

**ORIGINAL RESEARCH:  
EMPIRICAL RESEARCH - QUANTITATIVE**

# Service user involvement in a secure setting before and after the implementation of recovery-oriented practice: A quasi-experimental study

Grethe Elly Ytreland Hauso<sup>1</sup> | Kjersti Alsaker<sup>1,2</sup> | Mette Senneseth<sup>1,3</sup> 

<sup>1</sup>Department of Welfare and Participation, Western Norway University of Applied Sciences, Bergen, Norway

<sup>2</sup>National Centre for Emergency Primary Health Care (NKLM), NORCE, Bergen, Norway

<sup>3</sup>Centre for Research and Education in Forensic Psychiatry, Haukeland University Hospital, Bergen, Norway

#### Correspondence

Mette Senneseth, Centre for Research and Education in Forensic Psychiatry, Haukeland University Hospital, Bergen, Norway.

Email: mette.senneseth@helse-bergen.no

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## Abstract

**Aim:** To measure change in service user involvement in secure mental health units, before and after the implementation of recovery-oriented practice.

**Design:** Quasi-experimental study pretest–posttest design with non-equivalent comparison groups.

**Methods:** Data were collected from May 2018 to December 2019 in four medium-/high-security units in Norway. Two intervention units that implemented recovery-oriented practice were compared with two comparison units that did not. Data were obtained using anonymous questionnaires at baseline and at 6-month follow-up. For intervention units, data were also obtained at a 12-month follow-up to measure sustainability of improvements over time. Twenty inpatients ('patients'; intervention group: 10, comparison group: 10) and 141 members of frontline staff ('service providers'; intervention group: 92, comparison group: 49) participated at baseline. Mann–Whitney *U*-tests and independent sample *t*-tests were applied at the group-level to analyse changes in mean scores in groups.

**Results:** Among patients in the intervention units, findings indicated no improvements after 6 months, but significant improvements after 12 months in terms of patients' opportunities to participate in formulating their individual care plans, to influence decision-making about therapy and to receive information about complaint procedures. Opportunities to participate in discussions about medication and treatment regimens did not improve. After 6 months, service providers in the intervention units reported an increase in democratic patient involvement, patient collaboration and management support, but not in carer involvement and assisted patient involvement. The improvements in democratic patient involvement and management support were sustained over time. No changes were found in the comparison groups.

**Conclusion:** The patients and the service providers reported a higher degree of service user involvement after implementing recovery-oriented practice. Specific work is needed to ensure patients' involvement in all domains.

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**Impact:** The findings are encouraging with respect to the potential to increase empowerment in a restricted setting through the implementation of recovery-oriented practice.

**KEYWORDS**

empowerment, forensic mental health, patient participation, psychiatric nursing

## 1 | INTRODUCTION

Internationally, involvement of service users in their mental health care is a major priority, and the recovery model has been identified as the guiding framework in many countries (Department of Health, 2014; Norwegian Directorate of Health, 2014; Saxena et al., 2015). Little is known about the extent to which service user involvement is adequately implemented in secure settings. Previous studies have highlighted the lack of collaboration with patients in forensic care (Barnao et al., 2015; Marklund et al., 2020; McKenna et al., 2014a). Secure units are responsible for patients with the highest security and treatment needs (Urheim & VandenBos, 2006). These include mentally ill people whose behaviour represents a risk to themselves and others. Some are not criminally responsible for their offences and are committed to court-ordered psychiatric treatment. Hence, patient choice may be restricted in such settings because of the need to reduce risk and fulfil the duty of public protection (Adams et al., 2018). However, at present, there is no evidence that service user involvement compromises staff or public safety (Urheim et al., 2011). In fact, increased patient autonomy has been linked to fewer incidents of patient aggression and violence inside secure units (Urheim et al., 2020). A cornerstone of the recovery model is patient choice; involving patients in their treatment and care is possibly the most important factor in terms of ensuring that recovery takes place (Bowser, 2013; John, 2017). It is widely recognized that people with mental illness can participate actively in their own treatment and care (Mueser et al., 2002). It has been argued that the perspectives of patients in secure settings are equally as important as the perspectives of other patients about their illness and care (Marklund et al., 2020), and it is probably that they will respond positively to increased opportunities to be involved in their own treatment (Livingston et al., 2013). Therefore, it would be beneficial to optimize service user involvement in forensic settings. There has been a call for practical and longitudinal research to increase our understanding of what improves patient outcomes and delivers more respectful services in secure settings (Simpson & Penney, 2018). The present study aims to evaluate service user involvement before and after implementing recovery-oriented practice in two secure units in Norway.

## 2 | BACKGROUND

Tambuyzer et al. (2014) found four main arguments for patient involvement in mental health care: (1) it is a fundamental right of

citizens and 'the right thing to do', (2) it contributes to empowerment, quality of life and satisfaction with health, (3) it enhances the quality of mental health care and (4) it is advocated to meet governmental or funding requirements or to increase the initiative's legitimacy. Livingston et al. (2013) proposed two additional arguments—the efficiency argument and the commercial argument—referring to the fact that patient engagement is often framed as a way to reduce costs and that institutions that prioritize patient engagement are seen as more attractive to service users. Service user involvement has also been suggested as a mechanism to encourage patients to take responsibility for their recovery journey and manage their own risk (Henagulph et al., 2012). In a recent study by Møllerhøj and Stølan (2018), patients in secure settings were asked to contribute with advice on how to improve practices in mental health services. The respondents stressed the importance of service providers involving patients in decision-making. Marklund et al. (2020) found that patients in secure settings understood what they needed to recover, but their experience was that this understanding was not taken into consideration. They documented the patients' 'need for empowerment in a restricted life' (pp. 237–238). Marklund and colleagues call for service providers to value patients' experiences and perceptions and allow these to form the foundation of care (Marklund et al., 2020). Moreover, several studies have identified unmet needs as a trigger for conflict (El-Gilany et al., 2010; Giesen et al., 2008; Hills & Joyce, 2013; Trønnes et al., 2020). Not being heard, or not feeling involved and included, are described as difficult experiences that create a sense of hopelessness and result in a loss of confidence in the service providers and in the care offered (Marklund et al., 2020). Furthermore, in the 'Struggle for Recognition' theory it is argued that the experience of powerlessness, fear and not being recognized as a person with legal rights may be potential motivators for interpersonal conflicts (Honneth, 1996). Hence, a mental health service that fosters patient choice and empowerment may strengthen the experience of such recognition and subsequently reduce the incidents of aggression and acts of violence (Gudde et al., 2015; Urheim et al., 2011). The concept of recovery refers to multiple dimensions of the individual's development (Jaeger & Hoff, 2012; Whitley & Drake, 2010). William Anthony's (1993) description of *personal* recovery from mental illness as a process of living a satisfying life in the limitations caused by illness is widely accepted (Bird et al., 2014). Personal recovery is different from clinical recovery, which has traditionally focussed on reducing symptoms and increasing functioning (Slade et al., 2008). Leamy et al.

(2011) identified five key personal recovery processes as stated by people with mental illness in general psychiatry: connectedness, hope, identity, meaning and empowerment. Together, these form a theoretical framework for personal recovery from mental illness known as 'CHIME'. Although there is a growing body of research seeking to understand what recovery means to forensic patients (Clarke et al., 2016; Shepherd et al., 2016), there is no unifying definition or specific framework to guide recovery-oriented practice in secure settings. However, the concept of recovery has gained considerable acceptance in secure settings internationally over the last decade (Simpson & Penney, 2018). Regardless of security needs, it has been argued that implementing a recovery-oriented model of care in secure settings may be just as important as in general mental health services (Simpson & Penney, 2018). However, there has been some debate surrounding its appropriateness (Mezey et al., 2010). For example, it has been argued that caution should be taken to ensure that patients are given realistic expectations rather than false hopes (Mezey et al., 2010). Nevertheless, a recovery approach has been implemented in secure settings in several countries (Drennan & Alred, 2013; Laithwaite et al., 2009; Livingston et al., 2012; McKenna et al., 2014b; Skinner et al., 2014), and the research in this field is growing rapidly. Skinner et al. (2014) found that forensic patients are 'able to manage the complexities of developing a realistic sense of hope in the context of the double stigma of being both mentally ill and dangerous' (p. 99). Livingston et al. (2013) conducted a study to support recovery by improving patient engagement in a forensic mental health hospital in Canada. They found that a major challenge was engaging and educating staff about the importance of patient engagement and recovery-oriented care approaches. Other studies have found that service providers in secure settings are positive about the implementation of recovery-oriented practice (Gudjonsson et al., 2010), and it has been argued that the approach can easily be incorporated into existing treatment and care (Gudjonsson et al., 2007).

Implementing a recovery-oriented model of care may demand and initiate a process that could positively affect several areas that are important to forensic patients' personal recovery, including a higher degree of involvement in treatment and care. The present study examines how patients and service providers evaluate the degree of service user involvement before and after the implementation of recovery-oriented practice. Specifically, it poses the following research questions:

- Do patients in the intervention units report an improvement in service user involvement after the implementation of recovery-oriented practice?
- Do service providers in the intervention units report an improvement in service user involvement after the implementation of recovery-oriented practice?

We expect no changes in the comparison units.

## 3 | THE STUDY

### 3.1 | Aim

The aim of the study was to measure changes in service user involvement, as reported by patients and service providers, before and after the implementation of recovery-oriented practice in a Norwegian secure mental health setting.

### 3.2 | Design

The study applied a quasi-experimental design with non-equivalent comparisons, which is considered valuable when an entire unit is implementing the intervention and where a similar unit not implementing the intervention is available (Polit & Beck, 2017). The quasi-experimental design is based on the assumption that the indicators of interest follow the same trajectory over time in treatment and comparison groups (White & Sabarwal, 2014). The TREND statement for nonrandomized evaluations was used for reporting the study (Des Jarlais et al., 2004).

### 3.3 | Participants

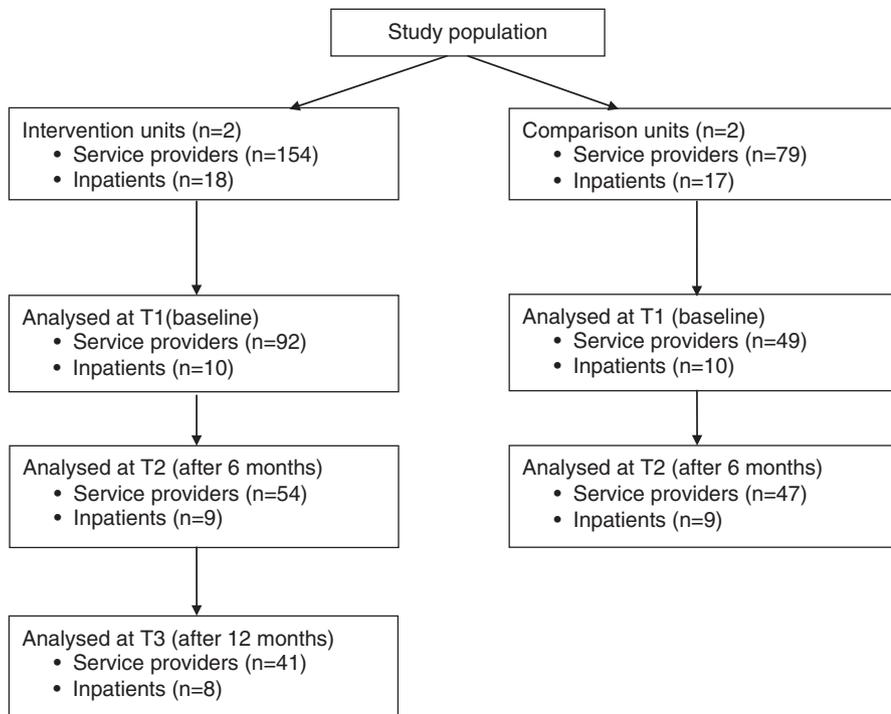
The study setting comprised four units in two high-/medium-security hospitals in Norway: one 10-bed high-security unit, two eight-bed medium-security units and one nine-bed medium-security unit. The secure units are responsible for the patients with the highest security and treatment needs in the region. The admission criteria are severe mental illness combined with risk of severe violence. Using the ICD-10 diagnostic manual, the major diagnoses are schizophrenia or other psychotic disorders and personality disorders, mainly dissocial and unstable (Urheim et al., 2011). Most patients are referred from general psychiatric hospitals or from prisons, or after serious incidents of violence, or where there is an increased concern about the risk of violence.

Two units were purposively assigned to the intervention group as they were implementing a recovery-oriented model of care. The other two units were assigned to the comparison group based on organizational leaders' interest and willingness to participate. The comparison units had not implemented a recovery-oriented model of care but intended to do so. Therefore, comparison units were only included at baseline and at 6-month follow-up.

The study population was the 35 admitted patients and the 233 service providers employed in the four units (Figure 1). The inclusion criteria for patients were that they had the capacity to consent to participate and had been admitted for at least 1 month. All service providers were asked to participate.

Twenty patients (10 in the intervention group and 10 in the comparison group) and 141 service providers (92 in the intervention

FIGURE 1 Flow diagram



group and 49 in the comparison group) took part in the study at baseline (T1). The intervention and comparison units were similar in organizational size and population, except for one high-security unit in the intervention group, which employed more service providers than the other units.

### 3.4 | Data collection

Anonymous data were collected from May 2018 to December 2019, using self-report questionnaires. Data collection occurred at three time points for the intervention group: baseline (T1), after 6 months (T2) and after 12 months (T3); and at two time points for the comparison group: baseline (T1) and after 6 months (T2). Comparison units were only included at T1 and T2 as they were planning to start implementation subsequent to T2. Patients received information about the study and were given questionnaires during their weekly community meeting. Patients who were willing to participate returned their questionnaires anonymously in sealed envelopes to the research team. Returning the anonymous questionnaire implied consent. Service providers received an invitation by email to fill out an electronic questionnaire. They were reminded twice by email of their participation, whereas the patients were reminded only once.

### 3.5 | Validity, reliability and rigour

Patient reports on service user involvement were measured using the Psychiatric In-Patient Experience Questionnaire (Bjertnaes et al., 2006, 2015; Garratt et al., 2006). The questionnaire contains 15 items covering the areas of relationship with therapist, benefit of

patient stay, information on and influence of treatment. It has previously been applied in studies of service user involvement in mental health settings in Norway (Storm, Knudsen, et al., 2011). The present study included 10 items that were considered appropriate for the current secure settings. Seven of these items were measured on a 5-point Likert scale from 1 (very large extent) to 5 (not at all), for example, 'Have you participated in discussions about your treatment regime?' The remaining three items were yes-or-no questions, for example, 'Have you had the opportunity to choose your own primary service provider?'

Service provider reports on service user involvement were measured with the Service User Involvement in Mental Health Scale (SUIMH), comprising 23 items measured on a Likert scale from 1 (never) to 7 (always). The SUIMH is categorized into five subscales: (1) 'democratic patient involvement', referring to the extent to which mental health professionals in the unit encourage patients to participate in decision-making and meetings about treatment, (2) 'patient collaboration', which involves therapeutic alliance and refers to the extent to which service providers view themselves as encouraging, open to discussion and collaborating with their patients when planning and implementing treatment, for example, 'I work out goals for treatment together with the patient', (3) 'carer involvement', referring to the degree of informing and involving the patient's next of kin in the treatment of the patient, for example, 'if the patient wants, the carers are involved in treatment planning', (4) 'assisted patient involvement', referring to the extent to which service providers perceive their patients as being involved in their admission, assessments of functioning and decisions about follow-up care and discharge, for example, 'the patient is involved in assessing his/her level of functioning', (5) 'management support', representing providers' perceptions of management encouragement and support for service user

involvement, for example, 'department management is encouraging the involvement of patients in their treatment' (Storm, Knudsen, et al., 2011; Storm et al., 2010). Satisfactory reliability of the subscales has been reported in two earlier studies, with Cronbach's alpha ranging from .75 to .87 (Storm, Hausken, et al., 2011; Storm et al., 2010). In the present study, Cronbach's alpha for the five subscales ranged from .77 to .88 at baseline. The SUIMH is considered valid and useful for identifying areas to be further developed or strengthened to achieve satisfactory user-oriented care practices (Storm et al., 2010).

Two additional single items were applied to this measure: 'How important is service user involvement in psychiatry in your opinion?' and 'To what extent has service user involvement been carried out in your institution?' These items were rated on a scale from 1 (not important/entirely absent) to 10 (very important/carried out extensively).

### 3.6 | Intervention

Subsequent to T1, the units that took part in the intervention programme reviewed the baseline results with the patients and service providers in separate workshops. The workshop for service providers was arranged as a whole-day seminar that was held twice, 2 days in a row, to cover all staff (Appendix S1). The aim of the workshops was to involve patients and service providers in developing new measures that could address the issues highlighted by the baseline survey findings. The workshops with service providers included education about recovery principles and a lecture given by a recovery mentor with experience of being a patient. The education was based on the theoretical framework for personal recovery from mental illness known as 'CHIME' (Leamy et al., 2011).

Building on the workshop discussions, changes in routines were suggested, and new means for promoting recovery-oriented practice were developed and tailored to the specific units. An implementation seminar was held in October 2018, which represented the starting point for the new means. These included (1) a new routine for the treatment teams that secured the involvement of the patients in their own treatment, (2) a personal folder for patients to keep in their rooms, which provided an overview of information on judicial rights, house rules and routines, and decisions about their individual plans, (3) weekly dialogue meetings with heads of units as an opportunity for participation and (4) a new set of recovery-oriented values, which were chosen and agreed on, to guide the unit's work. Simultaneously, because of legal requirements, the house rules were revised to be more flexible and patient-oriented.

### 3.7 | Ethics approval and considerations

The Data Protection Committee in Norway and the Norwegian Centre for Research Data approved the study protocol (438053).

The Regional Committee for Medical and Health Research Ethics of Norway confirmed that the present study was not considered to be research according to the Health Research Act; therefore, it was not subject to a formal ethics review (2018/162/REC north). All participants were adults (over the age of 18) and capable of giving informed consent. Careful consideration was given to the potential power imbalance in the research settings. Patients received oral and written information that the study was voluntary and that non-participation would not influence their treatment in the clinics. None of the researchers was employed in the clinics or had a relationship with any of the patients. Due to the very small and vulnerable population, authors were guided by the Data Protection Committee in Norway and the Norwegian Centre for Research Data to ensure anonymity for participants. Therefore, no social-demographic characteristics of the patients were collected with the data, except for length of stay. All data were treated confidentially and anonymity was ensured. The patients received approximately 10 Euros (100 NOK) as compensation for their time spent on the survey.

### 3.8 | Data analysis

Statistical analyses were performed using SPSS version 24.0. Descriptive statistics were reported with means and standard deviations (SDs). All data were anonymously collected and could not be linked individually. Therefore, all data were analysed at a group level. Analyses were based on the assessment of the difference in the amount of change over time in the outcomes between the two groups (Handley et al., 2018). Mann-Whitney *U* tests and independent sample *t*-tests were applied to analyse changes in means in service user involvement from T1 in groups. The Mann-Whitney *U* test is a nonparametric version of the *t*-test. It is suitable for analysing data from small sample sizes that do not follow a normal distribution (Marston, 2010) and was therefore used to analyse the data from the patients. The effect sizes of the changes from baseline to follow-up in groups (Cohen's  $d = [\text{Mean}_2 - \text{Mean}_1]/\text{SD}_1$ ) were judged against the following criteria: small ( $d \geq 0.2$ ), moderate ( $d \geq 0.5$ ), large ( $d \geq 0.8$ ) or very large ( $d \geq 1.3$ ) (Sullivan & Feinn, 2012).

Chi-square tests were applied for categorical variables (e.g. to analyse any group differences in sample characteristics between the intervention and comparison groups). To analyse any group differences in the mean scores between the intervention and comparison group, independent sample *t*-tests were applied to service provider data. All *p* values were judged to be statistically significant if  $<.05$ .

## 4 | RESULTS

### 4.1 | Characteristics of study samples

Sample characteristics are outlined in Table 1. Half of the patients had been admitted involuntarily for more than a year, whereas the other half had been admitted for less than a year.

TABLE 1 Characteristics of study sample

	Intervention N = 92	Comparison N = 49	Difference between groups	Total N = 141
Service providers (N = 141)	n (%)	n (%)	p*	n (%)
Gender			.38	
Women	37 (40.2)	24 (49.0)		61 (43.3)
Men	53 (57.6)	25 (51.0)		78 (55.3)
Missing	2 (2.2)	0 (0.0)		2 (1.4)
Profession			.65	
Health profession	61 (66.3)	34 (69.4)		95 (67.4)
Other (assistants)	28 (30.4)	13 (26.5)		41 (29.1)
Missing	3 (3.3)	2 (4.1)		5 (3.5)
Duration of employment			<.01	
Less than 1 year	31 (33.7)	2 (4.1)		33 (23.4)
1–3 years	16 (17.4)	11 (22.4)		27 (19.1)
More than 3 years	44 (47.8)	36 (73.5)		80 (56.7)
Missing	1 (1.1)	0 (0.0)		1 (0.7)
Position			.91	
Full time	61 (66.3)	32 (65.3)		93 (66.0)
Part time	28 (30.4)	14 (28.6)		42 (29.8)
Missing	3 (3.3)	3 (6.1)		6 (4.3)
Inpatients (N = 20)	N = 10	N = 10	p*	N = 20
Length of stay			.25	
Less than 1 year	4	6		10 (50)
More than 1 year	6	4		10 (50)

\*p values provided by chi-square tests. Significant difference if  $p < .05$ .

The majority of service providers had higher levels of health education (e.g. nurse education) had been employed at the clinic for more than a year and worked full time (Table 1). There were no significant differences in characteristics between the intervention group and the comparison group ( $p > .05$ ), except for a higher proportion of employees in the intervention group who had been employed at the clinic for less than a year.

#### 4.2 | Patient reports on service user involvement

Neither the patients in the intervention group nor those in the comparison group reported statistically significant changes in service user involvement from baseline to 6 months follow-up (Table 2). However, patients in the intervention group reported an improvement in service user involvement in 3 out of 10 items after 12 months: involvement in formulating their individual care plans, more satisfaction with opportunities to influence decision-making about therapy, and receiving more information about complaints procedures ( $p < .05$ ) (Table 2). Patients' opportunities to participate in discussions about medication and treatment regimens did not improve.

#### 4.3 | Service provider reports on service user involvement

Service providers in the intervention group reported an improvement in service user involvement in three out of five subscales after 6 months: democratic patient involvement, patient collaboration and management support (Table 3). The highest mean value was obtained in management support (4.94, SD 1.31) followed by democratic patient involvement (4.07, SD 1.38), patient collaboration (3.94, SD 1.56), assisted patient involvement (2.93, SD 1.51) and carer involvement (1.95, SD 1.79). Service providers in the comparison group did not report any changes in any of the service user involvement subscales after 6 months ( $p > .05$ ). In the intervention units, analyses indicated sustained effects after 12 months in democratic patient involvement and management support ( $p < .05$ ) (Table 3).

In addition, two single items were analysed: service providers' general opinions of the importance of service user involvement in psychiatric services and the extent to which service user involvement was carried out in the institutions. Both groups emphasized the importance of service user involvement, and no significant differences were found between the groups, either at T1 ( $t = -0.23$ ,  $p = .82$ ) or T2 ( $t = 0.60$ ,  $p = .55$ ). About the service providers' opinions

TABLE 2 Service user involvement as stated by patients

	Intervention group										Comparison group																
	T1					T2					T3					T1					T2						
	N	Mean (SD)	N	Mean (SD)	p <sup>a</sup>	N	Mean (SD)	N	Mean (SD)	p <sup>a</sup>	N	Mean (SD)	N	Mean (SD)	p <sup>a</sup>	N	Mean (SD)	N	Mean (SD)	p <sup>a</sup>	N	Mean (SD)	N	Mean (SD)	p <sup>a</sup>	Effect size (d <sup>b</sup> ) T1-T2	
1. Have you participated in discussions about your medication?	10	3.50 (1.27)	9	3.44 (1.42)	.93	8	3.63 (1.19)	8	3.63 (1.19)	.81	0.1	10	3.10 (1.37)	9	3.56 (1.13)	.45	0.3										
2. Have you participated in discussions about your treatment regime?	9	3.00 (1.32)	9	3.00 (1.58)	.96	8	3.38 (0.74)	8	3.38 (0.74)	.33	0.3	9	3.00 (0.71)	9	3.11 (0.93)	.92	0.2										
3. Have you participated in discussions about ward routines and department environment?	9	2.78 (1.30)	9	2.67 (1.22)	.81	8	3.38 (1.19)	8	3.38 (1.19)	.39	0.5	8	3.13 (1.46)	9	3.00 (1.58)	.92	-0.1										
4. Have you participated in formulating your individual care plan?	9	2.00 (1.12)	9	2.44 (1.24)	.44	8	3.38 (0.92)	8	3.38 (0.92)	.02	1.2	9	3.22 (1.56)	9	2.78 (0.97)	.39	-0.3										
5. Have you had enough time for talks and contact with your therapist?	10	3.40 (1.07)	9	3.89 (1.45)	.27	8	4.00 (0.93)	8	4.00 (0.93)	.23	0.6	10	3.70 (0.82)	9	3.22 (1.20)	.34	-0.6										
6. How satisfied are you with the opportunities to have influence on decision making about therapy?	10	2.50 (1.18)	9	2.78 (1.20)	.61	8	3.63 (0.92)	8	3.63 (0.92)	.03	1.0	10	3.60 (0.97)	8	3.63 (1.40)	.82	0.0										
7. Overall, have the help and treatment you have received so far at the institution been satisfactory?	9	3.00 (1.32)	8	3.25 (1.58)	.69	8	3.63 (0.92)	8	3.63 (0.92)	.37	0.5	10	3.70 (1.06)	8	3.75 (1.39)	.78	0.0										
8. Have you had the opportunity to choose your own therapist?	10	1/9	9	2/7		8	1/7	8	1/7		.87	10	0/10	9	1/8	.28											
9. Have you had the opportunity to choose your own primary service provider?	10	2/8	9	0/9		8	1/7	8	1/7		.67	10	2/8	9	2/7	.91											
10. Have you received information about complains procedures regarding your treatment? (Health Supervision, the Directorate of Health, Health and Social Service Ombudsman)	10	5/5	9	6/3		8	8/0	8	8/0		.02	10	7/3	9	7/2	.70											

Note: Items 1-7 are scored on a 5-point Likert scale (1-5).

<sup>a</sup>p value for the change in mean score from T1 within group, provided by Mann-Whitney U tests. Significant change if  $p < .05$ .

<sup>b</sup>Cohen's d. Effect size of change from baseline within group.

<sup>c</sup>p value provided by chi-square tests.

TABLE 3 Service providers' evaluation of service user involvement before and after implementation of recovery-oriented practice

	Intervention group				Comparison group			
	T1 (N = 91)	T2 (N = 54)	T3 (N = 41)	T1 (N = 48)	T2 (N = 47)	Effect size (d <sup>c</sup> ) T1-T2	p <sup>a</sup>	Effect size (d <sup>c</sup> ) T1-T2
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)			
1. Democratic patient involvement (five items) Cronbach's alpha T1 = 0.88	3.28 (1.68)	4.07 (1.38)	4.34 (1.03)	4.23 (1.56)	4.29 (1.37)	0.6	.83	0.0
1. Mental health professionals formulate the treatment plan together with the patient								
2. Mental health professionals encourage the patient to participate in treatment planning								
3. Treatment goals and means are formulated together with the patient								
4. Mental health professionals and the patient agree on therapeutic methods								
5. The patient participates in meetings about his/her treatment								
2. Patient collaboration (three items) Cronbach's alpha T1 = 0.86	3.57 (1.55)	3.94 (1.56)	4.00 (1.24)	4.17 (1.26)	4.20 (1.48)	0.3	.89	0.0
6. I work out goals for treatment together with the patient								
7. I encourage the patient to participate when planning the treatment								
8. I discuss various treatment methods with the patient								
3. Carer involvement (five items) Cronbach's alpha T1 = 0.85	2.33 (1.99)	1.95 (1.79)	2.18 (1.74)	3.08 (1.89)	3.09 (1.65)	-0.1	.98	0.0
9. The carer is informed about the patients admission								
10. Soon after the patient admission initiatives are taken towards the carers								
11. If the patient wants, carers are involved in planning the patient's treatment								
12. The carer is provided with information about the patients mental health problems								
13. If the patient wants, the carer is involved in decisions about the patients discharge								

(Continues)

TABLE 3 (Continued)

	Intervention group			Comparison group		
	T1 (N = 91)	T2 (N = 54)	T3 (N = 41)	T1 (N = 48)	T2 (N = 47)	Effect size (d <sup>c</sup> )
	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	Mean (SD)	T1-T2
4. Assisted patient involvement (five items): Cronbach's alpha T1 = 0.77	2.63 (1.54)	2.93 (1.51)	2.76 (1.40)	3.56 (1.41)	3.76 (1.44)	.51
14. The patient can initiate his/her admission						
15. The patient participate in assessing his/her level of functioning						
16. The patient has input into what follow-up care he/she will receive from mental health services						
17. The patient is able to cope with daily life when discharged						
18. The patient takes part in filling out the individual care plan						
5. Management support (five items) Cronbach's alpha T1 = 0.87	3.95 (1.77)	4.94 (1.31)	5.01 (1.12)	5.10 (1.69)	5.00 (1.58)	.75
19. Department management are engaged in discussions about treatment methods						
20. Service providers are engaged in discussions about treatment methods in the department						
21. Department management are encouraging involvement of patients in own treatment						
22. Patient involvement in treatment is supported by department management						
23. Department management encourage the patient to participate when filling out his/her individual care plan						
						0.1
						<.01/<.01
						0.6
						.08/.65
						p <sup>a</sup>
						Effect size (d <sup>c</sup> )
						T1-T3
						p <sup>a</sup>
						Effect size (d <sup>c</sup> )
						T1-T2

Note: Each item is scored on a 7-point Likert scale (1-7).

<sup>a</sup>p values of the change in mean score from T1-T2 within groups provided by independent sample t tests. Statistically significant change if p < .05.

<sup>b</sup>p values of the change in mean score from T1-T3 within the intervention group provided by independent sample t tests. Statistically significant change if p < .05.

<sup>c</sup>Cohen's d. Effect size of the change in mean score from baseline within group.

of the extent to which service user involvement was carried out in the institution, there was a significant difference between the groups at T1 ( $t = -5.45, p < .01$ ), but not at T2 ( $t = -1.72, p = .09$ ). Comparisons initially showed a higher level of service user involvement in their institution than in the intervention group ( $t = -5.45, p < .01$ ). The intervention group reported a significant increase during the 12 months (Figure 2).

At T3, the mean score for the intervention group (6.76, SD 1.69) had reached the same level as that of the comparison group at T2 (6.85, SD 2.02). The effect size of the improvement in the extent to which service user involvement was carried out in the institution was considered to be of moderate to large clinical importance ( $p < .01, d = 0.75$ ) (Sullivan & Feinn, 2012). Service providers in the comparison group did not report any change in the two additional single items ( $p > .05$ ).

## 5 | DISCUSSION

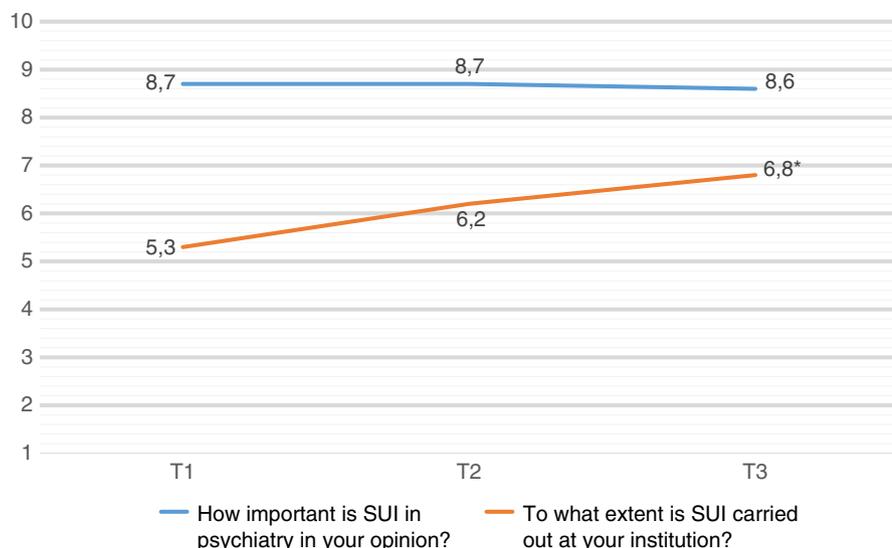
The aim of this study was to measure changes in service user involvement in a secure setting before and after the implementation of recovery-oriented practice. Findings indicated improvements in patients' opportunities to participate in formulating their individual care plans, influence decision-making about therapy and receive information about complaint procedures about their treatment. Supporting the findings from the patients, the service providers reported an improvement in democratic patient involvement, patient collaboration and management support. The comparison units did not report any changes in service user involvement. These findings suggest that implementing a recovery-oriented model of care in secure settings may increase service user involvement. However, further research is required to overcome the limitations in this study.

Although implementing a recovery-oriented model of care is not the only way to improve service user involvement, it does require a determined focus on involvement as an essential precondition for recovery. This may explain why the new means were primarily

concerned with improving service user involvement and participation, and hence, the associated findings. The intervention groups did not reach higher levels of service user involvement than those of comparison groups because comparison groups originally had higher levels of service user involvement. However, intervention groups started out with lower levels of service user involvement and experienced an improvement after implementing a recovery model of care. The stability of the findings in the comparison groups, indicating no change from baseline, adds to the reliability of the findings about the improvements in the intervention groups.

The first research question focused on patients' evaluations of their involvement. The systematic work during the intervention period appeared to, eventually, play a role in achieving a higher degree of service user involvement in important areas such as opportunities to influence care plans and decision-making about therapy. The lack of a comparison group at this point (T3) limits the ability to draw strong conclusions about these findings. However, the new routine that required service providers to include patients in meetings about their treatment may have been useful in this regard. We may speculate that service providers may unintentionally serve as gatekeepers to service user involvement if they misjudge patient capability to participate in treatment or are afraid that empowering patients would be unsafe (Livingston et al., 2013). Hence, service providers may be helped by a routine that ensures that service user involvement takes place. However, these improvements were first detected after 12 months. Previous practice had been that patients rarely attended such meetings, and it might be expected that it would take some time for an improvement to be experienced and reported by patients.

The second research question focused on service provider evaluations of service user involvement, operationalized through democratic patient involvement, patient collaboration, carer involvement, assisted patient involvement and management support. The improvement in democratic patient involvement for the intervention group suggests that service providers fulfilled their responsibility to encourage participation in decision-making and in meetings about



**FIGURE 2** Service providers' evaluation of service user involvement (SUI) before and after implementation of recovery-oriented practice. SUI ranged from 1 to 10. \*An independent sample *t*-test shows a statistical improvement in mean score from T1 to T3 within the intervention group ( $p < .01$ ), which is also considered to be a clinically important improvement ( $d = 0.75$ ) (Sullivan & Feinn, 2012)

treatment, goals and plans, because of the new routine. The reliability of this finding is strengthened by its alignment with the patient reports. Service providers in the intervention group also reported that patient collaboration happened more frequently after implementing a recovery model of care. However, this improvement did not continue after 12 months. Patient collaboration involves therapeutic alliance and refers to the extent to which service providers view themselves as encouraging, open to discussion, and collaborating with their patients when planning and implementing treatment. Storm, Hausken, et al. (2011) found that service providers experienced challenges in their attempts to involve patients in their own treatment and highlighted patient motivation as a potential factor. Major challenges concerning how to motivate patients to change and engage in therapy have been found in secure settings (Gudjonsson et al., 2007). However, this finding may also be explained by service providers not seeing themselves in a position to encourage and discuss treatment with a patient; they would rather leave this to the patient's therapist.

The degree of carer involvement was poor at baseline, and service providers in the intervention group did not report any improvement. This finding may relate to the fact that the intervention was not aimed at enhancing carer involvement. Carer involvement may require more attention and specific consideration in the implementation process to see improvement. Ultimately, there may be a need for explicit acknowledgement that carer involvement is an important part of service user involvement. In the present study, the comparison units reported more carer involvement than the intervention units. However, even in the comparison units, the occurrence of carer involvement was 'quite rare'. This discovery is in line with findings from other secure services (Ridley et al., 2014) as well as general mental health services (Lakeman, 2008) and underlines that this issue requires more attention in the future.

The service providers in the intervention group reported that 'assisted patient involvement'—the extent to which service providers perceived patients as being involved in assessments of functioning and decisions about follow-up care and discharge—was still 'quite rare' after the intervention. A possible explanation for this finding may be that few patients were about to be discharged, as secure patients often have very long stays. Nevertheless, these findings are in line with those of previous studies that showed inadequacies in preparation for discharge (Shepherd et al., 2008). This may be a focus for future studies.

Finally, management support represented providers' perceptions of management encouragement and support for service user involvement. The intervention group reported a significant positive development in perceived management support, from answering 'occasionally' at baseline to 'quite often' after 12 months. These findings support the fact that leaders in the intervention group showed a clear commitment to increasing service user involvement. Previous research has shown that organizational leaders play a key role in stimulating service user involvement practices, placing service user involvement on the institutional agenda and encouraging work in this area, all of which seem to

be essential (Storm, Hausken, et al., 2011). Without management support, the chances of service user involvement becoming a core value are reduced and may end up becoming dependent on the relationship between individual service providers and patients (Storm et al., 2010).

## 5.1 | Study strengths and limitations

The main strength of this study was its quasi-experimental and longitudinal design and the inclusion of patient and service provider evaluations. Nevertheless, there are some notable limitations. The study was based on anonymous data, therefore, it relied only on analyses at the group level. Thus, it is unclear whether the same patients and service providers participated at baseline and in the subsequent assessments. Consequently, caution should be taken in the interpretation of these findings, particularly about patient outcomes. This weakens the study's ability to draw strong conclusions and limits the generalizability of the results. Furthermore, the small patient sample increases the risk of type II errors. For example, for patient satisfaction, the effect size of the change from baseline indicated a moderate improvement in the intervention group, but the finding was not judged to be statistically significant (Table 2). Longitudinal individual-level data from a larger sample would have produced stronger conclusions about the effects of the implementation of recovery-oriented practice on service user involvement. A complementary qualitative approach could have revealed in-depth participant experiences and perspectives, which might have further informed the interpretation of the findings.

## 5.2 | Implications for clinical practice and future research

Despite these limitations, the findings from the present study may have some implications for clinical practice. They support the idea that implementing recovery-oriented practice in a secure mental health setting can increase service user involvement. Future research should focus on the effectiveness of each individual method for ensuring patient involvement and the possible upper limits (ceiling) of the involvement. The inclusion of safety and security outcomes will be beneficial to ensure that improving service user involvement in secure settings does not compromise staff or public safety.

## 6 | CONCLUSION

The implementation of recovery-oriented practice appears to have a promising impact on increasing service user involvement in secure settings. A broad approach is needed to ensure that service user involvement takes place in all desired areas. These results require confirmation from future longitudinal studies with larger sample sizes.

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## CONFLICT OF INTEREST

No conflicts of interest have been declared by the authors.

## PEER REVIEW

The peer review history for this article is available at <https://publons.com/publon/10.1111/jan.14841>.

## DATA AVAILABILITY STATEMENT

The data that support the findings of this study are available on request from the corresponding author. The data are not publicly available due to privacy or ethical restrictions.

## ORCID

Mette Senneseth  <https://orcid.org/0000-0002-0668-6598>

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## SUPPORTING INFORMATION

Additional supporting information may be found online in the Supporting Information section.

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