Rehabilitation and recovery of people with severe mental health problems living in sheltered and supported housing facilities

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REHABILITATION & RECOVERY

of people with severe mental health problems living in sheltered and supported housing facilities

Neis Bitter

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te Alkmaar

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Prof. dr. C. Van Audenhove
Prof. dr. M.R.F. Van Regenmortel
Dr. E.M. van der Meer

Ronnie gaat naar huis

Ronnie gaat naar huis
Kijk maar in zijn tas
Een cassette en de schelpen uit zijn la
Het ging een tijdje slecht
Maar dat is nou voorbij

Heb je het al gehoord
Ronnie gaat naar huis
Zijn glimlach maakt het zomer voor altijd
Kijk maar op de lijst
Ronnie gaat naar huis

De gaten in de muur
De poster van Parijs
Soep om twaalf uur
En heel de dag tv
Ronnie weet heel goed
Hoe de nachten kunnen zijn
Als je met tellen bent gestopt

Ronnie gaat naar huis
En ‘s avonds naar het strand
En de schaduw die zich Ronnie noemde
Was een andere man

Het spook is uit zijn hoofd
Ik zei toch dat het kon
Misschien dat hij nog belt
Maar dat zal waarschijnlijk niet
Kijk maar hoe hij loopt
Ronnie gaat naar huis

En als de bus dan stopt
Zal de maan van zilver zijn
Wordt het zomer voor altijd
In het huis waar Ronnie woont

Spinvis, 2002

CONTENTS

CHAPTER 1

General introduction

The topic of this thesis, the recovery and rehabilitation of people with severe mental health problems, is part of a fascinating and on-going transition in mental health care. This transition aims at how people with severe mental health problems can live a satisfying and meaningful life in society. To this end, the difficulties this group faces first will be described, followed by an examination of important developments in the field of mental health care. Finally, the objective, research questions and outline of this thesis will be given.

SEVERE MENTAL ILLNESS

Psychiatric problems are frequently occurring. About 43% of people experience a psychiatric disorder once in their lives [1, 2]. Most of these people recover after a while and can maintain or return to their daily roles and routines. Part of this group, in the Netherlands about 1.6% of the population, suffers from a severe mental illness [3, 4][1]. This means that these people experience symptoms for longer than two years and have enduring and severe limitations in social functioning. Most of these people experience a disorder related to psychosis, but chronic mood disorders, personality and developmental disorders, alcohol or drug abuse, or combinations of the aforementioned disorders can also evolve into serious and persistent limitations in functioning [4]. People who experience severe mental health problems often experience on-going negative symptoms like apathy and lack of motivation and positive symptoms like hallucinations and delusions [5]. Moreover, cognitive impairments, such as difficulties with memory and planning, are common.

The personal, societal and financial burden resulting from the problems they experience is large. Studies on employment, for instance, show that only 10–20% of these people have regular paid employment, 50% work as volunteers or participate in organized day activities, and approximately 40% have no paid or unpaid employment at all [6]. Furthermore, a lack of social contacts and loneliness is common [7, 8]. These difficulties are not only a direct result of the symptoms and impairments. Due to the fact that severe mental health problems often manifest in adolescence or early maturity, an important period for education and building work experience and social relations, people with severe mental health problems are at risk of ending up in situations of societal deprivation and social exclusion [9, 10]. Moreover, stigmatization, trauma and victimizations often affect the lives of people with severe mental health problems [11, 12]. Nevertheless, they have the same wishes in life as other people [13]. Due to the complexity and comprehensiveness of their problems, these people need, besides medical treatment, support in their daily life concerning, for example, personal

[1] This is based on the definition used in the Netherlands, which results in a smaller number than that classified according to the usual international definition. According to this definition a severe mental illness means such a severity of symptomology that (coordinated) treatment and support are necessary, and there are severe and long-term limitations in social and societal functioning. The symptomology and impairments are structural and last at least for several years [3,4]. Internationally, most countries estimate the number of people with a severe mental illness around 3–5% (OECD, 2009).

development, work and relationships [14, 15]. Besides the personal burden, the situation of deprivation and low level of participation leads to a loss of talents and possibilities that this group might contribute to society. Moreover, the high amount of care and support needed leads to high costs [16].

Although this may sound hopeless, during the last decennia, increasing evidence has appeared that more improvement is possible than thought before for this group of people [17, 18]. Most people with severe mental health problems can live independently with the support and treatment of community mental health care teams instead of living in clinical settings. Some, however, have such limitations that they need support from sheltered or supported housing services; in this thesis, the focus lays on that group. The living situation and support of these people has been subject of several transitions since the second half of the 20th century. Following is a description of these transitions.

FROM ASYLUMS TO COMMUNITY-ORIENTED CARE

The current living situation of people with severe mental health problems has not always been like this. Until the 1950s, most people with mental illness were banished from society and lived in large asylums, outside the inhabited world. These asylums were almost a kind of village, with churches, bakeries and workplaces. There, the admitted people often stayed for the rest of their lives. This started to change around 1950 due to developments and new insights in the fields of ethics, psychology, psychopharmacological drugs, and politics. Asylums largely were replaced by facilities that made it possible for people with severe mental health problems to live in society [19]. Influenced by national policies, traditions and resources, different countries have gone through different processes of deinstitutionalization [20, 21]. In most Western countries, this has led to a broad range of services characterised by a strong emphasis on community mental health care aimed at making it possible for people with severe mental health problems to live in society [22-26].

In the Netherlands, deinstitutionalization developed in a somewhat distinctive way. The Netherlands was one of the first European countries in which community-based, mental health-care services were established, next to the asylums, in the 1920s. These services focussed on the organization of prevention and of aftercare [27]. Nevertheless, deinstitutionalisation started later, and the number of beds decreased less than in most other Western countries [24]. Only in the 1970s were ambulatory services and community mental health centres (RIAGGs) established. In the same period, mental hospitals also started to develop and increase their outpatient care [28]. Since then, the Dutch deinstitutionalization started to take shape [25]. In this period, different forms of sheltered and supported housing facilities also emerged. These housing facilities developed into sectors on their own and became an important player in the Dutch mental health-care system [29].

Sheltered and supported living

Most organizations for sheltered and supported housing in the Netherlands have their roots in small, private facilities with diverse (sometimes religious) visions, approaches, clientele and quality. In the 1980s, the attention of governmental policy in this branch grew, resulting in a more defined policy and financial system regarding this specific group of services. In the decade that followed, several small facilities emerged, sometimes with residential facilities of psychiatric hospitals, and developed into so-called Regional Institutes for Residential Care (RIRCs, in Dutch: RIBW's). Over time, these institutes developed ambulatory living support, or practical support for people living in their own houses. The number of beds in RIRCs grew to 17,000 and outpatient care to 24,000 people [25, 29].

Nowadays, RIRCs provide a broad range of housing facilities that can be broadly divided into three types of services that differ in target group, amount of support and independency [25, 29]. First is supported housing, in which people who need daily support and supervision can live. Several types of supported housing forms exist, from regular houses to larger institutional like facilities. They are often situated in regular neighbourhoods. Second is supported independent living. People who receive that service live independently and see a professional worker once or twice per week. Third, RIRCs provide boarding houses for homeless people. Different sizes of group supported housing facilities exist. Sometimes people only have a room and share all other facilities and activities. Increasingly people have individual apartments and share a common space to come together when they want.

Besides the form of the facility, the amount of support can differ. In some facilities 24-hour support is present, while in others support is available only during daytime or for a couple of hours per day, depending of the residents' needs. In addition to housing services, several RIRCs also have day-care facilities that support activities such as work projects, or projects concerning sports and leisure.

Bridge or threshold between institute and society?

Traditionally, RIRCs are an important service provider in the field of community-oriented care in the Netherlands. They are positioned between mental health-care organizations, which primarily focus on medical and psychological treatment, and the societal services. They focus explicitly on community housing and participation. Nevertheless, although the RIRCs were established as the bridge between hospital care and society, in practice, some of their clients will never reach the other side of the bridge. Despite the hopeful ambitions with which the deinstitutionalizations started, people with severe mental health problems living in the community often still do not participate fully in society [9, 30].

Community participation of clients of sheltered facilities remains a topic that is on the agenda of practitioners and policymakers. Since 2015, municipalities have been

responsible for financing sheltered and supported housing facilities. This policy is aimed at increasing support towards the participation and empowerment of people and their relatives in their own environment. The legal side of this transition is almost fulfilled now; the challenge is now to bring this transformation into full practice [29]. Besides that, RIRCs still have an important role in developments in mental health care as the paradigm shifts to recovery-oriented care [29].

CHANGING VISIONS ON RECOVERY FROM A MENTAL ILLNESS

As described previously, severe mental health problems may have a strong impact on people's life. It affects not only their mental and physical health, but also aspects of daily life such as social relationships, work and living situation. Moreover, a mental illness can have an impact on the way people look at themselves, on self-esteem, hope for the future, and the feeling of autonomy and control over one's life [31, 32]. All these factors interact in a complex way that differs per person. It therefore is not surprising that the debate about how to define, treat and support people suffering from severe mental illness is one with a long history. The aforementioned deinstitutionalization is one part of that story. Connected to that, and arising from the client movement, is the shift that led to increasing attention for what is called personal recovery from a severe mental illness [33].

There are several ways to look at recovery from a mental illness. Traditionally, the medical model was the most central vision in mental health care. In this model, recovery means being symptom free, thus being cured from the illness. Since the 1960s and 1970s, a new view on recovery arose from the client movement [17]. The insight grew that a complete remission of medical and psychiatric symptoms is not necessary to recovery. Recovery in this sense, also called personal recovery, is defined as 'a deeply personal, unique process of changing one's attitudes, values, feelings, goals, skills, and/or roles. It is a way of living a satisfying, hopeful and contributing life even within the limitations caused by illnesses' [34]. This vision on recovery is a more subjective concept and is about personal growth, hope, and building a satisfying and meaningful life, although some symptoms still exist.

Recovery is described as a very personal process [34]. Nonetheless, several authors have argued that a recovery process comprises different phases [18]. Spaniol et al. (2002) describe the phases as 'being overwhelmed by the disability', 'struggling with the disability', 'living with the disability' and 'living beyond the disability'. Each phase asks for different support. Personal recovery may be connected to the medical dimension of illness, but not necessarily in a proportional way. A person may feel 'recovered' but still experience several symptoms. To put it another way, symptomatic recovery does not automatically lead to living beyond the disability and living a satisfying and meaningful

life [35-37]. An important aspect of journey is being able to fulfil social and societal roles, concerning family, friends and work. The professional field that aim to support people in their societal recovery is the field of psychiatric rehabilitation [38]. In the past decades several interventions and approaches have been developed to support people in achieving their goals and increasing social and societal participation. Mental healthcare organisations and organisations for sheltered and supported housing often offer these interventions [25]. Rehabilitation interventions can be broadly divided into general interventions focussing on formulating and achieving personal goals, interventions aiming at a specific field such as (competitive) work, and interventions aiming at training specific skills such as social skills.

Although mental health-care organizations and organizations for sheltered living nowadays claim to work recovery-oriented, in actual practice it sometimes is hard to change the envisioned dimension. The transition to recovery-oriented care means for professionals a different way of working. Professionals need to connect to a person's recovery process, creating hope and empowerment, and supporting instead of patronizing. They must stimulate the person to take (responsible) risks and to support him or her in finding their way back in society. Although upcoming in educational programs nowadays, most professionals (nurses and social workers), were not educated explicitly in these skills. Therefore, mental health-care organizations and organizations for sheltered living offer training courses concerning recovery-oriented care and rehabilitation approaches. In the Netherlands the two most commonly used rehabilitation approaches are the Boston Approach [39] and the CARe methodology (in Dutch: Systematisch Rehabilitatiegericht Handelen (SRH)).

THE CARE METHODOLOGY

The CARe methodology has a history of more than 30 years. The developers were strongly inspired by rehabilitation approaches from the United Kingdom and the United States. The British approach, in short, traditionally focussed merely on modifying the environment. The American approach paid more attention to individual and methodical support of clients and on improving their skills and knowledge [40, 41]. This led to the following definition of rehabilitation: 'Psychosocial rehabilitation is a process involving activities geared towards helping a person with psychological, social and other limitations to maximize his quality of life, both on personal and social level, to be able to function satisfactorily at home, work and in other environments of his choosing' [40]. The CARe methodology entails a broad approach to rehabilitation. When using it, the aim is to support clients by fulfilling wishes and goals relating to quality of life, dealing with vulnerability and reinforcing strengths, and gaining access to desired environments and maximizing the quality of life through living environments and social networks [40, 41].

During the years, the methodology has been developed further under influence of new insights in mental health care. A first important influence was the aforementioned Recovery Movement [17]. A second influence was the Strengths Model [42], a method for case management with a strong emphasis on a person's, and his environment's qualities, strengths and talents. Finally, the Presence Approach [43, 44] was in an important influence. This theory describes the importance of establishing a meaningful and genuine relationship with a client in which attention and 'just being there for someone' is the starting point.

The CARe methodology was developed to be used for all people suffering from psychiatric or psychosocial problems, and it aims to be appropriate in the support of the most vulnerable clients, including people with complex and persistent disabilities. In contrast to other methodologies, there are no criteria for clients to be supported by use of this methodology. For example, if a client cannot set a goal, workers seek other ways to increase his or her quality of life. This makes the CARe methodology an approach that often is used in the long-term care and support for people with severe mental health problems who may have lost hope and motivation in life. Although it has a long history, little is known about the effects on clients.

OBJECTIVE AND RESEARCH QUESTIONS

These developments show that the mental health-care sector is still moving towards recovery-oriented care. Although the amount of knowledge on what is needed to support people in their recovery is growing, much remains unknown. More knowledge especially is needed concerning people who need sheltered and supported housing facilities.

This thesis therefore has two overarching objectives. The first one concerns the evaluation of the CARe methodology, which has been the subject of many developments and is applied in many housing facilities and mental health-care organizations in the Netherlands and abroad. Nevertheless, decent, long-term, evaluation studies have not been executed until now. To further develop the methodology, and recovery-oriented care in general, it is important to gain more insight into the effectiveness of this methodology. This study aims to evaluate the effectiveness of training teams of housing facilities in the CARe methodology's model fidelity and the recovery knowledge of team members, as well as on the quality of life, and personal and societal recovery of their clients.

The second objective of this study is to gain more insight in the recovery status, needs and quality of life of clients in sheltered housing facilities and to explore which interventions are available to support them in their recovery.

The research questions of this study are:

- What is the efficacy of training teams in the CARe methodology on model fidelity and recovery knowledge of team members of sheltered facilities?
- What is the effectiveness of training teams in the CARe methodology on quality of life, recovery, social functioning, hope, empowerment, self-efficacy and unmet needs of clients?
- Which recovery client profiles exist in sheltered facilities and what are the care needs and quality of life of the clients of these profiles?
- Which psychosocial interventions have been applied and evaluated to support clients of sheltered facilities (clinical services and sheltered housing) dealing with long-term severe mental health problems in their societal, functional and personal recovery, and what scientific evidence is available about the outcomes these interventions?

OUTLINE OF THIS THESIS

In this thesis, the research questions are answered in three parts. The first part describes the rationale, design and results of the evaluation study concerning the CARe methodology on participating teams and clients. The second part is about the needs for and the availability of care for people with severe mental health problems who live in sheltered facilities. The third part comprises an overall summary and discussion of the findings of this study.

Part 1: Evaluation of the CARe methodology

This part focuses on the first objective of this thesis and contains after this general introduction, three chapters on the evaluation of the CARe methodology.

Chapter 2 describes the rationale and design of the study, a cluster randomized trial, in which the effectiveness of training teams in the CARe methodology on quality of life, recovery, social functioning, hope, empowerment, self-efficacy and unmet needs of clients, and on fidelity and recovery knowledge of professionals are evaluated.

Chapter 3 presents and discusses the results of CARe methodology training on model fidelity and recovery knowledge of 14 participating teams and professionals at three RIRCs. Additionally, we deliberate on the barriers and that facilitators and professionals experienced.

Chapter 4 presents and discusses the results of the CARe methodology training on the quality of life, recovery, social functioning, hope, empowerment, self-efficacy and unmet needs of clients. In this study, 263 clients participated.

Part 2: The needs for care and availability of interventions for clients of sheltered facilities

This part focuses on the second objective and deliberates on recovery status of clients who receive housing services and care to support them in their recovery.

Chapter 5 explores whether and which recovery profiles exist in sheltered facilities, based on three dimensions of recovery: clinical, personal and societal. Furthermore, we explore the care needs and quality of life of clients in each profile and the differences between the profiles.

Chapter 6 presents the results of a scoping review on the availability and effectiveness of psychosocial interventions to support clients of sheltered facilities who are dealing with long-term severe mental problems in their societal, functional and personal recovery.

Part 3: Summary, conclusions and discussion

Chapter 7 summarizes and discusses the main findings of this thesis and deliberates on what this means for practice and policy. Besides that, methodological considerations and recommendations for future research are presented.

Chapter 8 provides a summary of the complete thesis in Dutch.

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PART 1

Evaluation of the CARe methodology

CHAPTER 2

Effectiveness of the Comprehensive Approach to Rehabilitation (CARe) methodology: Design of a cluster randomized controlled trial

Neis Bitter, Diana Roeg, Chijs van Nieuwenhuizen & Jaap van Weeghel

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ABSTRACT

Background There is an increasing amount of evidence for the effectiveness of rehabilitation interventions for people with severe mental illness (SMI). In the Netherlands, a rehabilitation methodology that is well known and often applied is the Comprehensive Approach to Rehabilitation (CARe) methodology. The overall goal of the CARe methodology is to improve the client's quality of life by supporting the client in realizing his/her goals and wishes, handling his/her vulnerability and improving the quality of his/her social environment. The methodology is strongly influenced by the concept of 'personal recovery' and the 'strengths case management model'. No controlled effect studies have been conducted hitherto regarding the CARe methodology.

Methods/design This study is a two-armed cluster randomized controlled trial (RCT) that will be executed in teams from three organizations for sheltered and supported housing, which provide services to people with long-term severe mental illness. Teams in the intervention group will receive the multiple-day CARe methodology training from a specialized institute and start working according the CARe Methodology guideline. Teams in the control group will continue working in their usual way. Standardized questionnaires will be completed at baseline (T0), and 10 (T1) and 20 months (T2) post baseline. Primary outcomes are recovery, social functioning and quality of life. The model fidelity of the CARe methodology will be assessed at T1 and T2.

Discussion This study is the first controlled effect study on the CARe methodology and one of the few RCTs on a broad rehabilitation method or strength-based approach. This study is relevant because mental health care organizations have become increasingly interested in recovery and rehabilitation-oriented care.

BACKGROUND

People with serious mental illnesses (SMI) experience numerous problems in their daily lives. Studies on employment, for instance, show that about 10–20% of people with SMI have regular paid employment, 50% work as volunteers or participate in organized day activities and approximately 40% have no paid or unpaid employment at all [1, 2]. Furthermore, a lack of social contacts and loneliness is common among people with SMI [3-5]. Previous studies show that these people experience unmet needs in these areas, which results in a lower quality of life [6-9]. Hence, it is important that mental health care organizations address these needs and wishes. Psychiatric rehabilitation practices have been applied by mental health care organizations to increase social participation and improve quality of life over the last two decades [10, 11]. The goal of these practices is 'to help individuals with complex, longer term mental health problems to develop the emotional, social and practical skills needed to live, learn and work in the community with the least amount of professional support' [11-13]. Psychiatric rehabilitation is closely related to the concept of personal recovery. Personal recovery implies a client-oriented definition of recovery in which the emphasis lies more on personal development and growth than on symptom reduction. Important aspects of recovery are: hope, empowerment and the feeling of living a satisfying life despite symptoms of illness [14-22]. While recovery is an individual and subjective process, mental health care organizations can be recovery-oriented. The recovery of clients with SMI can be supported by, among other things, providing psychiatric rehabilitation services [11, 23].

Several rehabilitation methods have been developed to help people identify and achieve their own individual goals, including living independently, self-care, gaining and staying in employment, participating in routine educational settings, developing better relationships with their families, and pursuing leisure activities [24-27]. Comprehensive methods exist which focus on the personal goals and wishes of clients. Examples of well-known comprehensive rehabilitation methods are the Boston Psychiatric Rehabilitation (PR) approach [12] and the strengths model [28]. There are also rehabilitation methods that focus on a specific aspect of life, for example, 'Individual Placement and Support' (IPS) in which people are supported to gain and stay in competitive employment [29]. Finally, there are methods that aim at improving cognitive functioning or practical skills, e.g., cognitive remediation [30, 31] and cognitive adaptation training (CAT) [32, 33].

Internationally, there is an increasing amount of evidence for the effectiveness of the aforementioned interventions on social functioning [11, 13, 25, 26, 29, 34]. Swildens and colleagues [35] found that, among clients who participated in the Boston PR approach, goal attainment and social functioning were significantly higher compared with clients in the control condition. Furthermore, IPS has a strong effect on vocational outcomes [29, 36, 37]. The strengths model is associated with positive results on different outcomes

[38-40] including decreased hospitalization and improved quality of life and social functioning [39, 41]. Although research on rehabilitation methods thus shows promising results, their effectiveness remains largely unknown. For example, few randomized controlled trials (RCTs) have been conducted to research the strengths model [38, 42], and most of these studies had methodological limitations such as small sample sizes and inadequate randomization [38]. Furthermore, in most of the studies only the effects on social functioning and quality of life were studied. Effects on personal recovery, hope and empowerment were not investigated, although these are also seen as an important outcome in mental health care nowadays. Finally, little is known about the effectiveness of these rehabilitation-oriented practices for clients of sheltered and supported housing facilities [43].

In the Netherlands, a rehabilitation method that is well known and often applied in mental health care is the Comprehensive Approach to Rehabilitation (CARe) methodology. The overall goal of the CARe methodology is to support a client in his/her recovery and to improve his/her quality of life. The central principles of this approach are: realizing goals and wishes; handling vulnerability; and improving the quality of the client's social environment [44, 45]. The methodology is strongly influenced by the concept of 'personal recovery' and by the strengths model [28]. The CARe methodology is used in several mental health care organizations and organizations for sheltered and supported housing. It is suitable for all clients who experience psychosocial problems, regardless of the severity of their impairments or the phase of their recovery process. With regard to the CARe methodology, in contrast with the Boston PR approach, no controlled effect studies have yet been carried out [46, 47]. In the Netherlands, people with SMI often receive care from both mental health care organizations and housing facilities. Central in the approach of housing facilities is the focus on rehabilitation of their clients, while mental health care organizations focus more on treatment [43]. Several of these housing facilities make use of the CARe Methodology; therefore we chose these as research sites for this study.

This is, to our knowledge, the first RCT on the effectiveness of a method that combines rehabilitation, recovery and strengths principles. Finally, the CARe methodology is distinct from other methods due to the fact that it can be used for even the most vulnerable clients and not only the motivated ones. Hence, the aim of this study is to investigate the effectiveness of the CARe methodology on recovery, social functioning, quality of life, hope, empowerment, self-efficacy beliefs and needs for care of people with SMI.

METHODS

In this article, we follow the Consolidated Standard of Reporting Trials (CONSORT) 2010 statement on extension of the standard to cluster trials [48].

Study design

This study is a two-armed cluster RCT that will be executed in teams selected from three organizations for sheltered housing in the Netherlands. These teams all provide sheltered housing and/or supported independent living services. Randomization will be applied at team level and will be stratified by organization. The professionals of the teams in the intervention group will receive a basic training in CARe methodology (three full-day meetings and four half-day meetings; see 'Intervention' for further information) while teams in the control group will continue to offer 'care as usual'. Cluster randomization is necessary because the intervention is offered at team level; reorganization of this structure (i.e., reassigning clients to other teams in case of individual randomization) would disturb the clients' living situations and relations of trust with their personal key workers, and would therefore be ethically undesirable. Furthermore, cluster randomization reduces contamination between the trial arms as much as possible. However, we will not be able to prevent staff changes completely; therefore we shall monitor this and take this into account in the analysis (see paragraphs outcome measures and statistical analysis). The participating teams will be randomized on an equal basis so an equal amount of teams and clients can participate in both arms. An independent researcher of the Department of Methodology and Statistics of Tilburg University will perform the randomization. The professionals and researchers will be aware of the allocation to the conditions; clients cannot be blinded but it will not be pointed out to them explicitly which condition they are in. All clients in the participating teams will be asked to participate in the study through an informed consent procedure. Standardized questionnaires will be completed at baseline (T0), and at 10 (T1) and 20 months (T2) post baseline (see figure 1). Besides client outcomes, the model fidelity of the CARe methodology will be assessed at T1 and T2.

The study has received ethical approval from the Medical Research Ethics Committee of the Elisabeth Hospital in Tilburg (NL41169.008.12). The trial registration number is ISRCTN77355880 (http://www.controlled-trials.com/ISRCTN77355880).

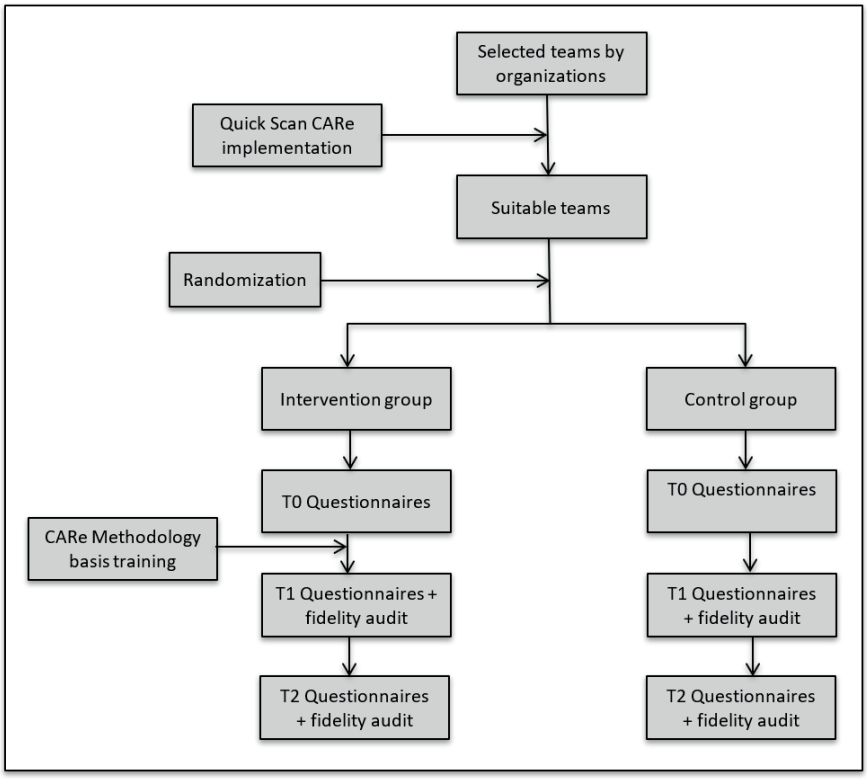

Figure 1: Flowchart of the study

Setting

The organizations for sheltered and supported housing in which this study is conducted provide 'sheltered housing' and 'supported independent living' services. In sheltered housing facilities, people with SMI live together and receive daily supervision from care professionals. In the case of supported independent living, the client lives independently, alone or with family or friends, and receives a certain amount of care at home. Both sheltered housing and supported independent living services are often provided by the same team of professionals. In that case the home base of the team is a sheltered housing facility, from where the team also provides supported independent living services to clients in the same area. The teams consist of 'key workers' and 'support workers'. Key workers coordinate care around a client and draw up support plans and direct the execution of these plans. Support workers support clients in their daily living and are responsible for the execution of (parts of) the support plan. Furthermore, support workers take care of the living environment in a sheltered housing facility. Generally, key workers and support workers are educated as social workers or nurses. The teams are not responsible for the

medical/psychiatric treatment of their clients. Most clients receive treatment from external (multidisciplinary) treatment teams from mental health care organizations.

Interventions

CARe methodology

First the overall aims and corresponding theoretical background of the CARe methodology will be explained. Subsequently we will describe the way the methodology will be provided in practice.

Theoretical background

The central aim of the CARe methodology is improving the quality of life of people with a psychological or social vulnerability. The CARe methodology addresses this aim in three ways: (1) realizing the client's wishes and goals; (2) handling vulnerability and reinforcing strengths; and (3) obtaining access to desired environments and improvement of the quality of the client's living environment and social networks. The CARe methodology is strongly influenced by the concept of 'personal recovery' [17], the 'presence approach' [49] and the 'strengths model' [28, 44, 45, 50].

Personal recovery

One of the major objectives of the CARe methodology is to support clients in their personal recovery. In the CARe methodology, the recovery process consists of three phases: stabilization, reorientation and reintegration. When applying the CARe methodology, the individual recovery process of the client is central. In this respect, five clusters of recovery factors have to be investigated and reinforced. These clusters are: (1) motivation, (2) identity, (3) knowledge and skills, (4) social status and (5) social and material resources [44, 45, 50].

'Presence approach'

The 'presence approach' focuses on the professional's attitude towards and relationship with the client. The fundamental idea of the presence approach is to create an equal relationship with the professional 'being there' for the client without focusing directly on the problems. Important attitudes in the presence approach are patience, unconditional attentiveness and receptivity [49]. When applying the CARe methodology, the presence approach is the central starting point of the way in which a worker builds a relationship with the client.

Strengths model

The third influence is the 'strengths model' of case management of Rapp [28]. The aim of the strengths model is to focus on the personal qualities, talents, and strengths of a person and his or her environment. The model has six principles: (1) focus on an individual's strengths rather than pathology and limitations; (2) the case manager-client relationship

is primary and essential; (3) interventions are based on clients' wishes and choices; (4) the community is viewed as a source of possibilities, not as an obstacle; (5) the intervention is preferably offered in the community; and (6) people suffering from SMI can recover and continue to learn, grow and change. When working with the CARe methodology the worker and the client map the strengths of both the client and his/her environment, and use these strengths in achieving the clients goals [45, 50].

The CARe Methodology in practice

In practice, applying the CARe methodology consists of the following six steps (figure 2): (1) building and maintaining a constructive relationship with the client; (2) collecting information and making a 'strengths assessment' with the client. The strengths assessment can be used to gain an overview of a client's former, current and desired situation in the fields of daily life, work, social contacts and leisure; (3) helping the client to formulate his/her wishes, make choices and set goals; (4) helping the client to complete a 'recovery worksheet, this is a concrete plan with (small) tasks and activities that can be done to achieve the client's goals and wishes'; (5) helping the client to execute the plan; and (6) after completing the process, to learn, evaluate and adjust [44, 45].

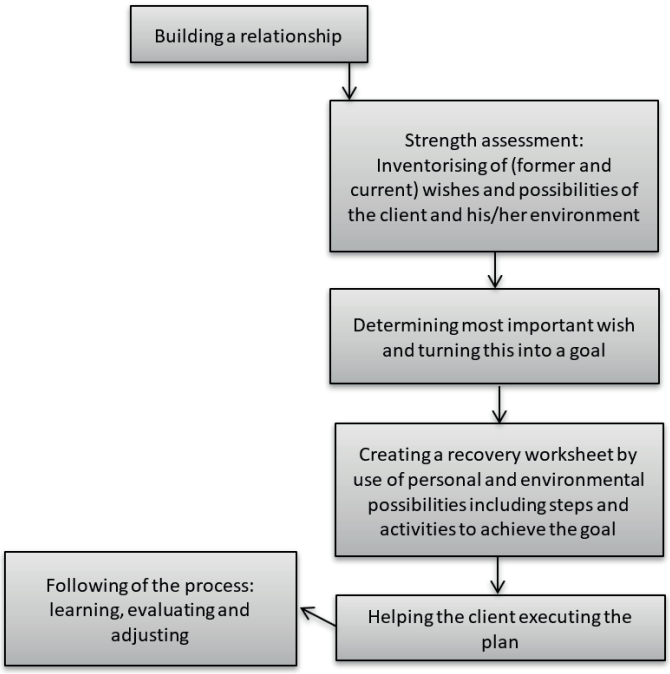

Figure 2: The CARe Methodology process

Training in the CARe methodology

The teams in the intervention group will receive basic training in the CARe methodology. The aims of this training are to train professionals in the principles of rehabilitative and recovery-supportive care and to support clients' rehabilitation processes in a methodical way. The training consists of seven meetings, i.e., three full-day theory meetings and four half-day meetings in which the practical skills are learned. Qualified trainers from a specialized training institute conduct these meetings.

After the training program, the professionals continue to be supported in working according to the CARe methodology by means of CARe coaching meetings (once every 4–6 weeks) in which practical cases can be discussed. These coaching meetings are guided by a trained 'CARe coach' from the organization concerned, who is not a member of the workers' teams.

Care as usual

The teams in the control group do not receive this training in CARe methodology. The workers in those teams will continue to work according to 'care as usual'. Care as usual implies working according to the outdated CARe methodology and with a minimal level of model fidelity. Because the CARe Methodology is recently adapted, several distinctive differences exist between the outdated form of the methodology and the form the intervention teams will use. The most important difference between teams in the intervention group and teams in the control group teams will be that the control teams will no`t work with the 'strengths assessment' and the 'recovery worksheet', which are seen as the most important instruments of the current CARe Methodology. Besides that they will not be supported by the 'CARe coaching meetings'. Finally, teams in the control group will be asked not to implement new practices oriented on recovery, rehabilitation or strengths for as long as they are participating in the study.

Recruitment of teams

Because rehabilitation practices are common in sheltered and supported housing facilities in the Netherlands, it is impossible to include teams that do not work according to any rehabilitation method at all. However, to study the effects of the CARe methodology in a randomized design, teams are needed whose methodology is (1) outdated and (2) not adopted by the workers or inadequately applied. These teams will be selected in three steps. First, we will seek out sheltered housing organizations that possess an intention or interest in training their employees in the CARe methodology. Second, each such organization will be asked to make a selection of possible teams suitable for this study; teams in which (most of) the workers do not have training in CARe methodology, or were trained in an outdated version, and in which the CARe principles are downgraded due to, for example, changes of employees. Teams that are already trained in the current CARe methodology will be excluded from this study. Third, a researcher (NB) will interview

the team leaders and make a definitive selection by means of the 'Quick Scan CARe', an instrument developed to map the general implementation of the CARe methodology in a team. Only teams with a very low level of implementation will be included in the study and randomly allocated to the intervention or the control group.

Team inclusion criteria

Teams of three organizations for sheltered and supported housing facilities in the Netherlands will be included. These teams provide sheltered housing and/or supported independent living services to adults with severe mental health problems. These teams work according to an outdated form of the CARe Methodology. Furthermore, in these teams the (outdated) CARe Methodology is not adopted by the workers or is inadequately applied.

Recruitment of participants

All clients of the participating teams will be asked to participate in the study. An information meeting will be organized at the location and all clients will receive an information brochure. Subsequently clients will be approached individually by the researcher or via the staff.

The participating clients will be asked to give their informed consent in writing to take part in the data gathering and use of the data for the study. This informed consent will be signed before the start of the first interview. Each participant will be informed about his or her right to withdraw from the study at any time. Because the participating organizations already apply rehabilitation principles and specifically the CARe methodology is already part of the participating organizations no informed consent is needed for the group randomization and the receiving of care according to the CARe methodology.

Client inclusion and exclusion criteria

Adult clients (>18) who receive services from a team included in the study participate in the study. Clients with too little knowledge of the Dutch language to fill in the questionnaire and/or clients who are unable to give informed consent or participate in the study due to cognitive impairment or clinical symptoms will be excluded.

Outcome measures

Outcome measures that suit the aims of the CARe methodology have been chosen. Furthermore, outcome measures have been selected on the basis of usage in comparable national and international research, and on their psychometric properties. Other considerations included were: expected effect sizes, sensitivity and interview duration. Based on these requirements the following outcomes and instruments are selected (see also Table 1):

Primary outcomes

Because the CARe Methodology aims to support clients in their recovery and participation with the overall goal of increasing quality of life, we chose these three outcomes (recovery, social functioning and quality of life) as primary outcomes. All these outcomes will be measured by use of self-report measures.

- **Recovery** will be measured by the Dutch version of the Mental Health Recovery Measure (MHRM), an instrument developed to assess the recovery process of persons with SMI [19]. The MRHM is a self-report instrument with 30 items. The MHRM is a reliable and valid instrument. The instrument comprises three subscales: 'self-empowerment' (α=0.90), 'learning and new potentials'(α= 0.86) and 'spirituality' (α=0.94) [19]. All items are rated using a five-point Likert scale that ranges from 'strongly disagree' to 'strongly agree'.
- The Social Functioning Scale (SFS) will be used to measure **social functioning**. The scale (α= 0.80) consists of 19 items and four checklists on seven domains: social engagement/withdrawal, interpersonal behaviour, pro-social activities, recreation, independence-competence, independence-performance and employment/ occupation [51].
- **Quality of life** will be assessed by the Manchester Short Appraisal (MANSA), an instrument to measure quality of life in people with mental illness. The MANSA (α=0.74) consists of 12 subjective items with a seven-point Likert scale ('could not be worse'–'could not be better'). Besides the subjective questions on satisfaction, the MANSA contains four yes/no questions, for example, about the presence of a good friend [52, 53].

Secondary outcomes

Besides the primary outcomes, secondary outcomes will be used, aiming to get more insight in the effects of the CARe Methodology. All these outcomes will be measured by use of self-report
measures.

- **Empowerment** is the process of people achieving, or having the feeling that they have, control over their own lives. For the measurement of empowerment the Dutch Empowerment Scale (α=0.93) will be used. This scale consists of 40 items distributed over six domains: professional help (α=0.81), social support (α=0.87), own wisdom (α=0.89), belonging (α=0.74), self-management (α=0.74) and involvement in community (α=0.81). The items are scored on a five-point Likert scale ranging from 'strongly disagree' to 'strongly agree' [54, 55].
- **Hope** will be assessed by the Dutch version of the Herth Hope Index (HHI), consisting of 12 four-point Likert scale items ranging from 'strongly disagree' to 'strongly agree'. The Dutch version of the HHI consists of two factors, each of six items: 'view on life and future' (α=0.8) and 'self-confidence and inner strength' (α=0.69) (overall α=0.84) [56, 57].

- The Dutch version of the Mental Health Confidence Scale (MHCS) will be used to measure health-related **self-efficacy beliefs** (α=0.93). This scale has 16 items with a six-point Likert scale ('totally no confidence'–'full confidence'). The instrument has three subscales: optimism (six items, α=0.87), coping (seven items, α=0.76) and advocacy (three items, α=0.93) [58, 59].
- **Need for care** will be measured by use of the 27-item client-rated version of the Camberwell Assessment of Needs Short Appraisal Schedule (CANSAS). With this instrument the client can score a health or social need as 'no need', 'fulfilled need' or 'unfulfilled need' [60].

Additional and control measures

In a complex research project such as this, there may be numerous external influences. Hence, several additional measures will be used to measure some factors that may modify or explain the possible effects.

- The following **demographic variables** will be measured: age, gender, marital status, nationality, educational status, employment status, income and living situation. These demographics will be measured by use of a client-rated form developed for the study.
- **Psychiatric symptoms** will be measured by use of the client-rated Brief Symptom Index (BSI) [61].
- The client-rated **Recovery Promoting Relationship Scale** (RPRS) (α=0.90) will be used to measure to what extent the client experiences the relationship with his or her key worker as supporting his/her recovery. The scale consists of 24 items with a four-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree) and with five indicating not applicable [62].
- **Worker's knowledge of recovery** will be measured by use of the staff-rated Recovery Knowledge Inventory (RKI) (α=0.80). The RKI consists of 20 items (scored on a five-point Likert scale ranging from strongly disagree to strongly degree) [62, 63]. Some additional questions will be added to the RKI concerning age, level and type of education and whether the worker received a CARe methodology training. All workers in the participating teams will be asked to fill in the RKI.
- The key workers of the participating clients will be asked to answer questions regarding the psychiatric **diagnosis** (DSM IV) of the client and the **amount of contact** they have with the client (hours per day and/or week). Besides that, there will be questions about the client's **care consumption** in general and his or her use of work/recreation facilities (hours per week).

Table 1: Outcomes and measures

Topic	Instrument	T0	T1	T2	Rater
Primary outcome measures (client level)					
Recovery	Mental Health Recovery Measure (MHRM)	x	x	x	Client
Societal functioning	Social Functioning Scale (SFS)	x	x	x	Client
Quality of life	Manchester Short Appraisal (MANSA)	x	x	x	Client
Secondary outcomes					
Empowerment	Dutch Empowerment Scale	x	x	x	Client
Hope	Herth Hope Index (HHI)	x	x	x	Client
Self-efficacy	Mental Health Confidence Scale (MHCS)	x	x	x	Client
Need for care	Camberwell Assessment of Needs (CANSAS)	x	x	x	Client
Additional process and control measures (client level)					
Demographic characteristics	Age, gender, nationality, level of education, marital status, living situation, principal daily pursuit, income	x	x	x	Client
Healthcare utilization	Diagnosis, psychiatric care, day care, contacts with care workers, (psychiatric) hospital admission, other care, psychiatric medication	x	x	X	Staff
Psychiatric symptoms	Brief Symptom Index (BSI)	x	x	x	Client
Recovery promoting relation	Recovery Promoting Relationship Scale (RPRS)	x	x	x	Client
Additional process and control measures (team level)					
Knowledge on recovery	Recovery Knowledge Inventory (RKI)	x	x	x	Staff
Fidelity of Care Methodology	CARe Methodology fidelity audit		x	x	Staff and clients
Quality of care	Quality Indicator for Rehabilitation Care (QUIRC)	x		x	Team leader

Model fidelity of the CARe methodology

At T1 and T2, a 'CARe methodology fidelity audit' will be performed for all the teams aiming to investigate the extent to which the teams work according to the critical ingredients of the CARe methodology. These critical ingredients are: (1) the presence approach, (2) recovery orientation, (3) strengths orientation, (4) working according to the steps of the CARe methodology, (5) each client has a key worker, and (6) certification, learning (coaching) and implementation. This audit consists of individual interviews with clients, key and support workers, the team leader or manager and a CARe coach. These interviews will be conducted by two auditors: a researcher (NB) and an independent CARe coach. This audit will result in a report with quantitative scores on each critical ingredient of the CARe methodology and a total score. This audit will be performed for teams in the intervention group as well as the teams in the control group so that differences in the model fidelity levels between the two groups can be detected. The results of the audits will be used to investigate to what extent client outcomes can be related to the level of implementation of the CARe methodology and its critical ingredients.

Quality of care

To assess the overall quality of care at the team level, the Quality Indicator for Rehabilitation Care (QuIRC) is used. The QuIRC is a European instrument developed to assess quality of care delivered in hospitals and community-based mental health units [64]. The QuIRC comprises 145 questions on service quality and provision (e.g., number of beds, treatments and interventions, training and supervision of staff). The QuIRC provides ratings across seven areas of care: built environment, therapeutic environment, treatment and interventions, self-management and autonomy, social interface; human rights and recovery oriented care [64]. In this way we can investigate to what extent the implementation of the CARe methodology influences the overall quality of care; and relate the areas of care to the outcomes of the other instruments on client level as well as on team level. The QuIRC will be filled in by a researcher (NB) based on face-to-face interviews with the team managers.

Power calculation/sample size

Sample size was calculated taking into account the design effect (due to group randomization) and the expected effect size. The measures with the highest expected effect size within the duration of the study of 20 months are: empowerment (0.38) and hope (0.50) [26, 43]. Cohen's d was used as the measure for effect size with α=0.05 and a power of 0.80, based on a two-sided test. The design effect used is estimated to be 1.5 based on an average cluster size of 38 and an intra-cluster correlation (ICC) of 0.013. Based on the effect size of empowerment (0.38; the lowest of the two above mentioned) a sample of 128 clients per condition is needed. When taking into account a reduction of 20% for loss due to follow up, 160 clients per group will be recruited to achieve the required power. To reach a sufficient amount of clients 16 teams will be included in the study, which together provide services to 890 clients.

Statistical analysis

Data will be analysed according to intention-to-treat, meaning that participants will be analysed in the group to which they were allocated by randomization [65]. SPSS 19 will be used for the analysis. Because the study has a cluster randomized design, longitudinal multilevel analysis (linear mixed modeling with random intercepts at both team level and individual level) is the analysis method of choice. First, effectiveness of the CARe Methodology on the three primary outcomes, recovery, social functioning and quality of life, will be evaluated. Subsequently, the effectiveness on four secondary outcomes, hope, empowerment, self-efficacy beliefs and need for care will be evaluated. An alpha correction (i.e., Bonferroni adjustment) will be applied across analysis of the primary measures in order to maintain a family-wise alpha level of 0.05. A separate Bonferroni adjustment will be applied to the set of analysis for the secondary measures to maintain their family-wise

alpha level at 0.05. Furthermore, in separate analyses we will assess whether different types of predictors explain the outcomes: (1) client characteristics (age, gender, having a partner, type of housing, diagnosis), (2) symptom severity (BSI), (3) health and day care utilization. Only predictors that influence the prediction of the outcome measures will be added tot the final model. Outcomes will be measured at 10 months and 20 months post-baseline (time will be analyzed as a categorical variable).

To detect significant differences in the baseline characteristics between the intervention group and control group descriptive analysis will be used. When necessary these differences will be taken into account in the analysis. Missing data and drop-outs will be analysed and accounted for by multiple imputation if the assumption of data missing at random (MAR) is not violated.

DISCUSSION

This article describes the design of a cluster-randomized controlled trial which aims to investigate the effectiveness of the CARe methodology on (among other things) quality of life, social participation and recovery. This study is the first effect study on the CARe methodology and one of the few studies with a control group on a comprehensive rehabilitation method or strengths based approach [25, 38]. This study is of high relevance because recovery and rehabilitation oriented care has become increasing important for mental health care organizations, especially nowadays as de-institutionalization and participation in society is increasingly being encouraged [14, 43, 67].

The strength of this study is that a broad group of clients with long-term SMI (elderly, double diagnosis, mild intellectual disabilities, inpatient and outpatient) will be included. Most rehabilitation or recovery-oriented interventions are offered only to clients who are motivated to participate in them [35, 55]. Consequently, research on these interventions tends to include only motivated clients. The CARe methodology is for all persons with SMI, and therefore this study includes all clients who choose to participate in the interviews for the study, regardless of their rehabilitation readiness or phase of recovery. The underlying reason for this is that the CARe methodology is a method developed for all kinds of clients, including vulnerable ones. Due to this broad inclusion the participants in this study can be seen as representative of clients with (long-term) SMI. This is not only interesting for the analysis of the effects of the CARe methodology, but it also gives insight into where this group stands in terms of societal participation, recovery, hope, quality of life, and empowerment. Therefore the results of this study will add to our current knowledge.

Another strength of this study is that it includes assessment of the level of implementation of the CARe methodology. In this 'fidelity audit' interviews will be conducted with clients, workers, team leaders and CARe coaches on different aspects of

CARe methodology. This will make it possible to attribute the outcomes to the level of implementation and/or to specific elements of it. Moreover it will give insight into the most critical elements of the method. This audit is at the same time a limitation because the instrument is not yet fully investigated and validated.

Another limitation of the study is that the effects of the CARe training may be biased because several principles of rehabilitation and recovery are already used in regular practice to some extent, which might bias the 'care as usual' condition. However, with the selection procedure designed for the participating teams (pre-selection by the organizations, quick scan) and the fidelity audits in both conditions, we prevent and control for this as much as possible. Also, the fact that professionals as well as clients cannot be blinded for the intervention is a limitation of this study design. It is generally known that it is very difficult to investigate the effectiveness of a complex social intervention in a practical environment in which several influences play a role [68]. Nevertheless, in this study these influences can be taken into account, because they will be measured on individual, organizational and environmental levels. Hence the effects of the CARe methodology can be studied in the complex context of practice.

This study will provide insight into the recovery processes of people with SMI and the effects of a comprehensive rehabilitation method on these processes. The results can be used to improve the CARe methodology and the corresponding training program. Furthermore, the results can contribute to the development of recovery-oriented care in general and the inclusion of people with SMI.

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CHAPTER 3

Training professionals in a recovery-oriented methodology: a mixed method evaluation

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Under review

ABSTRACT

Background Several studies have reported difficulties concerning the implementation of recovery-oriented interventions. In this study, the effect of training in the Comprehensive Approach to Rehabilitation (CARe) on daily practice was evaluated. Additionally, we aimed to acquire insight into the experiences with the implementation process involving professionals, management and trainers.

Methods Fourteen teams for sheltered and supported housing in the Netherlands participated in this study. As part of a cluster randomized controlled trial (RCT) design, eight teams received training in the CARe methodology. Model fidelity (using the CARe fidelity audit) and professionals' knowledge of recovery (using the Recovery Knowledge Inventory) were measured for all teams until 20 months after the start. Afterwards, an evaluation meeting with participating stakeholders was organized in which barriers and facilitators of the implementation of the CARe methodology were inventoried.

Results Ten months after the training, the intervention teams scored higher than the control teams on the fidelity subscales: 'recovery', 'strengths orientation' and 'amount of training and coaching'. Twenty months after the training, only the effect of 'amount of coaching and training' remained. Additionally, 'methodological working' clearly differed between the groups after 20 months in favour of the intervention teams. In all teams, model fidelity was moderate at both measurements. The knowledge of recovery of the trained teams was slightly and significantly higher at 10 and 20 months after training. Although professionals were positive about recovery and strength-oriented working, they experienced several organizational and societal barriers.

Conclusion Training in the CARe methodology improved the fidelity and knowledge of recovery among professionals. However, the differences were small, and fidelity decreased over time. More in-depth knowledge is needed on which barriers professionals experience in practice so that tailored training and implementation strategies can be developed. Furthermore, more attention is needed for professional development and the translation of theory into practice.

BACKGROUND

Mental health care organizations nowadays aim to support clients in their personal recovery [1]. Recovery in this sense refers to a process of 'building a meaningful and satisfying life, as defined by the person themselves, whether or not there are on-going or recurring symptoms or problems' [2]. Central aspects of recovery are connectedness, hope, being able to take responsibility for oneself, having meaningful activities and building up a positive identity [3, 4]. Although recovery processes are personal and subjective by nature, these processes can be supported by treatment and rehabilitation programs [5, 6].

Adoption of recovery-oriented care is not self-evident as it differs strongly from traditional medical-care models which focus on treatment of the illness [7, 8]. Instead of merely focussing on symptom relief and stabilization, in a recovery-oriented practice the focus is on the person and his/her values and goals in life. It is important that mental health care professionals have a feeling of positive expectation and hope towards the possibilities for recovery of their clients and encourage clients to pursue their life goals. Earlier studies show that although professionals are positive about the concept of personal recovery, different interpretations exist [5, 9]. Furthermore, professionals can experience difficulties in supporting personal recovery in daily practice [1]. However, research indicates that this can be improved by training [10, 11].

Various interventions have been developed in which professionals can be trained in supporting clients in their recovery. Well-known examples are: the Strengths model of case management [12], Refocus [13] and Illness Management and Recovery (IMR) [14]. Some of these interventions have shown promising results [10, 15]. However, studies also report difficulties concerning the implementation of these interventions [13, 16, 17], leading to limited levels of model fidelity [18]. Previous research showed a positive relationship between the model fidelity of an intervention and its results at client level [7, 19]. This seems to be a starting point for enhancing recovery-oriented care.

In order to improve the quality of recovery-oriented care, it is important to gain insight into the implementation process of these approaches. However, research on the efficacy of training professionals in recovery-oriented approaches is still in its infancy [20]. In the current study, we evaluate the implementation of the CARe methodology [21]. The main implementation strategy was training of the professionals. In this CARe training, professionals learn about the principles of rehabilitative and recovery-supportive care and how to support their clients' recovery process in a methodical way. The methodology is firmly based on principles of personal recovery and the Strengths model of case management [22]. Recently, the CARe methodology was evaluated in a cluster-randomized controlled trial [23]. In this study, no significant differences were found between the outcomes of clients of trained and untrained teams [24]. A possible explanation of this result could be the limited implementation of the methodology. In order to gain more insight into the adoption process of recovery-oriented practices and to find answers for improved implementation of

these practices in general, the current study aims to evaluate the efficacy of training in the CARe methodology on model fidelity and the recovery knowledge of professionals and to explore the experiences of involved professionals.

The research questions are:

- What is the effect of training teams in the CARe methodology on model fidelity?
- What is the effect of training teams in the CARe methodology on the recovery knowledge of professionals?
- What are the experienced barriers to and facilitators of implementation of the CARe methodology by involved professionals and other relevant stakeholders?

METHODS

Study design

This study was part of a two-armed cluster RCT, executed in teams selected in three organizations for sheltered and supported housing in the Netherlands [23, 24]. Randomization was applied at the team level and was stratified by organization. Professionals in the intervention group received training in the CARe methodology; teams in the control group continued to offer 'care as usual'. Data were gathered before training (T0) and 10 months (T1) and 20 months (T2) afterwards. In this study, quantitative and qualitative methods were used. Table 1 provides an overview of the methods used per research question. The study received ethical approval from the Medical Research Ethics Committee of the Elisabeth Hospital in Tilburg. The trial registration number is ISRCTN77355880 (http://www.controlled-trials.com/ISRCTN77355880).

Table 1: Overview of research questions and methods

Research question	Method	Moment of measurement
Effect of training on model fidelity	Fidelity audit in which the following critical ingredients were examined: (1) The presence approach, (2) Recovery orientation, (3) Strengths orientation, (4) Working according to the steps of the CARe methodology, (5) Each client has a key worker, (6) Training and coaching of the professionals.	10 (T1) and 20 (T2) months after start of the training
Effect of training on the recovery knowledge of professionals	Questionnaire: Recovery Knowledge Inventory (RKI)	T0, T1 and T2
Barriers to and facilitators of implementation	Evaluation meeting with different stakeholders	After the analysis and presentation of the quantitative data

Setting

The participating organizations provide sheltered housing and support independent living services for people with severe and long-term mental illness. Sheltered housing includes permanent supervision in (semi-)individual or group facilities. Supported independent living includes home-based support of clients who live on their own or with family of friends. Teams often provide both types of services in a certain area. The teams consist of key workers and support workers. Key workers coordinate care around a client and draw up, together with the client, support plans and direct the execution of these plans. Support workers support clients in their daily living and are responsible for the execution of (parts of) the support plan. Furthermore, support workers take care of the daily routine in a sheltered housing facility. Generally, key workers and support workers are educated as social workers or nurses. The teams are not responsible for the medical/psychiatric treatment of their clients. Most clients receive treatment from external (multidisciplinary) treatment teams from mental health care organizations.

Recruitment of teams

Because rehabilitation practices are common in sheltered and supported housing facilities in the Netherlands, it was not possible to include teams that did not work according to any rehabilitation methodology or principle at all. Therefore, we selected teams in two steps. First, the organizations were asked to make a first selection of teams with a low level of rehabilitation and/or recovery-oriented training. Second, a researcher (NB) interviewed the team leaders of selected teams with the 'CARe Quick Scan', a short fidelity instrument. Only teams with no, or negligible training and skills in the CARe methodology, were included in the study. In total: 14 teams providing care to 631 clients were selected and randomized.

Intervention: CARe methodology training

The teams that were randomly assigned to the intervention group received training in the CARe methodology (see Box 1). The training consisted of seven sessions, i.e., three full-day theory meetings and four half-days 'training on-the-job'. Qualified trainers from a specialized training institute conducted these sessions.

During the training, the following topics were discussed: theoretical principles of the CARe methodology (recovery, presence and strengths-oriented working); social participation and using environmental resources; building a partnership with a client and the basic principles of supporting clients, connecting to the recovery process of a client; investigating the client's wishes and strengths by use of the strengths assessment and seeing possibilities to realise these; formulating concrete goals with the client; drawing up plans (a recovery worksheet for the client and a support plan for the professional); and introduction to the CARe Toolkit with specific tools for specific cases, for example, an instrument to map a client's social network.

After finishing the training, teams received coaching every four to six weeks. During these coaching sessions, the professionals discussed cases in a methodical way. A professional who was trained as a licensed CARe coach guided these sessions.

Box 1: The CARe methodology

The CARe methodology
The central aim of the CARe methodology is to improve the quality of life of people with a psychological or social vulnerability. The CARe methodology addresses this aim in three ways: (1) realizing the client's wishes and goals; (2) handling vulnerability and reinforcing strengths; and (3) obtaining access to desired environments and improvement of the quality of the client's living environment and social networks. The CARe methodology is strongly influenced by the following concepts: the presence approach [25], the concept of personal recovery [2] and the Strengths model of case management [12, 26-28].

Applying the CARe methodology in practice consists of the following six steps:

1. Building a relationship with the client
In the CARe methodology, the relationship between client and worker is seen as the basis of offering professional support. Central elements of this relationship are: safety, active support and personal meeting.

2. Drawing up a 'strengths assessment'
The aim of using the strengths assessment is to create insight into the experiences, strengths and resources of a client on four personal and four life domains. The personal domains are: self-care, health, meaningfulness and social relations. Life domains are: living, working, learning and recreating. The experiences, strengths and resources can be found in the past and in the present time.

3. Helping the client to formulate his/her wishes and goals
The central starting point of working with the CARe methodology is attaching to the wishes of a client. The worker supports the client in exploring and formulating his or her wishes. Based on the strengths assessment and the wishes, a client chooses a wish he or she wants to translate into a goal. The worker supports this process.

4. Helping the client to make a 'recovery plan'
The formulated goal and the strengths assessment form the basis for the 'recovery worksheet'. In this plan, concrete steps and activities are described to achieve this goal. It also consists of information about activities of others in the support system, for example, informal caregivers and other professionals.

5. Helping the client to execute the recovery plan
During the execution of the plan, the focus is on using and increasing the strengths of the client. Besides that, there is attention to handling and accepting vulnerabilities of the clients. The professional supports by seeking connections in the environment, for example, by improving the accessibility of a desired environment (housing, employment, etc.) and creating support in the society.

6. Adjusting the recovery plan
The recovery worksheet can be used in a flexible way. The trajectory and the goals can be changed based on experiences on the road. It is a cyclical process in which learning, evaluating and adjusting are important.

Care as usual

Teams in the control group did not receive the CARe training, were not supported by the 'CARe coaching meetings', and provided care as usual. Additionally, teams in the control group were asked not to implement new practices oriented towards recovery, rehabilitation or strengths for as long as they were participating in the study.

Measures

In order to investigate the effect of the CARe training on model fidelity, fidelity audits were executed, investigating the six critical ingredients of the CARe methodology (see Table 1). These audits per team consisted of individual interviews with three clients, three key and support workers, the team leader or manager, a CARe coach and the assessment of three client files.

Recovery knowledge was measured with the Dutch version of the Recovery Knowledge Inventory (RKI). The RKI is a self-reporting instrument that assesses knowledge of and attitudes toward recovery-oriented practices. The Dutch version consists of 14 items (scored on a five-point Likert scale ranging from strongly disagree to strongly agree) and was shown to have a Cronbach's alpha of 0.80 [29, 30].

Statistical analyses

Descriptive statistics for both intervention and control groups were computed separately. Characteristics of professionals were tested using *t*-tests for continuous and χ^2-tests for discrete variables.

Regarding the fidelity audits, for each critical ingredient a score was calculated based on scores of the corresponding criteria per source. Additionally, a total mean score for a team was calculated. Subsequently, means and ranges were calculated on team levels for both the intervention and the control groups. Because of the small sample size on this level (14 teams), we decided not to test the differences between the groups statistically. Instead we described the differences.

Regarding the recovery knowledge of individual team members, measured with the RKI, an initial analysis was conducted to investigate differences on the team level. For this analysis, means were calculated for both the intervention and control groups per moment of measurement. Subsequently, independent sample t-tests were executed to compare the means between the groups at the different moments of measurement. Eta squared values were calculated as measures for effect size. A second analysis was executed to evaluate the longitudinal effect of the CARe training on the recovery knowledge of the individual staff members. In this analysis, the data of the staff members included at T0 were included (n=184). Linear mixed modelling was used and two models were fitted: the first with only the main effects of time and intervention and the second with the time x intervention interaction to test the effect of the intervention over time. The interaction was tested two-tailed by comparing the -2 log likelihood of the models. All analyses were executed using SPSS 22.

Stakeholder evaluation meeting

After the execution of the study and the analyses, an evaluation meeting with persons from different stakeholder groups (professionals of participating teams, policy advisors, managers, trainers, CARe coaches) was organized. The aim of this meeting was to explore the barriers and facilitators the different stakeholders had experienced during the training and implementation process. In this meeting, we first presented the results of the study on the team and staff member level (including the fidelity and RKI) and client level (including the quality of life, personal recovery, social functioning, hope, empowerment, self-efficacy and care needs) separately. Subsequently, participants were divided into mixed groups of five to six people and asked to formulate three to five barriers to and three to five facilitators of (1) implementation of the CARe methodology in a team according to model fidelity and (2) working with the CARe methodology in practice and to write these down. Afterwards, the barriers and facilitators were exchanged and discussed fully.

All facilitators and barriers, collected on the flap overs, and notes made by the research team during the discussion were analysed and categorized by the authors afterwards.

RESULTS

Characteristics of the teams and professionals

The teams of the intervention (n=8) and control groups (n=6) differed in the number of clients receiving sheltered living facilities (range: 0-49) versus supported independent living services (range 0-90) (Table 2). Table 2 also shows the characteristics of the participating professionals of the teams. The mean age of the professionals was 41.3 years for the intervention group and 38.4 years for the control group. The groups consisted of 79.4% and 68.3% women respectively. They had an average number of years relevant work experience of 11.9 in the intervention group and 13.0 in the control group. No significant differences were measured between the participating professionals at baseline.

Fidelity to the CARe methodology

In all teams, a CARe methodology fidelity audit was executed at T1 and T2. Table 3 shows the mean fidelity scores per critical ingredient and the overall fidelity score of the teams at the different points in time of both the intervention and control groups. The overall fidelity score was higher for the intervention group (60%) than for the control group (45%) on both moments of measurement.

Table 2: Characteristics of the participating teams and professionals

Team characteristics	Intervention (N=8 teams)	Control (N=6 teams)
Number of clients: mean (range)		
Sheltered living	30.8 (14-49)	22.8 (0-36)
Supported independent living	13.1 (0-42)	22 (0-90)
Number of employees: mean (range)	25.6 (11-60)	18.7 (16-23)
FTE: mean (range)	14.3 (8,1-20.7)	12.8 (9.6-14.4)
% Female workers	79.4%	68.3%
Professional characteristics[12]	**Intervention (N=123)**	**Control (N=61)**
Mean age (SD)	41,31 (12,18)	38,38 (10.57)
Female	99 (79.4%)	40 (68.3%)
Male	26 (20.6%)	19 (31.7%)
Mean years relevant work experience (SD)	11,85 (10.02)	13.03 (9.64)
Function of the professionals: n (%)		
Support worker	65 (51.6%)	32 (53.3%)
Key worker	32 (25.4%)	20 (33.3%)
Team leader	5 (4.0%)	2 (3.3%)
Assistant worker	13 (10.3%)	2 (3.3%)
Other	11 (8.7%)	4 (6.8%)
Education level: n (%)		
Low	10 (7,9%)	2 (3.4%)
Middle	46 (36.5%)	25 (41.6%)
High	61 (48.4%)	33 (55.0%)
Unknown	9 (7.2%)	0 (0%)

[1]Based on data of the RKI

[2]Characteristics of the professionals did not differ significantly on baseline

At T1, the teams in the intervention group had higher scores than the control group on critical ingredients 2 – 'recovery orientation' (difference of 16%), 3 – 'strengths orientation' (difference of 22%) and 6 – 'amount of coaching and training' (difference of 40%). These differences disappeared at T2, except for critical ingredient 6 – 'amount of coaching and training' (difference of 35%). Additionally, at T2, on critical ingredient 4 – 'methodical working' (working with the strengths assessment and the recovery worksheet) a difference of 25% was found between the groups to the advantage of the intervention group.

Table 3: Results of the fidelity audits measured on team level

	T1					T2				
Critical ingredient	**Intervention (N=8) Mean (SD) Min-max**		**Control (N=6) Mean (SD) Min-max**		**Difference[1]**	**Intervention (N=8) Mean (SD) Min-max**		**Control (N=6) Mean (SD) Min-max**		**Difference**
1 Presence approach	65 (17)	43-89	55(18)	33-71	10	66 (6)	56-71	63 (20)	43-91	3
2 Recovery orientation	54 (11)	42-70	38 (14)	21-61	16	47 (15)	29-72	43 (12)	26-61	4
3 Strengths orientation	43 (11)	28-60	20 (11)	0-52	23	40 (8)	30-52	37 (20)	11-67	3
4 Care methodical	49 (22)	18-76	38 (18)	18-65	11	54 (15)	35-77	29 (12)	18-47	15
5 Key workers	76 (15)	44-100	86 (16)	67-100	10	89 (8)	78-100	86 (8)	75-100	3
6 Training and coaching	56 (27)	00-76	16 (28)	4-41	40	46 (25)	0-71	14 (18)	0-47	32
Overall score	57 (5)	49-64	43(10)	27-57	14	57 (6)	47-67	45 (5)	38-53	12

[1]The difference between the intervention and control group

Recovery knowledge

The response rates for the RKI were 60% for the intervention group and 54% for the control group. Table 4 shows the results of the RKI on team level. The total mean score of knowledge of recovery measured with the RKI did not differ between the groups at baseline (t=-1.11, p=.27). At both follow- up measures, a significant difference with a small effect size was found between the groups, with the intervention group scoring the highest (T1: t=2.17, p=.03, es=.04; T2: t=2.06, p=.04, es=.03).

Table 4: Results of the recovery knowledge inventory (RKI) measured on staff member level

	T0			T1			T2		
	Intervention Mean (SD) N=123	**Control Mean (SD) N=61**	**t/p/ ES[3]**	**Intervention Mean (SD) N=76**	**Control Mean (SD) N=55**	**t/p/ ES**	**Intervention Mean (SD) N=85**	**Control Mean (SD) N=62**	**t/p/ ES**
[1]Total score RKI[2]	3.25 (.43)	3.33 (.42)	t=-1.11 p=.27	3.47 (.51)	3.27 (.49)	t=2.17 p=.03 es=.04	3.45 (.47)	3.30 (.43)	t=2.06 p=.04 es=.03

[1]The total score is based on the recoded data. The scores of items are reported according to the actual scale.
[2]RKI scale: 1= strongly disagree; 2 = disagree; 3 = not disagree/not agree; 4 = agree; 5 = strongly agree.
[3]Interpretation Eta Squared (ES): 0.01 small effect, 0.06 medium effect, 0.14 large effect.

The results of the linear mixed modelling analyses are presented in Table 5. No effect of time on recovery knowledge could be found on T1 or T2 (Table 5, rows 2 and 3). Furthermore, the interaction effect (Table 5, row 5: intervention x time) was not significant, indicating that the intervention had no effect on recovery knowledge (X^2=4.19; p=.12).

Table 5: Results of the linear mixed modelling on recovery knowledge

Model	Test	P	95%CI
Time	F=7.70	.001	
T1	B=.08	.14	-.03-.18
T2	B=.08	.12	-.02-.18
Intervention	B=.00	.98	-.13-.14
Intervention x time	X^2=4.19	.12	

Results of the evaluation meeting

Thirty professionals participated in the evaluation meeting: nine workers (key and support workers) of the participating teams, eleven CARe trainers and/or coaches involved in the study, eight managers and quality advisors of the involved organizations for sheltered and supported housing and the training institute and the two developers of the CARe methodology. Four categories of barriers and facilitators could be distinguished: implementation and facilitation in the whole process and on all levels, the content of the methodology, development of teams and professionals and the translation of theory into practice.

Implementation in work process and health system

According to several participants, implementation should include structural imbedding of key components of the CARe methodology in the existing work process, for example, adequate planning of group coaching, the adoption of CARe instruments (strengths assessment and recovery plan) in the electronic patient record, the presence of responsible staff members and adoption in the quality cycle of the organization. Furthermore, implementation of the methodology was often not accomplished on all levels of the organization while – according to the participants – more involvement, and preferably training, of management and client representatives is also needed. Besides that, the involvement of external partners as social care organizations and other (mental) health care organizations are mentioned as important but often lacking. Reorganizations, including reduction and changes in staff and a transition to self-management of teams, were mentioned as a hampering factor. Finally, it was mentioned that different interventions (for example, peer support interventions or short-term support programs) were introduced during a short period, leading to certain 'methodology tiredness' and a lack of clarity about how different methodologies relate to each other.

The content of the CARe methodology

Participants were generally very positive about the content of the CARe methodology. The focus on strengths and the recovery orientation of the CARe methodology were experienced as facilitators in practice because professionals support these visions. Furthermore, they experience working with the methodology as 'systematic', 'client-centred' and as 'a positive development because it creates hope and perspective'. In addition, the central role of the client-professional relationship in the CARe methodology was seen as a facilitator and characteristics of this relationship that were mentioned were: trust, equality and a modest attitude of the professional. Finally, participants mentioned that the CARe methodology stimulates professionals to start a genuine dialogue with clients. Barriers of the methodology are the high number of different tools and a lack of clarity about when to use which tool.

Professional and team development

The training with the whole team, as offered in this study, was experienced as a facilitator for collaboration because it stimulates a ´shared language and attitude in a team'. Besides training, most participants of the meeting felt that more attention is needed for on-going professional development and coaching. An easily accessible CARe coach and regular coaching sessions are important aspects of this. Furthermore, training and coaching must be tailored to the needs and possibilities of a team. Differences in knowledge and experiences between professionals within a team and a lack of adjusting the training to these differences were mentioned as barriers. Finally, the presence of a 'champion' or an 'expert' concerning the CARe methodology in a team was seen as a facilitator because such a person can generate enthusiasm and attention to the methodology.

Translation of theory to practice

Although professionals were positive about the concepts of recovery and rehabilitation, the translation of theory into practice was often experienced as difficult. Professionals regularly have to work with hospitalized clients who find it difficult to communicate wishes and goals. Besides that, sometimes the wishes and expectations of clients, professionals and society are different. Furthermore, participants mentioned that professionals sometimes misunderstand the meaning of rehabilitation and what rehabilitation and recovery-oriented working means in practice. Rehabilitation is then, for example, seen as 'offering support in a reserved way', leading to a too passive attitude of the professional. An example of this is that professionals sometimes do nothing when a client lies in bed for the whole day because 'that is his wish'. A participant in the meeting with another vision stated: 'Sometimes a person just needs help, even though he does not ask for it'. This illustrates the different views professionals can have on recovery-supported working and the dilemmas they face in practice.

DISCUSSION

In this study, we evaluated the efficacy of team training in a recovery-oriented approach on model fidelity and recovery knowledge. Additionally, we explored barriers to and facilitators of the implementation process. We aimed to further understand the problems that occur by implementation of recovery-oriented methods and to formulate recommendations for comparable process in the future. This study was the first to evaluate the efficacy of training in the CARe methodology. Training had a small but positive influence on recovery knowledge on the team level. Besides that, the overall model fidelity in the intervention group was higher than in the control group, although it was moderate (about 60%). In the short term (after 10 months), the trained teams had higher fidelity scores on the critical ingredients – 'recovery orientation', 'strengths orientation' and 'training and coaching'. However, after 20 months there only was a difference on the critical ingredients of 'methodical working' and 'training and coaching'.

The results of this study demonstrated that training in the CARe methodology positively influenced the recovery and strengths orientation of teams in sheltered facilities. Trained teams scored higher on recovery knowledge and model fidelity at both follow-up measurements. That this effect was achieved despite high staff turnover in the teams, and an effect of training on individual professionals' knowledge of recovery could not be proven, indicated that a team has a sort of 'methodical memory' and that knowledge can be transferred between professionals of a team. However, the results also show that the effect of training faded away on some critical ingredients over time, despite the coaching meetings. Also notable was the total fidelity score of 60%. In theory, scores of 80–90% should be achieved to call teams well educated in the method. Future validity study of the fidelity measure is needed to confirm this hypothesis. The effect on recovery knowledge had a small effect size; the question is whether this is enough to influence client outcomes. These results are in line with other studies on comparable methods [13, 15, 31]. Apparently, just training is not enough to achieve a convincing and lasting shift in beliefs and work culture.

The results of the evaluation meeting provided explanations for these results. Furthermore, this meeting gave some indications for improvements in the implementation of the CARe methodology and of recovery-oriented approaches in general. In the meeting, barriers of different natures were mentioned. These barriers seem to concern the methodology and the concept of recovery, the individual professional (knowledge, attitude), the team and organization, and the broader context. This corresponds to other studies on implementation in health care [32]. Implementation of a methodology cannot be seen as a freestanding process. Teams operate in a complex organizational and societal context, which should be taken into account when implementing a new way of working. Moreover, reorganizations, including budget cuts, reduction and changes

of staff and a shift to self-management of teams hampered implementation in this study. As leadership, for example, is a promoting factor for implementation [33, 34], the transition to self-management of teams could have influenced the process negatively. The same applies to other influencing factors, such as work climate, staff changes and practical and moral support from the organization [35]. There is growing recognition that adequate implementation asks for well-considered and tailored implementation strategies on multiple levels [17, 36]. These strategies should be grounded on analyses of potential barriers before the start of the implementation [32, 37]. Although in this study teams received coaching sessions, in the evaluation meeting it was mentioned that these aspects were not embedded in practice very well. In addition, no tailored strategies were formulated in advance. We recommend therefore investing in tailored implementation strategies based on thorough team and organizational analyses when implementing recovery-oriented practices in the mental health care field.

It is known that for change in professional behaviour, knowledge and attitude play a role [38]. Although in this study most professionals were very enthusiastic about the principles of the CARe methodology, including the recovery and strengths-based approach (attitude), they also seem to experience a lack of understanding and practical skills (knowledge) to bring recovery-oriented working to reality with clients in their caseloads. These include persons who often have multiple and complex disabilities in a society with high expectations and demands. A struggle with the interpretation of 'recovery' and translation into daily practice was described in other studies as well [5, 9, 15, 39-43]. Le Boutillier et al. [42], for example, conducted a grounded theory study on staff perspectives on supporting recovery. They concluded that staff 'struggles to make sense of recovery-oriented practice in the face of conflicting demands, informed by different priorities of different health system levels'. This indicates also that more attention is needed for the connection of and collaboration between different stakeholders who are involved in the recovery of people suffering from severe mental illness. Nonetheless, more in-depth study of which barriers workers experience, mainly concerning the use of recovery-oriented methodologies, should be executed to further develop training and implementation strategies [44].

This study has a number of weaknesses and strengths. A weakness is that we could not completely rule out a 'diffusion of treatment' effect among untrained teams, reducing the effects found of our intervention [45]. Trained and untrained teams could have influenced each other, for example, by organizational developments and internal communication. Next, regarding model fidelity, it was not possible to conduct a baseline measurement, and the audit instrument used in this study is not validated yet. Therefore, we cannot guarantee that the results of the audits are a fully accurate representation of the practice. However, the results of the validated RKI did give us some frame of reference, indicating that the audits are (at least for the recovery orientation) an appropriate

instrument. A strength of this study is the long follow-up: 20 months in total. This gave the opportunity to follow up the effect of training during almost two years. Another strength is the combination of different ways of data gathering (fidelity audit, questionnaire and evaluation meeting), resulting in a multifaceted view on the implementation process.

Conclusion

This study is the first providing information on the barriers and facilitators faced during implementation of recovery-oriented methods in the field of supported living. It provided information on the recovery knowledge and fidelity, as well as several starting points on how to further improve implementation processes. Our results confirm that implementation of a recovery-oriented methodology is possible, but that it is a complex process and that achieving sustainable effects is not self-evident, even if there is a proper training program. It is promising that professionals are positive about recovery-oriented working. However, professionals and teams need to be constantly supported in their development and receive tailored, team-based training and coaching that connects to the barriers they experience in practice. More in-depth knowledge is needed on how the barriers and facilitators discovered can be translated into training and organizational structures to further support teams in achieving higher levels of fidelity in working with recovery-oriented methods.

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CHAPTER 4

How effective is the Comprehensive Approach to Rehabilitation (CARe) methodology? A cluster randomized controlled trial

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ABSTRACT

Objectives The CARe methodology aims to improve the quality of life of people with severe mental illness by supporting them in realizing their goals, handling their vulnerability and improving the quality of their social environment. This study aims to investigate the effectiveness of the CARe methodology for people with severe mental illness on their quality of life, personal recovery, participation, hope, empowerment, self-efficacy beliefs and unmet needs.

Methods A cluster Randomized Controlled Trial (RCT) was conducted in 14 teams of three organizations for sheltered and supported housing in the Netherlands. Teams in the intervention group received training in the CARe methodology. Teams in the control group continued working according to care as usual. Questionnaires were filled out at baseline, after 10 months and after 20 months. A total of 263 clients participated in the study.

Results Quality of life increased in both groups, however, no differences between the intervention and control group were found. Recovery and social functioning did not change over time. Regarding the secondary outcomes, the number of unmet needs decreased in both groups. All intervention teams received the complete training program. The model fidelity at T1 was 53.4% for the intervention group and 33.4% for the control group. At T2 this was 50.6% for the intervention group and 37.2% for the control group.

Conclusion All clients improved in quality of life. However we did not find significant differences between the clients of the both conditions on any outcome measure. Possible explanations of these results are: the difficulty to implement rehabilitation-supporting practice, the content of the methodology and the difficulty to improve the lives of a group of people with longstanding and severe impairments in a relatively short period. More research is needed on how to improve effects of rehabilitation trainings in practice and on outcome level.

BACKGROUND

People with serious mental illnesses (SMI) experience numerous problems in their daily lives. Studies on employment, for instance, show that about 10–20% of people with SMI have regular paid employment, 50% work as volunteers or participate in organized day activities and approximately 40% have no paid or unpaid employment at all [1, 2]. Furthermore, a lack of social contacts and loneliness is common among people with SMI [3–5]. Therefore, in addition to medical and psychiatric treatment, these people are in need of services concerning psychiatric rehabilitation and societal participation [1-3].

Over the last two decades, mental health care organizations have applied several psychiatric rehabilitation practices [4, 5]. The goal of these practices is 'to help individuals with complex, longer term mental health problems to develop the emotional, social and practical skills needed to live, learn and work in the community with the least amount of professional support' [5-7]. Psychiatric rehabilitation is closely related to the concept of personal recovery. Personal recovery implies a client-oriented definition of recovery in which the emphasis lies more on personal development and growth than on symptom reduction. Important aspects of recovery are: hope, empowerment and the feeling of living a satisfying life despite symptoms of illness [8-16]. While recovery is an individual and subjective process, mental health care organizations can be recovery-oriented. The recovery of clients with SMI can be supported by, among other things, providing psychiatric rehabilitation services [5, 17].

Different approaches to rehabilitation have been developed to help people identify and achieve their own individual goals, including living independently, self-care, gaining and staying in employment, participating in routine educational settings, developing better relationships with their families, and pursuing leisure activities [18-21]. Comprehensive methods exist which focus on the personal goals and wishes of clients. Examples of well-known comprehensive rehabilitation methods are the Boston Psychiatric Rehabilitation (PR) approach [6] and the strengths model [22]. There are also rehabilitation methods which focus on a specific aspect of life, for example, 'Individual Placement and Support' (IPS) in which people are supported to gain and stay in competitive employment [23]. Finally, there are methods that aim at improving cognitive functioning or practical skills, e.g., cognitive remediation [24, 25] and cognitive adaptation training (CAT) [26, 27].

Internationally, there is an growing amount of evidence for the effectiveness of the aforementioned interventions on social functioning [5, 7, 19, 20, 23, 28]. Swildens and colleagues [29] found that, among clients who participated in the Boston PR approach, goal attainment and social functioning were significantly higher compared with clients in the control condition. Furthermore, IPS has a strong effect on vocational outcomes [23, 30, 31]. The strengths model is associated with positive results on different outcomes [32-34] including decreased hospitalization and improved quality of life and social functioning

[33, 35]. Although research on rehabilitation methods thus shows promising results, their effectiveness remains largely unknown. For example, few randomized controlled trials (RCTs) have been conducted to research the strengths model [32, 36], and several of these studies had methodological limitations such as small sample sizes and inadequate randomization [32, 37]. Furthermore, little is known about the effectiveness of these rehabilitation-oriented practices for clients of sheltered housing facilities [38].

In the Netherlands, a rehabilitation method that is well known and often applied in mental health care is the Comprehensive Approach to Rehabilitation (CARe) methodology. The overall goal of the CARe methodology is to support a client in his/her recovery and to improve his/her quality of life. The central principles of this approach are: realizing goals and wishes; handling vulnerability; and improving the quality of the client's social environment [44, 45]. The methodology is strongly influenced by the concept of 'personal recovery' and by the strengths model [28]. The CARe methodology is used in several mental health care organizations and organizations for sheltered and supported housing. It is suitable for all clients who experience psychosocial problems, regardless of the severity of their impairments or the phase of their recovery process. The CARe methodology is applied by multiple mental health care organizations and organizations for sheltered and supported housing in the Netherlands and abroad. However, no controlled studies have yet been executed on the CARe methodology [39]. The aim of this study was to investigate the effectiveness of the CARe methodology, which was implemented by means of training the professionals of the teams, on personal recovery, quality of life, social functioning, hope, empowerment, self-efficacy beliefs and care needs of people with SMI.

METHODS

Study design

This study was a two-armed cluster RCT, executed in teams selected from three organizations for sheltered and supported housing in the Netherlands. Randomization was applied at the team level and was stratified by organization. Professionals in the intervention group received the CARe training program; teams in the control group continued to offer 'care as usual'. The professionals and researchers were aware of the allocation of the conditions; clients could not be blinded but it was not explicitly pointed out to them which condition they were in. Outcomes were measured at baseline (T0), and at 10 (T1) and 20 months (T2) afterwards (see Figure 1) [39].

The study received ethical approval from the Medical Research Ethics Committee of the Elisabeth Hospital in Tilburg (NL41169.008.12). The trial registration number is ISRCTN77355880 (http://www.controlled-trials.com/ISRCTN77355880).

Setting

In dialogue with the national supported housing alliance, we selected three sheltered housing organizations with an articulated interest in training their employees in the CARe methodology that were invited to participate. These organizations, which were all situated in (semi-)urban areas, provide 'sheltered housing', including permanent supervision in (semi-) individual or group facilities, and supported independent living services including home-based support. Teams often provide both type of services and consist of social workers and nurses. The organizations are not responsible for the psychiatric treatment of their clients, which is provided by external mental health care organizations.

Intervention

The CARe methodology

The central aim of the CARe methodology is improving the quality of life of people with a psychological or social vulnerability. The CARe methodology addresses this aim in three ways: (1) realizing the client's wishes and goals; (2) handling vulnerability and reinforcing strengths; and (3) obtaining access to desired environments and improvement of the quality of the client's living environment and social networks. The CARe methodology is strongly influenced by the following concepts: the presence approach [40], the personal recovery movement [11], and the strengths model of case management [22, 41-43].

The CARe methodology consists of the following six steps:

1 Building a relationship with the client

In the CARe methodology the relationship between client and worker is seen as the basis of offering professional support. Central elements of this relation are: safety, active support and personal meeting. The presence approach of Baard [46] focusing on an equal relationship and frequent attendance is used.

2 Drawing up a 'strengths assessment'

The aim of using the strengths assessment is to create insight in the experiences, strengths and resources of a client on four personal (i.e., self-care, health, meaningfulness and social relations) and four life domains (i.e., living, working, learning and recreating). The experiences, strengths and resources of the past and in the present time are drawn up together with the client.

3 Helping the client to formulate his/her wishes and goals

The wishes of a client are the starting point. The worker supports the client in exploring and formulating his wishes. Based on the strengths assessment of step 2, formulates wishes and translates these in one or two concrete goals with support of the worker.

4 Helping the client to make a 'recovery worksheet'

In a 'recovery worksheet' concrete steps and activities are described to achieve the goals from step 3. It includes the role of others in the support system of the client.

5 Helping the client to execute the recovery worksheet

During the execution of the plan, handling and accepting vulnerabilities are topics a worker gives attention to. Besides that, there is attention for strengths of the clients. The professional's support in seeking connections in the environment, for example by improving the accessibility of a desired environment and creating support in the society.

6 Adjusting the recovery worksheet

The recovery worksheet is a 'living document'. The trajectory and the goals are evaluated and changed when needed. It is a repeating cyclic process that helps the client to grow in putting rehabilitation goals into action and adjust plans when required.

Training and coaching

The training consisted of seven meetings, i.e., three full-day theory meetings and four half-day 'training on-the-job'. Qualified trainers from a specialized training institute conducted these meetings. Box 1 shows the topics which were addressed in the training. After finishing the training, teams receive coaching every 4 to 6 weeks. During these coaching sessions the professionals discuss an example of a client in a methodical way. A trained CARe coach guided these sessions.

Care as usual

The teams in the control group did not receive the CARe training program. The workers in those teams continued working according to 'care as usual'. This implied working according to common practice. Several differences exist between care as usual and the CARe methodology. The most important difference between teams in the intervention group and teams in the control group teams was that the control teams did not work with the 'strengths assessment' and the 'recovery worksheet', which are seen as the central instruments of the CARe methodology. Besides that they were not be supported by the 'CARe coaching meetings'. Finally, teams in the control group were asked not to implement new practices oriented on recovery, rehabilitation or strengths during the study.

Box 1: Content of the CARe methodology training

- Theoretical principles of the CARe methodology: recovery, presence, strengths oriented working, social participation and using environmental resources.
- Building a partnership with a client and the basic principles of supporting clients.
- Connecting to the recovery process of a client.
- Inventorying the client's wishes and strengths and seeing possibilities to realise these.
- Formulating concrete goals with the client.
- Draw up plans: a personal plan for the client and a support plan for the professional.
- Introduction to the CARe Toolkit with specific tools for specific cases, for example an instrument to map a client's social network.

Recruitment of teams

Because rehabilitation practices are common in sheltered and supported housing facilities in the Netherlands, it was impossible to include teams that did not work according to any rehabilitation method at all. However, to study the effects of the CARe methodology in a randomized design, teams using as least as possible rehabilitation methodology were needed. These teams were selected in two steps. First, each participating organization was asked to make a selection of possible teams suitable for this study, teams in which (most of) the workers did not receive training in a rehabilitation method before or in which the use of rehabilitation principles were downgraded due to, for example, turnover of staff or poor implementation. Teams that were trained completely in the CARe methodology were excluded from this study. Second, a researcher (NB) interviewed the team leaders and made a definitive selection by means of the 'Quick Scan CARe', an instrument developed to map the general use of the CARe methodology principles in a team. Only teams with a very low score on this quick scan were included in the study and randomly allocated to the intervention or the control group. In total, 14 teams providing care to 631 clients were selected to participate in the study (Figure 1).

Recruitment of participants

Recruitment of clients took place between September 2012 and June 2013. The researchers sent an information brochure to all clients 18 years or older who were receiving services from one of the included teams. Subsequently, clients were approached by the researcher (NB) or via the staff for participation in the study. Participants were asked to give their informed consent in writing before the start of the first interview. Each participant was informed about his or her right to withdraw from the study at any time. Clients with too little knowledge of the Dutch language to fill in the questionnaire and/or clients who were unable to give informed consent or to participate in the study due to cognitive impairment or clinical symptoms were excluded.

Model fidelity

After 10 and 20 months of the training program, a comprehensive 'CARe methodology fidelity audit' was performed for all the teams to check the implementation level and the contrast between intervention and control teams. The audits were performed by the first author (NB) and a CARe expert; both received training in this audit from the developer. In this audit, the model fidelity was scored by means of interviews with three clients, three workers, team leader and CARe-coach and by a random check of three client files.

Outcomes

The following self-reported questionnaires were used to measure the outcomes.

Primary outcomes

Quality of life, social functioning and personal recovery were the primary outcomes, relating to the main goals of the CARe methodology. Quality of life was measured using the Manchester Short Appraisal (MANSA). The MANSA (α=0.74) consists of 12 subjective items with a seven-point Likert scale ('could not be worse'–'could not be better') [44, 45]. Social functioning was measured using the Social Functioning Scale (SFS). The scale (α= 0.80) consists of 19 items and four checklists on seven domains: social engagement/withdrawal, interpersonal behavior, pro-social activities, recreation, independence-competence, independence-performance and employment/occupation [46]. Personal recovery was measured by the Mental Health Recovery Measure (MHRM). The MRHM is a self-report instrument with 30 items. The MHRM is a reliable and valid instrument. The instrument comprises three subscales: 'self-empowerment' (α=0.90), 'learning and new potentials'(α= 0.86) and 'spirituality' (α=0.94). All items are rated using a five-point Likert scale that ranges from 'strongly disagree' to 'strongly agree' [13]. For quality of life and recovery, we calculated the mean score of the full scale; for social functioning, we calculated a sum score.

Secondary outcomes

Empowerment, hope, self-efficacy beliefs and need for care were the secondary outcomes. Empowerment was measured by the Dutch Empowerment Scale. This scale consists of 40 items distributed over six domains: professional help (α=0.81), social support (α=0.87), own wisdom (α=0.89), belonging (α=0.74), self-management (α=0.74) and involvement in community (α=0.81). The items are scored on a five-point Likert scale ranging from 'strongly disagree' to 'strongly agree' [47, 48]. Hope was measured by the Herth Hope Index (HHI), consisting of 12 four-point Likert scale items ranging from 'strongly disagree' to 'strongly agree'. The Dutch version of the HHI consists of two factors, each of six items: 'view on life and future' (α=0.8) and 'self-confidence and inner strength' (α=0.69) (overall α=0.84) [49, 50]. Health-related self-efficacy beliefs were measured by the Mental Health Confidence Scale (MHCS). This scale has 16 items with a six-point Likert scale ('totally no confidence'–'full confidence'). The instrument has three subscales: optimism (six items, α=0.87), coping (seven items, α=0.76) and advocacy (three items, α=0.93) [51, 52]. Need for care was measured by the 27-item version of the Camberwell Assessment of Needs Short Appraisal Schedule (CANSAS). With this instrument the client can score a health or social need as 'no need', 'fulfilled need' or 'unfulfilled need' [53]. Concerning empowerment, hope and self-efficacy beliefs, we calculated the overall mean score. Regarding needs for care, we calculated the total amount of 'unmet needs'.

Additional and control outcomes

The following demographic variables were measured: age, gender, marital status, employment status and living situation. Additionally, the key workers of the participating clients were asked to answer questions regarding the psychiatric diagnosis (DSM IV) of the

client and the amount of contact they had with the client (hours per day and/or week). Psychiatric symptomatology was measured by use of the client-rated Brief Symptom Inventory (BSI). This is a 53-item self-report questionnaire (α= 0.96). This instrument assesses clinical symptoms during the past week. The items are rated using a five-point scale, ranging from 'not at all' to 'extremely'. The BSI has nine subscales: somatisation, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobia, paranoia and psychoticism [54]. The client-rated Recovery Promoting Relationship Scale (RPRS) (α=0.80) was used to measure to what extent the client experiences the relationship with his or her key worker as supporting his/her recovery. The scale consists of 24 items with a four-point Likert scale ranging from 1 (strongly disagree) to 4 (strongly agree) and with five indicating not applicable [55]. The workers' knowledge of recovery was measured by use of the staff-rated Recovery Knowledge Inventory (RKI) (α=0.80). The RKI consists of 20 items (scored on a five-point Likert scale ranging from strongly disagree to strongly degree) [55, 56].

Statistical analysis

Sample size was calculated taking into account the design effect (due to group randomization) and the expected effect size. The sample size calculation was based on the measures with the strongest expected effect size according to comparable studies [48, 51]. Within the duration of the study of 20 months these were: empowerment (d=0.38) and hope (d=0.50). The design effect used is estimated to be 1.5 based on an average cluster size of 38 clients and an intra-cluster correlation (ICC) of 0.013. Based on the effect size of empowerment (d=0.38; the lowest of the two above mentioned), this design effect, and a planned power of 0.80 using a two-sided test, a sample of 128 clients per condition was calculated to be needed. Assuming a loss of 20% due to follow up, we aimed to recruit 160=clients per condition.

Descriptive statistics for both intervention and control groups were computed separately and differences were tested using *t*-tests for continuous and χ^2-tests for discrete variables. Subsequently, we used a linear mixed modeling (procedure MIXED in SPSS 22) to test our main hypotheses. The advantage of mixed models over more traditional approaches ((M)ANOVA) is that linear mixed modeling can accommodate missing values and time-varying covariates.

For each of the outcome variables, several mixed models were tested. All models had the same covariance structure, a random effect of 'team' taking into account team effects and a compound symmetry covariance structure for time. We first estimated the ICC for both team and participants within one team. Subsequently, two models were fitted, one with only main effects of time and intervention, and the second with the time × intervention interaction as well. The interaction tests the effectiveness of the intervention over time. The interaction was tested two-tailed by comparing the -2 log likelihood of the models. The two models were fitted both without covariates and with covariates (age, gender,

having a partner, symptoms, amount of support, recovery-promoting relationship and recovery knowledge of the professionals). Because effects of covariates were observed for all variables, only the results of the model with covariates were reported. If the interaction was statistically significant at .05, we checked using simple slope analysis how the effect of the intervention group differed from the control group over time.

RESULTS

Teams

The overall mean score on the model fidelity (% possible achievable points) at T1 was 53.4% for the intervention group and 33.4% for the control group. At T2 this was 50.6% for the intervention group and 37.2% for the control group.

Clients

Figure 1 shows the flowchart of the study. In total, 263 clients agreed to participate in the study: 152 in the intervention group and 111 in the control group. At the first follow up, 81% were still included; at the second follow up this was 68%. The intervention group consisted of a significantly higher number of clients who lived in a sheltered living facility ($p<.001$) using a significantly higher amount of support ($p<.001$) in comparison with the control group. No other differences were observed (see Table 1).

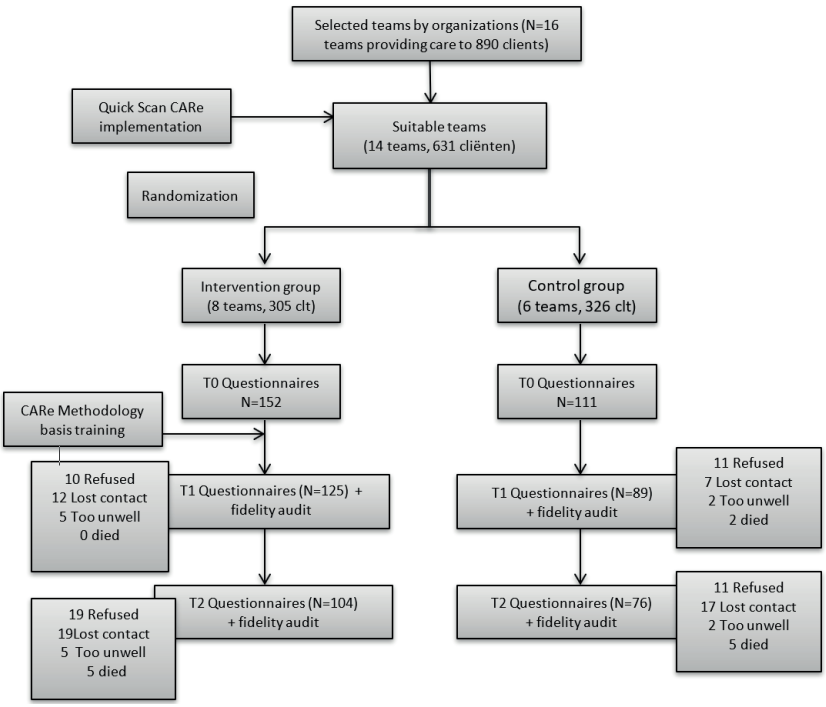

Figure 1: Flowchart of the study

Table 1: Client characteristics at baseline (N= 263)

	Intervention (N=152)		Control (N=111)	
Characteristic	**N**	**%**	**N**	**%**
Mean Age (SD)	50.76	(14.29)	49.36	(13.25)
Male	98	65	72	65
Having a partner	18	12	19	17
Nationality				
Born in the Netherlands	129	85	95	86
Other	23	15	16	14
Type of care[a]				
Sheltered living	125	83	65	59
Supported independent living	26	17	46	41
Work situation				
Paid work	4	3	5	5
Sheltered work	11	7	12	11
No work	82	54	66	60
Voluntary work	40	26	24	22
Retired	11	7	3	3
Amount of support[a]				
>daily	97	69	47	47
>weekly	25	18	30	30
once a week	10	7	21	21
<weekly	8	6	2	2
Primary outcomes	**M (SD)**		**M (SD)**	
Quality of life (N=262)	4.08 (.70)		3.93 (.67)	
Social functioning (N=263)	112.13 (24.76)		109.57 (23.21)	
Personal recovery (N=262)	3.52 (.55)		3.41 (.48)	
Secondary outcomes	**M (SD)**		**M (SD)**	
Hope (N=262)	2.91 (0.38)		2.84 (.38)	
Empowerment (N=242)	3.64 (0.48)		3.60 (.49)	
Self-efficacy (N=240)	4.41 (0.91)		4.36 (.76)	
Needs (N=254)				
Unmet needs	3.95 (3.16)		4.45 (2.83)	
Met needs	8.34 (3.16)		7.80 (3.22)	
No needs	14.53 (3.33)		14.59 (3.42)	
Covariates	**M (SD)**		**M (SD)**	
BSI (N=257)	.71 (.62)		0.82 (.63)	
RPRS (N=230)	3.49 (.61)		3.62 (.53)	

[a] type of facility and amount of support differed significantly (p<.001) between the groups. On other variables, the groups did not differ significantly.

Preliminary analysis

Means, standard deviations, sample sizes and Cohen's d for all measures at T0, T1 and T2 are shown in Table 2. On T1, a small to medium significantly different change score between the intervention and control group was found on both quality of life (Cohen's d = .373; p = .01) and unmet needs (Cohen's d = .316; p = .03) in favor of the intervention group. On T2, no differences were found.

Table 2: Means (SD) at baseline and at 10 and 20 months assessments

	T0		T1			T2		
Primary outcomes	Intervention	Control	Intervention	Control	Cohen's d[a]	Intervention	Control	Cohen's d
Quality of life	4.08 (.70) N=152	3.93 (.67) N=110	4.15 (.66) N=124	3.89 (.70) N=88	.0.373 t(210)=2.71 p=.01	4.57 (.95) N=104	4.53 (.75) N=76	0.051 t(178)=.33 p=.74
Social functioning	112.13 (24.76) N=152	109.57 (23.21) N=111	107.86 (26.92) N=125	108.57 (23.89) N=89	-.028 t(212)=-.20 p=.84	111.78 (22.93) N=104	115.87 (24.96) N=76	-.170 t(178)=-1.14 p=.26
Personal recovery	3.52 (.55) N=152	3.41 (.48) N=110	3.55 (.44) N=125	3.44 (.57) N=89	.212 t(212)=1.59 p=.11	3.58 (.46) N=104	3.46 (.51) N=76	.259 t(178)=1.74 p=.08
Secondary outcomes								
Hope	2.91 (.38) N=152	2.84 (.38) N=110	2.89 (.34) N=123	2.84 (.39) N=89	.148 t(210)=1.09 p=.28	2.92 (.35) N=103	2.87 (.36) N=75	.143 t(176)=.95 p=.35
Empowerment	3.64 (.48) N=139	3.60 (.49) N=103	3.67 (.39) N=111	3.57 (.54) N=82	.215 t(141)=1.42 p=.16	3.67 (.41) N=99	3.67 (.49) N=73	.070 t(170)=.44 p=.66
Self-efficacy	4.41 (.91) N=139	4.36 (.76) N=101	4.51 (0.62) N=112	4.35 (.81) N=81	.227 t(144)=1.59 p=.14	4.43 (.73) N=97	4.42 (.73) N=70	.004 t(165)=.03 p=.98
Unmet needs	3.95 (3.16) N=149	4.45 (2.83) N=106	3.16 (2.3) N=117	4.0 (3.04) N=89	.316* t(159)=-2.14 (P=.03)	2.18 (2.31) N=101	2.85 (.79) N=72	.252 t(171)=-1.72 p=.09

[a] Cohen's d corresponds to the difference in change scores from baseline between the intervention and control group. Cohen's d is positive if it is in the expected direction.

Mixed modeling

The ICC for 'team' was .284 for social functioning and varied between .000 and .030 for the other variables. Therefore, a random effect of team was only included in the analysis of social functioning. The participants ICCs were between .571 and .675, demonstrating much larger systematic individual differences in the outcomes (Table 3 and 4, row 'ICC team' and 'ICC participants').

The effect of the intervention team at T1 and T2 was not different from that of care as usual-team (Table 3 and 4 row 'intervention x time'). Quality of life (Table 3) increased (B=.51 (p<.001)) and the amount of unmet needs (Table 4) decreased significantly (B=.31 (p<.001)) in both groups. The CARe training program intervention had no effect on the outcomes (Table row 'intervention'). The results retained after controlling for background variables (age, gender, having a partner, symptoms, amount of support, recovery-promoting relation and recovery knowledge of professionals) (Table 3 and 4). Concerning

the influence of background variables, BSI and RPRS had a respectively negative and positive effect on all outcomes. Age had a negative effect on social functioning. Gender (male) had a positive effect on hope, empowerment and self-efficacy. Having a partner had an effect on social functioning and hope. The amount of support and recovery knowledge of the team had a respectively positive and negative effect on social functioning.

Table 3: Mixed modeling analysis testing the effect of the CARe methodology on primary outcomes

	Quality of life			**Personal recovery**			**Social functioning**		
ICC team[a]	.030			.007			.284		
ICC participants	.602			.652			.673		
Model	**Test**	**P**	**95%CI**	**Test**	**P**	**95%CI**	**Test**	**P**	**95%CI**
Time	F=22.37	.00		F=2.87	.06		F=2.05	.13	
T1	B=.04	.45	-.07-.15	B=.03	.44	-.04-.10	B=.38	.80	-2.53-3.30
T2	B=.51	.00	.35-.66	B=.12	.02	.02-.22	B=4.22	.05.	.01-8.42
Intervention	B=.06	.52	-.14-.27	B=.09	.10	-.02-.20	B=4.67	.07	-.32-9.66
Intervention x time[b]	X^2=4.46	.11		X^2=1.28	.53		X^2=4.64	.10	
Covariates[c]									
Age	B=.00	.18	.00-.01	B=.00	.92	-.00-.00	B=-.96	.00	-1.13--.78
Gender	B=.08	.31	-.08-.25	B=-.08	.17	-.20-.03	B=5.23	.05	-.07-10.53
Partner	B=.06	.51	-.11-.22	B=.09	.12	-.02-.21	B=5.4	.03	.50-10.37
Symptoms	B=-.55	.00	-.66--.44	B=-.31	.00	-.39--.24	B=-9.72	.00	-13.06—6.39
Amount of support	B=-.01	.79	-.09-.07	B=-.01	.64	-.07-.04	B=4.70	.00	2.29-7.11
Recovery knowledge team	B=-.20	.29	-.58-.17	B=-.10	.44	-.34-.15	B=-11.28	.03	-21.64--.93
Recovery promoting relationship	B=.33	.00	.21-.44	B=.24	.00	.16-.32	B=4.71	.01	1.22-8.19

[a]Intra-Class Correlation for team and participants.

[b]Effect of the intervention. The chi-square values are values of the deviance or likelihood ratio test.

[c]The effects of the included covariates.

Table 4: Mixed modeling analysis testing the effect of the CARe methodology on secondary outcomes

	Hope			Empowerment			Self-efficacy			Unmet Needs		
ICC team[a]	.03			.00			.01			.03		
ICC participants	.59			.57			.67			.48		
	Test	**P**	**95% CI**	**Test**	**P**	**95% CI**	**Test**	**P**	**95% CI**	**Test**	**P**	**95% CI**
Time	F=1.80	.16		F=1.51	.23		F=.32	.73		F=10.07	.00	
T1	B=.00	.96	-.06-.06		.14	-.12-.02		.45	-.07-.15		.24	-.82-.21
T2	B=-08	07	.00-.16	B=-.05	.70	-.08-.11	B=.04	.99	-.16-.16	B=-.31	.00	-2.34- -.91
Intervention	B=.03	.49	-.07-.13	B=.02	.96	-.09-.09	B=.00	.98	-.17-.18	B=-1.63	.65	-.69-.43
Intervention x time[b]	X^2=.22	.90		X^2=1.99	.37		X^2=3.63	.16		X^2=.73	.70	
Covariates[c]												
Age	B=-.00	.80	.00-.00	B=.00	.07	-.00-.01	B=.00	.85	-.01-.01	B=-.01	.19	-.03-.01
Gender	B=-.13	.00	-.22--.04	B=-.13	.01	-.23--.03	B=-.30	.00	-.48--.11	B=-.48	.11	-1.08-.12
Partner	B=.09	.05	.001-.18	B=.02	.72	-.08-.12	B=.16	.09	-.03-.34	B=-.12	.74	-.83-.59
Symptoms	B=-.23	.00	-.29--.17	B=-.31	.00	-.38---.24	B=-.70	.00	-.82--.58	B=2.48	.00	2.04-2.90
Amount of support	B=-.03	.21	-.07-.02	B=-.01	.65	-.06-.04	B=.00	.93	-.08-.09	B=-.09	.56	-.41-.23
Recovery knowledge team	B=-.02	.84	-.22-.18	B=.01	.95	-.22-.23	B=-.29	.14	-.68-.09	B=-1.09	.18	-2.66-.49
Recovery promoting relationship	B=.15	.00	.09-.21	B=.38	.00	.32-.45	B=.29	.00	.16-.42	B=-.49	.03	-.94--.04

[a]Intra-Class Correlation for team and participants.

[b]Effect of the intervention. The chi-square values are values of the deviance or likelihood ratio test.

[c]The effects of the included covariates.

DISCUSSION

We examined the effectiveness of training teams of professionals in the CARe methodology on clients of sheltered and supported housing services. Clients improved on quality of life and amount of unmet needs. However, clients of the intervention group did not improve more than clients of teams in the control group measured after 10 and 20 months. This indicates that, in this study, the CARe methodology did not lead to better rehabilitation for clients of supported housing facilities.

There are three relevant discussion points. First, although the CARe training program was provided as meant, and a difference in model fidelity was measured between the control and intervention teams 10 and 20 months after the training, the overall fidelity of the CARe methodology in the intervention teams was limited: it did not exceed 60% at both times. Although, we cannot be sure that higher implementation is possible as there are no other studies on the CARe methodology, there is a change that we cannot ignore that a higher fidelity in CARe would lead to better outcomes. Implementation is a consistent problem in (mental) health care research [57-59]. Barriers in an implementation process can occur at organizational, team and individual levels [60, 61]. In our study, all participating organizations went through reorganizations and budget cuts during the research period, which may have negatively influenced the implementation process on all levels. Participating staff members mentioned factors such as changes in staff and management, a negative work climate and lack of practical and moral support from the organization. Nevertheless, in future research more attention is needed on how this methodology can be implemented more effectively and on methods that can be used to properly monitor and control this implementation process.

A second explanation for our findings might be the characteristics of the CARe methodology itself. Earlier research on other rehabilitation approaches indicated that elements of effective psychiatric rehabilitation are: focusing on the specific skills that are needed in a certain environment and actual access to that desired environment as soon as possible [62]; integrating rehabilitation and psychiatric treatment; and combining skills training and offering support [62, 63]. In the CARe methodology, these aspects are not elaborated explicitly. Nevertheless, much is still unknown on how people with SMI can be supported in their rehabilitation successfully. In order to develop psychiatric rehabilitation and the CARe methodology, it is necessary to conduct more research on the specific efficacious elements of rehabilitation practices [64, 65].

Third, the participating clients might have such severe impairments that this intervention is not strong enough to support them in their recovery and participation. Some studies on psychiatric rehabilitation interventions showed small positive results; these all concerned methods focusing on a selective group of motivated clients with concrete goals [29, 30]. In the CARe methodology, motivation and being capable to formulate goals were not eligibility requirements. Besides that, the intervention group

consisted of relatively more clients of a sheltered facility. This may indicate that the group consisted of more vulnerable clients than the control group. However, in none of the outcomes and control variables on baseline significant differences were found between both groups. Thus, although we cannot exclude that group differences in type of accommodation affected the results, our data do not indicate that this is the case. Despite this, it is encouraging that the quality of life of clients participating in this study increased in the total group, although none of the other outcomes improved over time (personal recovery, societal participation, hope, empowerment and self-efficacy). This might indicate that it takes more time and effort to increase recovery and participation for these people. More research is needed on how to support this specific group of people with long-term impairments of whom several have lost their motivation and goals in life [57].

This study is the first effect study on the CARe methodology and one of the few studies with a control group on a comprehensive rehabilitation method or strengths based approach [25, 38]. This study is of high relevance because recovery and rehabilitation oriented care has become increasing important for mental health care organizations, especially nowadays as de-institutionalization and participation in society is increasingly being encouraged [14, 43, 67]. Strength of the study is that a large and diverse group of clients with long-term SMI participated, a group that is often difficult to reach in research. The fidelity assessment is another strength giving a clear indication of the implementation rate that was achieved by training the teams in the intervention group.

Although it is a strength that this study was executed in real care settings, this has also led to some limitations. First, as rehabilitation and recovery oriented working is increasingly common practice in mental health care, it was not possible to select teams with no experience in this respect. Even though we controlled the selection process by using a quick scan, we cannot guarantee that the control condition was totally blank. Another weakness is the fact that the interviewers and fidelity auditors were not blinded. Furthermore, the targeted recruitment was not achieved and the attrition rate was somewhat higher than expected. Finally, because the achieved sample size was lower than the planned sample size, the actual power of our analyses was lower than intended (0.64 instead of 0.8).

CONCLUSIONS

This is the first study on the effectiveness of the CARe methodology. And one of the few studies with a control group on a comprehensive rehabilitation method or strengths based approach executed in a sheltered facility for people with long-term severe impairments. An extensive training program in the CARe methodology for teams of sheltered and supported housing facilities did not lead to more improvement in clients on quality of life, personal recovery and social functioning, served by these teams compared with clients of teams that did not receive such training. Nevertheless, clients in both groups improved on quality of life and amount of unmet needs. The difficulty of implementation of rehabilitation methods and the complexity of changing lives of persons with longstanding and severe problems are important explaining factors. It is recommended to conduct more research on how to overcome these difficulties in order to enlarge the quality of life of people with long-term and severe mental illness.

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PART 2

The needs for care and availability of interventions for clients of sheltered facilities

CHAPTER 5

Identifying profiles of service users in housing services and exploring their quality of life and care needs

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ABSTRACT

Background Housing services aim to support people with mental illness in their daily life and recovery. As the level of recovery differs between service users, the quality of life and care needs also might vary. However, the type and amount of care and support that service users receive do not always match their recovery. In order to improve the quality of care, this study aims to explore whether subgroups of service users exist based on three dimensions of recovery and to examine and compare the quality of life and care needs of the persons in these subgroups.

Methods Latent class analysis was performed with data from 263 service users of housing services in the Netherlands. Classes were based on three variables: personal recovery (Mental Health Recovery Measure), social recovery (Social Functioning Scale), and clinical recovery (Brief Symptom Inventory). Subsequently, the quality of life (MANSA) and care needs (CANSAS) of the different classes were analysed by the use of descriptive and inferential statistics.

Results Three classes could be distinguished. Class 1 (45%) comprised of people who score the highest of the three classes in terms of personal and social recovery and who experience the least number of symptoms. People in class 2 (44%) and class 3 (11%) score significantly lower on personal and social recovery, and they experience significantly more symptoms compared to class 1. The distinction between class 2 and 3 can be made on the significantly higher number of symptoms in class 3. All three classes differ significantly on quality of life and unmet needs.

Conclusions The quality of life of service users of housing services needs improvement, as even persons in the best-recovered subgroup have a lower quality of life than the average population. Workers of housing services need to be aware of the recovery of a client and what his or her individual needs and goals are. Furthermore, better care (allocation) concerning mental and physical health and rehabilitation is needed. Care should be provided on all dimensions of recovery at the same time, therefore mental health care organisations should work together and integrate their services.

INTRODUCTION

Since the mid-twentieth century the importance of long-term mental health care in a hospital setting has lost ground in the Western world. Influenced by national policies, traditions and resources, different countries have gone through different processes of deinstitutionalisation [1, 2]. This has led to a broad range of services characterised by a strong emphasis on community mental health care and an increase of housing services for people with severe mental illness (SMI) [3-7]. These services support service users in their daily lives and aim to support them in their recovery. In practice, their support mostly addresses practical daily care and nursing, but also assists the service users with engaging in meaningful daily activities and societal participation [8, 9]. Nevertheless, these people still report several unmet needs [10]. According to Slade et al. (2005) mental health needs 'include broad domains of health and social functioning, which are necessary to survive and prosper in the community'. The fulfilment of needs is related to a person's quality of life, as quality of life is a result of a persons degree of satisfaction with major life domains [11]. In several studies, unmet needs appeared to be associated with a lower quality of life [12-16]. Furthermore, the societal participation of service users is limited. For example, 10–20% have regular employment and 40% have no paid or voluntary work at all [17, 18]. Hence, we can conclude that housing services can still improve the quality of care for their service users.

Previous studies have demonstrated that the type and amount of care and support that service users receive do not always match their recovery. For example, service users who live in staffed sheltered facilities have comparable levels of functioning and problem severity compared to service users receiving outpatient housing support [17, 19]. This raises the questions of to what extent housing services provide the appropriate support to their users and to what extent the recovery needs of these service users are met. An earlier study [20] showed that service users of housing services experienced the most unmet needs with respect to mental and physical health and social contacts. This study also showed that workers and service users have different perspectives on unmet needs. Needs concerning social contacts and meaning in life appeared to be less frequently reported in treatment plans than were needs concerning self-care. Apparently, a discrepancy exists between the experienced needs of service users and the actual support provided. The present study, therefore, focuses on the needs and quality of life of these service users and to what extent these are related to their recovery.

Housing services aim to provide 'recovery oriented care'. Several experts have described that recovery contains multiple dimensions, both objective and subjective [21-24]. An example of a classification that is often used in the Netherlands is the trichotomy – clinical, social and personal recovery [23, 25]. Clinical recovery refers to a decrease in clinical symptoms such as hallucinations, anxiety or depressive feelings [26].

Social recovery is about regaining everyday functioning, for example in work, social relationships, housing and family life [27]. Personal recovery refers to a person's own experience of his/her recovery; it is about hope, empowerment, self-determination and regaining the identity of someone who is living a meaningful life despite the presence of symptoms [21, 28, 29]. A recovery process is very personal and can fluctuate [30] and the dimensions influence each other constantly. Therefore, treatment and support for people with SMI mental illness should focus on all three dimensions of recovery [25], and should be centred around their individual needs and quality of life [31].

In order to improve the quality and focus of support of community-based services, it is important to gain a better understanding of the recovery of their users, their corresponding needs and perceived quality of life. Therefore, the aim of this study is to explore whether subgroups exist based on three dimensions of recovery (clinical, personal and social), as well as to examine the quality of life and care needs within and between these subgroups.

METHODS

Procedure

This study was part of a clinical trial on the effectiveness of the Comprehensive Approach to Rehabilitation (CARe) Methodology, which is being executed in 14 teams selected from three organisations for housing services in the Netherlands [32]. In the Netherlands, practical support on the field of daily living and participation for people with SMI is often offered by housing services. They do not provide the service users' medical and psychiatric treatment. Most service users receive treatment from multidisciplinary community treatment teams from local mental health care organisations. Housing services offer several forms of housing. Sheltered housing is a residential facility with 24-hour supervision. Supported independent living is a service for people who live on their own and receive just a couple of hours of support per week for certain domains. The participating teams all provide sheltered housing and/or supported independent living services. To inform service users about the study, an information meeting at each facility was organised and all service users received an information brochure. Subsequently, service users were approached individually by the researcher or via the staff to take part in an interview. Beforehand participants were asked to sign an informed consent to take part in the study and to permit use of their information. Each participant received information about his or her right to withdraw from the study at any time. The study received ethical approval from the Medical Research Ethics Committee of the Elisabeth Hospital in Tilburg (NL41169.008.12). The trial registration number is ISRCTN77355880 (http://www.controlled-trials.com/ISRCTN77355880).

Participants

Participants were recruited between September 2012 and April 2013 in 14 teams providing services to 631 people (all 18 years and older). Exclusion criteria for the study were: too little knowledge of the Dutch language to fill out the questionnaire and/or being unable to give informed consent due to cognitive impairment or clinical symptoms. In total, 263 people agreed to participate and met the inclusion criteria. Participants and non-participants did not differ significantly on gender, age and diagnosis.

Measures

Measures were chosen that met the aims of recovery-oriented care, were subjective and client-rated in nature and had good psychometric properties.

- **Personal recovery** was measured using the Dutch version of the Mental Health Recovery Measure (MHRM), an instrument developed to assess the recovery process [33]. The MRHM is a self-report instrument with 30 items. The Dutch version is comprised of three subscales: 'self-empowerment' (α=0.90), 'learning and new potentials' (α= 0.86) and 'spirituality' (α=0.94) [33]. All items are rated using a five-point Likert scale that ranges from '*strongly disagree*' to '*strongly agree*'.
- The Social Functioning Scale (SFS) was used to measure **social recovery**. The client-rated scale (α= 0.80) consists of 19 items and four checklists on seven domains: social engagement/withdrawal, interpersonal behaviour, pro-social activities, recreation, independence-competence, independence-performance and employment/ occupation [34].
- **Clinical recovery** was measured by use of the Brief Symptom Inventory (BSI) [35, 36]. This is a 53-item self-report questionnaire (α= 0.96). This instrument assesses clinical symptoms during the past week. The items are rated using a five-point scale (0–4), ranging from '*not at all*' to '*extremely*'. The BSI has nine subscales: somatisation, obsessive-compulsive, interpersonal sensitivity, depression, anxiety, hostility, phobia, paranoia and psychoticism. The total of all items is calculated as a total score of psychological functioning [35].
- **Quality of life** was assessed using the Manchester Short Appraisal (MANSA), an instrument to measure quality of life in people with mental illness. The MANSA (α=0.74) consists of 12 subjective items with a seven-point Likert scale ('*could not be worse*' – '*could not be better*'). Besides the subjective questions on satisfaction, the MANSA contains four yes/no questions, for example, about the presence of a good friend [37, 38].
- **Need for care** was measured using a 27-item client-rated version of the Camberwell Assessment of Needs Short Appraisal Schedule (CANSAS). With this instrument, the service user can score a health or social need as '*no need*', '*met need*' or '*unmet need*' [39].

- The following **demographic variables** were collected: age, gender, marital status, employment status and living situation. These demographics were measured by use of a client-rated form developed for the study. The key workers were asked to fill out a form with questions about the diagnosis and care use of the service user.

Analysis

Latent Class Analysis (LCA) [40] was used to identify subgroups of service users based on three critical dimensions of recovery: personal recovery, social recovery and clinical recovery. These dimensions were operationalised by, respectively: MHRM (measuring personal recovery), SFS (measuring social functioning) and BSI (measuring clinical symptoms). LCA is a statistical and probabilistic, method that can be used to classify individuals from a heterogeneous population into smaller more homogenous unobserved subgroups.

The analysis consisted of two steps. The first step was determining the number of classes based on the three dimensions of recovery. Model fit indices were used to select the model with the most suitable number of clusters. The Bayesian Information Criterion (BIC) and the Aikake Information Criterion 3 (AIC3) were used for this purpose. These measures provide information about the relative quality and the parsimony of a statistic model. The BIC and AIC have the lowest values on the best model [41, 42]. Furthermore, the classification error was taken into account; this value represents the chance that a participant is assigned to the wrong class. Finally, we looked at the bivariate residuals. These should be < 4, as bivariate residuals > 4 imply a possible correlation between the included variables. The LCA was conducted with Latent Gold [43].

The aim of the second step was to map the classes in terms of care needs and quality of life and demographics. Furthermore, the extent to which the classes differ significantly on these variables was tested. For continuous variables, analysis of variance (ANOVA) was used. For categorical variables, chi-square tests were used. A p-value < 0.05 was used to indicate statistical significance. These analyses were executed with SPSS 19.0. Furthermore, effect sizes (Eta squared for ANOVA and Cramer 's V for the chi-square tests), were calculated and reported.

RESULTS

Results of the LCA

We compared the fit indices of the models with one to seven clusters. Table 1 shows the results of this analysis. The three-cluster model was chosen as the most appropriate solution based on the clinical interpretation and the following criteria. The BIC (3229.9668) and the AIC3 (3178.5238) are the lowest for the three-cluster model. The classification error for this model is 0.1642, which is acceptable. Moreover, the bivariate residuals were below four.

Table 1: Result Latent Class Analysis (N=263)

		LL	BIC (LL)	AIC3 (LL)	No of parameters	Class. Err.
Model 1	1 cluster	-1652.9335	3339.2999	3323.8670	6	0.0000
Model 2	2 cluster	-1579.0862	3230.6104	3197.1724	13	0.1194
Model 3	**3 cluster**	**-1559.2619**	**3229.9668**	**3178.5238**	**20**	**0.1642**
Model 4	4 cluster	-1549.4542	3249.3565	3179.9084	27	0.2164
Model 5	5 cluster	-1541.5716	3272.5965	3185.1433	34	0.2036
Model 6	6 cluster	-1532.2652	3292.9887	3187.5303	41	0.2012
Model 7	7 cluster	-1526.4417	3320.3468	3196.8834	48	0.1932

Class descriptions

The mean age of the whole group of participants was 50; 65% of them were male (Table 2). At 51%, psychotic disorder was the most reported diagnosis. A total of 72.5% of the participants lived in a supported housing facility and 27.5% received supported independent living services. Concerning the demographics (Table 3), no significant differences were found between the classes (age, having a partner, living situation, work situation, diagnosis and amount of contact with workers), with the exception of gender. Class 3 contains a higher percentage of women (66%; p<.001) than do the other classes (29% in class 1 and 34% in class 2).

Table 3 shows the mean scores of the three recovery measures for each class. Class 1 (45% of the respondents) represents service users who have the highest scores on social functioning (SFS=120.4) and personal recovery (MHRM=3.85) and the lowest scores on symptoms (BSI=0.32). The service users in class 2 (44% of the respondents) score significantly lower on social functioning (SFS=105.5) and personal recovery (MHRM=3.21) than do the service users in class 1 and higher on symptoms (BSI=0.87). The service users in class 3 (11% of the respondents) have the lowest scores on social functioning (SFS=95.14) and personal recovery (MHRM=3.03) and the highest scores on symptoms (BSI=2.1). All three classes differ significantly (p<.001) on clinical symptoms (respondents in class 1 showing the fewest number of symptoms); this difference is also the strongest (eta squared=0.76). Service users in class 1 differ significantly from users in classes 2 and 3 on all three dimensions of recovery (p<.001). Classes 2 and 3 differ significantly on symptoms (P<.001), and not on social functioning and personal recovery.

Table 2: Descriptive variables per class (N=263)

	Whole sample N=263	Class 1 n=118 (45%)	Class 2 n=116 (44%)	Class 3 n=29 (11%)	p
Age (mean ± SD)	50.16 (13.85)	48.22 (13.38)	51.44 (13.47)	52.93 (16.44)	ns
Gender					
Male	170 (65%)	84 (71%)	76 (66%)	10 (34%)	<.001
Female	93 (35 %)	34 (29%)	40 (34%)	19 (66%)	
Partner					ns
Yes	37 (14%)	12 (10%)	19 (16%)	6 (21%)	
No	226 (86%)	106 (90%)	97 (84%)	23 (79%)	
Living situation					ns
Supported housing	190 (72.5%)	92 (78%)	79 (68%)	19 (68%)	
Supported independent living	72 (27.5%)	26 (22%)	37 (32%)	9 (32%)	
Work					ns
Paid work	9 (3%)	6 (5%)	1 (1%)	2 (7%)	
Sheltered work	23 (8%)	15 (13%)	6 (5%)	2 (7%)	
No work	148 (56%)	56 (48%)	74 (64%)	18 (62%)	
Unpaid work	64 (24%)	34 (29%)	26 (29%)	4 (14%)	
Retired	14 (5%)	5 (6%)	7 (6%)	2 (7%)	
Diagnosis					ns
Psychotic disorder	124 (51%)	59 (57%)	51 (47%)	14 (50%)	
Mood disorder	23 (10%)	8 (8%)	13 (12%)	2 (7%)	
Anxiety disorder	10 (4%)	3 (3%)	5 (5%)	2 (7%)	
Autism spectrum disorder	18 (7%)	8 (8%)	6 (6%)	4 (14%)	
Personality disorder	23 (10%)	7 (7%)	12 (11%)	4 (14%)	
Substance use disorder	12 (5%)	3 (3%)	8 (7%)	1 (4%)	
Other/none	6 (2%)	3 (3%)	1 (1%)	1 (4%)	
Contact with housing service					ns
≥Once a day	144 (60%)	59 (56%)	68 (63%)	17 (63%)	
>Once a week	55 (23%)	29 (28%)	20 (19%)	6 (22%)	
Once a week	31 (13)%	14 (13%)	13 (12%)	4 (15%)	
<Once a week	10 (4)%	3 (3%)	7 (7%)	0 (0%)	

Compared with norm scores of the BSI, service users in class 1 (mean 0.32) have fewer clinical symptoms than do outpatients (norm score = 0.44–0.86) and slightly more than do non-patients (norm score = 0.15–0.29). Service users in classes 2 and 3 experience, respectively, a comparable number (mean 0.87) and more (mean 2.1) clinical symptoms than do outpatients [44].

Table 3: Scores on measures per class and significant differences between the classes (N=263)

	Whole sample N=263	Class 1 n=118 (45%)	Class 2 n=116 (44%)	Class 3 n=29 (11%)	Eta square	p
Included in the LCA						
SFS (N=263)	111.05 (24.1)	120.4 (21.0)[a]	105.51 (23.9)[b]	95.14 (22.1)[b]	0.14	<.001
MHRM (N=262)	3.48 (0.52)	3.85 (0.39)[a]	3.21 (0.37)[b]	3.03 (0.53)[b]	0.42	<.001
BSI (N=257)	0.76 (0.62)	0.32 (0.2)[a]	0.87 (0.32)[b]	2.1 (0.53)[c]	0.76	<.001
Included in post-hoc analysis						
MANSA	4.02 (0.69)	4.43 (0.52)[a]	3.74 (0.58)[b]	3.44 (0.74)[c]	0.31	<.001
CANSAS Unmet needs	4.16 (3.03)	2.81 ((2.21)[a]	4.85 (2.97)[b]	7.07 (3.37)c	0.22	<.001
CANSAS Met needs	8.12 (3.19)	8.44 (3.02)	7.88 (3.03)	7.71 (4.31)	-	ns
CANSAS No needs	14.55 (3.36)	15.56 (3.56)[a]	14.09 (2.81)[b]	12.14 (2.90)[c]	0.11	<.001

- Classes with different characters (a, b, c) significantly differ on the indicated variable. p<.05; classes with similar characters do not differ from each other.
- Interpretation Eta squared: .02=small; .13=medium; .26=large

Care needs

With regard to the number of 'met needs' (needs for which a person receives care or support), no significant differences between the three groups were found. The average number of met needs is around eight in all classes. Concerning the number of 'unmet needs' and the number of 'no needs', significant differences exist between the three groups (p<.001) (Table 3). Service users in class 1 have the lowest average number of unmet needs (i.e. three). Service users in class 2 have five and users in class 3 have seven unmet needs. When comparing the groups on the percentage of service users (%) for whom a certain need is unmet (Table 4), the strongest differences exist in the needs with regard to 'psychological distress' (class 1: 11.3%, class 2: 39.4%, class 3: 78.6%) and 'safety for self' (class 1: 0.0%, class 2: 7.3%, class 3: 35.7%). Furthermore, a strong difference is visible concerning the need 'meaning and recovery' (class 1: 19%, class 2: 42,3%, class 3: 71,4%).

There are also several needs that are frequently unmet (>20%) and for which there is no significant difference between the classes. These are: intimate relations (24.3% of whole sample), paid work (34.4% of whole sample) and side effects of medication (24.4% of whole sample).

Besides the differences and similarities between the classes, we also looked at the most frequently (>35%) unmet needs per class. In class 1, this was 'paid work' (35.9%). In class 2, this was the case for: 'meaning and recovery' (42.3%), 'physical health' (41.1%), 'psychological distress' (39.4%) and 'company' (38.0%). In class 3, the following needs were reported as unmet by more than 35% of the service users: 'psychological distress' (78.6%), 'meaning & recovery' (71.4%), 'company' (57.1%), 'daily activities' (46.4%), 'sleep' (42.9%), 'paid work' (39.3%), and 'safety to self' (35.7%).

Table 4: Percentage of service users for whom a certain need is unmet

Care need (CANSAS)	Whole sample N=263 %	Class 1 n=118 (45%) %	Class 2 n=116 (44%) %	Class 3 n=29 (11%) %	Cramer's V	P
Accommodation	19.0	19.8	17.4	21.4	-	ns
Food	10.2	4.3	12.8	25.0	0.165	<.01
Household skills	5.1	2.6	5.5	14.3	0.143	<.05
Self-care	3.5	1.7	3.7	10.7	0.179	<.01
Daily activities	23.6	12.1	30.2	46.4	0.197	<.01
Physical health	32.4	20.0	41.1	50	0.197	<.01
Psychotic symptoms	9.6	4.4	10.1	28.6	0.182	<.01
Condition/treatment info	12.3	7.8	14.7	21.4	-	ns
Psychological distress	31.0	11.3	39.4	78.6	0.346	<.001
Safety to self	7.1	0.0	7.3	35.7	0.346	<.001
Safety to others	2.4	2.6	0.9	7.1	-	ns
Alcohol	4.7	1.7	8.3	3.6	-	ns
Drugs	2.0	1.7	1.9	3.6	-	ns
Company	31.6	19.7	38.0	57.1	0.192	<.01
Intimate relationships	24.3	21.4	26.9	21.4	-	ns
Sexual expression	19.5	15.8	23.8	18.5	-	ns
Child care	2.4	2.6	1.8	3.6	-	ns
Basic educations	6.7	8.6	3.7	10.7	-	ns
Telephone	5.1	5.1	3.7	10.7	-	ns
Transport	18.6	10.3	26.9	21.4	0.170	<.01
Money	21.3	12.8	28.4	28.6	0.150	<.05
Benefits	8.3	6.8	11.0	3.6	-	ns
Paid work	34.4	35.9	31.2	39.3	-	ns
Side effects medication	24.4	20.2	28.4	25.9	-	ns
Meaning and recovery	34.7	19.0	42.3	71.4	0.263	<.001
Judicial	3.1	2.6	2.8	7.1	-	ns
Sleep	22.5	12.1	28.4	42.9	0.194	<.01

- Interpretation Cramer's V: .15=small; .25=medium; .35=large

Quality of life

The scores on quality of life differ significantly between the three classes (class 1: mean 4.43, class 2: mean 3.74, class 3: mean 3.44; eta squared=0.31; p<.001). When comparing the scores with norm scores, we see that service users of all classes have a lower mean score than the average population (norm score = 5.27). Service users in class 1 have comparable scores as people with SMI (norm score = 4.69); users in class 2 and 3 have lower mean scores than people with SMI.

On several specific domains, significant differences exist between the classes (Table 5). The differences are the strongest on the domains 'mental health' (eta squared =0.24; p<.001), 'physical health' (eta squared=0.18; p<.001), 'life as a whole' (eta squared=0.20; p<.001) and 'job (when having a job)' (eta squared=0.21; p<.05).

When looking at the average number of domains on which people in a class are at least 'mostly satisfied' (mean > 5), we see that for people in class 1, this is the case for ten domains (life as a whole, job, amount and quality of friends, leisure activities, housing, personal safety, people with whom the individual lives, living alone, relationship with family and mental health). People in class 2 have one domain on which the average score is 5 or higher (personal safety); people in class 3 have none (see Table 5).

Regarding the average number of domains on which people in all classes score lower than 'mostly unsatisfied' (mean <4), we see that in class 1, there is no domain for which this is the case. People in class 2 have four domains on which this is the case (physical health, mental health, financial situation and sex life). People in class 3 have an average score of < 4 on seven domains (mental health, physical health, life as a whole, no job, sex life, relationship with family, and amount and quality of friends).

Table 5: Mean scores per quality of life item

Mansa item	Whole sample N=263	Class 1 n=118 (45%)	Class 2 n=116 (44%)	Class 3 n=29 (11%)	Eta squared	P
Total score	4.02	4.43a	3.74b	3.44c	0.31	<.001
Life as a whole	4.60	5.30[a]	4.14[ab]	3.55[b]	0.21	<.001
Job (when having one)	5.60 (n=47)	5.94[a] (n=32)	4.91[b] (n=11)	4.75[ab] (n=4)	0.20	<.05
No job	4.37 (n=218)	4.57 (n=87)	4.34 (n=106)	3.80 (n=25)	-	ns
Financial situation	4.36	4.81[a]	3.98[b]	4.0[ab]	0.06	<.01
Amount and quality of friends	4.79	5.24[a]	4.54[b]	3.97[b]	0.08	<.001
Leisure activities	5.00	5.53[a]	4.62[b]	4.41[b]	0.11	<.001
Housing	5.16	5.48[a]	4.90[b]	4.90[ab]	0.04	<.05
Personal safety	5.41	5.75[a]	5.29[b]	4.52[c]	0.10	<.001
People with whom the individual lives	4.82	5.13[a]	4.49[b]	4.79[ab]	0.04	<.05
Living alone	4.89	5.22	4.63	4.73	-	ns
Sex life	4.08	4.43[a]	3.77[b]	3.89[ab]	0.03	<.05
Relationship with family	4.79	5.13[a]	4.65[ab]	3.97[b]	0.05	<.01
Physical health	4.11	4.90[a]	3.56[b]	3.14[b]	0.18	<.001
Mental health	4.36	5.22[a]	3.83[b]	3.00[c]	0.24	<.001

- Classes with different characters (a, b, c) significantly differ on the indicated variable. p<.05; classes with similar characters do not differ from each other.
- Interpretation Eta squared: .02=small; .13=medium; .26=large

DISCUSSION

This study aimed to explore whether subgroups of service users in housing services exist based on three recovery dimensions, and to examine and compare the quality of life and care needs in these subgroups. We identified three subgroups of service users, which differed significantly in terms of clinical recovery. The clinically most recovered subgroup (class 1) showed only minor symptomatology: just slightly more than non-patients. This group also differed significantly from the other two subgroups on personal and functional recovery and can therefore be labelled as the most recovered subgroup of the three. Classes 2 and 3 represent people who experience more symptoms; comparable and much higher compared to outpatients respectively, and they also score the lowest on personal recovery and social functioning. Persons in class 1 mainly experience difficulties in their social recovery; persons in class 2 seem to stay mainly behind both in their personal and social recovery, while persons in class 3 experience problems in all recovery areas.

Although persons in the best-recovered subgroup found in this study have a comparable number of symptoms (score on the BSI) as healthy people, their quality of life appears to be much lower. Their quality of life was the highest of the three subgroups found, though still comparable with outpatients in other studies. Persons in the other two subgroups have a lower quality of life than do outpatients [11]. As improving quality of life is a central aim of mental health care, it is important to look at the deeper causes and search for possibilities to increase service users' wellness. We aimed to do this by analysing the different quality of life domains and unmet needs.

When looking at the total picture of unmet needs and quality of life on different domains, it becomes visible that the difference between the classes is mainly the number of domains on which a person needs support. The priority of service users in class 1 lays mainly on paid work and (intimate) relations. Service users in class 2 have these needs also, but in addition, they also need support regarding personal recovery and physical and mental health. Service users in class 3 experience similar problems as users in class 2; moreover they have more serious problems concerning their mental health.

Although the number of needs differ, it is remarkable that on some topics, notably paid work and intimate relations, the number of service users that experience an unmet need in these areas is comparable in all three classes. This indicates that persons suffering from severe psychological distress also have relevant needs in other areas such as work and relationships. It seems, therefore, to be unnecessary to wait until a person is recovered symptomatically to provide support in these areas. It may be possible, and recommendable, to provide support on all dimensions of recovery at the same time, guided by the individual life goals of the client. This corresponds to the growing insight that (vocational) rehabilitation has to be integrated in clinical services [45]. A successful example of this is the Individual Placement and Support model of supported employment,

which is applied to support people in getting and maintaining competitive employment; a significant number of studies have proven that this is actually possible [46-49].

Another remarkable result from this study is that a small but distinct group (class 3, 11%) seems not to receive the psychiatric treatment they need or they may not profit enough from it. In this group, 79% have an unmet need concerning psychological distress, 71% on meaning and recovery, 50% on physical health and 36% have an unmet need concerning safety to oneself. It is worrisome that such a distinct group has so many serious unmet needs. More attention is needed in mental health care to support these people in their daily life and their recovery. Furthermore, in classes 1 and 2, also a high number of unmet needs were reported in the areas of physical and mental health. These also include the quality of life domains that people in classes 2 and 3 are often less satisfied with. This implies that service users of housing services may not receive enough mental and physical health care. This is, especially concerning physical health care, a well-known phenomenon [12, 50, 51]. It is also a complex problem, for which several explanations exist (e.g. lack of awareness, stigma and poor communication and cooperation between different care providers in the field of (mental) health care) [52-54].

Differences in demographics, living situations and amount of support are not evident between the three classes. Although class 1 seems to score high on the different dimensions of recovery, these people do not have paid work or live independently more often than do the people in class 3. Moreover, the number of people with paid work is very low (3%). It is remarkable that people who score high on personal recovery and experience few symptoms do not participate more in society than do people who are less recovered. This is in line with other studies; for example, De Heer-Wunderink et al. (2012) compared service users who lived independently with users who lived in a sheltered housing facility and found that their participation in social activities differed but that their vocational participation was similar. In addition, a study on Van Gestel et al.'s (2012) recovery profiles concluded that recovery could not be significantly related to work status. Furthermore, Valdes-Stauber (2015) found that the level of institutionalisation of service users of different housing services did not reflect the severity of their illness or functional impairments. In short, there seems to be a gap between clinical and personal recovery on the one hand, and participation in society on the other.

There are several possible explanations for this. First, housing services seem not to offer adequate support to service users concerning social inclusion; therefore, more effort should be given to this topic in these facilities [5, 13, 55]. Another possible explanation can lay in the often-impaired executive and cognitive functions in people with SMI, such as deficits in concentration, planning skills, self-regulation and motivation [56-58]. As a result, service users are not prepared to perform in, for example, the competitive labour market. Although there is a growing body of interventions that focus on cognitive rehabilitation [59-61], these interventions are still not broadly offered in (long-term) mental health care.

Another explanation can be the impact of (self)stigma [62, 63]. It can be challenging for people recovering from a mental illness to become included in mainstream society, as stigmatisation of people with mental disorders is still widespread [64, 65]. Moreover, due to earlier disappointing experiences and the internalisation of stigma, people with SMI may lose self-esteem and self-efficacy. This in itself may lead to a decrease of initiative and motivation to participate in society, the so-called the 'why try effect' [66]. Lastly, people with SMI, and their relatives, can be uncertain about their possibilities and/or afraid of a relapse. As a consequence, they may have the tendency to avoid risks [67]. In sum, it is necessary to give more attention to rehabilitation and societal participation of all service users with SMI, regardless their recovery stage.

Strengths and limitations

The strength of this study is that 263 service users with SMI participated. However, a limitation may be that the data used in this study were gathered in the context of another study [32]; therefore, the recruitment of participating organisations and service users was not totally random. When we compare these characteristics with (inter)national studies on service users of housing services, though, we can conclude that the participants of this study are representative for this target group [12, 19]. The use of validated client-rated measures is another strength. Due to this, we achieved insight in the actual state of how service users experience their recovery on several fields; even though housing services do not structurally collect this information in a validated and reliable way. This is, to our knowledge, the first study identifying and exploring recovery profiles of clients of housing services and their quality of life and care needs. This explorative approach offers new insights, which are not only relevant for housing services but also for other stakeholders in mental health care.

Conclusion and implication for clinical practice

Service users of housing facilities can be divided into three classes of recovery. Each class experiences a different level of quality of life and comes with a different type and number of unmet needs. It is important for workers of housing services to be aware of the recovery of a client and what his or her individual needs and goals are. One size does not fit all for service users of housing services. Nonetheless, similarities were also found. As service users in all classes have rehabilitation needs with regard to intimate relations and employment, attention for all dimensions of recovery at the same time is recommended. As it is important to provide care on al dimensions of recovery, it is necessary for mental health care organisations to work together and integrate their services to increase quality and continuity of care for people with long-term severe mental illness. Furthermore, more quantitative and qualitative research is needed to further explain the differences between the three groups in recovery, quality of life and care needs. This knowledge can be used to develop interventions or adjust the current practice in order to improve the quality of life.

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CHAPTER 6

Psychosocial Interventions in Sheltered and Long-term Residential Facilities: A Scoping Review

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Submitted

ABSTRACT

Introduction A part of the people suffering from severe mental illness need the support of sheltered facilities or long-term clinical wards, yet most studies on psychosocial interventions aiming at recovery do not focus on this group. . The aim of this review was (1) to investigate which psychosocial interventions exist to support people with long-term severe mental illness that are in permanent need of support in daily living in their societal, functional and personal recovery and (2) to explore what scientific evidence is available about the outcomes of these interventions.

Methods We conducted a scoping review and included studies that aimed to evaluate the effectiveness of psychosocial interventions focussing on daily life (skills), cognitive enhancement, healthy behaviour, social relations, goal attainment, personal recovery and/or societal functioning in clients dealing with severe mental illness who receive services from housing services or comparable long-term sheltered/residential facilities.

Results The search resulted in 45 articles that met the inclusion criteria. Most studies (n=19) focused on interventions considering societal recovery. Five studies each were found on interventions for personal recovery and for functional recovery. Furthermore, we found nine studies on lifestyle-interventions and seven studies on creative and spiritual interventions.

Discussion Research specifically focussing on the recovery of people suffering from severe mental illness who live in sheltered facilities remains limited. Nevertheless, we can conclude that promising results have been achieved for several kinds of interventions regarding multiple dimensions of recovery (societal, personal and functional). The challenge now is to further develop practice and research concerning this specific group of people.

INTRODUCTION

Most people with severe mental health problems can recover and live in the community with or without support. A relatively small group of people (10–20%) have long-term, severe and complex needs but consumes 25–50% of the mental health and social care budget [1]. Killaspy (2016) therefore referred to this group as a 'low volume, high needs' group. These people often have major negative, on-going positive symptoms in addition to other mental, social and physical health problems. They need the permanent support of sheltered housing facilities or long-term clinical wards [2-5]. These services offer practical daily care, nursing and support to persons with severe mental illness (SMI) in their daily lives, aiming at improvements in recovery and functioning. Nevertheless, people with long-term SMI still report unmet needs concerning health, work, social relations and daily activities [6-8].

Over the past two decades, there is increasing attention for what it means to recover from a mental illness. There is a growing recognition that recovery is more than the remission of psychiatric symptoms. The current vision is that recovery is 'a way of living a satisfying, hopeful and contributing life even with limitations caused by illness' [9]. Several authors have described that recovery comprises multiple aspects [10-13]. An example of a classification that is used often in the Netherlands is clinical, functional, social and personal recovery [13]. First, clinical recovery refers to a decrease in clinical symptoms such as hallucinations, anxiety or depressive feelings [14]. Functional recovery is related to clinical recovery and refers to executive functioning such as planning and problem solving [15]. Societal recovery is about regaining everyday functioning in areas such as work, social relationships, housing and leisure [16]. Personal recovery refers to a person's own experience of his or her recovery; it is about hope, empowerment, self-determination and regaining the identity of someone who is living a meaningful life despite the presence of symptoms [9, 17]. These four aspects are closely related and influence each other constantly in complex processes [12].

A recovery process is very personal and can fluctuate over time [18]. Treatment and support for people with severe mental health problems therefore should focus on all dimensions of recovery and be tailored to a person's individual needs [6]. Several types of psychosocial interventions have been developed to support people with SMI in their recovery [19]. In this study, we focus on interventions that can be offered in non-medical, sheltered facilities such as housing services by staff including nurses or social workers. Therefore, the focus lays on interventions addressing societal, personal and functional recovery. Rehabilitation methods, for example, focus on clients' personal goals and wishes regarding daily life and societal recovery. Examples of well-known methods in this field are the 'choose-get-keep', or Boston Psychiatric Rehabilitation, approach [20], the Illness Management and Recovery (IMR) [21] and the Strengths model of case management [22].

Other methods focus on a specific aspect of life. These include Individual Placement and Support (IPS) in which people are supported to gain and stay in competitive employment [23, 24]. Other methods aim to improve cognitive functioning or practical skills; these include social and independent living skill modules, cognitive remediation programs and cognitive adaptation training (CAT) [25-27]. More recently, interventions have been developed especially focusing on personal recovery, sometimes provided by experts-by-experience, [28-30].

There is an increasing amount of research on the effectiveness of interventions addressing several outcomes. IPS, for example, has shown to have a strong and consistent effect on vocational outcomes [24]. Furthermore, the Boston approach has been shown to increase social functioning and goal attainment [31]. Studies concerning several other interventions, such as the Strengths model and those aimed at personal recovery, have reported varying results [32-34].

Although research on these interventions has shown some promising results, much remains unknown. These studies were executed mainly with participants who could live independently with a relative small amount of support. Also, most of these studies concerned methods that focus on a selective group of motivated clients who can formulate concrete goals [24, 31]. We cannot assume that these practices are suitable and valuable for people with long-term impairments, living in sheltered facilities, of whom some have lost their motivation and goals in life [6, 35].

For that reason, this study aims to identify and evaluate studies on psychosocial interventions focusing on different dimensions of recovery in sheltered facilities for people with long-term severe mental illness. The findings of this study can contribute to the further development of the content and quality of the support offered by sheltered facilities.

With this review, we aim to answer the following questions:

1. Which psychosocial interventions have been applied and evaluated to support clients of sheltered facilities (clinical services and sheltered housing) dealing with long-term severe mental health problems in their societal, functional and personal recovery?
2. What scientific evidence is available about the outcomes these interventions?

METHODS

Our aim with this review is to give an overview of a broad range of existing interventions. It therefore was impossible to conduct a clearly defined systematic review or meta-analysis. We choose to conduct a scoping review, as these are established for use when the objective is to examine the extent, range and nature of research activity in a certain field and to summarize and disseminate the research findings [36]. We followed the steps

described by Arksey and O'Malley (2005) in their framework for the execution of a scoping review: a) identify the research question, b) identify relevant studies, c) select the studies, d) chart the data and e) collate, summarize and report the results.

Search Strategy

To answer our first research question, we searched the following databases: PubMed, Psycinfo, Embase and Cinahl. These databases were chosen to cover medical (PubMed and Embase) as well as psychological (Psycinfo) and nursing (Cinahl) literature. We formulated and combined search terms concerning: a) the setting and population (mental disorder/ illness, schizophrenia, psychosis, inpatient rehabilitation, supported accommodation, sheltered housing, housing facility, community housing, community facility, supported housing, residential facility and residential care), b) the scope and outcome of the intervention (psychosocial, societal, recovery, functioning, rehabilitation, health, wellness and cognition), and c) study type (clinical trial, randomized controlled trial, evaluation study, experimental trial, naturalistic study, follow up study, quasi-experimental and case study.

To select studies that corresponded with our research aims, we formulated inclusion and exclusion criteria. We included peer-reviewed articles that were published in English from the year 2000 and onwards; included adult clients with severe mental illness receiving services from housing services or comparable long-term (> 1 year) sheltered/ residential facilities; evaluated psychosocial interventions focussing on personal, functional or societal recovery outcomes; evaluated the outcomes of an intervention on the client level; and evaluated outcomes by means of effect evaluation all types of designs except for expert opinions and case studies. As we aimed to give an overview of existing interventions for this group, we also included protocol papers and checked to see if a result paper already had been published on them. To be able to provide a clearly defined answer to the research questions and to keep the results manageable, we also formulated exclusion criteria. Studies were excluded if they primarily focussed on substance abuse; intellectual and/or developmental disability, including brain damage; or on homelessness; or if they were executed in developing countries.

Study Selection Process

In the first selection phase, the first author screened all titles from the initial search. In the second phase, the first author screened for relevance abstracts from the remaining papers. When there was doubt, the second author also read the abstracts and selected papers in consensus with the first author. The first and second authors determined final inclusion by discussing the interpretation of the inclusion criteria in certain cases. When doubt persisted about an abstract, the article was included so that a more careful decision could be made in the next phase.

In the third phase, the authors read the full text of the remaining articles and made a final selection. In this final phase, both the first and second author each read half of the articles independently. Again, articles about which doubt existed were discussed until consensus was reached. The selected studies then were categorised, if possible, based on the dimensions of recovery: societal, functional and personal.

Outcome Evaluation

Our second aim was to evaluate what is already known about the outcomes of these interventions. We evaluated each study to understand the status of the available evidence of each intervention found. First, we formulated categories of designs based on Evans' (2003) 'hierarchy of evidence' of Evans [37]. A study could be classified as a 'randomized (controlled) study', 'uncontrolled longitudinal study' or 'other (all other designs except case studies and expert opinions)'. Next, we evaluated the results of relevant outcomes and (where possible) the effect sizes of these results. Again, three options were possible: 'large or medium effects', 'small effects' or 'neutral effects, unclear, unknown or not convincing yet'. Based on these criteria, we concluded there was one of three options: a) added value, or randomized control trial (RCT) resulting in small, large or medium effects, b) promising first results, or other designs than RCTs and positive results, or (3) no evidence for the effectiveness yet, or neutral or negative results or no results yet. The first and second author executed this quality assessment independently. Each assessed an equal part and then discussed the results until they reached a consensus.

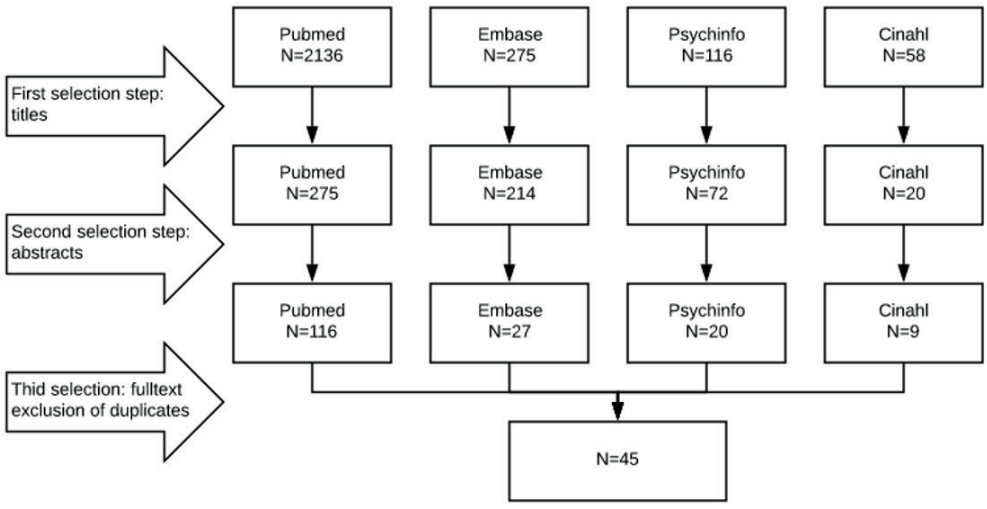

Figure 1. Flowchart of the selection process.

RESULTS

Forty-five articles met the inclusion criteria. Figure 1 shows a flowchart of the search, while Table 1 shows the categorization of the included articles as well as the number of studies and type of interventions per category. Five categories were formed. Three were based on the often distinguished dimensions of the recovery process: societal recovery, personal recovery and functional recovery, and two were formed in vivo: lifestyle, cultural and spiritual.

Most of the included studies (n =19) focused on societal recovery, addressing psychiatric rehabilitation approaches, occupational therapy and skills training. Studies concerned with personal recovery (n =5) focused on peer-run programs, illness management and recovery, and interventions aiming at increasing empowerment. Studies in the functional recovery category (n=5) examined cognitive training or remediation. Those in the lifestyle category (n=9) were aimed at a healthy lifestyle, (e.g. physical exercise and healthy eating). The last category, cultural and spiritual interventions (n = 7) looked at tai chi, musical therapy and art therapy.

Table 1 Type, amount and evidence of included studies

Type of intervention	Including	No. of studies	Evidence
Societal recovery	Approaches aiming at personal goals, occupational therapy, (social) skills training	19	4 added value 9 promising results 6 no evidence yet
Personal recovery	Peer run, empowerment, illness management	5	2 added value 3 promising results
Functional recovery	Cognitive remediation/training, cognitive adaptation	5	3 added value 2 no evidence yet
Lifestyle	Health promotion, exercise, healthy meals	9	6 promising results 3 no evidence yet
Spiritual and creative	Tai chi, music therapy, art therapy	7	3 added value 3 promising results 1 no evidence yet

Evaluation of Results of the Interventions

We evaluated the outcomes of all included studies (see Table 2-6 for a summary). Following is a description of the overall picture for each category.

Societal recovery

This category contains the greatest number of studies (n = 19, see table 2). These studies focussed on diverse interventions. Nine evaluated interventions aiming at general goal achievement, seven examined interventions aimed at achieving specific and/or disability

management and two looked at interventions aimed at vocational rehabilitation. One study concerned a staff-training programme designed to increase patients' engagement.

Of the nine studies that evaluated interventions aimed at goal attainment, six interventions were based on the 'choose-get-keep' model [20, 38-43], three were RCTs, and four were uncontrolled/pre-post design. Five of these studies showed (small) positive results [38, 40, 42-44] among others concerning functioning and residential status. Bitter, Roeg, van Assen, Van Nieuwenhuizen and van Weeghel (2017) evaluated, by means of a cluster randomized trial, a strengths model and recovery vision rehabilitation approach that trained teams of sheltered facilities but did not find any differences between the clients of trained and untrained teams [45]. Ellison et al. (2011) evaluated state-wide implementation of an intensive psychiatric rehabilitation approach based on the choose-get-keep model. They found positive effects on residential status and earnings of people who completed the program [42].

Of the studies on interventions concerning skills and illness/disability management, one RCT study evaluated the Illness Management and Recovery (IMR) approach in a supportive housing facility [46]. The study reported significant differences in illness management, symptoms and psychosocial functioning. Lindström, Hariz and Bernspång (2012) conducted a study on a home-based occupational therapy intervention aiming at daily occupations including remediation and compensatory strategies. The authors observed positive significant results on most outcomes (goal attainment, social interaction, satisfaction with daily occupations, activities of daily living [ADL] and psychiatric symptoms) [47]. Anzai et al. (2002) examined a RCT on an training program for illness management skills based on Liberman's Community Re-entry Module, resulting in positive effects including knowledge and skills and community participation [48]. In a small, pre-post study on a short educational training course on using the Internet and touch screen, no effects were found on social isolation, self-esteem and Internet use [51].

Two studies [49, 50] examined societal recovery explicitly focussed on social skills. Tsang and Pearson (2001) evaluated social skills training in the context of vocational rehabilitation. This cluster randomized pilot found positive results for work-related social skills, motivation to seek employment and success in job search (46% vs 23.1% in a training group without follow-up support vs 2.4% in care as usual) [50]. Seo et al. (2007) conducted a quasi-experimental study on social skills group training that included conservational and assertiveness skills based on the Liberman modules. The results showed a difference in improvement of social skills and self-esteem in favour of the intervention group [49].

Two studies evaluated interventions aimed at vocational rehabilitation. Oka et al. (2004) evaluated a hybrid occupational therapy and supported employment intervention by means of a retrospective study. Positive results were achieved concerning social functioning and hospitalisation [52]. Rogers, Anthony, Lyass and Penk (2006) evaluated the choose-get-keep approach in a vocational context compared with enhanced state vocational rehabilitation and found no differences between the groups. A positive effect on vocational status was found for

both interventions, indicating that a rehabilitation approach aiming at work can be effective for this group [53].

Finally, the two remaining studies were concerned with client engagement in activities and enlarging computer skills. Killaspy et al. (2015) evaluated a staff-training program designed to increase patients' engagement in activities. In this cluster-randomized trial, no differences were found between the study groups in engagement in activities [54]. Loi et al. (2016) evaluated a small study on an educational training course on using the internet, which also did not led to improvements on outcomes [51].

Interventions supporting personal recovery

The studies in this category evaluated interventions aimed at personal recovery (e.g. empowerment, confidence, quality of life)(see table 3). All studies already showed added value or promising results. Of these studies, one was a RCT and four were semi-controlled or pre-post designs. Two studies were peer-run interventions, and both showed promising results. One examined confidence and care needs [29] and the other on consumers' perception of the recovery attitudes on the staff [55].

One study focussed especially on elderly patients and showed a small but positive result concerning life satisfaction [56]. Park and Sung (2013) reported results of a study on a 6-week, recovery-oriented nursing intervention. This study also showed positive results on helplessness and recovery, but due to the non-controlled design, these results need further confirmation in replication studies. Randal et al. (2009) conducted a small, matched-control evaluation study on individual recovery-focused multimodal therapy. Although we must interpret these results carefully because of the study design, the results were promising with significantly more improvement of positive and negative symptoms and a decrease of deviant behaviour [58].

Functional recovery

This category consisted of studies evaluating interventions focused on improvement of cognitive and executive functions (see table 4). Four were RCTs, and one had a pre-post design. A study on an integrative program that focused on all basic cognitive functions showed positive results concerning vocational outcomes, family contact and social competence [59]. Lindenmayer (2012) conducted an RCT on an intervention that combined cognitive remediation with social cognition training. The combined intervention resulted in greater improvements in emotion recognition, emotion discrimination, social functioning and neuro-cognition compared with cognitive remediation alone [60]. Another study resulting in interesting results was a cognitive remediation intervention focusing on problem solving skills [61]. This study found a significant difference for independent living. Schutt et al. (2017) executed a small pre-post study on a cognitive remediation intervention but did not find relevant outcomes [62].

Health and lifestyle

We found nine studies focusing on lifestyle interventions (see table 5); all were published after 2010. Of these nine studies, five were RCTs and four were semi-controlled or pre-post studies. Loh, Abdulla, Bakar, Thambu and Jaafar (2016) executed a (pilot) RCT on a structured walking intervention. In this study, the participants of the control group scored slightly better on quality of life, psychiatric symptoms, physical role limitations and physical functioning after 3 months [63]. Hjorth et al. (2015) evaluated an intervention program for improving physical health in staff and its impact on patient's health. The intervention had a positive effect on the waist circumference and blood pressure for the staff, and there was a statistically significant association between the staff change in each facility and the patients' change in health parameters [64].

Looijmans et al. (2017) conducted a cluster RCT on lifestyle intervention that focused on cardiometabolic health. This intervention led to positive results after 3 months on waist circumstance and metabolic syndrome [65]. Oertel-Knöchel et al. (2014) conducted a combined cognitive–aerobic/relaxation intervention that study showed that physical exercise is a valuable addition to cognitive training [66]. Verhaeghe et al. (2013) conducted a cluster RCT on a comprehensive lifestyle intervention (psycho-education, supervised exercise and individual support) in sheltered housing services. Although initially small positive results were achieved on weight, body mass index (BMI) and waist circumstances, these results almost all disappeared during follow-up. No differences were found regarding secondary outcomes (i.e., symptoms and quality of life) [67].

Forsberg, Björkman, Sandman and Sandman (2010) did not find support for the added value of a lifestyle program. Hutchinson et al. (2016) and Gill, Zechner, Zambo Anderson, Swarbrick and Murphy (2016) both executed pre-post evaluations on a promotion program, resulting in positive results on physical activity and physical health [68, 69].

Spiritual and creative therapy

This category contained seven studies (see table 6). Two studies (one protocol) evaluated tai chi [70, 71] of which a pilot RCT showing promising results concerning movement and interpersonal functioning. Three studies [72-74] evaluated a form of music therapy. In all studies, positive results were achieved concerning amount others: negative symptoms [72], cognitive function [73], positive behaviour [73], and quality of life [74]. These positive results, however, did not last through the last follow-up.

One study in this category evaluated the effect of watching humorous movies. Watching these movies regularly for 3 months appeared to have a small positive effect on negative symptoms, depression and anxiety, and social competence [75].

DISCUSSION

With this study, we aimed to achieve insight into which psychosocial interventions are available and of and evaluated in people with long-term, severe mental health problems who live in sheltered facilities. Additionally we explored what scientific knowledge is available about the outcomes of these interventions. We found 45 studies with different types of interventions aiming at several dimensions of recovery. Several of these interventions showed promising results. This is a hopeful result that shows that improvement is possible for people with long-term severe mental health problems. The articles included in this study provide knowledge concerning the current use of psychosocial interventions in sheltered and residential facilities and give us new insights in the opportunities for implementation, further development and evaluation of interventions.

This study reveals that it seems that both practice and research attention for other aspects of health and recovery is growing for the group of people who need sheltered living facilities. Interventions aimed at societal participation and role functioning have the longest tradition, and although this still is an important goal, the attention for other aspects of recovery has grown over the years as well. The number of interventions aimed at personal and spiritual dimensions of recovery has increased, and several of these interventions resulted in promising results. This development comes with the paradigm shift in mental health care towards a broader definition of recovery in which more recognition exists for the personal experience of people [9, 10].

Another development we observed is a rise in interventions focussing on a healthy lifestyle. It seems that attention is growing for the fact that a substantial number of people suffering from a severe mental illness are affected by comorbid medical conditions as well, and that this can influence their life expectancy, quality of life and recovery on other dimensions [76]. The promising results of the included studies showed that the development of interventions aiming at the health of people with severe mental health problems is one to follow. More recently, the results show that the role of cognitive functioning for this group has gained attention. This is also a promising field of practice and research as three of the five studies showed added value. This is especially true when considering that cognitive dysfunction and related negative symptoms can be strong obstructing factors in the life of people with severe mental health problems [77].

This broader scope and promising results are hopeful developments especially as people with severe mental health problems experience several unmet needs [6, 8, 78]. However, compared with other groups of people with mental illness, the number of studies we found is still relatively low. This is not surprising because since the start of deinstitutionalisation in the second half of the 20th century, the focus of practice, research and policy increasingly shifted towards the development of ambulant and community-

oriented services [79]. Although this was an important development in mental health care, which led to the increasing opportunity for people with severe mental health problems to participate in society, the risk exists that a knowledge gap emerges concerning the group in need of long-term sheltered facilities [1, 80]. It is therefore important that more studies focus on this group to gain more insight in what these people need in their recovery and to develop interventions that matches their needs.

Strengths and weakness of the Study

This study has several strengths and limitations. Our aim was to provide an impression of psychosocial interventions that exist for people with SMI who need sheltered facilities and to provide first insight into what is known about the effectiveness of these interventions. Therefore, we used a broad and global search strategy and included a variety of interventions aimed at a broad range of outcomes and executed in different settings and (international) contexts. The results reflect this broad exploration rather than showing detailed evidence of the recovery methods. More research is needed into studies like these when developments in the recovery field are a bit further along; this would provide additional insight into the effectiveness of the interventions. One point of attention is that we used only information provided in the included articles, which sometimes was a somewhat poor, for example regarding effect sizes of found results. We did not contact the authors for additional information. Nevertheless, this study provided a broad overview of interventions on several dimensions of recovery that can give sheltered facilities an impression of interventions that may be relevant and sufficient to implement.

Conclusion and suggestions for development of practice and research

Research specifically focussing on the recovery of people with severe mental health problems who live in sheltered facilities remains limited but seems to be in development. We also can conclude that a broader vision towards recovery in these settings has gained attention and that, regarding all dimensions of recovery, promising results have been achieved.

Three challenges can be appointed concerning the practice and research of interventions for people with severe mental health problems who live in sheltered facilities. The first challenge is the further development and professionalization of recovery-oriented care and support offer for this specific group of people. Effective and promising interventions should be developed and made available for all people with severe mental health problems, despite their place in the care landscape (e.g. clinical, sheltered or supported services) [13].

The second challenge is to accompany developments in practice with research to gain more insight into what works, for whom and what does not, so that the provided care can be more personalized. Specific knowledge is needed concerning the group of

people who are in need of long-term sheltered facilities. For example, we were surprised that for some well-known recovery interventions, for example, the Wellness Recovery Action Plan (WRAP) [81] or narrative enhancement and cognitive therapy (NECT) [82], no studies explicitly focussing on people living in sheltered facilities. Here may lay a chance for further development, as it is worthwhile to study interventions that have proved themselves in ambulant contexts to see if they also can help clients with more complex and supported living needs.

The third challenge is the integration of different approaches toward recovery. In several countries, different forms of support are fragmentized [29]. For example, in the Netherlands a separation exists between clinical mental health care services and housing facilities; both draw up separate treatment or recovery plans for a client. The insight is growing, however, that integration of different aspects of recovery may lead to better outcomes [83]. This might lead to improvement of recovery orientation of the care for people living in sheltered facilities. Altogether, sheltered and residential facilities could reconsider their scope and position in the care landscape and consider broadening and strengthening their recovery-oriented services and increasing collaboration with other stakeholders such as mental health care and local organizations for community support.

Table 2: studies evaluating interventions concerning societal recovery

Study	Design and study duration	Setting	Study population (N)	Intervention
Bitter et al., 2017	Cluster RCT Duration: 20 months	Sheltered/ supported housing facilities	People suffering from SMI (N=263) 71% inpatients	Comprehensive Approach to Rehabilitation (CARe) Methodology
Loi et al., 2016	Pre-post, non randomized, study Duration: 6 weeks	Residential facility	Older adults suffering from SMI (N=5)	Short educational training course on using the internet and touch screen
Magliano et al., 2016	Controlled non-randomized study Duration: 2 months	Residential facilities	People suffering from SMI (N=114)	VADO Approach: Skills assessment and definition of goals
Killaspy et al., 2015	Cluster RCT Duration: 12 months	Inpatient rehabilitation units	People suffering from SMI (N=344)	Staff training program designed to increase patients' engagement in activities
Sanches et al., 2015	Multi site RCT Duration: 12 months	FACT teams and supported and sheltered housing facilities	People suffering from SMI	Boston University Approach to Psychiatric Rehabilitation (BPR; aka Choose-Get-Keep)
Anthony et al., 2014	Pre – post study Duration: 18 months	28 service programs	People suffering from SMI (N=238) 49% sheltered facility	Residential and employment goal setting procedure in a Choose-Get-Keep (Boston approach) rehabilitation program
Lindstrom et al., 2012	Prospective pre-test, post-test, and follow up test Duration: 6 months	Supported or sheltered housing facilities	People suffering from SMI (N=17) 82% inpatients	Home based occupational therapy intervention aiming at identifying, realising and sustaining meaningful daily occupations
Ellison et al., 2011	Pre-post design Duration: 12 months	State-wide implementation in several community facilities and supervised facilities	People suffering from SMI (N=511 and 221) controls for the analysis of service use and costs. (40% inpatients)	Intensive Psychiatric Rehabilitation based on choose-get-keep model
McMurran et al., 2011	Pragmatic multi centre RCT Duration: 1,5 year	Community settings including residential or supported care settings	340 planned suffering from personality disorder	Psycho education combined with problem solving (PEPS) therapy

Main Outcomes	Main findings	Added value/ promising first result/ no evidence for effectiveness yet
Functioning Personal recovery Quality of life	Quality of life increased and amount of care needs decreased in both groups.	No evidence for effectiveness yet
Social isolation Self esteem Internet use	No sign improvements or worsening in both outcomes	No evidence for effectiveness yet
Functioning	Positive result on functioning	Promising first results
The degree to which patients were engaged in activity over the previous week	No difference between the groups in engagement in activities.	No evidence for effectiveness yet
Societal participation Patients' experience of success Quality of life Recovery	Protocol	Results not known yet
Employment status Residential status Earnings	Participants with residential goals improved sign on residential status and earnings; intervention completers improved on employment status - Participants with employment goals improved significant on employment status and earnings	Promising first results
Goal attainment Motor and process skills Social interaction Satisfaction with daily occupations ADL Psychiatric symptoms	Sign improvements on goal attainment, social interaction, and satisfaction with daily occupations, ADL and Psychiatric symptoms.	Promising first results
Role functioning on several domains Service use and service costs.	A positive effect on residential status and earnings for completers.	Promising first results
Social Functioning (SFQ)	Protocol	No results yet

Study	Design and study duration	Setting	Study population (N)	Intervention
Fagan-Pryor et al., 2009	Retrospective outcome evaluation Duration: 3 years prior to - and 3 year post-implementation	Inpatient psychiatric facility	Male veterans suffering from SMI (N=47)	Psychiatric rehabilitation and recovery based program based on choose-get-keep (CGK) approach with focus on housing
Levitt et al., 2009	RCT Duration: 12 months	Supportive housing	104 persons with SMI	Illness Management and Recovery
Pratt et al., 2008	RCT Duration: 3 years	Community residents,	Older adults (>+50 yrs.) suffering from SMI (N=183) 50% inpatients	HOPES program: social skills training and health management; 24 months
Vandevooren et al., 2007	Retrospective repeated measures design Duration: Prior to program: annually over a 6-year period, before and after, 1 year follow up	Residential home	People suffering from SMI (N=25)	Systematic rehabilitation approach based on CGK approach
Seo et al., 2007	Quasi experimental design Duration: 2 months	Inpatient ward in psychiatric hospital	Persons diagnosed with schizophrenia (N=74)	Social skills group training based on Liberman and Bellack modules
Pioli et al., 2006	Partially randomized multi centric trial Duration: 12 months	Residential and day care centres	People diagnosed with schizophrenic disorder (N=98) 33% living in sheltered facilities	VADO: skills assessment and definition of goals
Rogers et al., 2006	RCT Duration: 24 months	Intensive care receivers of State Department of Mental Health	Adults suffering from major mental illness (N=135) 50% inpatients	Psychiatric vocational rehabilitation (PVR) = choose get keep approach
Oka, et al., 2004	Retrospective study Duration: Minimal 3 yrs. follow up	Previously long term hospitalized persons, recently discharged and living independently or in a residential home	Persons diagnosed with schizophrenia (N=52)	Hybrid occupational therapy and supported employment

	Main Outcomes	Main findings	Added value/ promising first result/ no evidence for effectiveness yet
	Discharge Community tenure Number of admissions	- Significant larger community tenure in discharged participants pre-post implementation	Promising first results
	Illness Management and Recovery Scales Psychosocial functioning Quality of life Symptoms	Significant difference in self-reported and clinician ratings of illness management, symptoms and psychosocial functioning of the QoL scale.	Added value
	Psychosocial functioning Community functioning Self efficacy Health	- Significant improvements in performance measures of social skills, psychosocial and community functioning, negative symptoms, and self-efficacy	Added value
	Community tenure Number of admissions Living situation	- Significant change in community tenure over 7 year period	Promising first results
	Social skills Self esteem Assertiveness skills Problem-solving skills Conversational skills	Differences in improvements of a number of social skills and self-esteem in favour of the intervention group.	Promising first results
	Social functioning Psychiatric symptoms	Significant improvement on psychiatric symptoms and social functioning.	Promising first results
	Psychiatric symptoms Quality of life Self esteem Vocational & educational status	No sign differences over time in employment status, symptoms, quality of life or self-esteem.	No evidence for effectiveness yet
	Hospitalization Community tenure Social functioning	Social functioning improved significantly greater after supported employment was started Mean number of hospitalization decreased Community tenure increased significantly	Promising first results

Study	Design and study duration	Setting	Study population (N)	Intervention
Anzai et al., 2002	RCT Duration: 1 year	Inpatient facility	Persons diagnosed with schizophrenia (N=32)	Illness self-management skills training program based on The Community Re-entry Module of Liberman et al.
Tsang et al., 2001	Cluster randomized pilot test Duration: 3 months	Community-based staffed residential facilities	Persons diagnosed with schizophrenia (N=97)	Social skills training in the context of vocational rehabilitation

Table 3: studies evaluating interventions concerning personal recovery

Study	Design	Setting	Participants	Intervention
Boevink et al., 2016	RCT Duration: 24 months	2 community treatment teams and 2 sheltered housing organisations	Persons suffering from severe mental illness (N=163) 28% inpatients	User run recovery programme TREE
Mancini et al., 2013	Quasi-experimental design Duration: 6 months	Psychiatric hospitals	People suffering from SMI (N=110)	Prorecovery; a 14-week consumer developed approach including structured group-sessions
Park et al., 2012	Repeated-measure design with matched controls Duration: 10 weeks	Psychiatric hospitals	Persons diagnosed with schizophrenia (N=46)	The empowerment program for schizophrenic patients: a nursing intervention focusing on patients' strength and hopes of recovery
Willemse et al., 2009	Pilot evaluation Duration: 12 weeks	Long stay ward of three psychiatric hospitals and one sheltered housing	Older people (mean age: 67) (N=36)	' Searching for meaning in life' program
Randal et al., 2003	Matched control evaluation study. Duration: depeding on individual trajectories	Inpatient rehabilitation unit	9 people with treatment resistant schizophrenia or schizoaffective disorder	Individual, flexible, recovery-focused multimodal therapy (21 months)

Main Outcomes	Main findings	Added value/ promising first result/ no evidence for effectiveness yet
Psychotic symptoms Knowledge and skills Rehabilitation skills	Significant improvement in knowledge and (rehabilitation) skills in the intervention group Patients in the intervention group spent significantly more time in community in comparison to the control group	Added value
Work related social skills, self-perceived Social skills in role play exercise Job motivation checklist Vocational outcome and adjustment	Work related social skills; self-perceived and measured with role play were both significantly higher in the two training groups. Training group with follow up support most successful in job search.	Added value

Primary Outcomes	Main results	Added value/ promising first result/ no evidence for effectiveness yet
Empowerment Mental health confidence Loneliness	Sign more mental health confidence Less care needs Less self-reported symptoms Less likelihood of institutional residence	Added value
Prorecovery Evaluation Instrument: Social satisfactions; Quality of life, Well-being, recovery	Significant effect on consumer's perception of the recovery attitudes of staff.	Promising first results
Helplessness Recovery (patient report and nurse report)	Significant effect on helplessness and recovery	Added value
The Philadelphia Geriatric Center Morale Quality of life	Significant increase in life satisfaction.	Promising first results
Positive and negative symptoms, Rehabilitation	Reduction in positive symptoms, negative symptoms, and in general psychopathology symptoms. General behaviour scores on the Rehabilitation Evaluation of Hall and Baker were clinically improved.	Promising first results

Table 4: Studies evaluating interventions concerning functional recovery

Author	Design	Setting	Participants	Intervention
Schutt et al., 2017	Pre-post pilot study Duration: 2 months	Group home	6 residents	Cognitive remediation
Stiekema et al., 2015	Cluster RCT Duration: 24 months	Long stay departments of 3 institutions	100 planned	Cognitive adaptation training of nurses and specialists
Sanchez et al., 2013	RCT Duration: 3 months	Psychiatric hospital	Persons diagnosed with schizophrenia (N=84)	REHACOP, integrative program that taps all basic cognitive functions.
Lindenmayer et al., 2012	RCT Duration: 3 months		Persons diagnosed with schizophrenia (N=59) (93% inpatients)	Cognitive remediation (CR) + Social cognitive intervention
Medalia et al., 2001	RCT Duration: 5-6 weeks	Inpatient psychiatric centre	Persons with schizophrenia (N=54)	Remediation of cognitive problem solving skills

Table 5: studies evaluating interventions concerning a healty lifestyle

Author	Design and study duration	Setting	Participants	Intervention
Looijmans et al., 2017	Cluster RCT Duration: 12 months	Residential and long-term teams of 2 mental health care organizations	People suffering from severe mental illness (N=371)	Lifestyle intervention focusing on cardiometabolic health
Hjorth et al., 2016	Cluster RCT Duration: 12 months	Longterm psychiatric treatment facilities	Staff members serving as role models for severely and chronically mental ill patients (N=174)	Health promotion intervention for staff as role modelling for patients

	(Primary) Outcomes	Main results	Added value/ promising first result/ no evidence for effectiveness yet
	Neurocognitive performance	No significant gains in cognitive performance.	No evidence for effectiveness yet
	Executive functioning Cognitive strengths and weakness Everyday functioning Quality of life Empowerment	Protocol	Results not known yet
	Neurocognition Clinical symtpoms Functioning	Significant effect on neurocognition, negative symtpoms, disorganization, and emotional distress.	Added value
	Social cognition and neurocognitive functions, psychopathology and social functions	Combined CR with emotion perception remediation produced greater improvements in emotion recognition, emotion discrimination, social functioning, and neurocognition compared with CR alone.	Added value
	Independent community living Verbal knowledge, judgement, and problem solvingVerbal memory and narrative recall	For independent living change scores, a significant between-group difference was found.	Added value

	Outcomes	Main results	Added value/ promising first result/ no evidence for effectiveness yet
	Waist circumference Body mass index Metabolic syndrome z-score	Waist circumference decreased 1.51 cm in the intervention group versus control group after 3 months and metabolic syndrome z-score decreased 0.22. After 12 months, the decrease in waist circumference was no longer significant.	Promising first results
	Waist circumference BMI Weight Lung PEEP Blood pressure Physical fitness Tobacco and alcohol consumption Quality of life	No effects found on client level. There was a relation in: staff change in QoL and patient change in QoL	No evidence for effectiveness yet.

Author	Design and study duration	Setting	Participants	Intervention
Hutchison et al., 2016	Pre-post study Duration: 12 months	Long term residential mental health care facility	Persons suffering from with severe mental illness (N=43)	In SHAPE program, a health promotion program aiming at physical activity and healthy diet, using assessment, fitness plan, weekly meetings education, incentives, and group motivational celebrations.
Gill et al., 2016	Pilot: single group pre-post design Duration: 8 weeks	Supported housing programs and ACT program	Adults with serious mental illnesses (N=77)	Wellness for Life Interprofessional health promotion intervention Including: Exercise, nutritional counseling, health literacy education, and peer wellness coaching
Loh et al., 2016	Pilot RCT Duration: 3 months	Long stay ward	Patients diagnosed with schizophrenia (N=104)	Structured walking intervention
Cabassa et al., 2015	RCT Duration: 18 months	Supportive housing	300 planned	Peer-led healthy lifestyle program
Oertel-Knochel et al., 2014	Matched pre-post design Duration: One week before and one week after the intervention		Long-term patients suffering from a major depression or schizophrenia (N=51)	Exercise group: cognitive training + aerobic exercise Relaxation group: Cognitive training + relaxation 12 sessions in for weeks
Verhaeghe et al., 2013	Cluster preference RCT Duration: 6 months	Sheltered housing organisations	Adults with mental disorders (N=324)	Health promotion Program aiming at physical activity and healthy eating
Forsberg et al., 2010	Cluster RCT Duration: 12 months	8 Supported housing facilities and 2 housing support programmes	Persons with severe mental illness (N=41)	12 month Lifestyle intervention program

	Outcomes	Main results	Added value/ promising first result/ no evidence for effectiveness yet
	Physical activity Physical health Recovery Severity of depression Self perceived ability to implement health-promoting behaviours Hopefulness	100% expressed a nutrition and exercise goal, and weekly logs were filled in by the majority Physical activity, health has increased. Recovery and depression improved significantly. Self perceived ability improved for well being and exercise.	Promising first results
	Blood pressure Blood glucose Waist circumference Body weight Physical strength and flexibility BMI Readiness to change Health status	Average blood pressure and waist circumference decreased Strength and flexibility improved Readiness for diet and exercise improved	Promising first results
	Health related Quality of life	Positive effect on QoL, well being and psychiatric symptoms	Promising first results
	Weight QoI Recovery	Protocol	No results yet
	Cognitive performance Symptoms Wellbeing	Increase in cognitive performance in the domains visual learning, working memory and speed of processing, a decrease in state anxiety and an increase in subjective quality of life between pre- and post-testing.	Promising first results
	Body weight BMI Waist circumference Fat mass Health-related quality of life Psychiatric symptom severity	Significant results on body weight, BMI, waist circumference, fat mass, however disappeared during follow up except for fat mass.	Promising first results
	Quality of life Functioning Psychiatric symptoms	No difference found between the study groups	No evidence for effectiveness yet

Table 6: studies evaluating spiritual and creative interventions

Author	Design and study duration	Setting	Participants (N)	Intervention
Berry et al., 2016	Cluster RCT Duration: 6 months	Psychiatric rehabilitation wards	Patients with complex mental health needs (N= 51 patients and 85 staff)	24 one-hour sessions focussing on staff-patients relationships per ward over 6 months
Ho et al., 2014	3-arm RCT Duration: 24 weeks	Residential rehabilitation complex	Patients diagnosed with schizophrenia (N=153)	Tai-chi
Gold et al., 2013	Pragmatic parallel trial Duration: 9 months	Specialised mental health care settings	Adults with severe mental disorders (N=144)	3 months biweekly individual resource-oriented music therapy
Kwon et al., 2013	Quasi-experimental pretest-posttest design Durtation: 7 weeks	Mental health rehabilitation complex	Adults with severe mental disorders (N=55)	7 week group music therapy
Ho et al., 2012	Pilot RCT Duration: 12 weeks	Mental health rehabilitation complex	Patients with chronic schizophrenia (N=30)	Tai Chi (6 weeks)
Gelkopf et al., 2006	Cluster randomized trial Duration: 3 months	Psychiatric hospital	Patients with chronic schizophrenia (N=29)	Humorous movies Daily for 3 months
Hayashi et al., 2002	Non randomized, controlled study Duration: 4 months	Long stay wards of mental health care institute	Female patients with chronic psychoses (N=66)	Group musical therapy Including, listening to and making music and group communication about it

	Primary Outcomes	Main results	Added value/ promising first result/ no evidence for effectiveness yet
	Staff and patient relationships Staff wellbeing Patient functioning	Significant less depersonalization in staff. Less feeling of criticism by patients and improvement of ward organization and relationships by patients.	Added value
	Symptom management Motor coordination Memory Daily living function Stress levels	Protocol	No results yet
	Negative symptoms General symptoms Motivation for change Self-efficacy Self-esteem Social relationships	Effect on negative symptoms, functioning, clinical global impressions, social avoidance through music, and vitality	Added value
	Brain wave, cognitive function, behaviour.	Effect on alpha waves revealing that the participants in the music therapy may have experienced more joyful emotions throughout the sessions. The experimental group also showed improved cognitive function and positive behavior (social competence, social interest & personal neatness) while their negative behaviors was significantly less.	Promising first results
	Movement coordination Negative symptoms Disability	Effect on movement coordination and interpersonal functioning. Fewer disruptions to life activities at 6 weeks after the intervention.	Promising first results
	Positive and negative symptoms Anxiety Depression Anger Social functioning Treatment insight Therapeutic alliance	Significant larger difference over time in reduction of negative symptoms, depression and anxiety than in control group The intervention group showed a significant larger improvement in time than the control group on the social functioning scale.	Added value
	Psychotic symptoms Objective quality of life Subjective musical experiences Ward activity and - Adjustment	A significant advantage was found of the intervention for psychotic symptoms, quality of life, musical experience, and ward activity over time during the intervention Effects did not last at follow up	Promising first results

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PART 3

Summary, discussion and concluding remarks

CHAPTER 7

Summary, discussion and concluding remarks

SUMMARY

In this final chapter, first the main findings of this study are summarized, then the results are discussed and the implications for practice are deliberated on. Next, some methodological considerations are discussed, followed by recommendations for practice and future research.

Introduction and research questions

Chapter 1 described the background of this study. People with severe mental health problems experience numerous problems in their daily lives, influencing their personal development as well as their work and social relationships. The vision on how to support these people has changed strongly since the mid-20th century. Increasing evidence shows that more improvement is possible than previously thought for this group of people [1, 2]. Due to the development of community mental-health services as ambulant mental healthcare and supported and sheltered housing facilities, most people with severe mental health problems can live (to some extent) independently in society instead of in a clinical setting. Yet, further improvement is possible concerning the quality of life and societal participation of this group of people [3, 4].

The current insight is that a complete remission of medical and psychiatric symptoms is unnecessary for recovery [1]. Recovery in this sense, also called *personal recovery*, is defined as 'a deeply personal, unique process of changing one's attitudes, values, feelings, goals, skills, and/or roles. It is a way of living a satisfying, hopeful and contributing life even within the limitations caused by illnesses' [1]. Recovery is an individual and often changeable process in which clinical, personal and social factors play a role. Although recovery is a very personal process and involves development of the person him- or herself, the current vision is that people can be supported in this process [5-7]. This support can be provided by the person's social environment as well as by mental health care and supported housing facilities. Organizations for mental health care and supported housing increasingly aim to provide recovery-oriented care.

The transition to recovery-oriented care means a different way of working for professionals. Professionals must connect to a person's recovery process, creating hope and empowerment, supporting instead of patronizing behaviours. They must stimulate the person to take (responsible) risks and support him or her in finding the way back into society. Although becoming more common in educational programs nowadays, most professionals (nurses and social workers) were not educated in these skills. Therefore, mental healthcare and sheltered living organizations offer training courses concerning recovery-oriented care and rehabilitation approaches.

In the Netherlands, an often-applied rehabilitation method in mental health care is the Comprehensive Approach to Rehabilitation (CARe) methodology. The overall goal of the CARe methodology is to support clients in their personal recovery and to improve their quality of life. The key principles of this approach are realizing goals and wishes,

handling vulnerability and improving the quality of the client's social environment [8, 9]. The methodology is strongly influenced by the Personal Recovery movement and by the Strengths Model of case management [10]. The CARe methodology claims to be suitable for all clients who experience psychosocial problems, regardless of the severity of their impairments or the phase of their recovery process. Although the CARe methodology has a history of more than 30 years, no controlled studies have been executed concerning the effects on clients.

This study aimed to evaluate the effectiveness and efficacy of training teams of housing facilities in the CARe methodology and to measure its effects on model fidelity and recovery knowledge on a team level, as well as on clients' quality of life, and personal and societal recovery. Furthermore, it aimed to gain insight into their clients' recovery status on several dimensions and the total availability of social interventions, next to CARe, that also are aimed at recovery for mental health clients who need housing services.

The central research questions of this thesis were:

- What is the efficacy of training teams in the CARe methodology on model fidelity and recovery knowledge of team members of sheltered facilities?
- What is the effectiveness of training teams in the CARe methodology on quality of life, recovery, social functioning, hope, empowerment, self-efficacy and unmet needs of clients?
- Which recovery client profiles exist in sheltered facilities, and what the care needs and quality of life is of clients of these profiles?
- Which psychosocial interventions have been applied and evaluated to support clients of sheltered facilities (clinical services and sheltered housing) dealing with long-term severe mental health problems in their societal, functional and personal recovery, and what scientific evidence is available about the outcomes these interventions?

Part 1: Evaluation of the CARe methodology

Chapter 2 described the rationale and design of this study. To investigate the effectiveness of the methodology, a cluster randomized controlled trial (RCT) was conducted with 14 teams at three organizations for sheltered and supported housing in the Netherlands. Teams in the intervention group received training in the CARe methodology. Teams in the control group continued working according to care as usual. All clients were asked to participate in the study and to complete a questionnaire before the teams started their training and then again 10 (T1) and 20 (T2) months afterwards. Model fidelity audits were executed to monitor the implementation level of the CARe methodology at T1 and T2 in all participating teams. Additionally, at T0, T1 and T2, all workers of the teams were asked to complete a questionnaire about their knowledge of recovery.

Chapter 3 reported the results of the CARe methodology training on the model fidelity and the recovery knowledge of participating teams and professionals. Afterwards, stakeholders participated in an evaluation meeting to inventory the barriers to and

facilitators of implementation of the CARe methodology. Ten months after the training, the intervention teams scored higher than the control teams on the fidelity subscales: 'Recovery Orientation', 'Strengths Orientation' and 'Amount of Training and Coaching'. Twenty months after the training, only the effect on 'Amount of Coaching and Training' continued to show an effect. Additionally, after 20 months, the subscale 'Methodological working' clearly differed between the groups in favour of the intervention teams. In all teams, overall model fidelity was moderate at both measurements (about 60%). The trained teams' knowledge of recovery was, on a team level, slightly and significantly higher at 10 and 20 months than in untrained teams. Although professionals seemed to be positive about recovery and strength-oriented working, in the evaluation meeting they mentioned that they experienced several organizational and societal barriers in working with the CARe methodology. These barriers mainly concerned the implementation of the methodology in their work processes and the current health system, the professional and team development, and the translation of theory to practice.

Chapter 4 contained a description the results of this study on the client level. Quality of life increased in both groups, but we found no differences between clients of the trained and the untrained teams. Furthermore, recovery and social functioning did not change over time at all. Regarding the secondary outcomes, the number of unmet needs decreased in both groups with no significant difference due to training in the CARe methodology. The other measures (hope, empowerment and self-efficacy) did not change over time in either of the groups.

There are several explanations for these results. First, as described in Chapter 3, the overall fidelity of the CARe methodology in the intervention teams was moderate. What is unknown from this study is the impact of this fidelity on the results or if a higher fidelity is even feasible. Second, the content of the CARe methodology may be insufficient, explaining the negative results. Earlier research on other rehabilitation approaches indicated that elements of effective psychiatric rehabilitation are: a) focusing on the specific skills needed in a certain environment and actual access to that desired environment as soon as possible, b) integrating rehabilitation and psychiatric treatment, and c) combining skills training and offering support [11]. In the CARe methodology, these aspects are not elaborated explicitly. Furthermore, although the aim of the CARe methodology could be used for every client despite their needs and impairments, the clients who participated in this study might have such impairments that they need more and/or different support in to increase their recovery and societal participation.

Part 2: The needs for and availability of care for clients of sheltered facilities

Part 1 focused merely on the evaluation of the CARe methodology. In part 2, the overall care needs and availability of care for clients of sheltered and supported facilities were explored. *Chapter 5* described the results of latent class analyses (LCA) performed with data from 263 clients participating in this study.

Earlier research has shown that the type and amount of care received by people living in sheltered facilities does not always match their recovery needs [12]. Therefore, to gain more insight in their recovery, we explored the care needs and quality of life of this group of people and related them to their recovery. Classes were based on three variables representing different dimensions of recovery: personal recovery, social recovery and clinical recovery. Subsequently, the quality of life and care needs of the different classes were analysed and compared.

Three classes could be distinguished. Class 1 (45%) comprised people who scored the highest in terms of personal and social recovery and who experience the least number of symptoms. People in class 2 (44%) and class 3 (11%) scored significantly lower on personal and social recovery and experience significantly more symptoms compared to class 1. The distinction between classes 2 and 3 can be made on the significantly higher number of symptoms in class 3. All three classes differ significantly on quality of life and unmet needs, with class 1 performing the best and class 3 the worst of the three groups. Surprisingly, we found no differences between the classes concerning living and work situation. In all classes, most people mentioned unfulfilled needs concerning physical and mental health, daily activities, work, social and intimate relationships, and personal recovery.

Chapter 6 described the results of a scoping review designed to gain more insight in the availability and effectiveness of psychosocial interventions other than CARe, also at recovery in sheltered facilities. Forty-five articles met the inclusion criteria for the study. Most studies ($n = 19$) focused on interventions considering societal recovery. Five studies were found on interventions for personal recovery, and five studies on interventions for functional recovery. Furthermore, we found nine studies on lifestyle interventions aimed at such things as physical exercise and healthy eating. Finally, there were seven studies on creative and spiritual interventions including tai chi, musical therapy and art therapy.

This study revealed that research specifically focussing on recovery of people with severe mental health problems living in sheltered facilities is still limited. Nevertheless, we conclude that in these settings, a broader vision towards recovery has gained attention and, regarding all dimensions of recovery, promising results have been achieved. Also, a need for innovations exists in this sector. Three challenges can be named concerning the practice with and research of people with severe mental health problems living in sheltered facilities. The first challenge is further development and professionalization of the care and support offered to this specific group of people. Effective and promising interventions should be made available for all people with severe mental health problems, despite their place in the care landscape (e.g. clinical, sheltered or supported services). The second challenge is to accompany this development by further research in this field to gain more insight into what works for this group and what does not. The third challenge is the integration of different approaches towards recovery to develop a comprehensive and coordinated support program.

Discussion of the Findings and Implications for Practice

From our results, three main points of discussion arise. The first point concerns the future of the CARe methodology itself and its position in the care program for people with severe mental health problems. The second point is about the difficulties of implementing the methodology and the translation of it from theory to practice. The third point concerns what constitutes good care for people with severe mental health problems who receive care from sheltered facilities. These discussion points are elaborated in the following.

The CARe methodology: Future and position

The CARe methodology can be seen as a methodical representation of several contemporary insights on recovery-oriented care. It is client-centred, with attention devoted to the working relationship between client and professional, and it is recovery- and strength-oriented. Besides the emphasis on 'presence', the theory behind the methodology describes the importance of establishing a meaningful and genuine relationship with a client in which practitioners focus attention and 'just being there for someone' [9]. It provides a basic vision on recovery-oriented care: how to build a professional-client relationship, how to support people in their recovery process, and how to investigate what their wishes and strengths. These elements are recognized as important for good recovery-oriented care [5, 6, 14]. However, it seems to be not enough to achieve satisfying results concerning quality of life, recovery and participation. Therefore, it is plausible not only to search for other approaches but also to investigate what needs to be developed further to improve rehabilitation effects of CARe.

According to existing knowledge on rehabilitation, the following components are likely to be effective: a) a focus on empowerment, independence and choosing one's own goals, b) mobilising support in the social environment, c) training a client's skills in a real societal/social context, d) training specific skills for each specific environment, e) placing clients in the desired environment as soon as possible instead of first training and then placing, f) integration of rehabilitation, treatment and care, and g) challenging stigma and adaptation of laws and rules [11, 15]. The first two components, focusing on personal goals and involvement of the social environment, are clearly part of the CARe methodology. In the meeting organized as part of this study, these components also were mentioned as aspects the professionals valued. The other components were not elaborated explicitly, however. This may explain the lack of positive results found in this study and provides a direction for improvement of the CARe methodology, especially the components concerned with training, integration with treatment, and lack in the theory of the methodology. The core of the methodology consists of inventorying a client's strengths and possibilities, setting goals and formulating a recovery plan to describe how these goals can be achieved. However, concrete suggestions on how to overcome disabilities and how to train clients in specific skills needed are not given. The reality is

that the target group of the CARe methodology consists of people who often experience severe negative symptoms and/or cognitive deficits [16, 17]. These can be major limitations for participating in social roles and society. For that reason, further reflection is needed on how to deal with this.

According to the International Classification of Functioning, Disability and Health (World Health Organization [WHO], 2001), clinical (e.g. physical, mental, cognitive) impairments influence how a person executes daily activities, which influences his or her participation. This is in line with what seem to be effective elements of rehabilitation approaches, namely that training specific skills in relevant environments can lead to improved participation [11]. Increasing the focus towards the role of human functioning, therefore, may be a starting point for achieving more client improvement.

The Model of Human Occupation (MOHO) is a well-studied and often used model to analyse human functioning. According to this model, three aspects are important for human occupation: volition, habituation and performance capacity. Volition is about personal causation, values and interests. Habituation is about the patterns of occupation, which are regulated by a person's roles and habits. Performance capacity is about the physical and cognitive abilities of a person and the subjective experience of this. Volition, habituation and performance capacity together can lead consecutively to skills, performance and participation [19]. In the Dutch mental healthcare system, which mainly focuses on the clinical, personal and societal dimensions of recovery, little explicit attention is given to the occupational aspects of human functioning. Organizations for sheltered and supported housing can be seen as 'the bridge between mental health care and society' and offer support concerning societal participation. As such, they can be the designated place for more systemic attention to the occupational perspective of recovery and should consider strengthening their support services in this field. According to the Model of Human Occupation, when aiming at occupational functioning, attention should be given to volition, habituation, performance capacity and the environment.

The CARe methodology, with its focus on recovery and empowerment, fits with the current ideas of supporting people with the volition and environmental aspects of functioning. Adding concrete specialists and interventions concerning skills and execution of activities might further improve the programme. Occupational therapists, for example, are specialists in the field of executing activities in case of disability. This means not only training but also advising or adapting a client's (social) environment [20]. In addition, occupational therapists can use tools to systematically assess a person's functional abilities and impairments to gain insight as to where and what support is needed [21]. Specific methods have been developed to determine which interventions support people in learning to live with (cognitive) impairments; one intervention, for example, is Cognitive Adaptation Therapy (CAT) [22]. Individual placement and support (IPS) successfully combines placing and training specifically focussed on paid work [23].

Integrating the CARe methodology with interventions aiming at teaching skills needed for personal goals may contribute to how well clients achieve their goals. For example, using the CARe methodology, a professional worker and a client set a goal concerning work. Next, the worker should contact an IPS coach who can support the client in achieving this goal. Therefore, it is crucial that clients of housing facilities have easy access to these kinds of interventions or specialists, something that increasingly is gaining attention in some organizations for sheltered housing [24-27].

Implementation and from theory to practice: Easier said than done

In addition to examining the role played by the content of the CARe methodology, this study indicates how difficult it is to implement the methodology in practice. The ability to implement an intervention is an important condition for success [28]. The results cited in Chapter 4 show that training in the CARe methodology had a modest and short-term effect on model fidelity and knowledge of recovery. This is not the first study resulting in somewhat disappointing results in which the level of implementation plays a role [7, 29]. It often seems to be difficult to translate ambitious and theoretically well-developed programmes into convincing results on a professional and client level [30]. Therefore, we look at the aspects that have a role in the adoption of new approaches or interventions.

Greenhalgh (2004) created a contextual model based on an extensive literature review concerning the adoption of innovations. Here we focus on the three elements of this model that seem to play an important role in this case: the innovation itself (e.g. the CARe methodology), the user system (the teams and professionals) and the implementation process [31].

Adoption of an intervention depends on the compatibility of the methodology with the adopter's values, norms and perceived needs, as well as the complexity of the intervention. Compatibility is a promoting factor, and complexity can be a hampering factor. From our evaluation meeting with stakeholders, it appeared that the professionals, managers and staff involved were positive about the CARe methodology's principles of recovery-oriented work. It seemed to be compatible with their values and norms regarding offering care. Nonetheless, complexity could be a possible hampering factor. Professionals experienced difficulties imbedding the principles in the existing system and daily routines. It seems that the professionals found it difficult to translate the theory to the complex and stubborn reality in which different interests and priorities play a role. The concepts behind the CARe methodology – personal recovery, empowerment and presence – are quite theoretical and complex. A topic that was mentioned in the evaluation meeting, and in other studies as well is conceptual clarity [32-34]. It seems that professionals often struggle with what it actual means to work in a recovery-oriented manner. For example, when a client says he wants to stay in bed the whole day, is that a personal wish to follow or is there a need for other forms of support?

Here, we arrive at the second aspect to discuss: the professionals (users). User aspects of adoption of interventions lay in their needs, motivation, values and goals, skills and learning styles. Although the CARe methodology connects to their values, the question rises as to whether professionals have enough skills and to what extent the theory and training attaches to their skills and learning styles. Literature on recovery is often quite theoretical and sometimes even philosophical. Professional workers, who often are practice-oriented, hands-on people, may experience a lack of clear tools to bring these theoretical ideas into practice in the sometimes stubborn reality.

Additionally, as for the example of the client who wants to stay in bed, how do you talk to somebody who has lost motivation and how do you support that person in regaining hope and drive. Our study's audit and questionnaire on recovery knowledge showed that professionals had a basic knowledge concerning recovery-oriented working, but to what extent and how this is reflected in their behaviour in practice is still largely unknown. It is possible that the CARe methodology training did not lead to increased recovery-oriented working in actual practice. Organizations for sheltered housing and other mental health-care organizations should investigate what hinders and facilitates their professionals in their practice of supporting recovery.

This leads to the third point: the implementation process. According to the model of Greenhalgh et al. (2004), the following conditions are important for implementation and routinization: an adaptive and flexible organizational structure, the support of leadership and management, involvement of the practitioners in the process, internal communication and adaptation to the local context. Besides that, an organization/system should be ready for and experience a need to change and should be prepared to dedicate time and resources to the implementation process.

This study was carried out in a turbulent time for mental health care and sheltered housing organizations. In recent years, this field has suffered budget cuts and shifts in responsibilities. Although managers and team-leaders in our study stood behind the implementation of the CARe methodology and the participation of the teams in this study, the reality was that in two of three participating organizations a management level was cut and the organizations' priorities drifted away from the implementation process. Therefore, recovery-oriented principles should be implemented on different layers in an organization [32, 33]. Because the CARe methodology has a strong focus on the relationship and personal contact between client and professional, organizational policy should facilitate professionals in that area and aim at stability and continuity.

In short, we recommend that more attention be paid to CARe methodology training on how to support professionals and teams in achieving the skills needed to translate the theory of recovery-oriented care into practice. It also is important that general education in nursing and social work integrate recovery-oriented principles to prepare professionals in those fields. Besides that, more attention is needed for the implementation of the methodology in all layers of an organization. This asks for tailored and well-thought strategies based on the determinants of a specific practice [35].

Good care for clients of sheltered facilities: One size does not fit all

The overarching objective of this thesis was to investigate what people with severe mental health problems need to improve their societal and personal recovery and increase their quality of life. This is a complex and comprehensive issue for which our results provide some starting points. A relevant and measurable aspect of quality of life is the extent to which a person's needs are fulfilled (36-38). Therefore, we explored the association between recovery profiles (on several dimensions) and the quality of life and care needs.

In Chapter 5, we described that three profiles of recovery could be distinguished and that, whether the level of recovery was relatively low or high, clients in all profiles still had several unfilled needs concerning clinical, personal and societal recovery. This study showed that even the subgroup that had the highest scores on personal, societal and clinical recovery, which had just slightly fewer symptoms than non-patients, did not often have more paid work nor more frequently lived independently than the people with the lowest scores.

We also showed that despite these findings, a significant portion of these people (34%) want to participate in competitive work. Besides that, 32% of the participants experienced a need concerning physical health, 31% concerning psychological distress and 32% concerning social company. Furthermore, 34% had a need concerning personal recovery and 24% concerning the side effects of psychiatric medication. These are quite serious numbers. This is in line with other studies, which show that unless recovery to some extent (different per person) is possible, people suffering from a severe mental illness experience difficulties overcoming their deprivations [39, 40].

It seems that improvements remain possible concerning meeting the needs of people with severe mental health problems. To improve the care offered, we must determine what is needed to support people with severe mental health problems in their recovery. The current vision is that care should be recovery oriented with attention for clinical, societal and personal aspects recovery [21]. The results of the scoping review described in Chapter 6 showed that on all dimensions of recovery interventions are available that are sufficient for the clients of sheltered housing facilities, increasingly also concerning physical health and personal recovery. Concerning several of them studies showed already promising results. Nevertheless extensive thorough research is scarce in this field. Besides that, most of these interventions, or comparable interventions, are not offered to the majority of people living in sheltered facilities [13, 41]. In short, the results presented in this thesis indicate two directions for improvement of practice: first, better meeting the personal needs of individual clients, and second broaden, professionalize and integrate the available services.

Increasingly, awareness is growing that a system change is needed in mental health care for this group of people. An extensive, nationwide action plan on care for people with severe mental health problems in the Netherlands described six trends concerning

the vision on good care for this population: a) moving from merely symptom stabilization towards personal and social recovery, b) moving from solely professional support towards personal empowerment and self-management, c) moving from only addressing the individual client towards also involving his/her social network, d) moving from solely mental health care towards combined action with other societal sectors, e) moving from separate pathways towards integration of treatment and rehabilitation, and f) moving from separate domains towards integration of mental healthcare and somatic healthcare for this group of persons [13].

In recent years, sheltered housing facilities mainly have invested in the first two aspects. The adoption of recovery-oriented and empowerment principles were important objectives. It appears from this study, however, that more is needed to increase the recovery and participation of their clients than adopting a vision and training their staff in recovery-oriented principles. Besides that, scientific knowledge increasingly shows that integration of treatment and rehabilitation is necessary. This is contrary to the fragmentized system in which it is not unusual that people have a treatment plan from a mental healthcare organization that contains certain goals as well as a recovery plan with goals from their housing facility. The question is to what extent individual needs, wishes and goals, as well as the ways to achieve them, can be central in such a complex and fragmentized health system [13, 42].

The challenge that faces sheltered housing facilities is finding a way to provide a more integrated approach to supporting their clients. This can, for example, be achieved by broadening their services and establishing a more multidisciplinary approach in which specialists such as occupational therapists, psychologists and peer workers have a role. Another option is to intensify collaboration with, among others, mental healthcare organizations and societal organizations such as social district teams.

Methodological Considerations and Directions for Further Research

This thesis already has addressed several strengths and limitations. Here, two methodological aspects will be discussed in more depth: the design of the study and the measures used.

Design: The pros and cons of RCTs

This study was designed as a randomized controlled trial, in which two groups were followed over time and compared with each other. The advantage of this type of design is that it makes clear what the effect is of adding one factor (in this case: training in the CARe methodology) to one of the groups. This makes a RCT often the first choice of design when evaluating the effect of a methodology [43]. Due to the design of this study we now know that training professionals in the CARe methodology does not automatically lead to improvement in quality of life and the personal and societal recovery of clients. We also can partly explain these results by the limited levels of model fidelity measured in this

study, although this model fidelity measure has not yet been validated. The results give an indication of the amount to which teams were working according to CARe principles, but we do not exactly know yet what the maximum fidelity is nor are we sure about the exact relation between model fidelity and outcomes on a client level. An aspect to consider is that a RCT tends to focus more on the results than on the process and the role of the context that led to those results [44]. Although the evaluation meeting gave us some insights, we were unable to conduct an in-depth process evaluation. Future studies in CARe methodology, or comparable methodologies, should conduct a more in-depth process evaluation in addition to a trial. Neither could we link the effects on individual clients to the specific exposure of the intervention they received. Future studies concerning these kinds of interventions should include in their design a way to measure this individual exposure.

A point to consider is that in a RCT it is important to have clear boundaries between study conditions and between before and after situations. This is always difficult in studies in which a comprehensive intervention is evaluated in a complex and open context. In this study, we therefore conducted a CARe 'quick scan' before start of the study to investigate the extent to which participating teams worked according to CARe principles, enabling us to select only those teams which were as blank as possible concerning these principles. We cannot rule out completely, however, that the teams and professionals were influenced by principles of recovery and rehabilitation, also used in the CARe methodology, as the CARe methodology is based on contemporary insights concerning recovery-oriented care. Several of these insights have been taken up (to some extent) by mental healthcare organizations and sheltered facilities in the recent years and have become part of standard care to some extent. Nevertheless, just because of the realistic setting of this study, we can conclude that the current way of training has no added value.

Which tale do the numbers tell?

In this study, we evaluated the effect of the CARe methodology on quality of life, personal recovery, participation, hope, self-efficacy and empowerment. These are all complicated concepts. To evaluate the outcomes on a client level, we used validated, self-reported questionnaires. This is a strength as the subjective experience of clients' relevant outcomes should be central in practice and research [45]. Another strength is that the group of clients who participated in this study was very diverse. We aimed to achieve good external validity by not using narrow selection criteria for participants. People had to be able to sign informed consent and to participate in an interview; this led to the participation of people with severe cognitive deficits and (positive and negative) symptomatology. Additionally, it is estimated that of the long-term residents of mental healthcare organizations a substantial part is borderline intellectually disabled (an IQ of 70–85) [46, 47].

The fact that the study participants were so diverse can be seen as a strength because they represent the group of people living in sheltered facilities. It is highly common in mental health research to use self-reported questionnaires to measure outcomes. You might consider, however, if such a cognitive measurement method is actually sufficient for the whole group. For instance, the questionnaires are quite linguistic, with long sentences and abstract questions. Also, there is the question as to what extent recovery means the same for everyone. For instance, some of the people participating in this study lived in a sheltered facility for a longer period and were older. For these people, recovery may mean something different than what it does for a person in his 20s who has a different history. Future research among people with severe mental health problems living in sheltered facilities, especially when the most vulnerable are included, should consider forms of data gathering other than validated linguistic and age/background-unspecific questionnaires. Interesting developments related to this is the development of an instrument to measure quality of life in a more personalized and graphical way [48], as well as the experience sampling method which makes it possible to gain more insight in individual moment-to-moment perceptions without the necessity of reflecting on overall experiences which ask for more cognitive capabilities [49, 50].

Concluding Remarks

This study provides good first insights into the efficacy and effectiveness of the CARe methodology. The results also provide knowledge on the recovery, quality of life and needs of clients of sheltered and supported facilities. Overall, the results underline that still more effort is needed to develop services that support people with severe mental health problems who receive housing services in their recovery. The CARe methodology alone seems to be insufficient to realize concrete results concerning quality of life, and personal and societal recovery. Although, the methodology has a methodical focus on building a relationship with a client and investigating strengths and wishes, a possible threat is the lack of concrete tools to achieve specific wishes and goals. This suggestion is based on the results of and experiences in this study but needs to be evaluated further. Professionals, trainers, coaches and other staff involved in the training, implementation and execution of the CARe methodology should also critically reflect on their care services and on the position of the CARe methodology in that.

The results of this study point at three directions for improvement of sheltered and supported housing facilities: 1) increasing attention on the development of skills needed for goal attainment and societal recovery, 2) further development of training and implementation strategies concerning recovery-oriented working, and 3) broadening, professionalizing and integrating support services towards an integrated, recovery-oriented system.

Additionally, we recommend critical evaluations accompany future developments in this sector to gain more insight into what works and what does not for the group of people with severe mental health problems living in sheltered and supported facilities. This process should involve not only scientific researchers, but also clients, relatives and care professionals. In such a collaborative, empirical process, all stakeholders can bring in their knowledge, expertise and priorities.

Sheltered housing facilities have gone through several transitions in recent years. Under the influence of policy transitions and developments in mental healthcare, they were forced to further develop their support services and strengthen their position. This has led to several promising developments, especially those concerning personal recovery and empowerment, such as Recovery Colleges that offer courses for and by people with a psychiatric vulnerability. These are important developments; the next step could be to professionalize and broaden their services.

Another challenge lays in the connection with other mental healthcare and societal organizations to collaborate in building a person- and recovery-oriented system. Sheltered and supported housing facilities have a unique position between the mental healthcare organizations and the societal services in neighbourhoods, a perfect starting point for the further development of integrated local support services in which the personal wishes of clients can be the starting point.

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CHAPTER 8

Nederlandse samenvatting

NEDERLANDSE SAMENVATTING

In deze samenvatting worden de achtergrond, aanleiding, opzet en resultaten van deze studie beschreven. Vervolgens worden de belangrijkste discussiepunten en conclusies van dit proefschrift samengevat.

Achtergrond en onderzoeksvragen

Hoofdstuk 1 beschrijft de achtergrond van deze studie. Psychiatrische problemen komen vaak voor, ongeveer 43% van de mensen krijgt hiermee te maken gedurende zijn of haar leven. De meeste mensen herstellen hiervan en zijn in staat om hun dagelijks leven weer op te pakken. Een deel van deze mensen, ongeveer 1,6% van de Nederlandse bevolking, lijdt aan een ernstige psychiatrische aandoening. Dit houdt in dat de symptomen meer dan twee jaar aanwezig zijn en dat er dusdanig sprake is van ernstige beperkingen in het dagelijks functioneren dat langdurige en gecoördineerde zorg nodig is. Deze mensen ervaren, naast de klinische symptomen, continue belemmeringen in hun dagelijks leven op het gebied van wonen, werk en sociale relaties. De visie op hoe hen hierin te ondersteunen is de afgelopen decennia sterk veranderd. Sinds ongeveer de tweede helft van de 20e eeuw bleek in toenemende mate dat ook voor deze groep mensen meer verbetering mogelijk was dan eerder gedacht. Daarnaast werd steeds meer het streven zorg aan te bieden in de maatschappij in plaats van in afgelegen klinieken. Het zorgaanbod ontwikkelde zich ook in deze richting, met een focus op ambulante behandelteams en instellingen voor beschermd en begeleid wonen (RIBW's). Tegenwoordig kan de meerderheid van de mensen met ernstige psychiatrische problemen grotendeels zelfstandig leven, in de samenleving in plaats van in een klinische omgeving. Er is echter nog steeds verbetering mogelijk, en nodig, met betrekking tot de kwaliteit van het leven en de maatschappelijke participatie van mensen met ernstige psychiatrische problemen. Nog altijd heeft bijvoorbeeld slechts een klein deel van de mensen met ernstige psychiatrische problemen betaald werk (10-20%) en komt een gebrek aan sociale contacten en eenzaamheid relatief vaak voor in deze groep.

Het huidige inzicht is dat een complete remissie van klinische psychiatrische symptomen niet nodig is om te 'herstellen'. Herstel in deze zin, ook wel 'persoonlijk herstel' genoemd, wordt gedefinieerd als 'een diep persoonlijk, uniek proces van het veranderen van iemands houding, waarden, gevoelens, doelen, vaardigheden en/of rollen. Het is een manier om een bevredigend, hoopvol en betekenisvol leven te leven, zelfs met de beperkingen veroorzaakt door ziekten'. Herstel is een persoonlijk en vaak dynamisch proces waarin klinische, persoonlijke en sociale factoren een rol spelen. Hoewel herstellen een zeer individueel proces is, is de huidige visie dat mensen in dit proces kunnen worden ondersteund. Deze ondersteuning kan worden geboden door, onder anderen, iemands sociale omgeving, door organisaties voor geestelijke gezondheidszorg (GGZ-organisaties) en regionale instellingen voor beschermd en begeleidend wonen (RIBW's). Professionele

organisaties streven steeds vaker naar het bieden van 'herstel ondersteunende zorg': zorg die uitgaat van persoonlijke wensen, behoeften en mogelijkheden, met veel aandacht voor eigen regie en autonomie van de cliënt.

De overgang naar herstelondersteunende zorg betekent voor professionals een andere manier van werken. Professionals moeten aansluiten bij iemands persoonlijke herstelproces, hoop en empowerment uitdragen en stimuleren, ondersteunen in plaats van betuttelen. Hierbij hoort ook stimuleren van het nemen van (verantwoorde) risico's en het ondersteunen bij het weer oppakken van maatschappelijke rollen. Dit laatste is het terrein van de psychiatrische rehabilitatie. De meeste professionals, zoals verpleegkundigen en maatschappelijk werkers, zijn niet primair opgeleid in deze vaardigheden. Om deze reden bieden GGZ organisaties en RIBW's trainingen op het gebied van herstel- en rehabilitatiegericht werken.

Een in Nederland veel toegepaste rehabilitatie benadering is het Systematisch Rehabilitatiegericht Handelen (SRH). Het doel van het SRH is cliënten te ondersteunen bij hun persoonlijk herstel en om hun kwaliteit van leven te verbeteren. De belangrijkste uitgangspunten van de aanpak zijn: het realiseren van doelen en wensen; omgaan met kwetsbaarheid en versterken van krachten; en het verbeteren van de kwaliteit van de sociale omgeving van de cliënt. De methodologie is sterk beïnvloed door de herstelbeweging en door het Strengths casemanagement model. Het SRH is ontwikkeld als methodiek die gebruikt kan worden in de begeleiding van alle cliënten die psychosociale problemen ervaren, ongeacht de ernst van hun beperkingen of de fase van hun herstelproces. Ondanks dat het SRH al meer dan 30 jaar in ontwikkeling is, en veel wordt toegepast in Nederland en daarbuiten, was tot op heden nog geen grootschalig onderzoek uitgevoerd naar het effect op cliënten.

Het eerste doel van deze studie was het evalueren van het effect van het trainen van teams op de modelgetrouwheid en kennis van herstel van deze teams, evenals op de kwaliteit van leven, persoonlijk herstel en maatschappelijk participeren van hun cliënten. Het tweede doel was meer inzicht krijgen in het herstel van cliënten, en in het beschikbare aanbod gericht op herstel van cliënten die woonachtig zijn in een beschermde voorziening.

De onderzoeksvragen van dit proefschrift waren:

- Wat is het effect van het trainen van een team in het SRH op de modelgetrouwheid van het SRH en de kennis van herstel in teams van instellingen voor beschermd en begeleid wonen?
- Wat is het effect van het trainen van een team in het SRH op kwaliteit van leven, persoonlijk herstel, sociaal functioneren, hoop, empowerment, vertrouwen in eigen kunnen en onvervulde zorgbehoeften van cliënten?
- Welke herstelprofielen kunnen worden onderscheiden onder cliënten van beschermde woonvoorzieningen en wat is de zorgbehoefte en kwaliteit van leven behorend bij deze profielen?

- Welke psychosociale interventies gericht op maatschappelijk, functioneel en persoonlijk herstel zijn geëvalueerd om cliënten met ernstige psychiatrische problemen die verblijven in een beschermde voorzieningen te ondersteunen en welk wetenschappelijk bewijs is beschikbaar over de resultaten van deze interventies?

Samenvatting van de resultaten

Deel 1: Evaluatie van het Systematisch Rehabilitatiegericht Handelen

Hoofdstuk 2 beschrijft de achtergrond en de opbouw van deze studie. Met als doel de effectiviteit van het trainen van teams in het SRH te evalueren op persoonlijk herstel, kwaliteit van leven, sociaal functioneren, hoop, empowerment, vertrouwen in eigen kunnen en zorgbehoeften van cliënten, werd een cluster gerandomiseerd onderzoek (RCT) uitgevoerd in 14 teams van drie RIBW's. Teams in de interventiegroep werden getraind in het SRH. Teams in de controlegroep bleven werken zoals ze dat al deden. Voordat de teams begonnen met de training werd alle cliënten van de deelnemende teams gevraagd deel te nemen. Deelname betekende voor cliënten het invullen van een vragenlijst voor de start van de training en 10 en 20 maanden na start van de training. Om het implementatieniveau van het SRH te monitoren, werden 10 en 20 maanden na de training in alle deelnemende teams modelgetrouwheidsaudits uitgevoerd. Daarnaast werd op alle meetmomenten aan de professionals van de teams gevraagd een vragenlijst in te vullen over hun kennis van herstel.

Hoofdstuk 3 beschrijft de resultaten van de SRH training op de modelgetrouwheid en kennis van herstel van de professionals in de deelnemende teams en hun ervaringen met het implementatieproces. Uit de resultaten bleek dat 10 maanden na de training de interventieteams hoger scoorden dan de controleteams op de modelgetrouwheidsschalen: 'Herstelgericht werken', 'Krachtgericht werken' en 'Mate van training en coaching'. Twintig maanden na de training was er alleen nog verschil in 'Mate van coaching en training'. Daarnaast verschilde 'Methodisch werken' na twintig maanden tussen de groepen in het voordeel van de interventieteams. In alle teams was de algehele modelgetrouwheid van het SRH op beide metingen matig, rond de 60%. De kennis van het herstel van getrainde teams was, op teamniveau, significant iets hoger 10 en 20 maanden na de training dan in ongetrainde teams. Na afronding van de studie werd een bijeenkomst georganiseerd met verschillende betrokkenen (begeleiders, managers, beleidsmedewerkers en trainers) waarin de belemmerende en bevorderende factoren voor implementatie van het SRH werden geïnventariseerd. Hoewel in deze evaluatiebijeenkomst professionals positief waren over herstelgericht en krachtgericht werken, gaven ze aan dat ze verschillende organisatorische en maatschappelijke barrières ondervonden bij het werken met het SRH. Deze barrières hadden vooral betrekking op de implementatie van de methodologie in hun werkprocessen, de professionele en teamontwikkeling en de vertaling van theorie naar praktijk.

Hoofdstuk 4 bevat een beschrijving van de resultaten van de studie op cliëntniveau. De kwaliteit van leven nam in beide groepen toe, maar er werden geen verschillen gevonden tussen cliënten van de getrainde en de ongetrainde teams. Herstel en sociaal functioneren veranderden in de loop van het onderzoek helemaal niet. Met betrekking tot de secundaire uitkomsten; het aantal onvervulde zorgbehoeften nam in beide groepen evenveel af. Voor de andere maten: hoop, empowerment en vertrouwen in eigen kunnen, werden geen significante veranderingen gevonden. Er zijn verschillende verklaringen mogelijk voor deze resultaten. Ten eerste, zoals beschreven in hoofdstuk 3, was de algehele modelgetrouwheid van het SRH in de interventieteams rond de 60%, gemeten met het huidige audit instrument. We weten echter (nog) niet wat de relatie is tussen modelgetrouwheid en effecten op cliëntniveau en wat de maximaal haalbare modelgetrouwheid is, omdat het audit instrument nog niet gevalideerd is. Een tweede verklaring is dat het SRH inhoudelijk als methode onvoldoende sterk is. Uit eerder onderzoek naar andere rehabilitatiemethodieken bleken de volgende elementen bij te dragen aan effectieve psychiatrische rehabilitatie: een focus op de specifieke vaardigheden die nodig zijn in een bepaalde omgeving en daadwerkelijke toegang tot die gewenste omgeving, integratie van rehabilitatie en klinische behandeling; en het combineren van vaardigheidstraining met begeleiding. In het SRH worden deze aspecten niet expliciet uitgewerkt. Ten derde, hoewel het SRH ontwikkeld is voor elke cliënt ongeacht ernst van de problematiek, hebben de cliënten die aan deze studie hebben deelgenomen wellicht toch aanvullende of andere behandeling en begeleiding nodig om hen te ondersteunen bij hun herstel en maatschappelijke participatie.

Deel 2: De zorgbehoeftes van en het zorgaanbod voor cliënten van beschermde woonvoorzieningen

In deel 2 werd het herstel, de kwaliteit van leven en de zorgbehoeften van, en het zorgaanbod voor cliënten van beschermde woonvoorzieningen verkend. Hoofdstuk 5 beschrijft de resultaten van een latente klasse analyse, uitgevoerd met gegevens van de 263 cliënten die aan dit onderzoek deelnamen. Uit eerder onderzoek is gebleken dat het zorgaanbod voor mensen die wonen in beschutte voorzieningen niet altijd overeenstemmen met hun herstelbehoeften. Met als doel meer inzicht te krijgen in hun herstelbehoeftes, is in deze studie de mate van herstel van mensen in woonvoorzieningen verkend en gerelateerd aan hun zorgbehoeften en de kwaliteit van leven. De klassen werden gebaseerd op drie variabelen die verschillende dimensies van herstel vertegenwoordigen: persoonlijk herstel, maatschappelijk herstel en klinisch herstel. Er waren drie klassen te onderscheiden. Klasse 1 (45%) bestond uit cliënten die het hoogste van de drie klassen scoorden op het gebied van persoonlijk en maatschappelijk herstel en die de minste symptomen ervoeren. Cliënten in klasse 2 (44%) en klasse 3 (11%) scoorden significant lager op persoonlijk en maatschappelijk herstel, daarnaast ervoeren zij

significant meer symptomen in vergelijking met klasse 1. Het onderscheid tussen klasse 2 en 3 was het significant hogere aantal symptomen dat cliënten in klasse 3 rapporteerden. De cliënten in alle drie de klassen verschillen significant van elkaar op kwaliteit van leven en het aantal onvervulde behoeften, waarbij klasse 1 het beste presteerde en klasse 3 het slechtste van de drie groepen. Opvallend was dat er geen verschillen gevonden werden tussen de klassen met betrekking tot de woon- en werksituatie. De meest gerapporteerde onvervulde zorgbehoeften, in alle klassen, hadden betrekking op de fysieke en mentale gezondheid, dagelijkse activiteiten en werk, sociale en intieme relaties en het persoonlijk herstel.

Hoofdstuk 6 beschrijft de resultaten van een scoping review gericht op het verkrijgen van meer inzicht in welke psychosociale interventies gericht op herstel zijn gebruikt en geëvalueerd in beschermde woonvoorzieningen of vergelijkbare instellingen, en wat bekend is over hun effectiviteit. Het review resulteerde in 45 artikelen. De meeste studies, 19 stuks, betroffen interventies gericht op maatschappelijk herstel. Er zijn vijf studies gevonden over interventies gericht op persoonlijk herstel en vijf studies over interventies gericht op functioneel herstel. Tevens vonden we negen studies die betrekking hadden op leefstijlinterventies gericht op bijvoorbeeld lichaamsbeweging en gezond eten. Tenslotte waren er zeven studies over creatieve en spirituele interventies. Uit dit review bleek dat onderzoek dat zich specifiek richt op herstel van mensen met ernstige psychische problemen in langdurige verblijfsfaciliteiten nog beperkt is. Desalniettemin kan de conclusie getrokken worden dat ook deze settingen een bredere visie op herstel ontwikkelen en behoefte hebben aan innovatie op dit gebied. Voor verschillende interventies zijn al eerste positieve resultaten gevonden. Er kunnen drie uitdagingen worden benoemd met betrekking tot de praktijk en het onderzoek voor mensen met ernstige psychische problemen in intramurale faciliteiten. De eerste uitdaging is de verdere ontwikkeling en professionalisering van de zorg en ondersteuning die deze specifieke groep mensen nodig heeft. Daarnaast ligt een kans in het beschikbaar maken van effectieve en veelbelovende interventies voor alle mensen met ernstige psychische problemen, ondanks hun plaats in het zorglandschap (bijvoorbeeld klinische, beschermde of ondersteunde diensten). De tweede uitdaging is om deze ontwikkeling te begeleiden door onderzoek op dit gebied om meer inzicht te krijgen wat voor deze groep werkt en wat niet. De derde uitdaging is de integratie van verschillende benaderingen van herstel om een uitgebreid en gecoördineerd ondersteuningsprogramma te ontwikkelen.

Discussie en conclusies

De belangrijkste bevindingen van dit proefschrift zijn samengevat en bediscussieerd in **hoofdstuk 7.** Daarnaast worden in dit hoofdstuk de onderzoeksmethoden bediscussieerd en aanbevelingen gedaan voor onderzoek en praktijk. Deze studie biedt goede eerste inzichten in de effecten van het trainen van teams in

het SRH. Daarnaast bieden de resultaten van deze studie kennis over het herstel, de kwaliteit van leven en de zorg behoeften van cliënten van beschermde en begeleide woonvoorzieningen. De resultaten tonen echter ook aan dat er nog meer inspanningen nodig zijn om het zorgaanbod voor deze groep verder te ontwikkelen.

Het eerste discussiepunt gaat over de positie van het SRH in de zorg voor mensen met ernstige psychiatrische problemen. Het gebruiken van het SRH alleen lijkt niet voldoende om concrete resultaten te realiseren met betrekking tot kwaliteit van leven, persoonlijk en maatschappelijk herstel. Het is nodig om de inhoud van het SRH, het implementatieproces en het totale aanbod van zorg voor mensen met complexe psychiatrische problemen kritisch onder de loep te nemen.

Het SRH is sterk gericht op het opbouwen van een relatie tussen professional en cliënt, en daarnaast op het inventariseren van krachten en wensen van een persoon en zijn omgeving. Dit is een sterk punt. Een mogelijke zwakte kan liggen in het gebrek aan concrete hulpmiddelen om specifieke wensen en doelen te bereiken wanneer sprake is van beperkingen als gevolg van langdurige complexe problematiek. Instellingen die zorg aanbieden aan deze mensen zouden meer aandacht kunnen besteden aan het overwinnen, compenseren of leren leven met deze beperkingen. Bijvoorbeeld door het verbreden van hun aanbod met specialisten op dit gebied zoals ergotherapeuten of het toepassen van methodieken die expliciet aandacht besteden aan training van specifieke vaardigheden in een bepaalde context.

Een tweede aandachtspunt is de implementatie en de vertaling van de theorie van het SRH naar de praktijk. De inhoud van de SRH methode lijkt aan te sluiten bij de waarden en normen van de professionals. Desalniettemin ervaren zij regelmatig moeilijkheden bij de toepassing in de, soms weerbarstige, praktijk. In toekomstige implementatieprocessen van het SRH is het aan te bevelen meer aandacht te besteden aan de aansluiting bij de lokale context van een team, de aansluiting bij de kennis en vaardigheden van een specifiek team en zijn professionals, en de toepassing van herstelondersteunende principes in de praktijk bij cliënten met ernstige problematiek. Voorafgaand aan een implementatieproces zou een inventarisatie van specifieke bevorderende en belemmerende factoren gedaan kunnen worden op basis waarvan een gericht, context specifiek implementatieplan ontwikkeld kan worden.

Het derde discussiepunt heeft betrekking op hoe goede zorg voor mensen met ernstige psychiatrische problemen, die intramurale zorg nodig hebben, eruit zou moeten zien. Uit deze studie bleek dat cliënten van woonvoorzieningen vaak zorgbehoeften hebben op meerdere gebieden, waaronder op gebied van participatie, herstel en lichamelijke en geestelijke gezondheid. Hieruit blijkt dat nog steeds verbetering van het zorgaanbod nodig is. Het review liet zien dat ook voor deze groep mensen interventies beschikbaar zijn gericht op alle dimensies van herstel.

De uitdaging voor instellingen voor beschermd wonen is nu het verder doorontwikkelen, uitbreiden en integreren van hun aanbod. Ten tweede is het belangrijk dat dit gepaard gaat met meer onderzoek voor deze specifieke groep om meer inzicht te krijgen in wat voor hen wel of niet werkt. In dit proces zouden niet alleen wetenschappelijke onderzoekers moeten worden betrokken, maar ook cliënten, familieleden en zorgprofessionals. In een dergelijk samenwerkingsproces kunnen alle belanghebbenden hun kennis, expertise en prioriteiten inbrengen.

Instellingen voor begeleid en beschermd wonen hebben de afgelopen jaren verschillende ontwikkelingen doorgemaakt. Onder invloed van nieuw beleid en ontwikkelingen in de geestelijke gezondheidszorg werden zij gedwongen hun aanbod en hun positie te versterken. Dit heeft geleid tot een aantal veelbelovende ontwikkelingen, vooral met betrekking tot persoonlijk herstel en empowerment. De volgende stap zou kunnen zijn om hun aanbod verder te professionaliseren en te verbreden. Een andere uitdaging ligt in de aansluiting bij andere (GGZ) zorgaanbieders en maatschappelijke organisaties, zoals buurtteams, om samen te werken aan een persoonsgericht herstelondersteunend zorgsysteem. Organisaties voor beschermd en begeleid wonen hebben een unieke positie tussen de GGZ-organisaties en het sociale aanbod in de wijken, een perfect startpunt voor de verdere ontwikkeling van een geïntegreerd lokaal systeem waarin de wensen van cliënten centraal kunnen staan.

DANKWOORD

En dan is het af! Zonder de bijdragen en ondersteuning van velen was het nooit zover gekomen. En zeker een stuk minder leuk geweest ☺.

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ABOUT THE AUTHOR

Neis Bitter was born on the 9th of April 1984 in Alkmaar (the Netherlands). She completed her secondary education in 2002 at the Andreas College in Katwijk. After finishing her secondary education, she studied occupational therapy at the Amsterdam University of Applied Sciences. During this study she developed a special interest for (social) psychiatry and scientific research. After graduating she started working part-time as a mental health professional at GGZ Rivierduinen, a mental health care organization in South Holland. At the same time she completed a premaster program Health Sciences followed by the master 'Management, Policy analysis and Entrepreneurship in Health and Life Sciences' at the VU University in Amsterdam. She conducted two research internships, one at the Athena Institute (VU University) about collaboration between care farms and mental health care organizations, and a second one at the Phrenos Center of Expertise for severe mental illness on the development of the Quality Assessment of Regional Treatment Systems for Schizophrenia (QUARTS).
In May 2012 Neis started as a PHD student at the Tranzo Scientific Center for Care and Welfare at Tilburg University what resulted in this thesis. Currently she works a researcher for the Netherlands Insitute for Health Service Research (Nivel) were she works on the evaluation of an innovative way of organising primary care for vulnerable citizens.

OVER DE AUTEUR

Neis Bitter werd geboren op 9 april 1984 in Alkmaar. Ze rondde het Voorbereidend Wetenschappelijk Onderwijs (VWO) aan het Andreas College in Katwijk af in 2002. Vervolgens studeerde ze ergotherapie aan de Hogeschool van Amsterdam. Gedurende deze studie ontwikkelde ze een interesse in (sociale) psychiatrie en in wetenschappelijk onderzoek. Na haar afstuderen ging ze parttime werken als agoog bij GGZ Rivierduinen. Tegelijkertijd rondde ze de premaster Gezondheidswetenschappen af, gevolgd door de master 'Management, Policy analysis and Entrepreneurship in Health and Life Sciences' aan de Vrije Universiteit in Amsterdam. In het kader van deze master deed Neis twee onderzoeksstages, één bij het Athena Instituut (VU) over samenwerking tussen zorgboerderijen en GGZ organisaties en één bij Kenniscentrum Phrenos over de ontwikkeling van de Kwaliteitstoetsing Regionaal Aanbod Schizofreniezorg (KRAS).
Mei 2012 begon Neis aan haar promotieonderzoek bij Tranzo (Tilburg University), wat resulteerde in dit proefschrift. Momenteel werkt ze voor het Nederlands instituut voor onderzoek van de gezondheidszorg (Nivel) waar zij werkt aan een evaluatie van een innovatieve manier van organiseren en samenwerken in de eerstelijnszorg voor kwetsbare mensen.