The role of Internet-based interventions for recovery-oriented mental health care

Experiences of use from the perspectives of service users and health providers

Monica Strand

Faculty of Medicine, University of Oslo
Norwegian Centre for E-health Research, University Hospital of North Norway
Department of Digital Health Research, Oslo University Hospital
Division of Mental Health and Addiction, Vestre Viken Hospital Trust

2020
© Monica Strand, 2020

*Series of dissertations submitted to the Faculty of Medicine, University of Oslo*

ISBN 978-82-8377-754-3

All rights reserved. No part of this publication may be reproduced or transmitted, in any form or by any means, without permission.

Cover: Hanne Baadsgaard Utigard.
Print production: Reprosentralen, University of Oslo.
Table of contents

ACKNOWLEDGEMENTS ........................................................................................................ VII

SAMMENDRAG ................................................................................................................... IX

LIST OF PAPERS ................................................................................................................ XIII

1. INTRODUCTION ............................................................................................................... 15
  1.1 THE FOCUS OF THE DISSERTATION ........................................................................ 15
  1.2 AIMS AND RESEARCH QUESTIONS ....................................................................... 17
  1.3 CLARIFICATIONS OF TERMS .................................................................................. 18

2. BACKGROUND .................................................................................................................... 21
  2.1 ReConnect .................................................................................................................. 21
      2.1.1 The journey towards recovery ......................................................................... 21
      2.1.2 The functionalities and modules in ReConnect ................................................ 22
  2.2 RECOVERY .................................................................................................................. 24
      2.2.1 Personal recovery .............................................................................................. 25
      2.2.2 Social and relational recovery ......................................................................... 25
      2.2.3 Recovery-oriented practice ............................................................................. 26
  2.3 INTERNET-BASED INTERVENTIONS IN MENTAL HEALTH CARE ......................... 29
      2.3.1 e-recovery ........................................................................................................ 30
      2.3.2 Online working relationship ......................................................................... 31
      2.3.3 Online peer support ..................................................................................... 32
  2.4 TRANSITIONS IN PRACTICE .................................................................................... 34

3. RESEARCH DESIGN AND METHODS ............................................................................. 35
  3.1 THE RESEARCH TEAM ............................................................................................. 35
  3.2 SERVICE USER PARTICIPATION IN RESEARCH ...................................................... 35
### 3.3 The Setting ........................................................................................................... 37

### 3.4 Overview of the Included Studies ......................................................................... 38

### 3.5 Recruitment and Study Inclusion ......................................................................... 38

### 3.6 Preparation for Participation .............................................................................. 39

### 3.7 The Participants .................................................................................................. 40

#### 3.7.1 Study II ........................................................................................................ 40

#### 3.7.2 Study III ....................................................................................................... 41

#### 3.7.3 Study IV ....................................................................................................... 41

### 3.8 Data Generation .................................................................................................. 42

#### 3.8.1 Scoping review (study I) ........................................................................... 42

#### 3.8.2 Mixed methods (study II) ........................................................................... 43

#### 3.8.3 Qualitative methods (study III and IV) ...................................................... 44

### 3.9 Analysis .............................................................................................................. 45

#### 3.9.1 Scoping review (study I) ........................................................................... 45

#### 3.9.2 Mixed methods (study II) ........................................................................... 46

#### 3.9.3 Qualitative methods (study III and IV) ...................................................... 46

### 3.10 Ethical Considerations ...................................................................................... 47

### 4. Methodological Considerations ............................................................................. 49

#### 4.1 The Scoping Review (Study I) .......................................................................... 49

#### 4.2 The Mixed Methods Study (Study II) .............................................................. 49

#### 4.3 The Qualitative Studies (Study III and IV) ...................................................... 50

##### 4.3.1 Ecological validity ..................................................................................... 50

##### 4.3.2 Transferability ......................................................................................... 51
4.3.3 Reflexive comments ................................................................. 51

4.4 General limitations .................................................................. 53

5. FINDINGS .................................................................................. 55

5.1 Main findings relative to each study ....................................... 55

5.1.1 Study I ................................................................................... 57

5.1.2 Study II .................................................................................. 57

5.1.3 Study III ............................................................................... 58

5.1.4 Study IV ............................................................................... 59

5.2 Main findings across studies ................................................... 60

6. DISCUSSION .............................................................................. 63

6.1 Dyad relationships ................................................................... 63

6.1.1 Non-working relationships .................................................. 63

6.1.2 Working relationships .......................................................... 65

6.2 Supporting personally defined recovery ................................ 66

6.2.1 The process of writing .......................................................... 66

6.2.2 The role of goals .................................................................. 67

6.2.3 Ownership and locus of control ......................................... 67

6.2.4 The significance of peer support ....................................... 68

6.3 Promoting citizenship ............................................................... 69

6.3.1 Reduced thresholds for community engagement ............... 69

6.3.2 Challenges of combined peer support ............................... 71

6.4 Organizational commitment .................................................... 71

6.4.1 Recovery vision ................................................................. 72
6.4.2 Workplace support structures ................................................................. 73

6.4.3 Quality improvement ................................................................................. 74

6.4.4 Care pathway ............................................................................................... 75

6.4.5 Workplace planning ..................................................................................... 75

6.5 IMPLICATIONS FOR PRACTICE AND RESEARCH............................................. 76

6.5.1 Working relationships ................................................................................ 76

6.5.2 Combined peer support ............................................................................ 78

6.5.3 Synergies and customization between components .................................... 79

6.5.4 Diversity issues .......................................................................................... 80

6.6 CONCLUDING REMARKS ............................................................................. 81

REFERENCES ......................................................................................................... 83

PAPER I-IV

APPENDIX
Acknowledgements

This doctoral project was carried out at the Department of Digital Health Research at Oslo University Hospital (DIG) (former Center for Shared Decision Making and Collaborative Care Research). Norwegian Centre for E-health Research at University Hospital of North Norway (former Norwegian Center for Integrated Care and Telemedicine) was project owner. The project was funded by the Research Council of Norway grant # 213014/H10 and the Norwegian Extra Fund grant # 2011/3/0039. Department of Psychiatry Blakstad, Vestre Viken Hospital Trust contributed funding for project coordination.

First, my sincere gratitude goes to the participating service users and health providers for their generosity in sharing their experiences and insights that gave life to this work. I also thank the communities that participated in this project: Asker and Balsfjord municipalities, Vestre Viken Hospital Trust, and University Hospital of North Norway by Trine Hoff, Liv Wensaas, Grete Saursaunet, the late Idar Lettrem, Rigmor Havnevik, Unni Winther, Elisabeth Mork, Carsten Bjerke, and Per Brede Breidesen. In addition, I also would like to thank Asgeir Fjølstad from Asker and Bærum Mental Health. Their contributions have been decisive for the implementation of this project.

Several people have contributed to the completion of this dissertation and my gratitude goes to every one of them. Senior researcher and principal investigator Deede Gammon, my main supervisor and mentor, introduced me to the field of eHealth. I am grateful for her careful and skillful guidance throughout, for believing in me, and for always being available, patient and encouraging. I thank co-advisor professor Cornelia Ruland for sharing her vast knowledge about scientific writing and thinking, and for making me strive to do better. Gratitude also goes to Lise Solberg Nes, Head of Department, who stepped in as co-advisor at the very end of my work when Ruland retired.

Sincere thanks to colleagues and fellow PhD-students at DIG for interesting and constructive discussions, feedback and support. An especially warm thank you goes to one of my closest collaborators during this project, Lillian Sofie Eng, who was invaluable in lifting the voices of service users throughout the project. Lillian has been a discussion partner, a facilitator and moderator, a travel companion, a colleague, and a friend. My gratitude goes to Elin Børøsund for her statistical support and to Cecilie Varsi for her support on
implementation issues, and to both for their generous everyday support and friendship. I wish to give warm thanks to all the participants in the PhD-forum in addition to Elin and Cecilie: Jelena Mirkovic, Ólöf Birna Kristjánsdottir, Una Stenberg, Stian Jessen, and to Audhild Høyem, sometimes visiting from the north. This forum provided valuable support and interesting discussions. Thank you so much to the IT development team led by Per Tømmer: Cato Danielsen, Yizhak Itzhaki, Frederik Klokk Holst, Stein Jacob Nordbø, Fredrik Svensen, and Arne Hassel. Both during the pre-phase of the project and during the implementation and testing of ReConnect, the IT team found ways to turn our ideas for ReConnect into reality. Big thanks to Trude Nordby-Bøe and Marianne Westeng for their contribution in design and administration of ReConnect, and in facilitating research activities that I could not have done without them. Thanks go to Oddrun Rangsæter, Heidi Nygård, and Aina Jacobsen for administrative support and for always being service-minded.

I would like to also express my gratitude to Karin J. Sørli for steady project coordination in the North with valuable support from Kari Vang and Hanne Høyer. My gratitude also goes to those whose valuable contributions in the pre-project phases helped lay the foundation for this project: Gunn Helen Kristiansen, Camilla Dyrhol Paulsen, Johanna Muri, Vivi-Ann-Rype, Arne Lillelien, Britt Eriksen, and Finn Jørgensen Holo. In addition, a warm thank you to Professor Stian Biong for valuable input regarding the recovery approach in ReConnect.

Thank you so much to my colleagues at the Department of Mental Health Research and Development, Vestre Viken Hospital Trust. My deepest gratitude goes to Paul Møller, head of the department, not only for facilitating implementation of the project, but also for allowing my leave of absence during the project, and for his support and encouragement throughout the project and in finalizing this work. Big thanks to all the other colleagues at the department for everyday support and discussions, especially in the final phase of the project.

My deepest gratitude goes to my family and friends for their interest and support throughout the project, especially Trude Elisabeth Sivesind for our many study workshops together and ongoing conversations about studies as well as life itself. Last, but not least, to the love of my life, Jørgen, and our three boys, Oliver, Felix and Dilawar, I am forever grateful for your never-ending support but above all, for being what matters the most.
Sammendrag

Bakgrunn


Hensikt

Overordnet hensikt med dette avhandlingsarbeidet var å utvikle kunnskap om betydningen av digitale løsninger i utvikling av recovery-orienterte tjenester for personer med langvarige psykiske helseproblemer. Prosjektet utforsket bruk av ReConnect som et supplement til pågående psykiske helsetjenester.
Design og metode


Funn

Studie I identifiserte digitale løsninger som ga støtte til personlig recovery, spesielt til formulering og jobbing med egne mål, og tilrettelegging av likepersonstøtte. Ingen av de tyve inkluderte studiene presenterte endelig funn, og ingen benyttet rammeverk for recovery eller spesifikkre recovery-orienterte utfallsmål.

I studie II deltok totalt 56 deltagere, derav 29 brukere og 27 hjelpere i til sammen 29 dyader (bruker-hjelpereallianser). De ulike dyadene brukte ReConnect på ulike måter. Noen brukte den kun til sikker meldingsutveksling, noen andre brukte den til at hjelpere kunne gi digitale tilbakemeldinger til arbeidet brukere hadde gjort i ulike moduler, mens andre arbeidet sammen i ulike moduler i ReConnect når de møttes i ordinær oppfølg og behandling. Forumet var den mest brukte modulen. Både brukere og hjelpere rapportere behov for mer enn seks måneders bruk for å tilpasse bruk til behov både individuelt og i dyaden. En tredjedel av hjelperne benyttet ikke ReConnect i samarbeidet med brukere, noe som skapte frustrasjon for brukere. Å ha kontroll over selvhjelpsmoduler, som mulighet for å definere og jobbe med egne mål, kombinert med likepersonstøtte, synes som å støtte brukere i deres bedringsprosesser, uavhengig av hjelperens bruk av ReConnect.

I studie IV deltok 14 brukere i tre fokusgrupper og ti individuelle intervjuer. Tematisk analyse av transkribert materiale genererte to hovedtemaer. Det første hovedtemaet handlet om balansering av anonymitet og åpenhet illustrert ved to undertemaer: dilemmaer mellom anonymitet og konfidensialitet samt bevegelse mot eksponering og åpenhet. Det andre hovedtemaet handlet om muliggjøring av tilhørighet, illustrert ved undertemaene nye vennskap og nettverk i lokalsamfunnet. Tre av undertemaene handlet om fordeler ved kombinert likepersonstøtte, mens det fjerde undertemaet beskriver utfordringer ved kombinert likepersonstøtte.

**Konklusjon**

Dette utforskende og beskrivende arbeidet utført i et nytt felt i skjæringspunktet mellom eHelse og recovery, gir foreløpige innsikter og implikasjoner for videre forskning. Samlet sett tyder funnene på at digitale løsninger kan gi støtte til egne bedringsprosesser for brukere med langvarige psykiske helseproblemer og som er i etablert behandling. Potensiale i ReConnect ser ut til å ligge i muligheter for personlig tilpasning av bruk mellom selvhjelpsmoduler, samarbeid med hjelpere og støtte fra likepersoner, i takt med individuelle preferanser og behov. Gitt organisatorisk forankring, så kan digitale løsninger bidra til recovery-orienterte tjenester gjennom tilrettelegging for arbeid med egne mål, kombinasjon av formater for likepersonstøtte og engasjement i lokalsamfunnet.
**List of papers**

**Paper I**

**Paper II**

**Paper III**

**Paper IV**
1. Introduction

1.1 The focus of the dissertation

The project, from which this dissertation derives, was positioned at the crossroads between Internet-based interventions and recovery-oriented approaches to long-term mental health care. Prior to the work described in this dissertation, an Internet-based intervention called ReConnect was developed to support user involvement of persons with long-term mental health problems, here referred to as service users, in their mental health care. ReConnect consists of multiple functionalities and modules such as secure messaging between service users and health providers, a forum (online peer support group), and a toolbox of various self-help resources. The intervention also facilitated face-to-face ReConnect-cafés (offline peer support groups) for the participants using ReConnect. As described elsewhere (Gammon, Strand, & Eng, 2014), service users were highly influential in the design process, including decisions about what evidence-informed framework(s) were appropriate in guiding the intervention’s final content and functionality. The framework that service users found most closely aligned with their values, needs and preferences in this prior work had commonalities with findings from research about recovery. Recovery has been described as a process of living a meaningful life with or without ongoing mental health symptoms (Davidson & Roe, 2007), often referred to as personal recovery. Guidance exists about how services can support service users in such personal and unique processes (Le Boutillier et al., 2011). A working relationship between the service user and the health provider in all aspects of care, where the service user is valued as the expert on their own experience, and where autonomy is supported, is a cornerstone in recovery-oriented practice (ibid.). Also, peer support for persons with similar mental health problems has been identified as a key resource in promoting hope and the belief that recovery is possible (Repper & Carter, 2011). Challenges in transitioning organizations and practices towards recovery-oriented care are nevertheless substantial, and there are gaps in knowledge about how to align services with recovery principles (Oades & Anderson, 2012; Perkins & Slade, 2012; Slade et al., 2014; Vandekinderen, Roets, Roose, & Van Hove, 2012). The development and evaluation of interventions that effectively support recovery processes is a high priority in recovery research (Leamy, Bird, Le Boutillier, Williams, & Slade, 2011).
Internet-based interventions have the potential to improve the quality of health care (Reynolds, Griffiths, Cunningham, Bennett, & Bennett, 2015) through personalization and tailoring, accessibility, flexibility and interactivity (van der Vaart et al., 2014). While there is evidence for online interventions building on cognitive behavioral therapy that target mild or moderate conditions (e.g., Coull & Morris, 2011; Lal & Adair, 2014) less is known about Internet interventions for people with more complex, long-term mental health problems.

Research about online support for self-management relative to persons with bipolar disorder (Leitan, Michalak, Berk, Berk, & Murray, 2014) and psychosis (Naslund, Marsch, McHugo, & Bartels, 2015) exists. However, knowledge about the role of Internet-based interventions as an adjunct to mental health care for people with complex, long-term mental health problems and with a specific recovery-oriented approach is scarce. Apart from reports of acceptance and satisfaction, little is known about how service users experience Internet-based interventions as a support in their recovery (Schmidt & Wykes, 2012).

Internet-based interventions could potentially increase support for the collaboration between the service user and the health provider, as well as access to peer support, both of which are vital elements in recovery-oriented care (Le Boutillier et al., 2011). Use of e-mental health resources has the potential to develop and strengthen collaborative, partnership-based relationships, if mental health services encourage health providers and service users to use online resources together (Williams, Fossey, Farhall, Foley, & Thomas, 2018). However, in-depth insights are needed into how working relationships unfold when supported by the Internet, particularly when such support is introduced into ongoing care relationships (Berger, 2016).

Peer support shows promise in facilitating recovery-focused changes in services for people with long-term mental health problems (Davidson, Bellamy, Guy, & Miller, 2012; Mahlke, Krämer, Becker, & Bock, 2014; Shepherd, Boardman, Rinaldi, & Roberts, 2014). Those who participate in online peer support for mental health generally report benefits (Smith-Merry et al., 2019). Online and offline formats for peer support groups have qualities that appear to be complementary. However, little is known about possible interactions when combining offline and online peer support groups for persons with long-term mental health problems (Wright, 2016).
1.2 Aims and research questions

The overarching research aim of this project was develop knowledge about the potential role of Internet-based interventions in transitions towards recovery-oriented practice for persons with long-term mental health problems, with emphasis on the collaboration between the service user and health provider, and on peer support. The main overarching research question was: How can Internet-based interventions such as ReConnect facilitate recovery-oriented practices in mental health care?

The overarching aim, specific aims and research questions of this project are reflected in four studies:

Study I aimed to describe recovery-oriented Internet-based interventions and current research, and to identify gaps and issues relevant to advancing recovery research and practices through opportunities provided by the Internet. The published scoping review described interventions that supplemented ongoing mental health care, in contrast to stand-alone self-help interventions outside the context of care.

Research questions study I:

I) What characterizes recovery-oriented Internet-based interventions described in research literature (i.e., aims, target groups, settings and modules)?

II) How does the literature describe the core domains of recovery-oriented practices that are supported through the Internet?

III) What aims, methods, outcome measures and results are described in the studies and where do they originate?

IV) What facilitators and barriers are described in implementing recovery-oriented Internet-based interventions?

Study II aimed to illustrate uses of a recovery-oriented Internet-based intervention, ReConnect, as an adjunct to ordinary mental health care for service users and health providers, and explore descriptions of its potential role in shifting practices toward recovery.
Research questions study II:

I) What are the characteristics of service users and health providers using ReConnect as an adjunct to ongoing mental health care?

II) What are the types and frequencies of use of ReConnect by service users and health providers as an adjunct to ongoing mental health care?

III) How do service users and health providers describe the use of ReConnect relative to recovery-oriented practice?

Study III aimed to explore how service users and health providers experienced their working relationships when they were offered the option of supplementing ongoing collaboration with a recovery-oriented Internet-based intervention, ReConnect.

Research question study III:

I) How do service users and health providers describe potential benefits related to their relationships when they are offered the option of supplementing ongoing collaboration with ReConnect?

II) How do service users and health providers describe potential challenges related to their relationships when they are offered the option of supplementing ongoing collaboration with ReConnect?

Finally, study IV aimed to explore how service users described their experiences of combined online and offline peer support groups relative to their recovery processes, facilitated through a recovery-oriented Internet-based intervention, ReConnect.

Research question study IV:

1) With a particular focus on potential benefits and challenges, how do service users describe their experiences of combining online and offline peer support groups?

1.3 Clarifications of terms

In this dissertation, the term “service user” refers to persons receiving any kind of mental health care, while the term “health provider” refers to professionals who provide support. When describing collaboration or helpful relationships between service user–health provider, the term “working relationship” is used. “Non-working relationship” is used to describe
unhelpful relationships between service user and health provider. For short, the term dyad or just relationship is used to describe their relation, without any positive or negative connotation. The term “end-user” refers to individuals using a final product, in this case, service users and health providers using ReConnect. In describing the pre-phase of the project, the terms “service user representatives” as well as “health provider representatives” are used to describe participants in the practice–research team designing ReConnect.

“Mental health problems” reflect a contextual understanding of mental distress, both emphasizing the subjective aspect of mental health problems, as identified and described by the individuals themselves, and the societal aspect of mental health problems, reflecting the role of circumstances around the individuals’ experiences of mental distress. The term includes diagnosable symptoms as well as mental health distress that causes problems in people’s lives. The term “ongoing mental health care” refers to care provided without the introduction of Internet-based support.

The term “service user consultant” in this dissertation refers to a trained service user and her contributions especially relative to the design of ReConnect and as a moderator and facilitator of the peer support groups in the project. The term “co-researcher” is used when describing her involvement in the research process underpinning this dissertation. “Service user participation” is a term used to describe the involvement of the recruited participants who contributed in the research process as well as service users’ involvement in health care.

In this dissertation, “participating communities” refers to the two municipalities in Norway that participated in the study, including the mental health care services provided to their residents from both primary and specialist levels of care. Use of the term “communities” without specifically referring to the participating communities connotes the broader and more generic understanding of the term, reflecting local networks and resources among individuals who mutually depend on each other in a local community.

“eHealth” is a generic term denoting the use of Internet and related technologies in all domains of health care. In mental health care, the use of digital interventions often is referred to as “e-mental health”. At the time of the planning of this project, many interventions in mental health care used information and communication technology, but they were not always related to the Internet. To emphasize ReConnect’s relation to the Internet and to
recovery-oriented practice, the term “recovery-oriented Internet-based intervention” was used, or terms such as “e-recovery”, “e-recovery portal”, or just “portal” or “intervention”, for short.

“Online peer support group” or “forum” is used to denote peer support groups online, while “face-to-face peer support groups”, “offline peer support groups”, or “ReConnect-café” denote peer support groups conducted face-to-face.

“Project” refers to the total ReConnect project from which this dissertation was derived. The dissertation comprises of four studies, referred to by their respective numbers, which correspond to papers I-IV.
2. Background

2.1 ReConnect

Developments prior to the work described in this dissertation resulted in the intervention called ReConnect (Gammon et al., 2014). Service users and health providers in two participating communities used ReConnect for at least six months (2015-2016). The participants’ experiences with using ReConnect are the main focus of this dissertation. This section outlines ReConnect’s origin, objectives and content, as well as providing an understanding of the theoretical framework applied in this dissertation.

2.1.1 The journey towards recovery

The ReConnect intervention was designed and developed with extensive involvement from service users as well as health provider representatives from both primary and specialized mental health services within the two communities that participated in this project (Gammon et al., 2014). A practice–research team including service user and health provider representatives, a service user consultant, IT-experts and researchers worked to develop an Internet-based intervention to support individuals in long-term mental health care. As a starting point for the design process, the practice–research team adopted the following aims:

“ReConnect aims to support mental health service users in: i) gaining an overview and greater control over aspects of their personal lives that affect their health and well-being, ii) legitimizing their personal knowledge, strengths, and values in the formation of services provided by healthcare, and iii) experiencing a greater sense of continuity of care and relationships with and between health providers.” (ibid. p. 3).

During the early stages of this process, various domains of research were examined in terms of their suitability in justifying and adjusting the aims and priorities of the practice–research team. Following numerous discussions of the literature in workshops, it became clear that the perspectives from the field of recovery resonated best with the team, particularly among the service user representatives. From then on, the practice–research team sought to harmonize decisions about ReConnect’s design, content and functionality with literature on recovery (further described in chapter 2.2).
2.1.2 The functionalities and modules in ReConnect

ReConnect was designed to support recovery as an adjunct to ongoing mental health care. Support for service user–health provider collaboration and peer support was considered vital. ReConnect was “owned” largely by the service users in the sense that the service users had writing access to all of the modules, while the health provider collaborating in the use of ReConnect mainly had reading access, and only to some of the modules. The functionality and modules of ReConnect included secure messaging between service users and health providers, an online peer support group (forum), and a toolbox of diverse resources that supported service users in articulating and working with various aspects relative to recovery.

The toolbox could be conceptualized as an interactive workbook for self-help resources to support service users in gaining an overview of one’s own life relative to recovery processes, and included: a wide range of life domains and associated goals and activities; network map; crisis plan; exercises related to mindfulness, coping and symptom management; medication overview; written “good to know” texts (e.g., how to formulate meaningful goals, user involvement, working relationships, personal recovery, and how to use ReConnect); and links to local activities and service users’ organizations. Text written by the service user about what mattered most in his or her life, as a guiding vision for working with ReConnect, was always visible in the interface for the service user and his or her health provider. ReConnect was designed to support service users in describing their resources and strengths as well as their challenges. Information related to service user rights and organizations was accessible either in ReConnect itself or through links. Simple help texts were available in all modules. Additionally, local face-to-face ReConnect-cafés (offline peer support groups), were arranged as part of the intervention.

Descriptions of the different modules and functionalities in the service users’ interface in ReConnect and which modules and functionalities that are available for health providers are described in Table 1 (originally from a publication prior to the work in this dissertation) (Gammon et al., 2014).
Table 1. Modules and functionalities in the service user interface in ReConnect

<table>
<thead>
<tr>
<th>Modules and functionalities as presented to service users in ReConnect</th>
</tr>
</thead>
<tbody>
<tr>
<td><strong>What is important in my life</strong>: Here you can describe your values, or the things that matter the most to you in your life.</td>
</tr>
<tr>
<td><strong>Life domains</strong>: Here you can describe how your situation is right now within different life domains (school/occupation, social life, mental and physical health, housing, finances). You can also describe what helps and hinders you in living as you envision.</td>
</tr>
<tr>
<td><strong>My medications</strong>: Here you can make an overview over which medicines you take, what they are supposed to help you for, your experiences with them, and notes or questions that you can send to your doctor.</td>
</tr>
<tr>
<td><strong>Network map</strong>: Here you can make a map of all the people you have a relationship with. You can change placement in the map according to how close or distant you feel to a given person.</td>
</tr>
<tr>
<td><strong>Exercises</strong>: Here you will find different exercises that can help you strengthen your skills in areas that you might want to improve. The categories for exercises are: Coping, Strengths, Collaboration, and Lifestyle. You can also make your own exercises, and ask to be reminded to do exercises according to your own schedule.</td>
</tr>
<tr>
<td><strong>Crisis management</strong>: You can make an overview of warning signs or triggers to help plan for how you can prevent getting worse, as well as what you want your helpers to do if you experience an acute situation.</td>
</tr>
<tr>
<td><strong>Monitoring</strong>: You can choose between different daily registrations. For example: sleep, nutrition, physical activity, social life, medications, and assessment of relations with helpers. If you make registrations over a sustained period, you can make a visual graph which can help you see how these areas might be related to your health and well-being.</td>
</tr>
<tr>
<td><strong>Goals and activities</strong>: Here you can formulate goals that you want to work towards. You can also describe activities that can help you achieve these goals. If you want helpers to assist you, you can invite them to help.</td>
</tr>
<tr>
<td><strong>Good to know</strong>: Here you will find information about ReConnect and how you can adapt it to your own needs and daily life. Your will also find an overview of links and articles about mental health and well-being. Short stories and articles from other service users are also found here.</td>
</tr>
<tr>
<td><strong>My helpers</strong>: Here you can make a list of contact information to your helpers and family.</td>
</tr>
<tr>
<td><strong>Messages</strong>: Here you can communicate with your helpers in a secure way, and parts of the content can be integrated with/transferred to electronic medical records.</td>
</tr>
<tr>
<td><strong>Forum</strong>: In the forum you can anonymously meet other users of ReConnect online. There you can share experiences with others in similar life situations.</td>
</tr>
<tr>
<td><strong>Diary</strong>: This is your personal notebook that you can use to jot down thoughts, memories, or ideas for yourself. This might be useful in preparation for consultations, or afterthoughts.</td>
</tr>
</tbody>
</table>

*Modules and functionalities health providers have access to, either partly or in its entirety.

**Support for a working relationship**

Mindful of the recovery-oriented ideals for working relationships, ReConnect was designed to support the service users in articulating insights into their own lives as a basis for collaboration. Health providers’ user interface included an overview of service users who they used ReConnect with, and they could remotely read the service users’ modules with some exceptions (e.g., diary and forum), as described in Table 1. Thus, health providers could follow the progression of service users’ activities (e.g., assignments in between consultations) and provide feedback.
Peer support

Peer support is a cornerstone of recovery-oriented practices (Le Boutillier et al., 2011). Thus, considerable efforts were made to create safe and supportive formats for peer support groups both online and offline as part of the ReConnect intervention. Both formats were designed to be moderated and facilitated by a trained service user consultant who had first-hand experience of living with serious mental health problems over many years. Online peer support was provided in an anonymous, asynchronous, online forum where participants could initiate postings (i.e., topics for discussion) to the group, or respond to the postings of others. The option of receiving a text message or an email when new forum postings occurred, was integrated. Local, face-to-face ReConnect-cafés were planned to be held monthly in both participating communities, also facilitated by the service user consultant. Topics relevant for recovery processes, including the relationship with the health provider, and portal use, were planned to be introduced in the online forum and face-to-face ReConnect-café discussions moderated by the service user consultant.

2.2 Recovery

In recovery research, individuals with mental health problems and their shared experiences, have been vital (Davidson, O'Connell, Tondora, Lawless, & Evans, 2005). Based on research that demonstrates that individuals with mental health problems have opportunities for recovery and to live a good life with or without ongoing symptoms, mental health policies are shifting from a primary focus on symptom reduction toward personal recovery-oriented care with increased emphasis on service users’ perspective and their everyday life, especially for persons with long-term mental health care needs (Davidson & Roe, 2007). In this perspective, often contrasted with a biomedical approach, the goal is not to return to “normal” or “be cured”, often referred to as clinical recovery, but to support people’s personal processes toward living a meaningful life (Davidson & Roe, 2007; Sklar, Groessl, O'Connell, Davidson, & Aarons, 2013). Recovery is considered unachievable through an exclusively medical approach; rather, social and relational aspects are considered essential.
### 2.2.1 Personal recovery

Personal recovery (often referred to as just recovery) is described as a “deeply personal, unique process” (Anthony, 1993) (p. 527), “not a perfectly linear process” (Deegan, 1988) (p.96) and “a process of restoring a meaningful life of belonging to one’s community and a positive sense of identity apart from one’s condition while rebuilding a life despite or within the limitation imposed by that condition” (Davidson et al., 2007) (p. 25). The process of personal recovery is described as being in recovery rather than recovering from mental ill-health (Davidson & Roe, 2007).

A conceptual framework for recovery in mental health has been proposed, building on a systematic review and modified narrative synthesis of 97 papers (Leamy et al., 2011). Personal recovery is described as consisting of five processes: i) connectedness, which includes both personal and family relationships, and a wider aspect of social inclusion; ii) hope and optimism about the future; iii) rebuilding positive and social identities, including dealing with the impact of stigma and discrimination; iv) finding meaning and purpose in life; and v) empowerment and reclaiming control over one’s life, giving the acronym CHIME (ibid.). The five processes are different but related (ibid.), in that engaging in meaningful occupations appears to support recovery by also fostering the other four processes (Doroud, Fossey, & Fortune, 2015).

The design of ReConnect largely resonates with the five interrelated processes of personal recovery. It is nevertheless timely to elaborate on the social and relational components of recovery due to the emphasis on these elements in recovery research as well as in this dissertation.

### 2.2.2 Social and relational recovery

Some argue that the concept of personal recovery overemphasizes the individual and personal aspects of recovery at the expense of the social and relational dimensions of recovery (Price-Robertson, Obradovic, & Morgan, 2017; Shanks et al., 2013). For example, some claim that key factors such as family, and the social, material, educational, economic and political context of mental-ill health and recovery are largely obscured by individualizing recovery (Adeponle, Whitley, & Kirmayer, 2012; Harper & Speed, 2014;
Rose, 2014). While recovery is claimed to be a highly individualized process, it is also considered an inherently social process, and family members, friends, professionals, and the broader community play a vital role in the recovery process (Marino, 2015; Mezzina et al., 2006; Schön, Denhov, & Topor, 2009; Topor et al., 2006). While interpersonal relationships are currently recognized as a component of the individual recovery process, such relationships, it is argued, can more accurately be seen as suffusing all aspects of recovery, including concepts such as hope, identity and empowerment (Price-Robertson et al., 2017; Tew et al., 2012). The social world is believed to be the very medium through which personal transformation becomes possible, involving a journey of both personal and social (re)engagement (Price-Robertson et al., 2017). The creation of social environments that are accepting and enabling, and within which recovery may evolve, is vital (Tew et al., 2012). Social relationships, including peer support, play a key role in recovery processes for individuals experiencing mental health problems (Schön et al., 2009).

ReConnect was designed to largely support personal recovery processes, but also offered resources that could be defined as supportive of social and relational processes.

2.2.3 Recovery-oriented practice

In recovery-oriented practice, individualized, person-centered care with extensive user involvement is the central element (Davidson, 2005; Shepherd, Boardman, & Slade, 2008). Recovery-oriented practice “builds upon each person’s assets, strengths, and areas of health and competence to support the person in managing his or her condition while regaining a meaningful, constructive sense of membership in the community” (Davidson et al., 2007) (p. 26). Self-determination and self-choice are considered cornerstones in recovery-oriented practice (Farkas, 2007). Notably, recovery as a personal process represents a move in mental health services from focusing on pathology, illness and symptoms to an emphasis on health, strengths, well-being and wellness and the person’s right to inclusion in the community (Davidson, 2005; Shepherd et al., 2008). Recovery-oriented practice needs to ensure access to a broad range of community oriented services (i.e., housing, education, employment, peer support, recovery education, crisis support, support in everyday living, drug treatments, talk therapies, and advocacy) and promote social inclusion and human rights (Slade et al., 2014). Since the late 1980s, the recovery approach has increasingly influenced mental health
research, policy and practice throughout the English-speaking world (Anthony, 1993; Le Boutillier et al., 2011; Slade et al., 2014). This has resulted in numerous guidelines for, and descriptions of, recovery-oriented-practice (e.g., Fortune et al., 2015; Mental Health Commission of Canada, 2015). Calls for identifying factors that influence recovery processes in Nordic mental health care reflect an acknowledgement that cultural factors likely play a role in forming practices (Schön & Rosenberg, 2013).

In a review of 30 international policy documents on recovery-oriented practice, Le Boutillier et al. (2011) present a recovery-oriented framework. The authors identified four practice domains: (1) promoting citizenship (i.e., supporting the service user’s experience of wider entitlements of citizenship such as service user rights, social inclusion and meaningful occupation); (2) organizational commitment (i.e., giving primacy to the needs of people rather than those of services; (3) supporting personally defined recovery (i.e., individuality, informed choice, peer support, focus on strengths), and a holistic approach (i.e., including various life domains such as physical and mental health, social and relational factors); and (4) working relationships (i.e., a therapeutic relationship that encourages partnership and promotes hope).

A variety of interventions share many of the elements of recovery-oriented practice, such as individual wellness recovery action planning (WRAP) (Cook et al., 2012), illness management and recovery (IMR) (Fardig, Lewander, Melin, Folke, & Fredriksson, 2011), individual placement support (Drake, Bond, & Becker, 2012), the strengths model focusing on attaining personal goals (Rapp & Goscha, 2011), and assertive community treatment (Bond, Drake, Mueser, & Latimer, 2001).

The recovery-oriented framework (Le Boutillier et al., 2011) served as a guiding lens for study I and II in this dissertation, while the role of working relationships and peer support are particularly in focus in study III and IV.

**Working relationship**

A working relationship is described as a partnership between the service user and the health provider in all aspects of care where the service user is valued as the expert on their own experience, and autonomy is supported (Le Boutillier et al., 2011). Health providers and service users contribute to the partnership with different roles of equal value (Tondora,
Concepts such as working relationship, therapeutic alliance and partnership are used in recovery literature to underline equality between health providers and service users (Le Boutillier et al., 2011). Therapeutic alliance (the term typically used in the therapeutic literature) is of significance for outcomes (Martin, Garske, & Davis, 2000) across a range of diagnoses and treatment settings (Priebe & McCabe, 2008). Indeed, service users report that their relationship with their health provider is the most important component of care (Johansson & Eklund, 2003), in addition to their engagement in their own treatment (Dixon, Holoshitz, & Nossel, 2016; Kirsh & Tate, 2006). In a well-functioning working relationship, the health provider believes in and values the service user’s abilities, and they foster hope and optimism in their work (Leamy et al., 2011). Attention toward the service users’ hopes and needs, employing everyday language, and attending to personal relationships between the service users and health provider, is also of importance (Borg, Karlsson, Tondora, & Davidson, 2008).

The development of shared goals in the working relationship is central in recovery-oriented practices (Farkas, Gagne, Anthony, & Chamberlin, 2005; Slade et al., 2014; Shadmi et al., 2017) and characterized as essential to high quality mental health care (Keet et al., 2019). The importance of agreement among service users and health providers on the goals of treatment and rehabilitation has long been recognized (Bordin, 1979). Positive psychotherapy outcomes appear to be considerably enhanced when service users and health providers are actively involved in a cooperative relationship based on goal consensus (Tryon & Winograd, 2011). Self-concordant goals increase a person’s motivation, enable individuals to reap greater satisfaction from the attainment of these goals, and can improve the person’s sense of empowerment (Corrigan, 2002; Fischer, Shumway, & Owen, 2002; Sheldon & Elliot, 1999; Young & Ensing, 1999).

**Peer support**

Peer support is described as “a system of giving and receiving help founded on key principles of respect, shared responsibility, and mutual agreement on what is helpful” (Mead, Hilton, & Curtis, 2001). Individuals facing similar life events or health-related problems are believed to be in a unique position to understand one another in ways that health providers, friends and family may not (Helgeson & Gottlieb, 2000). Hope, and the belief that recovery
is possible for persons with similar mental health problems, is a key resource that peer support fosters (Repper & Carter, 2011).

Peer support shows promise in facilitating recovery for people with long-term mental health problems and has the potential to facilitate recovery-focused changes in services (Brown, Shepherd, Merkle, Wituk, & Meissen, 2008; Corrigan, 2006; Daniels, Bergeson, Fricks, Ashenden, & Powell, 2012; Davidson et al., 2012; Mahlke et al., 2014; S. Mead et al., 2001; Repper & Carter, 2011; Shepherd et al., 2014). The increased emphasis on the relational aspects of recovery also emphasize the key role of peer support (Price-Robertson et al., 2017; Schön et al., 2009; Topor, Borg, Di Girolamo, & Davidson, 2011). A number of outcomes show promise of improvement through peer support such as quality of life and hope (Davidson et al., 2012; Fuhr et al., 2014; Slade, 2009), hope and empowerment (Bellamy, Schmutte, & Davidson, 2017), and increased social networks and wellness (Walker & Bryant, 2013). Reduced treatment costs and rates of re-hospitalization have also been associated with peer support (Brown, Tang, & Hollman, 2014) and peer services have been found to be equally effective in traditional clinical outcomes as services provided by non-peer professionals (Bellamy et al., 2017). Perhaps one of the configurations of peer support with the strongest evidence is peer-delivered self-management programs (Valenstein & Pfeiffer, 2018) that are also promising in terms of reducing acute care readmission (Johnson et al., 2018). There is growing support for use of peer support as an integral part of mental health services, especially in the USA, Australia and New Zealand (Bellamy et al., 2017; Gillard et al., 2017; Jackson & Fong, 2017; Rogers, 2017).

2.3 Internet-based interventions in mental health care

eHealth and Internet-based interventions are generic terms denoting the use of Internet and related technologies in all domains of health care (Eysenbach, 2001). Such technologies have the potential to transform mental health care services by increasing access to, and potentially improving the quality of, health care (Reynolds et al., 2015). The strengths of Internet-based interventions include personalization and tailoring, accessibility, flexibility and interactivity (van der Vaart et al., 2014). The reasons for delivering health interventions through the Internet include increasing convenience for users, reduction of health service costs, overcoming isolation of users, the need for timely information, stigma reduction and
increased user and supplier control of the intervention (Griffiths, Lindenmeyer, Powell, Lowe, & Thorogood, 2006). Recently, reducing risk of exposure to the coronavirus has also justified use. All domains of health care have, to varying degrees, adopted Internet and digital solutions to conduct services. In mental health care, technologies can be designed to supplement existing models of care as well as support social inclusion (Alvarez-Jimenez et al., 2012). In mental health care, the use of digital interventions is often referred to as e-mental health that is defined as:

the use of information and communication technology (ICT) – in particular the many technologies related to the Internet – when these technologies are used to support and improve mental health conditions and mental health care (Riper et al., 2010) (p. 1).

People with severe mental health problems have been found to have the same level of Internet access and use as the general population (Ennis, Rose, Denis, Pandit, & Wykes, 2012; Thomas, Foley, Lindblom, & Lee, 2017). eHealth interventions among people with severe mental health illness have been found to be feasible and acceptable (Naslund et al., 2015), although acceptability appears higher when participants are provided remote online support (Berry, Lobban, Emsley, & Bucci, 2016). Factors related to acceptability include safety and privacy concerns, the importance of an engaging and appealing delivery format, the inclusion of peer support, computer and mobile phone literacy, technical issues and psychological factors (ibid.). Also, guided treatment has been found to be more beneficial than unguided programs (Apolinário-Hagen, Kemper, & Stürmer, 2017; Pihlaja et al., 2018), partly due to lower drop-out rates (Alvarez-Jimenez et al., 2012). From the perspective of service users, high levels of social support and service user involvement in the development of the intervention have been found to promote adherence (Apolinário-Hagen et al., 2017).

### 2.3.1 e-recovery

Several Internet-based interventions are relevant for recovery-oriented care, without explicit reference to recovery concepts or literature. Some suggest that e-mental health resources could have the potential to promote therapeutic processes such as learned resourcefulness, self-determination, and empowerment which may not always be prioritized in traditional therapy methods (Barazzone, Cavanagh, & Richards, 2012). Others suggest that access to personal health records via patient portals may improve patient activation, recovery scores,
and organizational efficiencies (Kipping, Stuckey, Hernandez, Nguyen, & Riahi, 2016). Various Internet-based interventions support elements relevant for recovery-oriented care such as shared decision making (Stein et al., 2013), self-management (Karasouli & Adams, 2014), peer support (Alvarez-Jimenez et al., 2014; Naslund, Aschbrenner, Marsch, & Bartels, 2016) as well as providing psycho-educational resources for promoting health and wellness (Naslund et al., 2015). However, little is known about how service users’ experience Internet-based interventions specifically as a support in their recovery (Schmidt & Wykes, 2012).

Interventions that demonstrate support for the four domains of recovery-oriented practice, referred to as e-recovery, were investigated in study I in this dissertation (Strand, Gammon, & Ruland, 2017). Since then, developments relevant for the field of e-recovery have emerged, such as digital support for the illness management and recovery program (Beentjes et al., 2018; Beentjes, van Gaal, Goossens, & Schoonhoven, 2015), and developments of an evidence-based health-optimization system enabling service users, health providers, and caregivers to collaborate in optimizing the service user’s health on a shared platform (i.e., shared-decision making) (Eiring, Nytrøen, Kienlin, Khodambashi, & Nylenna, 2017). The role of online working relationships and online peer support are particularly in focus in this dissertation, and research related to these areas is presented briefly in the following.

### 2.3.2 Online working relationship

Combinations of traditional consultations with Internet-based sessions (Erbe, Eichert, Riper, & Ebert, 2017), referred to as blended care, has been found feasible and sometimes more effective than stand-alone face-to-face therapies (Berger, Krieger, Sude, Meyer, & Maercker, 2018; Hanley & Reynolds, 2009; Succala et al., 2012). Similar to face-to-face therapies, online therapeutic alliance appears to be associated with outcomes (Pihlaja et al., 2018) including therapeutic writing, facilitation of therapeutic engagement, greater self-disclosure and extensions of the working relationship beyond the active therapy period (Clough & Casey, 2011).

If mental health services support health providers and service users in using online resources together, e-mental health resources has the potential to strengthen collaborative,
partnership-based relationships (Williams et al., 2018). In addition to fostering some common relational experiences by conveying warmth, empathy and shared goals, e-mental health resources might also promote additional therapeutic processes such as learned resourcefulness, self-determination, and empowerment which may not always at the center in traditional therapy methods (Barazzone et al., 2012).

However, there are challenges related to online working relationships such as poor integration into practice (Williams et al., 2018), insufficient guidance about how to interact between service users and health providers (Sieck et al., 2017), difficulties in articulation and lack of nonverbal cues, thereby increasing chances for misunderstandings (Rochlen, Zack, & Speyer, 2004), and transitions of power from health providers to service users in ways that may be confusing or uncomfortable, particularly if the parties are unprepared to address the issue (Bjerkan, Vatne, & Hollingen, 2014).

While knowledge about online working relationships is growing, surprisingly few have studied the issue in detail. Even among the most studied of Internet-based interventions (i.e., cognitive behavioral therapies which show improved outcomes when treatment is guided), research into online therapeutic alliance is scare (Pihlaja et al., 2018). Research into how working relationships unfold through, or are affected by, Internet communications is notably scarce (Cavanagh & Millings, 2013; Denneson, Cromer, Williams, Pisciotta, & Dobscha, 2017; Sucala et al., 2012), especially when such support is introduced into ongoing care relationships (Berger, 2016). Which measures can be taken to strengthen working relationships in Internet interventions, or how working relationships might influence recovery processes of persons in need of long-term mental health care, are barely addressed in the literature. It is also unclear how technology-facilitated writing should be implemented and what should be appropriate content and frequency (Watson, Simpson, & Hughes, 2016). These issues are explored in study III in the dissertation.

2.3.3 Online peer support

Knowledge about peer support groups is largely based on face-to-face group settings, however, literature on online peer support groups has evolved rapidly (Ilioudi, Lazakidou, Glezakos, & Tsironi, 2012; Wright, 2016), also for mental health concerns (Barak & Grohol, 2011). Online peer support is typically asynchronous and text-based and includes a wide
range of different interventions and target groups. These online peer support interventions/groups are also referred to by a variety of terms as self-help groups, mutual support groups or online support communities, and generally reflect the same purposes as face-to-face groups (Ali, Farrer, Gulliver, & Griffiths, 2015; Griffiths, Carron-Arthur, Reynolds, Bennett, & Bennett, 2017; Griffiths, Reynolds, & Vassallo, 2015).

Many of the qualities valued in online peer support are not typically available through traditional mental health care services (Wright, Bell, Wright, & Bell, 2003), and participants generally report benefits (Smith-Merry et al., 2019) such as facilitating social connectedness (Highton-Williamson, Priebe, & Giacco, 2015; Naslund, Aschbrenner, & Bartels, 2016) and recovery processes (Thomas et al., 2016). People have been found to be more willing and feel more comfortable sharing sensitive information or asking sensitive questions on the Internet compared to face-to-face (Berger, Wagner, & Baker, 2005; Cline & Haynes, 2001).

There are nevertheless reasons for caution such as risks for excessive use, leading to social isolation (Demiris, 2006; Eysenbach, Powell, Englesakis, Rizo, & Stern, 2004), social avoidance and excessive dependency on online peer support (Chung, 2013; Lawlor & Kirakowski, 2014). Having a moderator of online peer support groups appears to play a significant role in the degree to which negative effects develop. One study found that moderation was associated with higher levels of perceived social support, retention, engagement, acceptability, and efficacy than online peer support without moderators (Biagianti, Quraishi, & Schlosser, 2017).

At face value, online and offline formats for peer support groups have qualities that appear to be complementary, particularly in light of recovery-oriented practices. To our knowledge, however, no studies exist at this point that specifically address the issue of combining the two formats as adjunct to ongoing mental health care. Research into the interactions between the two formats has nevertheless previously been called for (Wright, 2016).

This dissertation sought insights into how service users experienced an online peer support group (the forum in ReConnect), as well as offline peer support groups (local, face-
to-face ReConnect-cafés). In particular, the experiences of combining the formats, were explored in study IV.

2.4 Transitions in practice

The main aim of this dissertation is to illuminate the potential role of e-recovery in transitioning towards recovery-oriented practices for persons with long-term mental health problems. This entails practices becoming person-centered, built on equal partnership, hope-promotion, facilitation of self-determination and focus on helping individuals live a meaningful life (Farkas et al., 2005; Slade et al., 2014). As argued by Slade et al. (2014), this type of transition requires a transformation of services, practices and, importantly, the paradigm within which they are delivered. The implementation of recovery-oriented practices has been found to be challenging, and there is a gap in knowledge about how to actively transform practices to align with recovery principles (Oades & Anderson, 2012; Perkins & Slade, 2012; Slade et al., 2014; Vandekinderen et al., 2012).

Likewise, there are well-known challenges of implementing eHealth into routine clinical practices (Varsi et al., 2019). Many eHealth projects end when the research is concluded and fail to become part of mainstream clinical care (Murray, 2012). Efforts to improve eHealth implementation include using models or frameworks that can aid in addressing the wide range of factors at play (e.g., organizational culture for change, practical routines, clinician attitudes, leadership and resources allotted to training) (Glasgow, Phillips, & Sanchez, 2014).

Together, the issues that are inherent to a study of “the potential role of e-recovery in transitions towards recovery-oriented practice” are considerably complex. At the same time, the paradigmatic shift needed for an alignment with recovery as prescribed (Slade et al., 2014), also entails re-examining knowledge and practices that have evolved within dominating paradigms. As detailed in the next chapter, the approach considered prudent here is explorative and descriptive, with a focus on the experiences of those whom mental health services seek to help, as well as those trying to help them.
3. Research design and methods

In light of the infancy of e-recovery and the complexities of implementing an Internet-based intervention into ongoing care relationships in mental health care, an exploratory and descriptive approach was chosen for this dissertation. As detailed in this chapter, qualitative methods were used to elicit descriptions of, and insights into, participants’ experiences, thoughts and beliefs in light of the research questions. Research questions were also explored from other perspectives enabling complementary insights from multiple data sources.

3.1 The research team

The core research team in this study consisted of: i) the principal investigator and senior scientist, a psychologist at Department of Digital Health Research, Oslo University Hospital. She has worked and published extensively in the field of telemedicine and eHealth for over 25 years, ii) the service user consultant, a service user with experience of use of mental health care at different levels for over 15 years, whose role is described in more detail below, and iii) the PhD candidate and author of this dissertation, with approximately 20 years of experience from the mental health field, mainly as a registered mental health nurse, but also as a caregiver. The PhD candidate was operatively responsible for the conduct of all phases and activities of the research process, including the analyses, under the supervision of the principal investigator and in collaboration with the service user consultant. The ultimate decision-making power was with the principal investigator, in close collaboration with the PhD candidate. The research team met regularly throughout the project.

3.2 Service user participation in research

Service user involvement in research emphasizes the importance of service users in the development and conduct of mental health research because of their direct personal experiences of the issues under study (Beresford, 2007, 2013). Participation of service users has the potential to enhance all the phases of the research process (Greenhalgh et al., 2019) and it is likely feasible in many settings (Domecq et al., 2014). A participatory approach to research by the use of a collaborative, multi-stakeholder approach adds relevance to the
research topics and findings, as well as increasing recovery opportunities for those participating in the research (Davidson, Bellamy, Flanagan, Guy, & O'Connell, 2017).

The range and extent of service user involvement and participation can vary considerably. Sweeney and Morgan (2009), for example, describe by four levels of involvement in research: consultation, contribution, collaboration, and control, in addition to no involvement. The service user consultant’s role in the research team can largely be characterized as research collaboration in that she contributed substantially in all the phases of the research process. Involvement of the other service users, that the service user consultant elicited responses from during the study, largely fitted a consultative role (ibid.).

The service user consultant had multiple roles, all of which were directed towards ensuring that the voices of as many service users as possible would be heard throughout the project. As part of the research team and as a co-researcher, the service user consultant was actively involved in formulating research questions, asking critical questions, and helping researchers translate research vocabulary into everyday language to be conveyed to service users. The service user consultant conducted interviews together with the candidate and contributed substantively to interpretations of data during the analysis process, as well as to writing up the publications and presenting findings at conferences. As moderator of the peer support forum and ReConnect-cafés, the service user consultant conveyed the principles of recovery in questions posed to the participants and in commenting the issues they presented. She also used these arenas to elicit service users’ opinions and perspectives on the research team’s preliminary data interpretations and conveyed this back to the research team. Her role and experiences were fortified academically by attending a college course about collaborative research in mental health care, funded by the project.

More consultative input (Sweeney & Morgan, 2009) was provided by other service users and health providers, and included reflections on inclusion criteria, recruitment strategies, and training procedures. Service users also gave input on the interview guides and to the analyses. Sometimes these reflections were elaborated on when the candidate was present, i.e., in focus groups, but also in different arenas where the service user consultant facilitated the processes, i.e., in ReConnect-cafés, or the online forum. The project also conducted a workshop with the aim of eliciting service users’ reflections about the
preliminary findings of the focus groups interviews, facilitating what may be considered a more contributive type of participation (ibid.). The participants’ reflections and discussions of findings also inspired them to take action during the study, including how to best use ReConnect in the remaining study period.

3.3 The setting

Norwegian health authorities express a vision to develop “The patient’s health service” (Helse-og omsorgsdepartementet, 2015). Their strategy focuses on person-centered care and partnerships (Helse-og omsorgsdepartementet, 2016) and the right to information and participation for both service users and their relatives (Pasient-og brukerrettighetsloven, 1999). As part of the national budget, Norway offers universal health care that is funded by the public through general and earmarked funds (Finansdepartementet, 2019). Primary and specialist services have shared responsibilities for the treatment and care for people with mental health problems (Helsedirektoratet, 2014). The Regional Health Authorities provide specialist services such as acute wards and district psychiatric centers, while the municipalities are responsible for providing primary health care and social services (ibid.). The Coordination Reform aims for seamless collaboration between the levels in health care and a shift towards a greater degree of community health service provision (Helse-og omsorgsdepartementet, 2009).

In this dissertation, mental health care services at primary and specialist levels that are provided to residents of two municipalities in Norway are referred to as “participating communities”: one community in a small municipality in the North with about 5500 inhabitants within an area of 1493 km², and one community in a large municipality on the outskirts of the capital in the South with about 52,000 inhabitants within an area of 100 km². The two communities were selected for participation to obtain desired contrasts in terms of rural/urban dimensions and access to care. Both communities had expressed commitments to policies promoting eHealth, user involvement, and collaborative practices.
3.4 Overview of the included studies

Table 2 Overview of the four studies included in the dissertation

<table>
<thead>
<tr>
<th>Study</th>
<th>Methods</th>
<th>Participants</th>
<th>Data collection</th>
<th>Data analysis</th>
</tr>
</thead>
<tbody>
<tr>
<td>Study I</td>
<td>Scoping review of the literature</td>
<td>N=20*</td>
<td>Five iterative stages of a scoping review were followed in searching and analyzing the data, largely using deductive thematic analysis</td>
<td></td>
</tr>
<tr>
<td>(Paper I)</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study II</td>
<td>Mixed methods</td>
<td>N=56 (29 dyads)</td>
<td>Log files of use, questionnaires, six focus groups, 12 ReConnect-cafés, forum postings</td>
<td>Descriptive statistics, first two steps of thematic analysis, largely deductive</td>
</tr>
<tr>
<td>(Paper II)</td>
<td></td>
<td>Service users and health providers</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study III</td>
<td>Qualitative methods</td>
<td>N=31</td>
<td>Six focus groups, 17 individual interviews and one interview in a dyad</td>
<td>Thematic analysis, inductive</td>
</tr>
<tr>
<td>(Paper III)</td>
<td></td>
<td>Service users (n=14) and health providers (n=14)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Study IV</td>
<td>Qualitative methods</td>
<td>N=14</td>
<td>Three focus groups and ten individual interviews</td>
<td>Thematic analysis, inductive</td>
</tr>
<tr>
<td>(Paper IV)</td>
<td></td>
<td>Service users (same as in study III)</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*studies

3.5 Recruitment and study inclusion

Written information about the project, along with verbal presentations given individually and in groups, was provided by the research team to multiple health services at primary and specialized levels of care, and to local service user organizations in the two participating communities. Interested health providers conveyed the information to service users who they believed might be interested and relevant to the project. In addition, some service users who had heard about the study requested that their health providers participate with them. To ensure a purposeful sample (Creswell, 2012), service users had to meet the following criteria: over 18 years of age, had received mental health care for at least six months before
inclusion, and had expectations of needing services at least six months forward, Internet access with a high level security identification key approved for use in healthcare, and at least one health provider willing to participate together with them in the study. For health providers, inclusion criteria were: employment in the participating communities, willingness to participate in the study for at least six months with at least one service user, and access to the same solution for secure electronic identification key as the service users. In order to ensure a breadth of perspectives, efforts were made to recruit a wide range of participants in terms of age, gender, mental health problems, professional background, types of ongoing support, and/or workplace.

Participating service users and health providers were invited to take part in focus groups and/or individual interviews about their experiences of ReConnect. As the perceptions of both users and non-users were deemed interesting at the time of the focus groups, all participants were invited to share their experiences by the research team, in addition to invitations conveyed by health providers and/or management at the participating mental health services. Only participants who had logged on to ReConnect >15 times were invited to individual interviews, in order to ensure a certain degree of experience with ReConnect. These individuals were invited to participate through a message in ReConnect and asked to contact researchers if they were interested, or they were asked directly by the service user consultant.

### 3.6 Preparation for participation

Potential participants that were informed about ReConnect were told that it was intended to support ongoing mental health care, that it could be combined with any type of follow-up and treatment, and used in any way the service user–health provider dyad saw fit. Participants were offered trainings sessions about use of ReConnect before inclusion.

Service users agreed on the consent form that they would use ReConnect exclusively for nonemergency purposes and that in acute cases or emergencies, they would use the normal channels. Apart from that, each dyad was free to decide how to shape their collaborative use of ReConnect based on their needs and preferences. Dyads were nevertheless strongly encouraged to clarify each party’s expectations for dyad interactions.
3.7 The participants

3.7.1 Study II

The study (Gammon et al., 2017) involved participants in 29 service user–health provider dyads. All 29 service users and 27 health providers that were given access to ReConnect were associated with primary or specialized mental health care in the two participating communities, and completed the entire six month study period. The self-reported diagnoses and professions of the service users and health providers, respectively, were highly diverse. Two service users were under both primary and specialized mental health care; each of these two formed dyads with two participating health providers. Of the 33 service users who originally registered to participate in the study, four withdrew shortly after being recruited. A few of the participants had taken part in the preparatory phase, and contributed to the design of ReConnect.

**Demographic characteristics among service users**

The 29 service users had a median age of 44 (range 21-62) years, were predominantly female (86%, 25/29), single (69%, 20/29), and had an educational attainment of high school or less (69%, 20/29). Thirty-one percent (9/29) had full- or part-time employment, 28% (8/29) were on work assessment allowance, and 35% (10/29) were retired or on disability leave.

**Psychosocial characteristics among service users**

The psychosocial characteristics and diagnoses described here are based on self-reports. Service users reported a median of two (range 1-7) diagnoses, a median score of 44 (range 0-80) on the WHO-5 Well-being Index (World Health Organization, 1998), and a median score of 2.08 (range 1.24-3.68) on the HSCL-25 (anxiety and depression) (Derogatis, Lipman, Rickels, Uhlenhuth, & Covi, 1974). This indicated that participating service users had low well-being and needed help with anxiety and depression symptoms (HSCL-25 cut-off: 1.75) (Derogatis et al., 1974; World Health Organization, 1998). The service users’ mid-range scores on patient activation, satisfaction, and recovery measures (Andrews & Withey, 2012; Corrigan, Salzer, Ralph, Sangster, & Keck, 2004; Hibbard, Stockard, Mahoney, & Tusler, 2004) indicated room for improvements. As for computer literacy, 90% (26/29) used email daily or weekly, and 76% (22/29) used social media daily or weekly.
Health providers

Most of the 27 participating health providers were women (24/27, 89%), 40 years or older (23/27, 85%), and registered nurses (11/27, 41%), social workers (5/27, 19%), or physicians (3/27, 11%). The rest (8/27, 28%) had various professions: occupational therapist, psychologist, priest, interdisciplinary specialist, bachelor of psychology, or home care worker. Health providers had completed their professional education a median of 19 (range 1-45) years earlier, and had been working in the mental health field for a median of 10 years (range 1-38). About half of them worked for municipalities (14/27, 52%) and the other half in specialized services at district psychiatric centers (13/27, 48%). One health provider worked at a 24/7 facility; the other 26 worked exclusively during daytime. All 27 health providers used email; the overwhelming majority used it daily (25/27, 93%).

3.7.2 Study III

In this study (Strand, Gammon, Eng, & Ruland, 2017), 14 service users and 17 health providers representing both levels of mental health care and both participating communities participated in six focus groups, 17 individual interviews and one dyad interview. Several participated in both focus groups and individual or dyad interviews. The service users ranged in age from 22 to 63 years and reported various mental health diagnoses. The health providers had between one and 35 years of clinical experience and represented various health professions. Five of the focus groups had 4-6 participants, while one had only two participants.

3.7.3 Study IV

A total of 14 service users from both primary and specialist levels of mental health care participated in three focus groups and 10 individual interviews in this study (Strand, Eng & Gammon, 2020). The service users were females from 22 to 67 years of age, and reported various mental health diagnoses (same service users as in study III). Eleven service users participated in the focus groups (range 2-6 participants), while 10 service users participated in the individual interviews. Seven of the service users participated in both focus groups and individual interviews.
3.8 Data generation

The data in this dissertation was generated from different sources and methods and included a scoping review (study I), a mixed methods study (study II) and qualitative studies (study III and IV).

3.8.1 Scoping review (study I)

In researching existing recovery-oriented Internet-based interventions, it was considered important to have some direction points to guide the work in this study (Strand, Gammon, & Ruland, 2017). Theory may serve as a lens for the inquiry in qualitative research (Creswell, 2009; Malterud, 2016). The framework of recovery-oriented practice (Le Boutillier et al., 2011) was considered appropriate.

During the preparatory phase of this project, research in the intersection between recovery and eHealth in the mental health field was sparse. For this reason, a scoping study was considered an appropriate starting point. Scoping studies are “[...] knowledge synthesis that addresses an exploratory research question aimed at mapping key concepts, types of evidence, and gaps in research related to a defined area” (Colquhoun et al., 2014) (p. 1293-1294). Scoping studies make it possible to incorporate multiple study designs and focus on issues other than intervention effectiveness (Levac, Colquhoun, & O'Brien, 2010). In scoping reviews, in contrast to traditional literature reviews, the included studies are not assessed for quality, and their findings are not synthesized (Arksey & O'Malley, 2005). This framework, with further enhancements (Levac et al., 2010; Peters et al., 2015), guided the study. Accordingly, the review was carried out in five stages. The first three steps involved data collection. The initial research questions were defined in stage 1. In stage 2, relevant studies based on the research questions and purpose of the study were identified. Systematic searches for articles were carried out in relevant research databases based on terms and concepts relative to Internet-based interventions and recovery-oriented practice. In addition, reference lists of included studies and relevant conferences were also searched for pertinent publications. The process of study selection, stage 3, was conducted through an iterative process of reviewing abstracts, refining the research strategy, and developing and revising inclusion and exclusion criteria (Arksey & O'Malley, 2005; Levac et al., 2010).
A total of 1511 articles were identified based on inclusion and exclusion criteria such as target group (individuals with long term mental health problems) and type of intervention (Internet-based, adjunct to ongoing care, recovery-oriented). Full texts of 132 potentially relevant studies were read by the PhD candidate. A random sample of one-fifth of the 132 articles, and those the candidate was uncertain about including or excluding, were read independently by the principal investigator. Disagreements about study selection were resolved by discussion.

3.8.2 Mixed methods (study II)

Study II (Gammon et al., 2017) used quantitative and qualitative data to explore ReConnect’s potential role in shifting practices toward recovery. The use of mixed methods can help answer research questions from multiple perspectives (Creswell, 2009). Our strategy might be characterized as a concurrent mixed method in that we converged or merged quantitative and qualitative data in order to provide a comprehensive analysis of the research issue. In this design, the research team collected both formats of data at the same time and then integrated the information in the interpretation of the overall results. Also, in this design, the researchers may embed one smaller form of data within another larger data collection in order to analyze different types of questions (ibid.).

Quantitative data (i.e., system log files and questionnaires on portal use) were extracted from the ReConnect server user log. All log-ins and uses of each module by service users and health providers were recorded in the system log. Online questionnaires, separate from the ReConnect portal, were used to collect demographics, self-reported diagnoses, psychosocial measures and the health providers’ professional background.

Qualitative data about use and experiences with ReConnect were generated in many settings, including focus groups, individual and dyad interviews, the anonymous online forum, the face-to-face ReConnect-cafés, and project meetings with service users and health providers. Service users from both communities participated in the same online forum, while only service users from the same participating community participated in the face-to-face ReConnect cafés. Topics such as personal recovery, working relationship, and portal use were often introduced by the service user consultant in the online forum and the face-to-face ReConnect cafés. The research team discussed which topics to introduce. The focus groups,
individual and dyad interviews were used to illustrate the tentative findings in this study and are further described below.

3.8.3 Qualitative methods (study III and IV)

The qualitative data in these studies (Strand, Gammon, Eng, et al., 2017; Strand, Eng & Gammon, 2020) were generated in focus groups (Malterud, 2012; Morgan, 1996), individual interviews (Malterud, 2003), and in one dyad interview. Since the aim and depth of the focus groups, individual and dyad interviews differed, many of the service users, as well as health providers, were invited to participate in both formats. This is a well-known strategy in multistage focus groups, aiming to start from a broad perspective in the first interview(s) and moving toward a more specific and narrow perspective, based on tentative findings from the first interview(s) (Hummelvoll, 2008).

Focus groups were considered well suited for stimulating discussions about participants’ use and experiences, considering their common frame of reference in using ReConnect (Malterud, 2012). The focus groups were held at an early stage of ReConnect’s implementation, so that discussions among participants could also serve to stimulate use and collaboration, an additional objective of focus groups (Braun & Clarke, 2013). The focus groups were conducted with service users and health providers separately, to facilitate free-flowing conversations among those with a common frame of reference (Morgan, 1996). The individual interviews were used to collect more personal, more detailed information (Braun & Clarke, 2013) than focus groups allowed for, and were held at a later stage when participants had gained more experience with use of ReConnect over time. In line with the objectives of individual interviews (ibid.), these interviews enabled an exploration of experiences and constructions of issues that participants have some personal stake in. In light of the often unbalanced power in the service user–health provider relationship, the research team decided not to initiate dyad interviews. One of the dyads nevertheless found it meaningful to discuss their collaboration via ReConnect together, in an interview, and took the initiative to do so.

In Study III (Strand, Gammon, Eng, et al., 2017), all of the focus groups, individual interviews and the interview in the dyad with both service users and health providers served as data. In study IV (Strand, Eng & Gammon, 2020), only the focus groups and individual
interviews with service users served as data. The focus groups were based on semi-structured interview guides with few and open-ended questions addressing experiences related to use, recovery processes, and working relationships, and to stimulate group dialogue in the focus groups (Malterud, 2012; Morgan, 1996) and were conducted after approximately three months of participation in the study (see Appendix III).

In the individual and dyad interviews, conducted after six to eight months of participation in the project, more in-depth personal experiences were sought relative to the same topics as the focus groups, also based on semi-structured interview guides with open-ended questions (see Appendix IV).

3.9 Analysis

3.9.1 Scoping review (study I)

The final two stages of the scoping review framework concern analysis (Arksey & O'Malley, 2005; Levac et al., 2010; Peters et al., 2015). In stage 4 in this study (Strand, Gammon, & Ruland, 2017) each of the articles included was coded according to relevant variables: intervention’s country of origin, aims, theoretical concepts, settings, target group, study aims, design and methods, modules, outcome, measures and results, implementation issues and the four practice domains with the 16 underlying themes of recovery-oriented practice (Le Boutillier et al., 2011). The PhD candidate and the principal investigator did the coding, first independently and then together, to explore nuances in different codes and find consensus resolutions for any coding discrepancies. The included articles and extracted data were reviewed repeatedly to ensure consistency, even after minor adjustments were made in the data charting form (Arksey & O'Malley, 2005; Levac et al., 2010).

Stage 5 of the review involved collating, summarizing and reporting the results (Levac et al., 2010). To collate and summarize the characteristics of the interventions according to their support for recovery-oriented practice, the research team did a thematic analysis with a mainly deductive and semantic approach (Braun & Clarke, 2006). The four practice domains and 16 underlying themes (Le Boutillier et al., 2011) served as the starting point for deductive analysis and structuring of the data.
3.9.2 Mixed methods (study II)

This study (Gammon et al., 2017) employed both quantitative data (system log files and questionnaires) and qualitative data (mainly focus groups). For descriptive statistics, SPSS version 21 (SPSS Inc, Chicago, IL, USA) was used to analyze participants’ demographics, previous experience of using the Internet, psychosocial measures, and their use of ReConnect as shown by system log data. To protect anonymity, demographics from the two communities were aggregated.

The qualitative data came from three different sources: i) verbatim transcriptions of audio recordings of focus groups; ii) selectively transcribed segments of audio recorded ReConnect-cafés which the service user consultant’s notes flagged as containing service users’ experiences of potential relevance to the research questions (e.g., working relationships, social support, and community engagement) and; iii) forum postings that were coded according to the first two of the six stages in a thematic analysis approach (Braun & Clarke, 2006). For this study, the principal investigator and first author examined the data in search of codes and quotes that illustrated Le Boutillier et al’s four practice domains: (1) personally defined recovery, (2) promoting citizenship, (3) working relationships, and (4) organizational commitment (Le Boutillier et al., 2011).

3.9.3 Qualitative methods (study III and IV)

The research questions in studies III and IV (Strand, Gammon, Eng, et al., 2017; Strand, Eng & Gammon, 2020) were addressed with qualitative methods. The focus groups, individual interviews and a dyad interview were audio-recorded and transcribed verbatim, and subsequently analyzed with NVivo software version 11. A six-phase thematic analysis procedure was used to identify, analyze and report patterns in the data (Braun & Clarke, 2006). This method has later been labelled reflexive thematic analysis, emphasizing the role of the researcher’s subjectivity and reflexivity (Braun & Clarke, 2019). What counted as a theme was based on its relevance for the research questions, and not by its quantifiable features. For this under-researched topic, the goal was to inductively produce a rich description of the entire data set, even though some depth and complexities may be lost (Braun & Clarke, 2006). The thematic analysis applied was largely at a semantic level, identifying themes within the explicit or surface meanings of what participants expressed.
The links between the participants’ expressed experiences and meanings and the theorizing of data was made in a rather straightforward way as outlined by Braun and Clarke (2006).

In the first phase, the PhD candidate familiarized herself with the data, noted initial ideas, and assigned and discussed preliminary descriptive codes with team members (ibid.). In the second phase, the entire data set was searched for text segments (e.g., sentence fragments, entire sentences or short paragraphs about a specific subject) that were relevant to the research question. These were systematically identified and entered into NVivo nodes (codes). In the third phase all related codes were provisionally organized into themes and all data relevant to each tentative theme were collected. In the fourth phase, themes from the entire data set were reviewed and adjusted where there was overlap or inconsistency in the coding. The fifth phase refined the wording of each theme and the overall story of the analysis, to obtain clear definitions and names for each theme. Ultimately, in the sixth phase, vivid, compelling quotes related to the research questions were selected for use in the final report. Although these phases are described sequentially, in reality the analysis process was recursive and flexible (ibid.), moving back and forth as needed.

3.10 Ethical considerations

The research in this dissertation followed ethical guidelines and commitments in health care research internationally and nationally, as well as professional ethics guidelines (NEM, 2014; Norsk Sykepleierforbund 2011; Simonsen, 2011; World Medical Association, 2001). The study was approved by the relevant Regional Committees for Medical and Health Research Ethics in Norway, as well as the Privacy Protection Committees at the participating sites. In addition to signing a consent form with information about the objective of use of ReConnect (i.e., not for emergency purposes) the participants were given information about security procedures and recommendations for ensuring privacy, and were informed about the option to withdraw from the study any time, without any specific reason. The information safeguarding informed consent was orally repeated before conducting the interviews, thus also safeguarding procedural consent, which is a cornerstone in ethically acceptable mental health research (Hem, Heggen, & Ruyter, 2007). During the study period, the PhD candidate as well as the service user consultant were available to participants in case of questions, need for discussions or assistance.
The research team frequently reflected and discussed ethical issues throughout the research process. One of the most important ethical commitments in research is to preserve the anonymity of the participants (NEM, 2014). This study posed certain challenges, particularly for service users who participated in multiple arenas where information was shared, such as in the focus groups and the online forum. These service users were regularly reminded of the actions they needed to take if they wanted to remain anonymous (i.e., refrain from sharing detailed personal information about oneself in one arena which could lead other participants to discovering one’s identity in another arena). It was emphasized that the service users themselves made decisions regarding their own anonymity online, while it was the researchers’ responsibility to safeguard their anonymity in future publications and presentations. Other precautions were taken in conjunction with the service user consultant who also received services from one of the participating communities. She did not participate in the individual interviews within in her participating community, nor did she read the transcripts from these interviews.

Finally, the research team encountered an ethical dilemma related to what was referred to as non-working relationships. The somewhat alarming portrayals of non-working relationships reported by some service users posed an ethical dilemma about how the research team should respond. For example, raising the issue with the health providers in question or their superiors could have created an involvement in the relationship with unpredictable outcomes. Ultimately, the approach chosen was that the service user consultant began raising the issue of working relationships broadly in the forum and cafés. This included outlining hypothetical situations in which relationships were working and non-working, alternative ways that service users might contribute to improving working relationships, as well as informing participants of their rights as service users. Constructive discussions grew out of these efforts, some of which also resulted in taking action (e.g., requesting a different health provider). These discussions among peers prompted the team to view both online and offline peer support groups as a potentially important resource for quality improvement within mental health services. Given an appropriate mandate and support, such peer support groups can provide insights into what measures can improve services.
4. Methodological considerations

This chapter offers critical reflections on the methodology and methods used related to each of the four studies and the dissertation in general. The considerations also turn to reflexive comments on my own role as a researcher in this project.

4.1 The scoping review (study I)

Scoping reviews are used for charting new territory between areas of research and identifying issues in need of further attention (Arksey & O'Malley, 2005). A scoping review was considered appropriate in exploring the crossroads between recovery and Internet in the current project. The study shares the strengths and limitations of scoping studies in that it illuminates the volume, nature and characteristics of the field of interest, but does not appraise the quality or weight of evidence (ibid.). Use of the conceptual framework for recovery-oriented practice served well as an aid in structuring analysis and description of findings. During this formative stage of development, use of such a framework enabled a more proactive and systematic discourse about Internet-based recovery-oriented interventions. The scoping review did however illustrate the complexity of operationalizing the recovery concept. Limiting the inclusion criteria to interventions exclusively with a recovery orientation in conjunction with ordinary care, led to the exclusion of stand-alone interventions with potentially important contributions to the emerging field of e-recovery (e.g., (Kuosmanen, Jakobsson, Hyttinen, Koivunen, & Valimaki, 2010; Steinwachs et al., 2011)). Thus, this study cannot claim to represent all current work relevant to advancing e-recovery.

4.2 The mixed methods study (study II)

In study II, different methods were selected to serve the multiple aims of describing the 57 participants (29 dyads), illustrating their use of ReConnect, and reporting their experiences in light of the four recovery practice domains (Le Boutillier et al., 2011). The quantitative data (system log files and questionnaires) and qualitative data (individual and dyad interviews and focus groups) were largely presented in parallel, rather than being truly
“mixed” (Bergman, 2011). The methods nevertheless complemented each other in ways also intended with mixed methods (Creswell, 2009). For example, reports from participants regarding the importance of certain modules for them personally, such as crisis plan and diary, helped nuance the log data showing those modules to be among the least frequently used. The opportunistic selection of quotes from preliminarily coded data was not intended to provide a balanced reflection of the totality of participants’ experiences. Rather, the project sought to illustrate the four practice domains (i.e., working relationship, support for personal recovery, promoting citizenship, and organizational commitment) as an indication of the potential role such portals might play in shifting practices.

4.3 The qualitative studies (study III and IV)

There are different quality criteria in qualitative research, and Braun and Clarke (2012) argue that in examining the trustworthiness of qualitative findings, ecological validity and transferability are particularly important concepts in assessing quality. Other quality assurance measures such as member checking and triangulation are described as techniques for ensuring trustworthiness (ibid.), in addition to end-user involvement (Treharne & Riggs, 2014).

4.3.1 Ecological validity

Ecological validity is concerned with the relationship between the “real” world and the research. This could be manifested through whether the context of data collection resembles the real world context or whether the data can be applied in the real world (Braun and Clarke 2012).

The strategies used to enhance the findings’ ecological validity in this dissertation included: conduct of the research in the context of ongoing mental health care in local communities; prolonged engagement with participants to facilitate mutual understandings and trust between researchers and participants (e.g., repeated visits to the two communities) (Lincoln & Guba, 1985); emphasizing to participants that any experiences or opinions that they felt could be relevant were important and welcome (Morrison-Beedy, Cote-Arsenault, & Feinstein, 2001; Shenton, 2004); triangulations of data sources and researchers
representing different roles and perspectives in developing the analysis of the data (Lincoln & Guba, 1985); sharing summaries and eliciting feedback from the participants (Harvey, 2015) on tentative analysis both during and after the various interviews, enabling questions, critique, and affirmation; purposive selection of context and participants (Graneheim & Lundman, 2004); use of well-established research methods (Shenton, 2004) including the use of semi-structured interview guides, and audio recording transcription of all material and use of NVivo (Morrison-Beedy et al., 2001).

### 4.3.2 Transferability

Another key criterion for trustworthiness is whether the research findings are applicable in, or transferrable to, other contexts or other groups (Braun & Clarke, 2013). For this purpose, conscientious efforts were made to provide rich descriptions of the specific contexts, participants, settings, and other circumstances affecting the study (Lincoln & Guba, 1985). Findings were also presented together with varied and appropriate quotations (Morrison-Beedy et al., 2001). Collectively, these measures aimed at enabling readers to make their own assessments about the relevance and applicability of the findings to their particular aims, contexts and participants (Lincoln & Guba, 1985).

### 4.3.3 Reflexive comments

The researchers involved in the project, from which this dissertation is derived, acknowledge that their efforts to make sense of the meanings of others, are shaped by their own personal, cultural, and historical experiences (Creswell, 2009). This study has been shaped by at least three central forces: service users’ enthusiasm for the principles of recovery as a guide for the design of ReConnect; the growing research and political agenda on recovery; and the PhD candidate’s own interest in recovery-oriented processes and practices. Regarding the PhD candidate’s own interests, as a researcher I acknowledge the value-laden nature of this study and that my values and biases have an impact on the research process. My interest in themes such as user involvement, empowerment and strengths grew from my Master’s study, which explored the role of mental health nursing for persons with severe and acute suicidal risk. During my ten years as a registered nurse at a closed acute mental health ward, I found that balancing user involvement, while at the same time safeguarding persons with potentially life-threatening symptoms and functions, was highly challenging. My belief in
the importance of enabling service users, giving them and their caregivers a stronger voice in their care, and in improving the quality of services, grew during this period. I took this belief and interest with me when I started working at a research and development center at the hospital trust. There, my interests for health education and participatory research as a means for developing knowledge and improving practice in mental health care was further strengthened, along with my growing interest in recovery literature and practices. I came to believe that user involvement, choice and empowerment are essential for recovery processes, and that health services and health providers should support these processes in addition to offering treatment and symptom reduction with the goal of cure.

Conducting research within one’s own professional field poses advantages as well as challenges. To know the field well entails having relevant, nuanced and comprehensive insights into the research literature and issues in question. On the other hand, there is a risk of becoming an “insider”, hence becoming blind to alternative perspectives or explanations. Tensions related to insider–outsider roles in the research process are well known (Le Gallais, 2008). In this project, reflections upon these tensions were particularly called for in light of the multiple roles and stakeholders involved. In efforts to maintain a high level of vigilance to this issue, I actively used the research team to discuss my own values and biases related to the research, and every research decision was discussed in the team and with the other supervisors. I also regularly wrote journal notes about the decisions taken and my reflections on the dilemmas/tensions faced, some of which were later discussed within the research team. As an example, the research team discussed how our roles as former health providers and current service user (the service user consultant/co-researcher) made us more likely to highlight issues in the data from the position of the group that we identified most with. In this case, the team’s written reflections on the subject made it easier to discuss issues openly in the research team and to be reflexive about our respective interpretations. To further safeguard reflexivity during analysis of findings, the research team examined my interpretations and presentation of the data, searching for an agreement on the best possible data interpretations.
4.4 General limitations

There are several limitations relative to the work presented in this dissertation. A major limitation to this project is related to sample issues. Only four men (14%) were recruited in the mixed methods study, none of whom used ReConnect actively or responded to invitations to participate in subsequent focus groups or individual and dyad interviews. In retrospect, making it a priority to recruit a male service user consultant in addition to the female service user consultant would have been ideal, also in the ReConnect design stage. Recruitment of participants from inpatient care also proved to be challenging. While the inclusion criteria of >12 months duration of mental health care was intended to ensure participation of service users with severe mental health problems, this was not necessarily the case. Service users with problems that may be considered moderate were nevertheless included, thus undermining efforts to offer any clear indications of what target groups are best suitable for ReConnect.

The quality of the service user–health provider relationships was not described or assessed prior to use of ReConnect. In hindsight, this would have shed light on a pattern that emerged in the findings; that positive and negative experiences with ReConnect appeared to be significantly associated with the quality of the working relationship prior to ReConnect. The data collected in the project allows for additional analyses that could have strengthened this dissertation, had time and resources permitted. For example, the potential differences in experiences of use of ReConnect related to levels of mental health care (primary versus specialist level) were not examined explicitly, but could have uncovered important issues, for example, regarding implementation.

The authors were involved in designing ReConnect as well as in generating data about its use. Efforts to reduce potential biases included inviting participants to give critical feedback both about the portal and our tentative data analyses, and by collecting the data over time. The inclusion criteria for the individual interviews (having logged on ReConnect >15 times) favors those who actively used ReConnect, thus excluding those who may have used ReConnect less due to negative attitudes or experiences.

Use of recovery perspectives and frameworks served well as a lens or sounding board for the focus and exploratory analyses conducted in this project. However, leaning
predominantly on one framework (Le Boutillier et al., 2011) may have made the lens too narrow. At the same time, other related perspectives and fields such as positive psychology (Resnick & Rosenheck, 2006; Slade, 2010), person-centeredness (McCormack et al., 2015), and user involvement (Storm & Edwards, 2013; Tambuyzer, Pieters, & Van Audenhove, 2014) probably would have added value to the work. In addition, applying implementation science frameworks that are typically used in e-health implementation research could have invited important insights into barriers and facilitators of shifting practices towards recovery.

In study II and III, as part of the work underpinning this project, the use of the term “participatory design” may not have been completely accurate, and a description such as “using elements of participatory approaches” or “being inspired by participatory design”, as described in this dissertation, would likely have been more accurate.
5. Findings

The findings in this dissertation are presented in two steps to illuminate the role that e-recovery may play in shifting practices towards recovery-oriented care. First, findings are presented per study, then across studies with focus on their relevance for recovery-oriented practice.

5.1 Main findings relative to each study

Main findings of each study, in light of the specific study aims, are presented in Table 3.
### Table 3. The studies, specific aims and main findings

<table>
<thead>
<tr>
<th>Study</th>
<th>Specific aims</th>
<th>Main findings</th>
</tr>
</thead>
</table>
| Study I:  
Transitions from biomedical to recovery-oriented practices in mental health: a scoping review to explore the role of Internet-based interventions | To describe e-recovery interventions and current research, and to identify gaps and issues relevant to advancing recovery research and practices through opportunities provided by the Internet. | Twenty studies describing six e-recovery interventions were identified. None of the 20 studies used recovery-oriented frameworks or specific recovery outcome measures. Four of the interventions were specific to a diagnosis. The main domain supporting personally defined recovery was most clearly reflected in the interventions. |
| Study II:  
Shifting practices toward recovery-oriented care through an e-recovery portal in community mental health care: a mixed-methods exploratory study | To illustrate uses and experiences of an e-recovery portal, ReConnect, as an adjunct to ongoing mental health care for service users and health providers, and to explore its potential role in shifting practices toward recovery. | The forum (online peer support group) was the most frequently used module. Dyads that used the portal resources did so in diverse ways. Service users’ control over toolbox resources (e.g., defining and working towards personal goals) combined with peer support, was suggested to activate service users in their personal recovery processes and in community engagement, regardless of health providers’ portal use. |
| Study III:  
Exploring working relationships in mental health care via an e-recovery portal: qualitative study on the experiences of service users and health providers | To explore how service users and health providers experienced their working relationships when they were offered the option of supplementing ongoing collaboration with an e-recovery portal: ReConnect. | Thematic analysis generated two main themes: 1) new relational avenues, particularly related to written communication and use of the goal module and 2) out of alignment, illuminating the difficulties that arose when service users’ and health providers’ expectations for use of ReConnect were not aligned. |
| Study IV:  
Combining online and offline peer support groups in mental health care: A qualitative study of service users’ experiences | To gain insights into the benefits and challenges of combining online and offline peer support groups facilitated through an Internet-based intervention designed to support recovery processes. | Two main themes were generated in a thematic analysis: 1) balancing anonymity and openness, describing how combined peer support enhanced a non-judgemental atmosphere and 2) enabling connectedness, elaborating on support for friendship and engagement in the local community. Challenges were more implicit and cut across themes. |

In the following, more thorough descriptions of the main findings relative to each study are presented.
5.1.1 Study I

In study I, a scoping review was conducted, identifying 20 studies describing six e-recovery interventions. Six of the studies employed a comparison group, three of which used randomization. None of these six studies presented definitive findings. None of the 20 studies used recovery-oriented frameworks or specific recovery outcome measures. Four of the interventions were specific to a diagnosis. The conceptual framework for recovery-oriented practice with four main domains and 16 themes was used to deductively code intervention characteristics. The domain supporting personally defined recovery was considered most clearly reflected in the interventions, whereas the other three domains – promoting citizenship, organizational commitment and working relationship – were considered less evident. Support for the formulation and follow-up of personal goals and preferences, and for accessing peer-support, were the characteristics shared by most interventions. In addition, e-recovery appeared to support a broader range of recovery themes than may be feasible in ordinary care, such as social inclusion, meaningful occupation, and access to and participation in the care pathway. The essential role played by peers in inspiring hope was fundamental to several of the interventions. Peer support was used to promote learning, self-management and personal responsibility through modelling, empowerment and sharing recovery stories. In addition, peers were engaged as experts in how to use the interventions and in sharing experiences. All 20 studies reported service user involvement in intervention design, thus complying with one of the core principles of organizational commitment and the increasing focus on the significance of service user involvement in research to enhance relevance. However, none of the studies described in detail the hope-inspiring dimension of service user–health provider working relationships, which is central to recovery. What actually happens during e-mediated interactions (e.g., whether interactions between service users and health providers are instrumental and detached, or personal and empathetic), and the role of Internet, still largely remains a black box in this setting.

5.1.2 Study II

This mixed methods study showed that the forum (i.e., online peer support group) was the most frequently used module of ReConnect, with 1870 visits and 542 postings. Service
users’ control over toolbox resources (e.g., defining and working towards personal goals), combined with peer support, activated service users in their personal recovery processes and in community engagement. Collaboration between service users and health providers through ReConnect varied in type (e.g., messages with or without the goal and life domain modules, during or outside consultations) and in frequency of use (i.e., twice a week to not at all). Participants reported needing more than six months to discover and adapt optimal uses relative to their individual and collaborative needs. Thirty percent of the health providers did not interact with service users through ReConnect. The tentative analysis of qualitative data illustrating the four recovery-oriented practice domains suggested that use of life domains, goals, activity plans, peer support, and the process of writing supported personally defined recovery processes. Citizenship was promoted by peer support activities online in the forum, and face-to-face in the ReConnect cafés. The working relationship domain overlapped particularly with the first domain (supporting personally defined recovery) in that health providers who supported service users in working with life domains, goals and activities also reported having good working relationships. Issues related to organizational commitment were reflected in some health providers’ claims of commitment to user involvement in mental health care, while others reported barriers to the use of ReConnect as an ordinary service, including lack of time, technical infrastructure-related barriers, multiple overlapping systems and lack of integration with existing electronic health records.

5.1.3 Study III

The aim of study III was to gain insights into how service users and health providers experience their relationships when given the option of supplementing ongoing collaboration with an e-recovery portal. The thematic analysis generated two main themes: 1) new relational avenues, and 2) out of alignment. The first main theme was about dyads who reported new and enriching ways of working together through ReConnect, particularly related to written communication and use of the goal module. The theme describes how dyads used the e-recovery portal to enrich their working relationship. Mainly described by the health providers, ReConnect strengthened service users’ sense of ownership in their care, largely through the goal module and writing process. The written communication from service users also offered health providers broader and more nuanced insights from the service users’ perspectives, and thus a more person-centered basis for working together, also
during in-person consultations. ReConnect was described as helping to focus the collaboration around the needs and goals that service users considered relevant to their daily lives (e.g., to arrange Christmas celebrations for the family), and not just focusing on medical issues. Service users’ 24/7 access to the portal promoted a sense of health providers’ presence and availability, despite asynchronous and sometimes lengthy response times. Illustrative subthemes of the first main theme were: i) ownership, ii) common ground, iii) goals and direction, and iv) sense of presence and availability. The second main theme illuminates the difficulties that arose when service users’ and health providers’ expectations for use of ReConnect were not aligned, including the consequences of not addressing these difficulties. Although participants were encouraged during the training sessions to discuss beforehand how they would use the portal, few did so explicitly. Those who expressed frustrations, both among service users and health providers, reported expecting initiatives or responses via the portal that the other party failed to fulfill. Service users experienced this as not being taken seriously, whereas one health provider reported losing motivation to use the portal. Illustrative subthemes of the second main theme were: i) initiative and responsibility, ii) waiting for the other, iii) feeling overwhelmed, and iv) clarifications and agreements.

5.1.4 Study IV

The aim of study IV was to explore how service users describe benefits and challenges of combining online peer support groups (the forum) and offline peer support groups (the ReConnect-cafés), when facilitated through ReConnect. Two main themes were generated in the thematic analysis of focus groups and individual interviews: 1) balancing anonymity and openness, and 2) enabling connectedness. The first main theme indicated that the open and non-judgmental atmosphere found in anonymous peer support forums may be enhanced by combining online and offline peer support. This is illustrated by how self-disclosure and openness in one format could migrate and be reinforced toward greater openness about personal issues in the other format. For some, the mutual self-disclosure in an anonymous and secure online environment reportedly reduced a sense of stigma and fostered the trust necessary to muster courage to self-disclose when also meeting face-to-face. On the other hand, participants’ commitments to preserving confidentiality, while at the same time weighing whether or not to expose their own identity online, was reported by some as challenging and a deterrent to self-disclosure. Participants who found ways to resolve these
types of dilemmas did so in a variety of ways that appeared to be in line with their own values and comfort zones. Illustrative subthemes of the first main theme were: i) dilemmas of anonymity and confidentiality, and ii) towards self-disclosure and openness. The second main theme, enabling connectedness, was found to be linked to the first main theme in that combining online and offline peer support appeared to open new paths towards friendships and engagement in the local community. For some of the participants, the combination of formats appeared to translate into the tangible benefits of friendships and in-person engagement in the local community that otherwise might not have evolved. Illustrative subthemes of the second main theme were: i) new friendships and ii) networks in the local community. Three of the four subthemes mainly describe benefits. Challenges were more implicit, cutting across the subthemes, and were linked to transitions from anonymity to revealing one’s identity in in-person ReConnect-cafés and how to protect confidentiality.

5.2 Main findings across studies

Summarized, the findings from this project suggest that e-recovery interventions such as ReConnect can facilitate shifts towards recovery-oriented care. The findings also shed light on issues that are likely to influence whether or not e-recovery interventions actually play such a role. In combination with observations elaborated upon in the four dissertation papers, the main findings, as described in the section above, are summarized in Table 4, relative to the previously described four domains of recovery-oriented practice (Le Boutillier et al., 2011). Emphasis is on findings that are identified as likely to have relevance to the role of e-recovery in shifting practices towards recovery-oriented care.
Table 4. Findings likely to have relevance for the role of e-recovery in shifting practices towards recovery-oriented care

| Working relationship | • The quality of the relationship between service users and health providers prior to portal use likely determined whether the portal was beneficial or not  
|                      | • When expectations for use of ReConnect were neither aligned nor addressed, difficulties arose for both parties in the dyad, especially for service users  
|                      | • New ways of working together through ReConnect enriched some service user–health provider relationships  
|                      | • Lack of new ways of working through ReConnect could reveal suboptimal working relationships  
| Supporting personally defined recovery | • Writing and working with personal goals in ReConnect played fundamental roles in the support of personally defined recovery  
|                      | • ReConnect facilitated a sense of ownership and locus of control for the service user  
|                      | • Service users supported each other in use of the different modules (e.g., goals, mindfulness exercises, text messaging with health providers) in ways that were relevant for their individual recovery processes  
|                      | • Peer support facilitated stigma reduction, self-disclosure and openness about personal issues  
| Promoting citizenship | • Blended peer support can open new paths towards friendships, networks and participation in the local community  
|                      | • Despite support from peers, participation and engagement in face-to-face activities in the communities was described as difficult  
|                      | • Service users expressed a desire for support from health providers to engage in the community  
| Organizational commitment | • A recovery vision in the organization most likely helps in the implementation of e-recovery  
|                      | • Lack of workplace structures (e.g., time, routines) hampered use of ReConnect  
|                      | • Peer facilitation and moderation by a service user consultant in both formats of peer support groups appeared to be of significance for beneficial use  
|                      | • Peer support can be used as a resource in quality improvements of mental health services relative to e-health  
|                      | • E-recovery can facilitate access to services, close follow-up from services, and participation in services  
|                      | • E-recovery can entail new roles that challenge service users as well as health providers and need to be addressed in planning of the workplace  

The summarized findings are discussed in the next chapter.
6. Discussion

The following discussion addresses the overriding question: What role can Internet-based interventions play in transitions towards recovery-oriented care for persons with long-term mental health problems? The dissertation’s main findings are discussed relative to the four domains of recovery-oriented practice: working relationship, supporting personally defined recovery, promoting citizenship, and organizational commitment (Le Boutillier et al., 2011). The findings demonstrate that the domains are overlapping and sometimes mutually reinforcing. Processes from the CHIME model (connectedness, hope, identity, meaning, and empowerment (Leamy et al., 2011), are also touched upon when relevant in highlighting service users’ experiences relative to recovery. A discussion of the dissertation’s contribution to knowledge follows, along with implications for practice and future research, and conclusions.

6.1 Dyad relationships

The findings from this dissertation offer insights that can aid in understanding how service user and health provider relationships unfold when mediated through portals such as ReConnect. The quality of the service user–health provider relationship prior to portal use appeared to play a key role in determining whether the ReConnect portal undermined, or strengthened, the relationship between them.

6.1.1 Non-working relationships

Non-working relationships refer to participants’ descriptions of frustrations and difficulties in use of ReConnect in the dyad. The role ReConnect played in these relationships was nevertheless unclear, as many of the frustrations appeared to predate ReConnect. Service users described health providers in ways known to characterize non-helpful professionals (Ljungberg, Denhov, & Topor, 2016); not displaying engagement, not listening to or respecting the views of the service users, and an exclusive focus on diagnosis and symptoms, leading to reduced consultation frequency, or the service users’ avoidance of health providers, feelings of betrayal, disappointment, and detachment from the relationship, are known characteristics of non-helpful professionals. Difficulties in use of ReConnect
appeared to arise for both parties in the dyad, but especially the service users, when expectations for use were not aligned or not addressed within the dyad.

Clarifications and agreements about the use of ReConnect were often not conducted in the dyads, or if they were, not always followed. This was not reported to be a problem for dyads that may be characterized as having working relationships, although some parties in these dyads acknowledged that clarifying expectations could be wise. For those in non-working relationships, unresolved expectations were associated with expressions of uncertainty, a lack of clarity in expectations, and mistrust in the relationship, especially for the service users. These reactions are common when hopes and expectations are not met (Cleary, Escott, Lees, & Sayers, 2017). Service users who did not receive responses from their health providers also described a decrease in initiative and sense of responsibility for use of ReConnect with their health provider. This might not be surprising in light of the association between the quality of the working relationship and engagement in care (Dixon et al., 2016; Kirsh & Tate, 2006). Service users whose health providers neglected to respond to messages may have experienced a decline in trust towards their health provider, which could in turn reveal or intensify non-working relationships. A main barrier for establishing working relationships is suggested to be a lack of clarity of the goal of interactions (Farrelly & Lester, 2014). In turn, this can leave service users and health providers with poorly defined roles and potentially conflicting needs (ibid.), as reflected in the findings from this dissertation. Without a joint process of goal setting (i.e., concurrence between service user’s goals and health provider’s treatment goals), service users might feel less motivated and less likely to attain their goals (Nair, 2003).

Reasons for non-use or lack of alignment of ReConnect use in the dyads are probably many, but were not systematically explored in this project, although practical barriers (e.g., lack of time, infrastructure support) were reported. Other studies might shed light on possible explanations. For example, one study found that health providers acknowledge that blended care is modern and flexible, but they appear to lack knowledge about how to benefit from technology-aided interventions as part of ordinary care, and seem to doubt that such technological aids will help them in their daily work (Schuster, Pokorny, Topooco, Berger, & Laireiter, 2018). Lack of perceived advantages or benefits is suggested to possibly result in reduced interest and consequently, in the possible obstruction of dissemination efforts.
High disease burden and a chronic course are also contraindications of the use of blended care, according to health providers (Titzler, Saruhanjan, Berking, Riper, & Ebert, 2018). In one study of blended treatment that was not part of ordinary care, the establishment of a working relationship was found to be hampered by technical issues (ibid.). However, another study with blended care as part of ordinary care did not find a decrease in working alliance (Berger et al., 2018). Research suggests that both parties in a dyad might be lacking guidance on how to appropriately engage with each other online and service users may be worried whether their use is appropriate (Sieck et al., 2017); thus training and guidance may be essential (further discussed in chapter 6.4.5). As later discussed under Implications, a number of precautions are worth consideration before implementing e-recovery.

6.1.2 Working relationships

The findings in this dissertation also described what can be characterized as working relationships building on the service user as expert and where autonomy is supported (Le Boutillier et al., 2011). These relationships developed patterns of ReConnect use that were individualized and reflected a willingness to experiment, learn and adjust interactions accordingly. This finding might reflect the notion that when expectations and beliefs about each other and the Internet-based intervention are shared, engagement and outcomes are positively influenced (Cavanagh & Millings, 2013).

Service users offered examples of attentive and flexible health providers who were open and curious about how they experienced ReConnect and how they might use it together to best accommodate their needs. Health providers, for their part, described how ReConnect helped them better understand and respond to service users’ needs. These descriptions reflect central characteristics of helpful professionals where also hope is fostered through provision of time, trust, support and valued interpersonal processes (Borg & Kristiansen, 2004; Ljungberg, Denhov, & Topor, 2015). The working relationships developed patterns of ReConnect use that were person-centered, reflecting a willingness to experiment, learn and adjust interactions according to the service users’ needs and preferences.

The positive role that ReConnect played in working relationships largely overlaps with, and was amplified by the role it played in supporting personally defined recovery.
6.2 Supporting personally defined recovery

This practice domain refers to processes that foster individuality, informed choice, peer support, a focus on strengths, and a holistic approach (i.e., all life domains, not just mental health) (Le Boutillier et al., 2011). ReConnect’s toolbox offered information and functionality that supported several of these dimensions, including a goals/activities module, information about patient rights, an exercise to map strengths, and functionality for service users to describe the status of their life domains.

6.2.1 The process of writing

ReConnect’s facilitation of writing appeared to highlight or legitimize service users’ experiences and roles as experts in the communication between partners in the dyad. The experiences reported by participants suggest that the content produced by service users in ReConnect also facilitates a broader and more relevant understanding of the service users’ thoughts, experiences, and situation, particularly related to aspects considered important for the service users.

The expressed benefits of writing in this project appear to reflect known health promotion aspects of writing in general (Wold & Uverud, 2019), as well as the healing effects of writing in therapy (Lange, van de Ven, Schrieken, & Emmelkamp, 2001; Wright & Chung, 2001). Participants reported that writing facilitated self-reflection and the structuring of often chaotic thoughts and emotions. This reflects research showing that the health effects of writing depend on progress in the structure of the written texts over time – from chaotic and disjointed texts to more cohesive stories (Smyth, 1998). By describing status and goals relative to various life domains, service users gained what might be described as a greater sense of coherence about themselves and the processes ahead. Some have suggested that online writing can be an empowering process where service users become change agents and where person-centered care is facilitated (Deegan et al., 2017). Service users of online communication have been found to feel more confident and empowered, to experience increased knowledge and improved health status (Åkesson, Saveman, & Nilsson, 2007). These aspects of writing are likely also at play in the therapeutic aspects of online peer support groups.
6.2.2 The role of goals

The experiences reported by service users and health providers suggest that the content produced by service users in ReConnect facilitated a broader, more nuanced and relevant understanding of the service users’ situations and goals, as suggested by other researchers when introducing a recovery-oriented approaches in mental health care (Dalu, Pedersen, Cunningham, & Eplov, 2015). Traditional consultations were at times described as being diffuse or lacking structure, while ReConnect was described as helping the dyad focus more directly on the services users’ everyday life and practical issues. This reflects an important aspect of the paradigm shift from health provider’s priorities to the priorities of the service user (Ness et al., 2014). Moreover, when service users are empowered to communicate through written text they express diverse and very personal goals in ways that help health providers gain insights into their goals and needs without requiring longer visits (MacDonald-Wilson, Deegan, Hutchison, Parrotta, & Schuster, 2013). This may be associated with research that shows how Internet-based support for preference-based care planning can improve user-centered care and patient outcomes (Bjerkan & Alonso, 2010; Lau, Kuziemsky, Price, & Gardner, 2010). Research suggests that there often is a lack of consensus and shared understanding of service users’ priorities, and that priorities vary widely among service users and health providers (Fischer et al., 2002). Without a joint process of goal setting (i.e., concurrence between service user’s goals and health provider’s treatment goals), service users might feel less motivated and less likely to attain their goals (Nair, 2003). It has been suggested that agreed-upon goals are vital in the working relationship, and that conceptualizing goal setting as an interpersonal process central to recovery is called for (Shadmi et al., 2017). e-recovery portals that include a goal module, such as ReConnect, have the potential to facilitate such a process.

6.2.3 Ownership and locus of control

In the current project, the process of writing was often related to personal goals and descriptions of service user’s increased sense of control and ownership in the collaboration. The effects of writing and support for goals were boosted by service users’ control of the content in ReConnect, and to a certain degree, health providers’ access to modules in ReConnect. This type of shift in “locus of control” from health providers to service users has
been referred to as a power shift (Bjerkan et al., 2014). Being in charge of defining and guiding one’s life in the direction one chooses is a fundamental step in the recovery process (Le Boutillier et al., 2011; Leamy et al., 2011). Internet-based interventions may help stimulate such power shifts and to promote person-centered care by redefining service users as resourceful, responsible and active individuals, who exercise self-care and connect with healthcare resources purposefully and rationally (Dedding, Van Doorn, Winkler, & Reis, 2011). When expectations and beliefs about each other and the Internet-based intervention are shared, engagement and outcomes are positively influenced (Cavanagh & Millings, 2013).

6.2.4 The significance of peer support

Peer support is a hallmark of recovery-oriented approaches (Daniels et al., 2012; Davidson et al., 2012; Le Boutillier et al., 2011) and the peer support forum was by far the most frequently used ReConnect module in the current project. The option of participating in online and/or offline peer support groups appeared to expand opportunities for peer support in that service users could tailor use to their personal preferences. Diverse patterns of participation were evident, with some using only the online format, others only the offline format, and some combining online and offline formats. Prevalent throughout the findings of service users’ experiences of online as well as offline peer support groups were known features of online peer support such as recognition, acknowledgement, and self-disclosure (Suler, 2004). The project’s service user consultant played a vital role by introducing topics (e.g., how to use ReConnect to support personal recovery processes and the working relationship) for the participants to discuss in online as well as face-to-face peer support groups. As a result, peer support also facilitated processes related to writing and ownership as well as working with personal goals.

Regardless of format, peer support was highly valued by those who participated in the current project. Service users described how discussions among peers helped them identify their personal preferences, goals and strengths. The discussions helped the service users to see things not just from the perspective of their illness, but also from new and broader perspectives. Peer support appeared to heighten participants’ awareness about their rights and the range of choices available to them, such as sharing ideas about how to use the
goal module to improve service providers’ focus on service users’ priorities. Moreover, peer support appeared to help reduce stigma, and facilitate self-disclosure and openness about personal issues. For those whose health providers were reluctant or unresponsive online, combined peer support appeared to serve as a form of compensation. Some of the service users described being able to use ReConnect without the support of their health provider, especially with support from their peers. As others have found, the social exchanges of mutual support and experiential knowledge provided by peer support groups are believed to be central to therapeutic processes (Brown et al., 2008; Brown et al., 2014). This includes the therapeutic effect of helping others (Pagano, Post, & Johnson, 2011; Solomon, 2004). None of the participants reported negative experiences related to peer support per se.

Nevertheless, efforts to accumulate conclusive evidence of group peer support effectiveness have been frustrated by the plethora of ways groups are conducted and the contexts within which they have been studied (Chinman et al., 2014; Lloyd-Evans et al., 2014). The peer support described in this dissertation introduces one more novel context to this challenge.

6.3 Promoting citizenship

Promoting citizenship in recovery-oriented practice is described as supporting the service user’s experience of wider entitlements of citizenship such as service users’ rights, social inclusion, and meaningful occupation (Le Boutillier et al., 2011). This dissertation illustrates how peer support, in combination with modules from a portal such as ReConnect, can facilitate service users’ empowering and hope-inspiring friendships and community ties, irrespective of their health providers’ support.

6.3.1 Reduced thresholds for community engagement

The peer support activities in the ReConnect cafés and forum can be viewed as promoting citizenship in itself. As others have also found, technological innovation can sustain people’s engagement in health and invoke community empowerment (Graffigna, Barello, Wiederhold, Bosio, & Riva, 2013). Initially, peer support was established and maintained through the forum and subsequently expanded on and enriched through the ReConnect café
gatherings and the focus group interviews. Friendships developed and plans were made for getting involved in local activities. This included reflections on the role that community involvement can play in promoting health, and the need for health providers to support service users in this process.

For those concerned about an overly individualized focus in recovery-oriented approaches in mental health care, the current findings suggest a feasible and potentially effective way of supporting the CHIME processes (Leamy et al., 2011) by boosting the social and relational dimensions of recovery. Information about service user rights and various activities in the community are easy to integrate in Internet-based interventions (Strand, Gammon, & Ruland, 2017). Moreover, service users in the current project described combined online and offline peer support as relevant for a sense of belonging in relationships with others and in the local community. This aligns with research arguing that peer support is integral to the increased emphasis on the relational and social aspects of recovery (Price-Robertson et al., 2017; Schön et al., 2009; Topor et al., 2011). Service users in the project developed friendships and activities that they wanted to maintain after the study and outside the context of mental health care (Strand, Gammon, Eng, et al., 2017). A supportive environment and sharing of success stories appeared to give inspiration and instill hope. The therapeutic process of helping others (Pagano et al., 2011; Solomon, 2004) might also contribute to feelings of hope. The descriptions of reduced shame and stigma appeared to foster an identity beyond service user or patient, defined as important processes in personal recovery (Leamy et al., 2011). The development of a supportive environment and unique friendships was described as highly valued and supportive of new valued roles in the current project, in addition to sharing and “educational” support related to a wide range of topics including empowerment processes and service user rights. Social avoidance as a result of heavy online use known from other studies (Chung, 2013; Lawlor & Kirakowski, 2014) was not noted in this dissertation. On the contrary, for at least one of the participants, social anxiety that normally hindered participation in face-to-face meetings was overcome through encouragement online and practical support for transport from peers. Further, combination of online and offline peer support groups can even be said to have facilitated meaning in life as illustrated through inclinations to engage in community activities locally, and for some also re-engagement with the job market. The combination of peer support appeared to have
implications for the participants’ empowerment processes, especially illustrated through the service users’ reciprocal focus upon strengths. Research indicates that community participation is a predictor of recovery-oriented outcomes (Kaplan, Salzer, & Brusilovskiy, 2012). Moreover, the project supports research suggesting that the recovery processes, such as development of identity and sense of purpose and independence, often occur outside the scope of mental health services and their health providers (Marin et al., 2005) but that e-recovery such as ReConnect as an adjunct to ongoing mental health care might show promise in supporting such processes. Based on the current findings it is suggested that combined online/offline peer support could be one way of counter-balancing an individualized focus on recovery.

6.3.2 Challenges of combined peer support

The challenges of combined peer support in the current project were mainly related to ways of protecting confidentiality when switching between online and offline formats of peer support groups. Most of these challenges resolved themselves over time, and none of the participants reported any harmful experiences. However, very little research has been done to address this issue. There is some research showing how participants in online support groups transfer their friendship to offline settings and how they manage to share their personal identities (Parks & Floyd, 1996). Service users in the current project described barriers to participating in the offline community (e.g., social anxiety, lack of transportation) despite support from other peers. They further expressed a belief that community engagement would be helpful in the recovery process and expressed a wish that mental health services would give this issue greater attention.

6.4 Organizational commitment

The practice domain of organizational commitment refers to the degree to which an organization commits to the primacy of recovery and adapts to the needs of people, rather than those of services. It is an acknowledgement of a wide range of prerequisites needed when seeking to transform practices in accordance with the principles of recovery. As outlined, implementation challenges are well known for recovery practices (Oades & Anderson, 2012; Perkins & Slade, 2012; Slade et al., 2014; Vandekinderen et al., 2012), as
well as for eHealth in general (Murray, 2012; Varsi et al., 2019), and can be viewed in light of the organizational commitments needed in order to succeed with intended changes. The implementation challenges facing ReConnect were thus related to the technology as well as to recovery-oriented practices. In the following, findings are discussed relative to the dimensions encompassed in the domain of organizational commitment: recovery vision, workplace support structures, quality improvement, care pathway, and workplace planning (Le Boutillier et al., 2011).

6.4.1 Recovery vision

An overarching vision of what services will look like when the values, culture and practices are aligned with recovery-oriented principles is considered vital to sustaining transitions towards recovery-oriented practice (Le Boutillier et al., 2011). The justifications the two participating communities had for joining the project can be said to reflect visionary ideas about how services should look in the future. Both participating communities in this project were officially committed to service user involvement in care, and the hope was that ReConnect would constitute an innovative way of facilitating achievement of that ideal. In particular, improved service user involvement in care was commonly expressed as a value and ideal held high in both communities.

Commitment to recovery values and practices was reflected differently in the two participating communities (Gammon et al., 2017). The largest participating community had committed to personal recovery principles in all major policy and strategy documents with specific goals. This included a commitment to quantifying the extent of user involvement in individual care plans, along with ambitious goals for an increase in service users’ involvement in plans for their own care. ReConnect was viewed by management as enabling more effective progress toward policy goals. The smaller municipality also had user involvement as a goal, but without a specific approach or quantified goals (ibid.).

While these organizational level observations are interesting, the current project cannot make claims about how the communities’ visions or ideals relate to the current findings. For example, working and non-working relationships were described in both communities, probably reflecting differences in health providers’ personal skills significant for service users’ experiences and outcomes (Heinonen & Nissen-Lie, 2019). Organizational
culture may also have played a significant role, although organizational factors were not explicitly explored. For example, research suggests that organizations with a routine, rule-governed approach come with an inherent risk of undermining health providers’ efforts to be helpful, since being a “good” professional based on the framework and aims of the organizational rules and routines does not necessarily coincide with the individual service user’s needs (Ljungberg et al., 2016).

Both service users and health providers reported six months as too short of a time-period for fully exploiting ReConnect, and stated that they were still discovering resources in the portal and adapting uses to their needs and preferences at the end of the study (Gammon et al., 2017). As others have found (Bjerkan et al., 2014; Roberts & Boardman, 2014) changes that entail shifts in control are challenging, likely adding to the time it takes to adjust. Employing Internet-based interventions to facilitate transitions towards recovery is likely a fluid long-term process, the potentials and limitations of which could not be fully captured by this dissertation project.

It can nevertheless be assumed that shifting practices towards recovery with the help of Internet-based interventions will require a long-term commitment to recovery principles, including the training and support needed to help health providers provide better care. It will also be of importance to ensure that participants can be active contributors rather than passive recipients of technology-supported change (Ennis, Rose, Callard, Denis, & Wykes, 2011).

6.4.2 Workplace support structures

The dimension of workplace support structure encompasses policies and procedures, including financial structures that support health providers in practicing in accordance with recovery principles (Le Boutillier et al., 2011). The ReConnect portal in itself can be portrayed as a structural support for facilitating recovery-oriented practices. Indeed, the intention of the project and many of the benefits reported by participants attest to ReConnect’s potential as such. Nevertheless, barriers related to clinical, technological, organizational, and financial aspects limited ReConnect’s potential to provide structural support for recovery-oriented practices. For example, health providers reported a lack of time, compensation, and routines for how to use ReConnect within the service user–health
provider dyad. These types of challenges are currently being addressed in the field of implementation of eHealth (Ennis et al., 2011), as well as in research about implementation of recovery-oriented practice (Le Boutillier et al., 2015). Some of the health providers neglected to respond to messages from service users, and also expressed reluctance to use an additional system not integrated with existing health journal systems. Health providers’ workload has been seen to affect the number of online interactions with service users (Carpenter-Song & Torrey, 2015). Service users as well as health providers have been found to look for guidance on how to appropriately engage with each other using online communication tools (Sieck et al., 2017). Service users worry about whether their use is appropriate or not, and health providers are concerned about the content of messages. Clearer rules of engagement for communication via portals (ibid.) could likely have helped counteract the described lack of agreement and guidance on how to use ReConnect.

6.4.3 Quality improvement

Service user involvement in design, delivery and monitoring of mental health service provision is considered key to quality improvement efforts in healthcare (Armstrong, Herbert, Aveling, Dixon-Woods, & Martin, 2013; Le Boutillier et al., 2011; Varsi et al., 2019). This dissertation highlights ways in which systems such as ReConnect may play valuable roles in engaging service users directly and indirectly in quality improvement.

Supporting findings from other online interventions (Smith-Merry et al., 2019), having a service user consultant as facilitator was key to fostering engagement in the use of ReConnect. Both offline and online forums enabled the service user consultant to rapidly identify and remedy problems with the technology and/or implementation. Moreover, in the forum as well as the ReConnect cafés, the service user consultant actively invited service users to express their views about ReConnect, their own recovery processes and the role of health services. This appeared to lower thresholds for sharing experiences with health services in ways that otherwise could have been left unaddressed. For example, service users mobilized support for peers who reported non-helpful relationships with health providers. Examples of support included advice to be more specific about one’s own needs and preferences when talking to the health provider (e.g., suggesting clear activities and to ask for help in working with the goal module). These findings align with research suggesting

74
that peer support shows promise in facilitating recovery for people with long-term mental health problems and is suggested to have the potential to facilitate recovery-focused changes in mental health services (Davidson et al., 2012; Mahlke et al., 2014; S. Mead et al., 2001).

### 6.4.4 Care pathway

A care pathway that increases access and participation in services, and flexibility such as operating outside usual working hours, reflects an organizational commitment to recovery-oriented care (Le Boutillier et al., 2011). For those experiencing ReConnect as a new avenue for collaboration, the 24/7 availability for service users, regardless of location, gave some service users a sense of presence and availability of their health providers. This was true even when health providers made clear that they would only respond to messages at certain times during office hours. Research suggests that enabling access to health providers also between consultations can support person-centered care and recovery processes in the working relationship (Mead & Bower, 2000). Moreover, some of the service users expressed reduced need of face-to-face consultations when online support from the health provider was available. However, for those experiencing a non-working relationship, ReConnect may have perpetuated a sense of the care pathway as less accessible and that participating in services would not be beneficial.

### 6.4.5 Workplace planning

In the workplace planning dimension, training and staff development are highlighted as essential to increasing health providers’ competencies in recovery-oriented practice (Le Boutillier et al., 2011). Research suggests that recovery-oriented practice in mental health services requires training and development of attitudes and skills for the workforce (Oades et al., 2005). Reported difficulties in how to use the ReConnect portal suggest that training for both parties in the dyad may have better prepared them for transitions towards partnerships emphasizing personal recovery, user involvement and person-centered care. Through ReConnect, service users were given the opportunity to play a more active role in their own recovery process as well as in the shaping of services, possibly promoting new roles for both service users and health providers. Findings suggest that service users’ initiatives and responsibilities were factors contributing to ReConnect’s usefulness as a tool for some in their working relationship. However, for others, such initiatives and responsibilities were too
comprehensive. As others have found (Bjerkan et al., 2014) some participants reported that it was challenging to find the right balance in the dyads between who took initiatives and had responsibilities for the use of the portal. The nature of and power dynamic in the relationship suggest that the health provider must have an overall responsibility for successful use of an e-portal in the dyad, and especially if the dyad experiences “ruptures” (Chen, Atzil-Slonim, Bar-Kalifa, Hasson-Ohayon, & Refaeli, 2016) in the alliance, as some of the study participants described. A comprehensive training program for health providers and service users together (Karlsson, Borg, Revheim, & Jonassen, 2013), could be beneficial also relative to e-recovery interventions. This could also include goal setting, as health providers trained in goal setting have shown significant improvements in the frequency and quality of documenting goals (Clarke, Crowe, Oades, & Deane, 2009).

6.5 Implications for practice and research

This dissertation offers insights that can be of use for those considering implementing e-recovery as an aid in transitioning practices towards recovery-oriented care. In this practice-oriented and user-focused dissertation, the implications for practice have been touched on implicitly throughout the discussion section. Some of the main implications for practice can also be deduced from Table 4 (p. 58) Findings likely to have relevance for the role of e-recovery in shifting practices towards recovery-oriented care. At the same time, the preliminary and formative nature of this work underscores a need for caution, along with a need for more research to substantiate these preliminary findings.

6.5.1 Working relationships

The apparent role played by the quality of ongoing working relationships prior to introducing ReConnect is perhaps one of the clearest findings with implications for both practice and research in this dissertation. Given the importance of working relationships for the outcomes of care (Martin et al., 2000), it is somewhat surprising that so little attention has been given to how these relationships develop online. In this dissertation, the degree to which the dyad communicated constructively prior to the use of ReConnect was the factor that appeared most clearly associated with service users’ positive or negative experiences with ReConnect. The introduction of ReConnect appeared in some instances to expose dyad
communication challenges and may even have further undermined the relationship. Even though this finding needs to be substantiated through future studies, it is prudent to caution against implementing e-recovery in organizations as a standard tool for all dyads. For example, assessments of the quality of the relationship in a given dyad prior to introducing the dyad to e-recovery is recommended. While some negative experiences related to use of Internet interventions in ongoing care are to be expected, and need to be acknowledged (Rozental et al., 2014), one cannot ignore the risk of undermining an already non-working relationship by introducing e-recovery. One potentially useful approach to reducing this risk may be the incorporation of feedback-informed treatment (FIT) (Miller, Hubble, Chow, & Seidel, 2015). The FIT method elicits feedback from the service user about how the alliance and progress of treatment is experienced, thus enabling quick adjustments. The method, which is increasingly available in online versions, is also well aligned with recovery-oriented practice in that it helps health providers to explicitly form interventions based on what is important for the service user, rather than a diagnosis and/or the system’s priorities (Brattland, 2019). However, what measures are taken once sub-optimal quality is identified is critical (ibid.)

While unavailable at the start of this project, the Fit for Blended Care instrument could prove useful in determining ways of adapting uses of portals such as ReConnect in the future (Wentzel, van der Vaart, Bohlmeijer, & van Gemert-Pijnen, 2016). This instrument is designed to facilitate a combination of face-to-face and online care in ways that can optimize the potentials of both treatment modalities and in alignment with service user abilities, needs, and preferences.

One important question is how health providers can reach a balance between enabling service users’ greater engagement and control in their own treatment and care, without relinquishing responsibility for the quality of the working relationship, also when using e-recovery portals. Another key question relates to the importance of “expectation management” in working relationships. At the start of the project, we encouraged participants to clarify expectations about how e-recovery would be used in the dyad’s work together (e.g., response times for messages, whether health providers would offer responses in messages, or wait to address issues in consultations). Few of the dyads, regardless of whether they were viewed as having a working or non-working relationship, addressed this
issue explicitly beforehand, but later acknowledged that doing so could likely have helped avoid misunderstandings. Whether clarifying expectations is as important as assumed, or what other factors may play mitigating roles, is an issue for future studies. In any case, it would be prudent to include topics such as changing roles and power balances in the dyad, along with encouraging clarifying expectations.

6.5.2 Combined peer support

The overall positive experiences of combined peer support that were reported by service users appeared closely linked with the role of the service user consultant as a moderator and facilitator of both formats. Although the role of a service user consultant was not studied explicitly, some implications for practice appear evident. First, being well versed in recovery-oriented principles appeared valuable in guiding the moderator’s responses to participants in positive and ethically sound ways. Second, the relational continuity of having the same moderator for both formats appeared to foster a sense of familiarity and security among participants, as well as positive synergies between the formats, in ways that may have been less likely had the formats had separate moderators. Finally, guidelines that help participants anticipate challenges (e.g., in transitioning between levels of anonymity and in safeguarding confidentiality) need to be developed and evaluated.

More knowledge is needed about how to optimize combinations of formats that support personal recovery processes and community engagement. Future research needs to address ways of facilitating the translation of social relationships in online and offline peer support formats into health-promoting relationships within local communities. Service users with non-helpful working relationships, who nevertheless reported benefits from the use of ReConnect, mainly referenced the support they had received from peers. Identifying ways to optimally leverage peers and the expertise of service user consultants in improving working relationships both online and face-to-face is worth pursuing in itself, but also as a step in quality improvement efforts.

Although the forum functioned well in this study despite a small number of participants, a greater number of participants would be preferable in future practice and research. This may ensure a minimum level of activity necessary for maintaining interest in revisiting the portal on a regular basis, as well as ensure a breadth of experiences and
perspectives. In addition, a higher number of participants can help protect the anonymity and confidentiality of participating individuals.

### 6.5.3 Synergies and customization between components

A preliminary insight in this dissertation is that ReConnect appeared to be more than the sum of its parts by fostering synergies between toolbox resources, collaboration with health providers and peer support. It was hypothesized (Gammon et al., 2017) that stand-alone uses of the individual components would have been less beneficial than were their combinations. For example, the toolbox (e.g., exercises, goals) offered a common vocabulary that was used by service users, health providers and peers in discussions about recovery processes within their respective settings, even though the toolbox was used in highly varied ways, if at all. Whether these apparent synergies are significant, or whether some components are more important than others, are open questions that deserve attention in future studies.

In close conjunction with the idea of synergies, is the idea of customization to individual needs in ways that can evolve over time as the recovery process itself evolves. The multitude of free-text options and modules such as life domain status, goals and exercises, together with messaging with the health provider, and options of combining online and offline peer support groups, enabled service users to explore their own needs and preferences over time. None of the participants appeared to use ReConnect in the same ways. The dyads who actively used ReConnect in their collaboration reported that they were still discovering new and useful ways of using ReConnect after six months use. Could it be that e-recovery’s support for personal recovery is inherently tied to its support of multiple options that each individual can explore on their own terms and tailor to their own needs?

The ideas about synergies and customization as reflected here are difficult to substantiate, but are worth further study. As research and practices progress, it would nevertheless appear worthwhile to ensure that future e-recovery interventions offer multiple options similar to ReConnect. In the spirit of personal recovery, where no one size fits all, users can be encouraged to explore and try out different options, and then discuss their experiences during consultations or in peer support groups.
It should be noted that while health providers had some access to some of the modules that service users had in the current project, they nevertheless had fewer options for customizing use to their personal preferences. Future design studies of e-recovery portals will need to more systematically address the needs of health providers. Many of the challenges experienced by participants reflected relatively tangible organizational factors that are well known from implementation research (e.g., sufficient time, training, infrastructure support of portal use). For the less tangible organizational factors such as shifts in power or locus of control between service users and providers, more research is needed.

6.5.4 Diversity issues

A number of issues are noteworthy in terms of implications, even though they have not been explicitly addressed and thus remain open questions. The first is the role of context, for example levels of care. ReConnect appeared more challenging for health providers within specialist care, than for those who provided care and follow-up in municipalities. Could this be a coincidence, or is e-recovery inherently better aligned with municipal care? If so, why, and how could e-recovery be better aligned with specialist care?

Second, the project’s inclusion criterion for participants was individuals with long-term mental health problems, which was intentionally broad and non-diagnostic. Future studies will need to look more systematically at what characterizes those who use, and benefit from, e-recovery and those who do not.

Third, recruitment of men was particularly challenging in this project. Could the dominance of women in the design phase of ReConnect have perpetuated a dominance of women in the study? Possible explanations include the fact that all of the research team members were women and that apparent gender differences in for example online social activity (Rollero, Daniele, & Tartaglia, 2019) and recovery processes (Schön, 2009; Schön, 2010) may have been at play. It would in any case be prudent to ensure involvement of both genders in service design studies in healthcare. Research into gender differences in recruitment and participation in peer support groups, e-health, and research in general is called for. While the findings from this dissertation largely built on experiences of actual ReConnect use, reasons for non-use should be addressed in future research to better address the needs of non-users in future interventions.
6.6 Concluding remarks

The main research aim of this dissertation was to develop knowledge about the potential role of Internet-based interventions in transitions towards recovery-oriented practice for persons with long-term mental health problems. Particular focus was on how online working relationships and combined online and face-to-face peer support groups unfolded as an adjunct to ongoing mental health care. As found in study I, Internet-based interventions have the potential to promote recovery among those in need of long-term mental health support, but existing research examining this topic is limited and does not represent definitive findings. Regardless of health providers’ portal use, service users’ control over toolbox resources, combined with peer support groups, offered an empowering common frame of reference that represented a shift towards recovery-oriented practice within the participating communities (study II). Use of the goal module appeared to strengthen the person-centered nature of collaboration. However, the degree to which a given dyad benefitted from using ReConnect appeared to be mainly associated with the degree to which the dyads’ relations were open and flexible, before the portal was introduced. Assessment of the relationship in the dyad and/or readiness for blended care prior to introducing e-recovery is recommended in order to avoid the risk of further undermining non-working relationships. For participants who experienced frustrations, the portal may have both exposed and added to suboptimal working relationships.

A key question is how health providers balance enabling service users’ greater control over their care without relinquishing responsibility for the quality of the working relationship, also when using an e-recovery portal (study III). Online and offline peer support groups appeared to complement each other in the current project, and combining them was mainly described as beneficial by service users. Identified benefits appeared to arise from service users’ options of one format or the other, or from being able to combine formats in ways that suited their individual values and comfort zones. Facilitation by a trained service user consultant appeared essential for both formats and can be used systematically to address identified challenges. Combining online and offline peer support groups is a promising way of facilitating recovery-oriented care and warrants continued research (study IV).
The dissertation’s discussion focuses on the overriding question: What role can Internet-based interventions play in transitions towards recovery-oriented care for persons with long-term mental health problems? As an explorative and descriptive project conducted within a field in its formative stages, conclusions are formulated as preliminary insights that can enable more focused inquiry in the future. The likelihood of Internet-based interventions playing a role toward recovery-oriented care is probably associated with the given organization’s commitment to the principles of recovery. Stand-alone resources in ReConnect may have been useful to some service users in their own right. However, among the clearest insights garnered from this project is that a portal such as ReConnect can facilitate a shift towards recovery-oriented care in terms of: i) personal goal-oriented collaboration between service users and health providers, ii) options of combined peer support groups, and iii) support for community engagement.
References


doi:10.1176/appi.ps.201700283


89
10.1176/ps.62.6.pss6206_0606


92


Karlsson, B., Borg, M., Revheim, T., & Jonassen, R. (2013). 'To see each other more like human beings... from both sides.'Patients and therapists going to a study course together. *International Practice Development Journal, 3*(1).


Kuosmanen, L., Jakobsson, T., Hyttinen, J., Koivunen, M., & Valimaki, M. (2010). Usability evaluation of a web-based patient information system for individuals with severe


Rogers, E. S. (2017). Peer support services: state of the workforce-state of the field in the USA. Mental Health and Social Inclusion, 21(3), 168-175.


Transitions from biomedical to recovery-oriented practices in mental health: a scoping review to explore the role of Internet-based interventions

Monica Strand1,2,3*, Deede Gammon1,4 and Cornelia M. Ruland1,3

Abstract

Background: The Internet is transforming mental health care services by increasing access to, and potentially improving the quality of, care. Internet-based interventions in mental health can potentially play a role in transitions from biomedical to recovery-oriented research and practices, but an overview of what this may entail, current work, and issues that need addressing, is lacking. The objective of this study is to describe Internet-based recovery-oriented interventions (referred to as e-recovery) and current research, and to identify gaps and issues relevant to advancing recovery research and practices through opportunities provided by the Internet.

Methods: Five iterative stages of a scoping review framework were followed in searching and analyzing the literature. A recovery framework with four domains and 16 themes was used to deductively code intervention characteristics according to their support for recovery-oriented practices. Only Internet-based interventions used in conjunction with ongoing care were included.

Results: Twenty studies describing six e-recovery interventions were identified and originated in Australia, Finland, the Netherlands, Norway and USA. The domain supporting personal recovery was most clearly reflected in interventions, whereas the last three domains, i.e., promoting citizenship, organizational commitment and working relationship were less evident. Support for the formulation and follow-up of personal goals and preferences, and in accessing peer-support, were the characteristics shared by most interventions. Three of the six studies that employed a comparison group used randomization, and none presented definitive findings. None used recovery-oriented frameworks or specific recovery outcome measures. Four of the interventions were specific to a diagnosis.

Conclusion: Research about how technologies might aid in illuminating and shaping recovery processes is in its formative stages. We recommend that future e-recovery research and innovation attend to four dimensions: evidence-supported interventions, new knowledge about personal recovery, values-based approaches and Internet as a facilitator for organizational transformation. The incremental changes facilitated by e-recovery may help propel a shift in mental health care toward recovery-oriented practices.

Keywords: Internet, Secure email, Recovery-oriented care, Service user involvement, Patient-physician relationship, Long-term mental illness, Values-based research and practices

* Correspondence: monica.strand@rr-research.no
1 Centre for Shared Decision Making and Collaborative Care Research, Oslo University Hospital, P.O. Box 4950, Nydalen, Oslo 0424, Norway
2 Department of Psychiatry Blakstad, Division of Mental Health and Addiction, Vestre Viken Hospital Trust, Asker, Norway
Full list of author information is available at the end of the article

© The Author(s). 2017 Open Access This article is distributed under the terms of the Creative Commons Attribution 4.0 International License (http://creativecommons.org/licenses/by/4.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided you give appropriate credit to the original author(s) and the source, provide a link to the Creative Commons license, and indicate if changes were made. The Creative Commons Public Domain Dedication waiver (http://creativecommons.org/publicdomain/zero/1.0/) applies to the data made available in this article, unless otherwise stated.
Background
Internet-based interventions are transforming mental health care services by increasing access to, and potentially improving the quality of, care [1]. While there is substantial evidence for online therapies targeting mild or moderate conditions such as depression and anxiety [2–6], less is known about Internet interventions for people with more complex, long-term mental health problems. Several studies show that Internet-based self-management interventions are feasible and acceptable to service users but that more research is needed in designing such interventions and evaluating their effectiveness [7–12]. Two reviews have a specific recovery-oriented perspective related to individuals with bipolar disorder [7] and serious mental illness [12].

The current study specifically examines the role that Internet-based interventions may be playing in the field of personal recovery for those with long-term mental health problems as recently called for [7]. Literature suggests that Internet can facilitate empowerment processes on a personal, interpersonal, group and citizen level [13] exemplified by increased access to social support and reduced stigma [14], power transitions between providers and service users [15] and person-centered services by allowing flexible and individually tailored services in homes and daily lives [16, 17]. At the same time, Internet-related technologies such as self-help apps, social media and virtual reality are developing so rapidly that there is a need to proactively identify and assess ways to exploit their benefits and limit their pitfalls. To aid in this, a number of theories and approaches in the technical and social sciences seem well aligned with the field of personal recovery and can offer some guidance [17–21]. Nevertheless, a systematic overview of Internet-based interventions relative to recovery research is needed to more specifically identify gaps and issues worth addressing, also through alliances with other fields.

Recovery
Personal recovery, hereafter referred to as recovery, has been defined as; “a way of living a satisfying, hopeful, and contributing life even with any limitations caused by illness” [22]. While not dismissing the important role that biomedical interventions can play for some individuals, recovery challenges biomedical approaches to recovery that prioritize symptom reduction in ways that can inadvertently undermine progress towards a life worth living [23, 24]. Proponents call for a fundamental shift away from the often paternalistic and pacifying nature of biomedical approaches, towards partnerships that acknowledge and support the decisive role that service-users and families play in defining and enacting their own recovery and wellbeing [23, 25]. This personal approach to recovery emerged from within consumer and civil rights movements, and increasingly guides reforms in mental health in English-speaking countries [26]. The approach is person-centered, values-based and is also increasingly reflected in the broader domain of chronic care research and practice [27]. Recovery-oriented interventions recommended in the 2014 NICE guidelines for psychosis as described by van der Krieke et al. [28] include Individual Wellness Recovery Action Planning (WRAP) [29], Illness management and recovery (IMR) [30] and Individual Placement Support (IPS) [31]. However, the complex, multiple and interacting components of such interventions are challenging to implement [32–35], especially compared with pharmacological interventions, despite the latter’s higher risk of adverse events [28].

The holistic and multifaceted nature of recovery-oriented interventions has prompted efforts to operationalize components, also by examining links to related research such as positive psychology, wellbeing, strengths-based approaches and self-management [32, 36, 37]. In their systematic review and narrative synthesis of 97 papers from 13 countries, Leamy and co-workers [38] propose that personal recovery can be conceptualized as a process comprised of five dimensions: connectedness to others and the community; hope and optimism about the future; identity building beyond being a patient and towards a positive sense of identity without stigma; meaning in life; and empowerment, summarized in the acronym CHIME. The CHIME framework has been validated by service users and provides a theoretical base for clinical and research purposes [38].

While CHIME offers a conceptualization of personal recovery Le Boutillier et al. [26] offer a framework for characterizing recovery practices. They identified 16 dominant themes grouped in four practice domains that characterize recovery-oriented practice: (1) promoting citizenship, e.g., supporting the experience of wider entitlements of citizenship such as service user rights, social inclusion and meaningful occupation; (2) organizational commitment, e.g., giving primacy to the needs of people rather than those of services; (3) supporting personally defined recovery, e.g., informed choice, peer support, focus on strengths, and a holistic approach; and (4) working relationships, e.g., a therapeutic relationship that encourages partnership and promotes hope. In this paper, Internet-based interventions that support the four practice domains are referred to as e-recovery. Along with evolving conceptual frameworks for recovery-oriented practices, efforts are underway to identify meaningful outcome measures across cultures and contexts and to identify active ingredients of recovery, for whom, by whom, under what conditions [39–42].
**Objectives**

The aim of the current study is to provide an overview of e-recovery interventions and research as an aid in identifying gaps and issues relevant to advancing recovery research and practices through opportunities provided by the Internet. We limit our focus to interventions that are integrated into ongoing care for persons with long term mental health problems in need of long-term mental health support. Arguably, Internet-based interventions that augment existing models of care, in contrast with self-help apps that are detached from ordinary care, are in need of particular attention, also in light of the organizational challenges that can be expected during implementation.

More specifically we addressed the following questions:

1. What characterizes e-recovery interventions (i.e., aims, target groups, settings and modules)?
2. How is recovery supported through the e-recovery interventions?
3. What aims, methods, outcome measures and results are described in the studies and where do they originate?
4. What facilitators and barriers are described in implementing the e-recovery interventions?

The study is to our knowledge the first attempt to describe in detail what may characterize recovery-oriented Internet-based interventions in conjunction with ordinary care.

**Method**

Scoping reviews are suitable for charting new territory between areas of research and in identifying issues worth further attention [43]. Scoping studies are defined as "[...] a form of knowledge synthesis that addresses an exploratory research question aimed at mapping key concepts, types of evidence, and gaps in research related to a defined area or field by systematically searching, selecting, and synthesizing existing knowledge” [44]. In scoping studies researchers can incorporate a range of study designs and address questions beyond those related to intervention effectiveness, and generate findings that can complement the findings of clinical trials [45]. However, the quality of included studies is not assessed, nor are findings synthesized [43].

This scoping review followed the framework proposed by Arksey and O’Malley [43] and further enhanced by Levac et al. [45] and was accordingly conducted in five stages also guided by Peters et al. [46]. The stages progress in an iterative process, requiring researchers to engage reflexively in each stage, repeating and revising each step whenever necessary to ensure that the literature and research questions are adequately illuminated [43].

**Stage 1**

In stage 1, our initial research questions were defined. Although these remained more or less the same in foci and objectives, they were adjusted somewhat during the research process to result in those listed above under Objectives.

**Stage 2**

In stage 2, relevant studies were identified based on the research questions and purpose of the study. Due to our interest in mapping research-based literature, we chose to exclude gray literature. Systematic searches for articles published from January 2004 to May 2015 were carried out in the following electronic databases: MEDLINE, PsycINFO, EMBASE and Cinahl. In light of the rapidity of technological developments, we judged this period to be sufficient. Each database was searched using the database thesaurus and the key word/free text method. Searches included the following terms and varying synonyms and related concepts, alone and in various combinations: ‘mental illness’, ‘Internet interventions’, ‘recovery’, and ‘mental health service user–provider interaction’. The term recovery was supplemented with related concepts such as ‘positive psychology’, ‘empowerment’, ‘strengths’, ‘well-being’ and ‘self-management’. All types of study design were included in the search strategy, which was restricted to articles in English or Scandinavian languages and published in peer-reviewed journals. We also searched the reference lists of included studies and relevant conferences for pertinent publications.

**Stage 3**

Stage 3 entailed the process of study selection, illustrated in Fig. 1. In accordance with scoping study principles, selection was an iterative process of reviewing abstracts, refining the research strategy, and developing and revising inclusion and exclusion criteria [43, 45]. We identified a total of 1511 articles (Fig. 1) based on inclusion and exclusion criteria as described in Table 1.

After removal of duplicates and irrelevant studies based on the titles and abstracts (e.g., not about Internet interventions, not recovery-oriented or wrong target group), 132 potentially relevant studies remained.

All of the potentially relevant studies were read in full text by the first author. The second author independently read a random sample of 20% and additionally all of the articles where the first author had questions about inclusion and exclusion. Disagreements about study selection were resolved by discussion.
Stage 4

Stage 4 entailed charting the data of the included studies by extracting and coding in Excel each included article according to each of the following variables: intervention’s country of origin, aims, theoretical concepts, target group, settings, modules, study aims, design and methods, outcome, measures and results, implementation issues and the four practice domains and underlying 16 themes of recovery-oriented practice as described by Le Boutillier et al. [26]. The process of extracting the data was done by the first and second authors separately and then together to resolve any discrepancies in coding through consensus. When minor adjustments were made in the data charting form, the included articles and extracted data were reviewed again to ensure correspondence [43, 45].

Stage 5

The fifth and final stage of the scoping review entailed collating, summarizing and reporting the results [45]. Inspired by a semantic-level, thematic analysis approach [47], the four practice domains and 16 underlying themes served as a point of departure for collating and summarizing the interventions’ characteristics according to their support for recovery-oriented practice. During this process we made memos that served as a basis for answering the research questions, as well as topics deserving attention in the discussion of our findings. Any discrepancies in interpretations of article content or the predefined domains and underlying themes were resolved through discussion [48]. Again, this is in line with the iterative nature of all the stages in scoping reviews [43, 45].

Results

A total of 20 articles describing six interventions were included in the scoping review. The interventions originated in Australia, Finland, the Netherlands, Norway and USA.

Characteristics of the e-recovery interventions

The modules are described in Table 2, together with a description of aim, target group and setting for each intervention.

How recovery is supported though the Internet interventions

The findings are presented relative to Le Boutillier et al.’s four domains and described with reference to the 16 underlying themes [26].

Promoting citizenship

Promoting citizenship domain is characterized by the following themes: seeing beyond the “service user”, service user rights, social inclusion and meaningful occupation [26].

All of the e-recovery interventions in our sample can be said to support this domain and its underlying four themes. The theme of seeing beyond the “service user” can be said to be reflected in all the interventions in...
<table>
<thead>
<tr>
<th>Intervention and origin</th>
<th>Aim</th>
<th>Target group and setting</th>
<th>Modules</th>
</tr>
</thead>
<tbody>
<tr>
<td>CommonGround, USA [49, 53, 54, 81–83]</td>
<td>Recovery and shared decision-making</td>
<td>For persons 18 years or older with severe and persistent mental illness at an outpatient psychiatric medication clinic.</td>
<td>A program consisting of a peer-to-peer workshop and training of providers in addition to a peer-run center including a software program: written material and videos with peers describing their recovery process; reminders of their own actions that give their life meaning and purpose and help to create wellness; a customized survey of symptoms and psychosocial functioning and primary goals for the medication visit; a database, a recovery library; and a one-page report to use in the medication visit.</td>
</tr>
<tr>
<td>Horyzons, Australia [65, 84, 85]</td>
<td>Recovery and maintaining clinical benefits</td>
<td>For persons aged 15–25 years with first episode psychosis following discharge from early intervention specialist care in consultation or at home.</td>
<td>A moderated online social networking forum: evaluation of service users’ goals, recovery style, and symptoms; interactive information on psychosis and the recovery process with emphasis on empowerment and social recovery; assessment of strengths; identification of early warning signs and a relapse prevention plan; interactive exercises about activity; cognitive-based strategies; and general overview of the key aspects of the completed modules with an emphasis on personal achievement and recommendation to stay well and to use the social networking features and practice personal strengths.</td>
</tr>
<tr>
<td>Miele.Net®, Finland [50, 52, 86–89]</td>
<td>To support self-management</td>
<td>For persons aged 18–65 years with schizophrenia spectrum psychoses in inpatient and outpatient settings.</td>
<td>Service user education and online support: information about illness, treatment, well-being, daily activities, and service users’ rights; a channel for peer support; recordings of voices telling service users’ life stories; drawings and pictures; a diary; eSupport; a tool for counseling; and interaction between service users and providers.</td>
</tr>
<tr>
<td>ReConnect®, Norway [55]</td>
<td>Greater overview and control regarding health and well-being, legitimacy of personal knowledge, strengths and values, and a sense of continuity in relationships</td>
<td>For adult persons with long term mental health problems at different levels of mental health care.</td>
<td>An intervention for guided self-help where service users can: state their values and what is important in their life; describe their current situation, goals and activities related to a wide range of domains; do exercises related to coping strategies, strengths, collaboration with providers, and lifestyle; write a crisis management plan; register information about various aspects of daily life such as sleep, nutrition, physical activity, social life, and medications; get information on issues related to daily life, health, well-being, and social activities including material from peers; register information related to medication; and get access to secure email with their providers.</td>
</tr>
<tr>
<td>Wegweis, The Netherlands [51, 56, 64]</td>
<td>Shared decision-making and individual advice related to treatment, rehabilitation, and personal recovery</td>
<td>For persons 18–65 years with schizophrenia or related psychotic disorder for use at home or in a clinical setting.</td>
<td>An Internet-based information and decision tool providing service users: results of their routine outcome monitoring assessments and personalized advice; descriptions of treatment modules dynamically linked to the assessment results; and overview of available treatment modules. Advice is based on evidence-based information, clinical expertise, and service users’ experiences and also refers to the service user’s provider and local counselor.</td>
</tr>
<tr>
<td>Your Schizophrenia Care, USA [90]</td>
<td>To empower service users to discuss their mental health treatment with their provider</td>
<td>For adult persons with schizophrenia in outpatient mental health care.</td>
<td>A service user-oriented learning approach related to six areas of quality of care: medications, side effects, referrals, family support, employment, and quality of life. Based on service user’s input on their current status and treatment related to each area, individualized feedback recommendations appear on the screen. The Web site includes video clips designed to model communication strategies and skill, and show how to be proactive in a visit, e.g., by expressing expectations and goals. Service users are encouraged to discuss their responses with their provider in an upcoming visit.</td>
</tr>
</tbody>
</table>

*Miele.Net is called Mental.Net in English

ReConnect was previously called PsyConnect
light of the wide scope and holistic approach that is not limited to diagnosis and symptoms. In addition to peer-support, which in itself may facilitate social inclusion, some of the interventions also explicitly offered support for social inclusion such as social networking features and information about service user organizations (Horyzons, Mieli.Net, and ReConnect). Four of the interventions had support for meaningful occupation such as daily activities, employment and community activities (Horyzons, Mieli.Net, ReConnect, and Your Schizophrenia Care). Two interventions explicitly provided information and support for service user rights (Mieli.Net and ReConnect).

Organizational commitment
Organizational commitment is characterized by the following themes: recovery vision, workplace support structures, quality improvement, care pathway and workplace planning [26].

The studies referred to a wide range of concepts that may be construed as a recovery vision exemplified by: "a decision support center and computerized tool designed to empower and activate consumers" [49], "the main principles in the development (...) were patient-centered, health-oriented, supportive self-care abilities and self-management" [50], and: "to empower service users and improve shared decision-making" [51]. Concepts and theories related to recovery such as positive psychology, person-centered care, communication, empowerment, service user involvement, self-management, and shared decision-making were also prominent.

Common for all of the interventions is that they were designed in collaboration with end-users, i.e., both service users and providers, which is an essential part of the theme of quality improvement. Justifications offered are mainly to ensure relevance and usefulness. Further, all of the interventions supported service users in becoming more involved in care and as such can be expected to facilitate quality improvement beyond the development phases. Care pathway can be interpreted as being reflected in the interventions’ commitment to increase service user access to and participation in the mental health services. Additionally, the interventions enable involvement in recovery-oriented activities outside usual working hours, for example through social support in the evenings and weekends.

Workplace support structures and workplace planning were not described in the studies.

Personally defined recovery
Personally defined recovery is characterized by the following themes: individuality, informed choice, peer support, strengths focus, and holistic approach [26].

The interventions can be said to promote individuality or autonomy by explicitly supporting service users in articulating their own values, goals and/or preferences (CommonGround, Horyzons, ReConnect, Wegweis, and Your Schizophrenia Care). Additionally, all of the interventions provided relevant information to promote informed choice regarding ongoing care treatment and follow-up.

Two of these were designed specifically as shared decision-making tools (CommonGround and Wegweis) while the other four interventions more generally supported service user activation and involvement (Horyzons, Mieli.Net, ReConnect, and Your Schizophrenia Care).

Peer support was central to five of the interventions (CommonGround, Horyzons, Mieli.Net, ReConnect and Wegweis). Justifications offered included the role of peer support in promoting learning, self-management and personal responsibility through modeling empowerment and sharing recovery stories as described in the conceptual framework [26]. Peers were also engaged as experts in how to use the intervention (CommonGround, Horyzons, and ReConnect). Experience-sharing through written stories, films and support forums was also an integrated part of the interventions (CommonGround, Mieli.Net, and ReConnect).

Support for the individuals’ own strengths was evident in five of the interventions by highlighting what individuals do to stay well (CommonGround), exploring and promoting the individual’s recovery styles (Horyzons), self-care and self-management (Mieli.Net), support in formulating strengths and coping strategies (ReConnect), and advice for personal recovery (Wegweis). All of the interventions have a holistic approach in that they include a wide range of domains and themes beyond symptoms such as self-management, strengths, social support, economy, housing and community activities.

Working relationship
Working relationship is characterized by the themes partnership and inspiring hope [26].

All of the interventions supported some form of communication between service users and providers such as email, forum, moderation and feedback, which may be said to support aspects of partnership. Some of the interventions could be used by the service users from home and/or together with the providers. All of the interventions reflected attitudes towards service users as experts in their own experiences, which is an important part of an inspiring relationship [26]. It was nevertheless not possible to assess the degree to which the communications inspired hope.

Characteristics of the studies
The studies’ place of origin, aims, design, methods, measures and outcomes, and main findings related to each intervention are presented in Table 3 Study characteristics. The number of studies available per interventions varied from one to six.
<table>
<thead>
<tr>
<th>Study</th>
<th>Aim</th>
<th>Methods and outcome measures</th>
<th>Main findings</th>
</tr>
</thead>
<tbody>
<tr>
<td>CommonGround [53]</td>
<td>To describe challenges in decisions about medications and the CommonGround program</td>
<td>Reflections and descriptions based on lived experience and research.</td>
<td>Program being piloted. Promising as support for shared decision-making, decisional conflict and optimizing activities that give life meaning and purpose in recovery.</td>
</tr>
<tr>
<td>CommonGround [54]</td>
<td>To describe a 12-month pilot for shared decision-making in psychopharmacology consultation</td>
<td>Observational record for each use of the software from two case management teams for a total of 189 clients. Focus groups with case managers (n = 14) and peer-specialist staff (n = 3).</td>
<td>The software was used 662 times varying from one to ten times for each client. Only ten clients refused to use it at some point. The intervention helped practitioners focus on client concerns, enriched dialogue and understanding, made the consultations more effective and empowered client involvement in decision-making.</td>
</tr>
<tr>
<td>CommonGround [81]</td>
<td>To describe CommonGround, new role for peers and early adopters, patterns of use and lessons learned</td>
<td>Use of CommonGround database and observation of 8 sites already offering the tool to a total of 4763 users. Log files of use by clients, peers, administrators, therapists, and case managers.</td>
<td>Technology and peer support can enhance shared decision-making even during brief (15-min) psychiatric medication consultations.</td>
</tr>
<tr>
<td>CommonGround [49]</td>
<td>Examine the impact of a decision support center and computerized tool on adherence to psychotropic medication</td>
<td>Multivariate linear regression models were used to examine if tool users (n = 122) had higher rates of 180-day medication adherence than non-users (n = 1000) based on administrative pharmacy claims data.</td>
<td>Relatively good adherence for psychotropic medications at baseline. Intervention had no detectable impact on adherence rates.</td>
</tr>
<tr>
<td>CommonGround [82]</td>
<td>To describe the use of self-management strategies, especially a strategy called “Personal Medicine” and how it correlates with wellness and symptom improvement</td>
<td>Pretest-posttest single-group design. A retrospective study of responses from CommonGround health reports generated from 12 clinics and service users (N = 5584). A self-developed questionnaire.</td>
<td>Health functioning improved with time. Self-management reduced medication side-effects, increased user satisfaction with medication, and fostered recovery.</td>
</tr>
<tr>
<td>CommonGround [83]</td>
<td>Examine the impact of CommonGround on the consumer – doctor interaction in medication consults</td>
<td>Pretest-posttest control group design for four months (N = 98). Measure of Patient-Centered Communication (MPCC) and Patient Perception of Patient-Centeredness (PPPC).</td>
<td>No significant effect at baseline. Improved scores after four to six months suggest need for longer intervention and better fidelity.</td>
</tr>
<tr>
<td>Horyzons [84]</td>
<td>To describe the rationale and potential of moderated online social therapy and examine the acceptability, safety and initial clinical benefits of system</td>
<td>A six-week trial using an uncontrolled single-group design for participants with first episode psychosis (N = 20) participating at least four weeks. Descriptive statistics of log files of use. A questionnaire and semi-structured interviews. Structured Clinical Interview for DSM-IV (SCID patient version), Brief Psychiatric Rating Scale (BPRS), the Calgary Depression Scale for Schizophrenia (CDSS) and the Beck Anxiety Inventory (BAI).</td>
<td>No drop-outs; 70% used the system &gt; three weeks, 95% used social networking, and 60% completed &gt; three modules. The majority of participants reported feeling safe, empowered and more socially connected; 70% considered it a useful post-treatment option. Depressive symptoms were significantly reduced at follow-up.</td>
</tr>
<tr>
<td>Horyzons [85]</td>
<td>To assess the safety of Horyzons</td>
<td>Semi structured interviews with participants and simple descriptive statistics from online posts and interviews. Structured Clinical Interview for DSM-IV (SCID patient version) and Brief Psychiatric Rating Scale (BPRS).</td>
<td>No clinical or security problems were noted. Users felt safe using Horyzons.</td>
</tr>
<tr>
<td>Horyzons [65]</td>
<td>To determine design guidelines for increasing engagement in mental health applications</td>
<td>Complex health intervention framework in stages: theory, design, exploratory trial, and implementation.</td>
<td>Themes identified for use in guidelines: 1) belonging and security, 2) better understanding of condition, 3) engendering positive thoughts,</td>
</tr>
<tr>
<td>Study Characteristics</td>
<td>Description</td>
<td></td>
<td></td>
</tr>
<tr>
<td>-----------------------</td>
<td>-------------</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mieli.Net</strong> [86]</td>
<td>To evaluate usability, quality, functionality, content and benefits of Mieli.Net. Explorative descriptive multiphase study among nurses (N = 76), using a questionnaire (The Quality Criteria of Public Online Services) and descriptive statistics, and additionally written feedback and content analysis. The evaluation showed good portal functionality, relevant content and benefits for users.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mieli.Net</strong> [52]</td>
<td>Identify barriers and facilitators in implementation of Mieli.Net. Questionnaire after one year use of portal among nurses (N = 89). Two thematic open-ended questions analyzed by using content analysis. Issues emerged in four categories: organization resources, nurses' individualities, patient-related factors, and portal-related factors. Barriers: lack of computers, time and/or training; nurses' negative attitudes. Facilitators: easy access to technical resources and Internet; time and motivation among staff.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mieli.Net</strong> [50]</td>
<td>To describe the design and development process of Mieli.Net. Mixed methods design in four phases: needs analysis (survey for administrative personnel (n = 36) and patients (n = 316), interviews with patients (n = 51) and relatives (n = 50) and overview of the literature); development of information areas (relevant literature and feedback from multidisciplinary team and end-users); development of a prototype (information source from 10 focus groups meetings and existing computer-based support systems; and evaluation by clients (n = 21), nursing students (n = 20) and nurses (n = 35). Five informational areas were identified: illness, treatment, well-being, daily activities, and patient's rights. Based on this, changes were made in the structure and new applications were added. The service was found to be promising. User involvement in development is important.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mieli.Net</strong> [87]</td>
<td>To describe nurses' experiences of information technology-based standardized patient education. Nurses completed a questionnaire about their experiences (n = 56), analyzed by content analysis. The intervention brought the patient and the nurses closer to each other and helped nurses to provide individual support for their patients. The education was time-consuming.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mieli.Net</strong> [88]</td>
<td>To determine the effectiveness of a needs-based computerized patient education program on patients' experience of being deprived of their liberty during hospitalization. RCT with three groups: an intervention group with needs based computerized patient education (n = 100), a patient education group with conventional education (n = 106), and a control group with standard care (n = 105). Primary outcome measure patients' self-reported deprivation of liberty developed for the study, and additionally the PSS-Fin (patient satisfaction scale, Finnish adaptation). Technology-based education was not found to be superior to other approaches.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>Mieli.Net</strong> [89]</td>
<td>To compare user groups' evaluation of usability. Descriptive design, a small-scale usability study with service users (n = 21), nursing students (n = 21) and registered nurses (n = 35). A self-developed questionnaire about the content, structure and visual appearance of the website. Service users were positive to intervention tools, but require support. Content, structure and appearance rated as good.</td>
<td></td>
<td></td>
</tr>
<tr>
<td><strong>ReConnect</strong> [55]</td>
<td>To describe the design and development process. Community-based participatory research design with particular focus on implications of service user involvement, conducted in two communities by a practice-research-team, involving work-shops with stakeholders and an iterative design process. The intervention invites a proactive approach from providers. Service users must be involved at all levels of project development to promote person-centeredness.</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Barriers and facilitators

Only Koivunen et al. [52] explicitly addressed barriers and facilitators for implementation as the main study objective, identifying four main categories: organizational resources, nurses’ individual characteristics, patient-related factors, and portal-related factors. Barriers to implementation were lack of computers, lack of time for patients, nurses and portal-related factors. Barriers suggested from the practitioners’ point of view include lack of monetary compensation and a feeling of being overwhelmed [54]. One study noted the concerns of clinicians who feared that if they had access to service-user-controlled content, they could be held responsible for faulty or alarming content [55].

Discussion

This study offers a first overview of the current state of research at the crossroads of Internet and recovery-oriented practice in conjunction with ordinary care. As such it complements other reviews of technically supported interventions for people with long-term mental health problems related to self-management in general [8–11] and recovery in particular [7, 12].
The e-recovery interventions identified were found to support all four domains in the conceptual framework of recovery-oriented practice [26], reflecting to various degrees 14 of the 16 underlying themes. Overall, the domain supporting personal recovery was most clearly reflected in interventions, whereas the last three domains, i.e., promoting citizenship, organizational commitment and working relationship, were less evident as part of the interventions and accompanying studies. Support for formulation and follow-up of personal goals and preferences, and in accessing peer-support, are key to the personal recovery domain and well supported by the interventions. Also, e-recovery appears to support a broader range of recovery themes than may be feasible in ordinary care, such as social inclusion, meaningful occupation and access to and participation in the care pathway.

The role of peers as an essential element in inspiring hope is fundamental to several of the interventions. However, none of the studies described in detail the hope-inspiring dimension of service user-partner relationships which is central to recovery [23]. What actually happens during e-mediated interactions, for example, whether interactions between service users and providers are instrumental and detached versus personal and empathetic, and the role of Internet, largely remains a black box [56, 57].

All studies reported service user involvement in intervention design, thus complying with one of the core principles of organizational commitment and the increasing focus on the significance of service user involvement in research to enhance relevance [26, 58, 59]. Two of the 16 themes in the conceptual framework [26] that were not explicitly reflected on by any of the interventions were; workplace support structures and workplace planning. These themes are essential for successful e-recovery implementations and are likely to share challenges that others have noted for e-health in general [60], as well as implementation of recovery-oriented practices per se [28]. Thus, an increased focus on organizational adaptations needed for promoting clinical uses of e-recovery is needed. Interestingly, none of the studies made references to the CHIME framework [38] or the framework of recovery-oriented practice [26], nor reported use of the recommended recovery-specific measures [39–42]. This may be due to the relative recency of the field and the lack of any notable consensus around models and measures. Also, those working with Internet interventions in mental health may find that narrower domains such as shared decision-making and self-management are more readily translatable to an Internet platform than the broader and more multifaceted domain of recovery.

Dimensions along which Internet can play a transitional role towards recovery-oriented practices

Throughout the analysis of interventions and research, we noted a wide range of impressions and topics that appeared important or relevant in efforts to exploit the potentials of Internet in transitioning towards recovery-oriented practices. Four of these are highlighted in the following.

Access to evidence-based interventions

The interventions in our sample build on research supporting isolated components such as shared decision-making and peer support. Due to the multi-component nature of recovery, it will nevertheless remain challenging to identify and compare the active ingredients of e-recovery as a basis for comparing findings. One approach that might aid in doing this is to build on well supported multi-component models (e.g., [29–31, 61]) that are inherently aligned with recovery, but have yet to exploit and assess Internet systematically [62]. The evidence supporting such models might serve as a benchmark for identifying a range of e-recovery and organizational options for improving access to, and/or ways of boosting these models’ active ingredients. Ultimately, it should be possible to incrementally add relevant Internet components in ways that allow assessments of their relative performance. This would also provide opportunities for pursuing new knowledge about recovery.

New knowledge about recovery-oriented practice

A fundamental aspect of recovery is that it is personal and unique to each individual. Technologies can increasingly ‘learn’ about their users, becoming sensitive and respond to, for example, progress towards one’s personal goals in ways that can increase engagement and reduce attrition [63]. Only one study in our study sample [64] addressed this type of personalization which would seem a key issue for future e-recovery research.

A wide range of theories and tools emerging in technical and social sciences [17–20] and positive computing [21] may aid in examining recovery-relevant issues such as self-esteem, stigma, power, self-disclosure, self-regulation, writing therapy and help-seeking behavior [13–15] and how connecting with others through Internet may enable users to shape the nature of the services in line with recovery principles [17]. However, the opportunities provided by these theories and tools need to be incorporated into studies that specifically address how they may advance recovery processes.

A particularly promising example of an interdisciplinary system design approach that is needed is the study by Lederman et al. [65], the only study in our sample that was published in a technical venue. Their type of approach illustrates our earlier call for joining forces between health service research and technical domains of research in chronic care [66]. By sharing theoretical and
methodological rationales for design processes, Lederman and co-workers enable others in the field to build on and compare the various intervention components, and to ultimately illuminate for whom they are effective, under what conditions, and why.

Values-based research and practices
Empowering technologies [13, 66] can also be disempowering [67, 68] depending on whose values and conceptions of evidence inform decisions about uses of new technologies on individual, professional, and societal levels [69]. While it may be easy to dismiss on moral grounds innovations like ‘chip in a pill’ (e.g., wireless surveillance of medication consumption via biological markers) that warns clinicians of a patient’s poor compliance [70], vigilance is also necessary for less obvious pitfalls. For example, an e-recovery tool that encourages service users to formulate and share with providers what is important to them, along with their personal goals, creates an obligation for providers to respond by seriously exploring realistic ways of adapting services to facilitate those goals. Arguably, if service providers are not prepared to do this, then offering such a tool would be ethically questionable.

The ethical issues associated with ubiquitous e-health systems need constant attention, and they need it urgently [71]. Slade [23] argues that an important first step in all service design and daily clinical decision-making is to make the values of those involved explicit, and hence amenable to debate. Giving primacy to patient autonomy over biomedical beneficence appears as a defining value in recovery-oriented practices [23]. Interestingly, the epidemic growth of multiple long-term conditions in aging populations has prompted the biomedical literature to revisit similar ethical premises in efforts to resolve conflicting health and professional goals and their underlying values [72, 73]. Arguably, chronic care and recovery researchers could benefit from joining forces towards a values-based, alternative health outcome paradigm [72], accompanying measures [39–41] and required changes to support systems [74, 75]. Finally, EU’s Responsible Research and Innovation (RRI) mission and participatory methods are well aligned with the values of recovery and can be an important ally in promoting an ethically sound e-recovery agenda.

Internet as a facilitator for organizational transformation
Implementing organizational transformation towards recovery-oriented services has been found to be challenging [32–35]. It is probably unlikely that e-recovery interventions will demonstrate recovery-oriented findings, as long as they operate within organizations that work at odds with recovery principles. Also, barriers to electronic communication in clinical environments [76], along with clinician resistance and uncertainty towards transformation of therapeutic relationships in line with partnership principles [77], are likely to impede e-recovery practices. Nevertheless, incremental changes currently facilitated by narrow components of e-recovery, e.g., shared decision-making [78], may stimulate new types of dialogue and insights that in turn stimulate broader organizational changes aligned with recovery.

Strengths and limitations
This study shares the strengths and limitations of scoping studies in that it illuminates the volume, nature and characteristics of the field of interest, but does not appraise the quality or weight of evidence [43]. A strength is use of the conceptual framework for recovery-oriented practice as a basis for analysis and description of findings. This can turn aid in refining concepts during this formative stage of development, along with enabling a proactive and systematic discourse about Internet-based recovery-oriented interventions. However, limiting the inclusion criteria to interventions used in conjunction with ordinary care led to exclusion of interventions with potentially important contributions to the emerging field of e-recovery (e.g., [79, 80]). This can also be said of our exclusion of gray literature. Thus, we cannot claim to represent all the current work that is relevant to advancing e-recovery.

Conclusion
The e-recovery interventions and research identified in this review are breaking new ground in an area that can be expected to expand. The degree to which e-recovery is contributing to the cultural and organizational changes called for in reorienting mental health care towards recovery practices cannot be deciphered from our study [25]. Nevertheless, incremental adaptations of components that can potentially facilitate recovery-oriented care were clearly evident in our study [77]. Technologies that may potentially aid in illuminating and facilitating recovery processes are still in their formative stages. We suggest a preliminary road-map for an e-recovery research and innovation agenda attending to four dimensions: access to evidence-supported interventions, new knowledge about personal recovery, values-based approaches, and Internet as a facilitator for organizational transformation. Recovery-oriented researchers and practitioners need to exploit the potentials of Internet in shaping interventions that ultimately promote recovery among those in need of long term mental health support.

Abbreviations
CHME: Connectedness to others and the community; hope and optimism about the future identity building beyond being a patient and towards a positive sense of identity without stigma; meaning in life; and empowerment; e-recovery interventions: Internet-based interventions that support the four practice domains described in the framework for recovery-oriented practice: personal recovery, promoting citizenship, organizational commitment and
working relationship; Recovery: A way of living a satisfying, hopeful, and contributing life even with any limitations caused by illness

Acknowledgements
We would like to thank librarian Schjødt-Osmo for support in developing and conducting the database search.

Funding
The scoping review is part of a larger study funded by the Norwegian Research Council for funding, grant # 213014.

Availability of data and materials
The dataset supporting the conclusion of this article is included in the article.

Authors’ contributions
All of the authors conceived the idea for this paper and designed the scoping review. The first and second author conducted all of the stages in the scoping review. Findings were examined and discussed among all authors and all authors have been involved in drafting and revising the manuscript for important intellectual content. All authors read and approved the final version.

Competing interests
The authors declare that they have no competing interests.

Consent for publication
The authors declare that they have no competing interests.

Consent to participate
Not applicable.

Ethics approval and consent to participate
Not applicable.

Publisher’s Note
Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.

Author details
1Centre for Shared Decision Making and Collaborative Care Research, Oslo University Hospital, P.O. Box 4950, Nydalen, Oslo 0424, Norway. 2Department of Psychiatry Bäkstad, Division of Mental Health and Addiction, Vestre Viken Hospital Trust, Askør, Norway. 3Faculty of Medicine, University of Oslo, Oslo, Norway. 4Norwegian Centre for Integrated Care and Telemedicine, University Hospital in North Norway, Tromsø, Norway.

Received: 1 March 2016 Accepted: 18 March 2017

References
59. Slade M. Mental illness and well-being: the central importance of positive psychology and recovery approaches. BMC Health Serv Res. 2010;10:26.
Shifting Practices Toward Recovery-Oriented Care Through an E-Recovery Portal in Community Mental Health Care: A Mixed-Methods Exploratory Study

Deede Gammon1,2, PhD; Monica Strand1,3,4, MSc; Lillian Sofie Eng1; Elin Børøsund1, PhD; Cecilie Varsi1, PhD; Cornelia Ruland1,4, PhD

1Center for Shared Decision-Making and Collaborative Care Research, Oslo University Hospital, Oslo, Norway
2Norwegian Centre for E-health Research, University Hospital of North Norway, Tromsø, Norway
3Department of Psychiatry Blakstad, Division of Mental Health and Addiction, Vestre Viken Hospital Trust, Asker, Norway
4University of Oslo, Faculty of Medicine, Oslo, Norway

Corresponding Author:
Deede Gammon, PhD
Center for Shared Decision-Making and Collaborative Care Research
Oslo University Hospital
Klaus Thorgårdsvei 3, 3rd Floor
Oslo, N-0377
Norway
Phone: 47 90977963
Fax: 47 23075450
Email: deede.gammon@rr-research.no

Abstract

Background: Mental health care is shifting from a primary focus on symptom reduction toward personal recovery-oriented care, especially for persons with long-term mental health care needs. Web-based portals may facilitate this shift, but little is known about how such tools are used or the role they may play in personal recovery.

Objective: The aim was to illustrate uses and experiences with the secure e-recovery portal “ReConnect” as an adjunct to ongoing community mental health care and explore its potential role in shifting practices toward recovery.

Methods: ReConnect was introduced into two Norwegian mental health care communities and used for 6 months. The aim was to support personal recovery and collaboration between service users and health care providers. Among inclusion criteria for participation were long-term care needs and at least one provider willing to interact with service users through ReConnect. The portal was designed to support ongoing collaboration as each service user-provider dyad/team found appropriate and consisted of (1) a toolbox of resources for articulating and working with recovery processes, such as status/goals/activities relative to life domains (eg, employment, social network, health), medications, network map, and exercises (eg, sleep hygiene, mindfulness); (2) messaging with providers who had partial access to toolbox content; and (3) a peer support forum. Quantitative data (ie, system log, questionnaires) were analyzed using descriptive statistics. Qualitative data (eg, focus groups, forum postings) are presented relative to four recovery-oriented practice domains: personally defined recovery, promoting citizenship, working relationships, and organizational commitment.

Results: Fifty-six participants (29 service users and 27 providers) made up 29 service user-provider dyads. Service users reported having 11 different mental health diagnoses, with a median 2 (range 1-7) diagnoses each. The 27 providers represented nine different professional backgrounds. The forum was the most frequently used module with 1870 visits and 542 postings. Service users’ control over toolbox resources (eg, defining and working toward personal goals), coupled with peer support, activated service users in their personal recovery processes and in community engagement. Some providers (30%, 8/27) did not interact with service users through ReConnect. Dyads that used the portal resources did so in highly diverse ways, and participants reported needing more than 6 months to discover and adapt optimal uses relative to their individual and collaborative needs.

Conclusions: Regardless of providers’ portal use, service users’ control over toolbox resources, coupled with peer support, offered an empowering common frame of reference that represented a shift toward recovery-oriented practices within communities. Although service users’ autonomous use of the portal can eventually influence providers in the direction of recovery practices, a
A common denominator of these developments is a shift in “focus of control” from health care providers toward service users by increasing the transparency of care decisions, as well as facilitating the voice and resources of service users in their care. In contrast to biomedical approaches that focus mainly on reducing symptoms, recovery-oriented approaches support people in articulating and regaining control over progress toward personal well-being goals [1, 12, 13]. Conceptualizations of the holistic and multifaceted nature of recovery are evolving in interaction with related fields such as self-determination and strength-based approaches [14, 15], and is sometimes referred to as paradigmatic in that it disrupts established practice norms, priorities, and professional skill sets [16, 17]. Accompanying emerging frameworks and guidelines for recovery-oriented practices are efforts to identify meaningful outcome measures across cultures and contexts [18-20]. Considerable work still lies ahead in identifying active ingredients of recovery, for whom, and under what conditions [15, 21].

It is within this evolving landscape that this study describes the use of a recovery-oriented eHealth (“e-recovery”) portal “ReConnect” in two Norwegian community mental health sites during a 6-month period (2015-2016). ReConnect was designed using participatory methods. The rationales for portal design, including our path toward recovery as the guiding framework, are described elsewhere [22] (note that ReConnect was called “PsyConnect” in this previous publication). In this study, we sought insights into the question: what uses evolve when an e-recovery portal is made available in community mental health practices and what role does it play in terms of shifting practices toward recovery-oriented care?
of participants in terms of gender, age, health issues, and types of ongoing support.

**Ethics**

The study was approved by the Regional Committees for Medical and Health Research Ethics in Norway and the Privacy Protection Committees at the participating sites. Participants signed an online consent form before inclusion in the study.

**Organizational Anchoring**

Local steering committees were established in both communities and consisted of primary and secondary health representatives (both clinicians and authorities), information technology (IT) management, and service user representatives. Their mandate was to ensure access to necessary resources (eg, clinician time, IT support, localities for training), and that the project harmonized with ongoing activities. Two hours of group training and/or individual training were held within both communities for service users and providers initially and when requested during the study period.

**The E-Recovery Intervention**

ReConnect was introduced to participants to support ongoing mental health care and treatment—whatever that treatment may be and as they saw fit. The stated objective of the portal was to support service user involvement in care, service user-provider collaboration, and personal recovery.

As depicted in Figure 1, the portal consists of a toolbox, anonymous peer support discussion forum, and messaging with providers. Users log on using their electronic ID (eg, BankID), which is approved by the Norwegian government to allow patients to share personal health information in electronic and mobile apps. This ID is the same whether users log on to public services or online banking and is thus familiar to most Norwegians.

![Figure 1. ReConnect portal.](Image)

**Toolbox**

(Providers have partial access)

- What makes my life worth living?
- My goals and activities
- Status
- Life domains
- Medications
- Network
- Helpers
- Exercises
- Registrations
- Crisis plan
- Diary
- Document archive

**Forum**

The anonymous peer-to-peer forum with service users from the two communities was moderated by LSE to ensure a safe and supportive environment.

**Cafés**

There were local real-life “ReConnect cafés” where service users could meet socially to discuss their uses of the portal and their own recovery processes.

**Collaboration**

Services users’ interactions with providers through ReConnect took place by messaging, by providers remotely accessing and commenting on the content of service users’ modules, or by sitting together and working with modules during consultations. The providers’ user interface included an overview of all their clients who used ReConnect, and they could remotely access the service users’ modules with some exceptions (eg, diary and forum). Thus, providers could follow the progression of service...
users’ activities (eg, homework in between consultations) and provide feedback as they saw fit.

Service users consented to using ReConnect exclusively for nonemergency purposes, and that ordinary channels had to be used for acute needs. Other than that, collaborative uses of ReConnect were determined by each respective service user-provider dyad as described previously. These were encouraged to clarify mutual expectations and routines, such as response time for messages (eg, daily, or once a week), absences (eg, holidays), and types of content (eg, providers might acknowledge receipt of messages with brief responses, but reserve therapeutic responses for consultations).

Quantitative Data Collection and Analysis

After online registration and completion of the consent form, participants completed an online questionnaire containing questions about demographic characteristics, previous use of the Internet, and the following psychosocial measures:

1. Well-being was measured with the WHO-5 Well-being Index. The WHO-5 score can range between 0 to 100, in which 100 indicates the best possible well-being [29].
2. Anxiety and depression were measured with The Hopkins Symptom Checklist-25 (HSCL-25). The total HSCL-25 score can range between 1.0 and 4.0, and values greater than 1.75 indicate a need for help for the symptoms [30].
3. Patient activation was measured with the Patient Activation Measure (PAM). The score can range between 0 to 100, and 100 indicates the best possible patient activation [31,32].
4. Satisfaction was measured with the Satisfaction Life Domains Questionnaire. The range of scores are 1 to 7, in which 7 indicates the best possible score [33].
5. Recovery was measured with the Recovery Assessment Scale (RAS). The range of scores are 1 to 5, and 5 indicates the highest recovery possible [34].

Data on portal use were extracted from the ReConnect user log on the server. All log-ins and uses per module were recorded in the system log.

Descriptive statistics were used to analyze questionnaire and system log data using SPSS version 21 (SPSS Inc, Chicago, IL, USA). Data are presented as medians and range for continuous variables due to skewed distributions and as proportion and percentages for categorical data. Demographics from the two communities are aggregated together to protect anonymity.

Qualitative Data Collection and Analysis

Six focus group interviews were held, three with service users and three with providers, separately at each community after approximately 3 months of use. The focus group interviews were conducted by MS and LSE together. Questions were semistructured addressing current practices and expectations, experiences related to use, recovery processes, collaboration, and desired changes in the portal. A total of 12 cafés (six in each community) were moderated by LSE who facilitated discussions about use of ReConnect and about recovery processes. Both the focus group interviews and café sessions lasted approximately 1.5 hours and were audiorecorded. All focus group interviews were transcribed, whereas cafés were transcribed only when LSE’s notes indicated areas of interest to research analysis. Forum postings also served as data. Along with commenting on participant postings in the forum, LSE introduced topics for discussion relevant for recovery, such as hope, strengths, and citizenship. At times, authors DG, MS, and LSE discussed questions that LSE in turn posed to participants (eg, “Have any of you changed your way of collaborating with your provider through ReConnect and if so how?”).

Publicly available documents (eg, minutes of meetings) and personal communications regarding stakeholders’ actions following the study are referred to when reporting findings regarding the domain “organizational commitment” [35].

All transcripts from the focus groups, cafés, and forum were read through by authors MS, LSE, and DG, who added codes corresponding to the first two of Braun and Clarke’s six stages thematic analysis approach [36]. For this paper, DG searched for codes and quotes that illustrated Le Boutillier et al’s [35] four practice domains: (1) personally defined recovery, (2) promoting citizenship, (3) working relationships, and (4) organizational commitment. Because our aim was not to present themes based on an analysis of the total dataset (a focus of subsequent publications), but rather use the data to illustrate the practice domains, we present 3 to 5 illustrative quotes per practice domain. MS and LSE, who were most familiar with the informants and contexts from which quotes were extracted, reviewed the quotes in terms of credibility in illustrating the practice domains.

Results

Participants

Service User Characteristics

Of the 33 registered service users recruited, two withdrew right after recruitment. Twenty-nine answered the questionnaires and remained participants throughout the 6-month study period.

As presented in Table 1, participants had a median age of 44 (range 21-62) years, were predominantly female (86%, 25/29), single (69%, 20/29), and had an educational level of high school or less (69%, 20/29). In all, 31% (9/29) were employed either full-time or part-time, 28% (8/29) were on work assessment allowance, and 35% (10/29) were on disability benefits or retired. The service users reported a median of 2 (range 1-7) diagnoses (see Table 2 for elaboration on diagnosis).
Table 1. Demographic and illness characteristics among service users (N=29).

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Participants</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age (years), median (range)</td>
<td>44 (21-62)</td>
</tr>
<tr>
<td><strong>Gender, n (%)</strong></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>25 (86)</td>
</tr>
<tr>
<td>Male</td>
<td>4 (14)</td>
</tr>
<tr>
<td><strong>Marital status, n (%)</strong></td>
<td></td>
</tr>
<tr>
<td>Married/cohabitating</td>
<td>6 (21)</td>
</tr>
<tr>
<td>Divorced</td>
<td>3 (10)</td>
</tr>
<tr>
<td>Single</td>
<td>20 (69)</td>
</tr>
<tr>
<td><strong>Education, n (%)</strong></td>
<td></td>
</tr>
<tr>
<td>Elementary/high school</td>
<td>20 (69)</td>
</tr>
<tr>
<td>University/college</td>
<td>9 (31)</td>
</tr>
<tr>
<td><strong>Employment status, n (%)</strong></td>
<td></td>
</tr>
<tr>
<td>Full-time/part-time work</td>
<td>9 (31)</td>
</tr>
<tr>
<td>Work assessment allowance</td>
<td>8 (28)</td>
</tr>
<tr>
<td>Disability leave/retired</td>
<td>10 (35)</td>
</tr>
<tr>
<td>Sick leave</td>
<td>1 (3)</td>
</tr>
<tr>
<td>Student</td>
<td>1 (3)</td>
</tr>
<tr>
<td><strong>Site, n (%)</strong></td>
<td></td>
</tr>
<tr>
<td>Small community (5500 inhabitants)</td>
<td>14 (48)</td>
</tr>
<tr>
<td>Large community (52,000 inhabitants)</td>
<td>15 (52)</td>
</tr>
<tr>
<td><strong>Number of psychiatric diagnosis, median (range)a</strong></td>
<td>2 (1-7)</td>
</tr>
<tr>
<td><strong>Psychosocial factors, median (range)</strong></td>
<td></td>
</tr>
<tr>
<td>Well-being</td>
<td>44 (0-80)</td>
</tr>
<tr>
<td>Anxiety/depression</td>
<td>2.08 (1.24-3.68)</td>
</tr>
<tr>
<td>Patient activation</td>
<td>56.40 (32.20-100)</td>
</tr>
<tr>
<td>Satisfaction with life domains</td>
<td>4.11 (1.44-5.44)</td>
</tr>
<tr>
<td>Recovery, total score</td>
<td>3.67 (2.33-4.50)</td>
</tr>
</tbody>
</table>

a See Table 2 for list of diagnoses.
The participants reported a median score of 44 (range 0-80) on the WHO-5 Well-being Index and a median score of 2.08 (range 1.24-3.68) on the HSCL-25 (anxiety and depression) indicating low well-being and an overall need for help with anxiety and depression symptoms (HSCL-25 cut off: 1.75). Their scores on patient activation, satisfaction, and recovery measures were in the middle of these scales, indicating room for improvements. A total of 90% (26/29) used email daily or weekly, and 76% (22/29) used social media daily or weekly (see Multimedia Appendix 1 for more details of media use).

**Health Care Provider Characteristics**

Of the 27 participating health care providers, 14 worked in the municipalities and 13 worked in secondary level (DPC). They were predominantly women (89%, 24/27), 40 years or older (85%, 23/27), and most were nurses (11/27, 41%), social workers (5/27, 19%), and physicians (3/27, 11%). The remaining eight (28%) had different professions such as occupational therapist, psychologist, priest, interdisciplinary specialists, bachelor of psychology, or home care worker. There was a median of 19 (range 1-45) years since graduating from health professional education, and they had been working a median 10 (range 1-38) years within the field of mental health (Multimedia Appendix 2). All 27 providers used email and the majority used it daily (25/27, 93%) (see Multimedia Appendix 1 for more details on media use). The dyads were highly diverse in terms of the diagnoses that service users reported and the professions reported by health care providers. Two service users had more than one participating provider.

**Types and Frequencies of Use**

The median number of log-ins was 17 (range 1-151) (Table 3). Median number of messages sent was 2 (range 0-43). Modules not used by most participants could be frequently used and valued by one or two participants. This was particularly the case for crisis plan, network map, the medication list, and the diary. Some reported that having the options was valued, even though they had not used them yet.

<table>
<thead>
<tr>
<th>Reported diagnosis</th>
<th>n (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Depression</td>
<td>17 (59)</td>
</tr>
<tr>
<td>Panic anxiety</td>
<td>8 (28)</td>
</tr>
<tr>
<td>Generalized anxiety</td>
<td>8 (28)</td>
</tr>
<tr>
<td>Posttraumatic stress disorder</td>
<td>8 (28)</td>
</tr>
<tr>
<td>Phobic anxiety</td>
<td>5 (17)</td>
</tr>
<tr>
<td>Drug/alcohol addiction</td>
<td>4 (14)</td>
</tr>
<tr>
<td>Bipolar illness</td>
<td>4 (14)</td>
</tr>
<tr>
<td>Personality disorder</td>
<td>3 (10)</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>2 (7)</td>
</tr>
<tr>
<td>Obsessive-compulsive disorder</td>
<td>2 (7)</td>
</tr>
<tr>
<td>Schizoaffective illness</td>
<td>1 (3)</td>
</tr>
<tr>
<td>Mania</td>
<td>1 (3)</td>
</tr>
<tr>
<td>Other</td>
<td>4 (14)</td>
</tr>
</tbody>
</table>

Table 2. Diagnoses reported by service users (N=29).
**Table 3. Usage of different components and activities in ReConnect during 6 months of access among service users (N=29).**

<table>
<thead>
<tr>
<th>Components and activities</th>
<th>Median (range)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Number of log-ins</td>
<td>17 (1-151)</td>
</tr>
<tr>
<td>“Good-to-know” article visits</td>
<td>3 (0-12)</td>
</tr>
<tr>
<td>Read article</td>
<td>0 (0-9)</td>
</tr>
<tr>
<td>Number messages views</td>
<td>14 (0-93)</td>
</tr>
<tr>
<td>Messages sent</td>
<td>2 (0-43)</td>
</tr>
<tr>
<td>Messages received</td>
<td>3 (0-40)</td>
</tr>
<tr>
<td>Crisis plan created</td>
<td>0 (0-1)</td>
</tr>
<tr>
<td>Diary post entries</td>
<td>0 (0-51)</td>
</tr>
<tr>
<td>Exercise visits</td>
<td>0 (0-9)</td>
</tr>
<tr>
<td>Forum Visits</td>
<td>21 (0-364)</td>
</tr>
<tr>
<td>Forum posts</td>
<td>3 (0-149)</td>
</tr>
<tr>
<td>Forum treads views</td>
<td>33 (0-508)</td>
</tr>
<tr>
<td>Medicine visits</td>
<td>1 (0-5)</td>
</tr>
<tr>
<td>Network map visits</td>
<td>2 (0-10)</td>
</tr>
<tr>
<td>Plan visits</td>
<td>10 (0-45)</td>
</tr>
<tr>
<td>Activity plan creation</td>
<td>0 (0-18)</td>
</tr>
<tr>
<td>Goal plan creation</td>
<td>0 (0-15)</td>
</tr>
<tr>
<td>Sub goal plan creation</td>
<td>0 (0-14)</td>
</tr>
<tr>
<td>Registration visits</td>
<td>6 (0-109)</td>
</tr>
<tr>
<td>Registration create</td>
<td>2 (0-128)</td>
</tr>
<tr>
<td>Update life domains assessment</td>
<td>1 (0-22)</td>
</tr>
</tbody>
</table>

**Collaborative Use**

Of the 27 health care providers, 19 (70%) answered secure messages from the service users. They answered a median of 6 (range 1-27) messages. (The system log failed to register types and frequencies of provider’s access to their service user’s module; therefore, we are unable to report this.) Both service users and providers reported that 6 months was too short of time to learn and optimally adapt their use of the various toolbox resources to their individual and collaborative needs. Examples mentioned included discovering relevant exercises after learning from peers in the forum, and that optimal use of the portal could differ when health was in a good versus a bad phase.

**Forum**

The forum was visited a median 21 (range 0-364) times per service user during their respective 6-month participation periods. During these 6 months, the service users posted 542 postings and viewed forum posts 1870 times in total (data not shown). The peer-moderator (LSE) initiated 167 of 542 postings (30.8%). Ten service users were active posters (>10 posts). No postings had to be removed due to inappropriate content. One service user reported obsessive use of the forum and together with his/her provider found ways to control use.

**Cafés**

In the 12 face-to-face gatherings, a total of 17 service users participated (range 3-9 per meeting). Several reported that becoming secure in the forum had been a prerequisite for mustering the courage to participate in the face-to-face cafés.

**Recovery-Oriented Practices**

In the following, the experiences reported in focus groups, forum postings, and cafés by service users and providers are presented relative to Le Boullier et al’s [35] four practice domains that were derived from a qualitative analysis of 30 international recovery-oriented practice guidance documents. These domains are summarized in Textbox 1. Although “practices” typically refers to actions taken by providers, we included the actions taken autonomously by service users through their use of ReConnect.
Supporting personally defined recovery

- Practitioners focus on supporting personally defined recovery heart of practice and not as an additional task. Individuals are supported to define their own needs, goals, dreams, and plans for the future to shape the content of care. Individuality, informed choice, peer support, strengths focus, and holistic approach are contained in this practice domain.

Promoting citizenship

- The core aim of services is to support people who live with mental illness to reintegrate into society and to live as equal citizens. Citizenship is central to supporting recovery, in which the right to a meaningful life for people living with severe and enduring mental illness is advocated. Seeing beyond “service user,” service user rights, social inclusion, and meaningful occupation are grouped in this practice domain.

Working relationships

- Practitioner interactions demonstrate a genuine desire to support individuals and their families to fulfill their potential and to shape their own future. A therapeutic relationship, characterised as a partnership, is essential to supporting recovery in which hope is promoted.

Organizational commitment

- Organizations that support recovery orientation demonstrate a commitment to ensure that the work environment and service structure are conducive to promoting recovery-oriented practice. The organizational culture gives primacy to recovery and focuses on and adapts to the needs of people rather than those of services. Recovery vision, workplace support structures, quality improvement, care pathway, and workforce planning are included in this practice domain.

Supporting Personally Defined Recovery

Types of ReConnect uses that were particularly reflective of this practice domain were life domains, goal/activities, peer support, and the process of writing. Service users reported being helped in gaining an overview of their lives and becoming more conscious of where they were headed and what kind of help they needed. For example, in a café discussion, one service user offered advice to another participant who was not getting the help he/she needed:

> What I experienced as unbelievably positive for me was to sit down and divide up my life into different life areas. It really increased my awareness. It became clearer for me where I stood, and where I wanted to head. I can really recommend it. You create for yourself a direction in life. At least that was my experience...[a lot of talking erupted in the group]...Maybe it would be easier for your helper to follow you up if she had something more concrete to work on...Maybe if you write it down it is easier for her to get a grip on what you need?

Some providers shared this assessment of the same modules. As one provider stated in a focus group:

> The goal module has really helped. When he/she says “I wish I’d do more of this,” then I can put pressure on. When it’s written down in there as a concrete goal, then it kind of lights up a fire of sorts.

Another provider highlighted the value of service users’ creating descriptions of life domains and goals/activities in their own words:

> It’s become a good way of structuring our work together. In a way, it’s clearer. What is his/her assignment or expectation of me?...It ensures that it is in fact his/her goal and not something I’ve written. One might think it’s the same, but the nuances in language can make a decisive difference in the actions we take.

The peer-to-peer forum and café gatherings were used to share experiences with the exercises (eg, mindfulness, strengths, self-created exercises) in support of defining one’s own direction. Among the many illustrative quotes in the forum:

> I’ve just logged and made an exercise. I use all of them [exercises] except the ones for drug abuse. It’s a nice support for me when I’m working with myself. And it HAS helped me. From being isolated and very depressed to now getting out more. It’s helped to the point that I’m now working in a job 50%.

Promoting Citizenship

The peer support activities in the forum and cafés can be viewed as promoting community involvement (citizenship) in and of itself. Initially, peer support was established and maintained through the forum and subsequently expanded on and enriched through both the café gatherings and the focus group interviews. Friendships developed and plans were made for getting involved (eg, volunteering) in local activities. This included reflections on the role that community involvement can play in promoting health, and that providers need to support service users in this process. An example from a café discussion, that also illustrates the next domain (working relationships), is the following:

> My mental health gets better when I help others. Be useful, do something meaningful, contribute to community. Those are things that helps your health and recovery. How can we get our helpers to support us in that kind of thing?

The issue that ignited the liveliest “community engagement” was at the end of the study when it was unclear whether ReConnect would be continued as a service within the two communities. This was evident in extensive forum discussions about how to influence community decision makers:
In any case, we’ve got to behave in the right way and talk to the people who are affected first, before we go to the newspaper, so we don’t step on the wrong people’s toes? But we can do this, right you guys? I hope you guys in [large community] are as enthusiastic as we [small community] are because we’re pretty fired up about keeping this service (six smiles)

A service user from the larger community responded:

*If we’re going to the newspapers, we need to have a positive angle—not that we’re angry, or going to the barricades to fight, if we lose ReConnect. The smartest might be to go to the membership paper of the Norwegian Mental Health Association.*

Eventually, two service users from the largest community contacted one of the project’s funding agencies who interviewed and photographed them for an article on their website.

**Working Relationship**

Dyad collaboration through ReConnect ranged from not at all to almost daily. This domain overlapped particularly with the first domain (supporting personally defined recovery) in that providers who supported service users in working with life domains, goals, and activities also reported having good working relationships. Collaborative uses included messaging, providers commenting the content of service users’ modules, and/or by sitting together and working with modules during consultations.

The life domains and goal/activity modules were frequently referred to by service users as helping collaboration with providers become more focused on their needs. The types of goals reported were typically short term (eg, per week) and very concrete. As one service user reported in a focus group:

*Earlier it’s always been that [provider] asked me if I’d taken my medications, and then what openings there were in our calendars for my next consultation. Those two issues were what [provider] seemed mainly preoccupied with. Now with ReConnect we work more on my resources and goals—it can be as simple as managing to get through Christmas. How do I do it? Subgoals and activities can be buy the steak, avoid stress, get everything in the house, that type of thing—it was actually very useful to get ideas from another perspective—how to break down the problem...It really helps to break down the problem into smaller pieces.*

Some service users expressed frustration that providers repeatedly told them how busy they were as an excuse for why they had not worked with them through ReConnect. For example, in a café discussion:

*Why did [provider] agree to work with me through this tool if she never expected to do it? She should have just said no. You get so disappointed. That’s why it’s good to have each other [forum participants]—to call you my helpers. So we can share things.*

This started a series of discussions about taking care not to overwhelm providers with messages or tasks, which caused one participant to react:

*It’s completely understandable that constantly hearing how busy your helper is—I mean you don’t want to make life miserable for them. You don’t. But it’s just not right that us service users have to go around protecting our helpers.*

These types of discussions in forum, focus groups, and cafés were typically accompanied by constructive suggestions for how to positively engage providers. One such exchange took place in a café discussion:

*You’re right, it’s important for them [providers] to see that they’re useful to us—productive. The more specific we can be about what we need, the greater the chances that they’ll respond to us and our needs.*

*I think it was some smart advice from [another participant]. She gave her helper a clear assignment as to how to follow her up. I think several of us should do that. That’s how we create communication.*

Some service users appreciated the flexibility that ReConnect introduced relative to in-person consultations that were sometimes described as unnecessary or unproductive. One service user, who received regular home visits, argued that flexibility could also benefit providers. As said in a focus group:

*Maybe they don’t have to come so often if we can contact them [through the portal] when we’re working on something and need follow-up. Follow-up is what we need.*

Providers, on the other hand, expressed concerned about pressuring service users to use ReConnect in ways that could be an added burden on them. For example, one reported in a focus group interview:

*I’ve heard my service user say, “Unfortunately I’ve never answered, or done it” ...sort of like they have to apologize for not doing it [used ReConnect]. That’s why I’m kind of afraid of...it can be an extra burden on them...just following up things...Many are really vulnerable for stress.*

This coincided with several providers who reported not wanting to put pressure on service users to use ReConnect, but that they were available if service users took the initiative.

**Organizational Commitment**

Most providers told of being committed to user involvement in care (a key recovery principle), whereas several reported barriers to committing to use of ReConnect as an ordinary service. Technical infrastructure-related barriers included inconveniences of having to log in with their private electronic ID (due to lack of integration with secure log-in system used by health care), multiple overlapping systems, and lack of integration with electronic health records.

Leadership in the large municipality initiated processes to address infrastructure barriers with the intention to implement ReConnect as a permanent service (minutes of meetings). Both
the political and administrative leadership had committed to personal recovery—principles in all major policy and strategy documents [28]. This included a commitment to quantifying the extent of user involvement in individual care plans along with ambitious goals for an increase. ReConnect was viewed by leadership as enabling more effective progress toward policy goals (minutes of meetings). The smaller municipality also had user involvement as a goal, but without a specific approach or quantified goals. Here, the technical and financial commitments required to implement ReConnect were considered too great at the time.

Providers reported other barriers to committing to ReConnect. These included blurring lines between work and private life, lack of time allotted to answering messages, and concerns about the frequency and volume of written responses that might be expected by service users. Providers who appeared most positive toward ReConnect also reported being explicit about what service users could expect from them. One focus group participant, who described the portal as an asset to her work and benefit to service users, reported giving service users’ clear expectations:

> I’ve told my clients that I answer messages Monday and Thursday mornings. That’s when they can expect answers from me. I need to have structure.

Another satisfied provider reported making agreements with service users that they would only respond to service users’ messages with brief responses to acknowledge receipt or clarify practical issues. More in-depth issues presented by service users would be acknowledged, then dealt with in their next consultation. Service users responded positively to these clarifications. Other providers valued saving time now that a service user had produced texts that could be taken directly into the statutory action plans. The fact that the service user also benefited from formulating and “owning” their own plans was referred to as “killing two birds with one stone.”

Discussion

Principal Findings

This descriptive and exploratory study sought to illuminate the question: how is an e-recovery tool used as an adjunct to ongoing community mental health practices and what role can it play in shifting practices toward recovery-oriented care?

The service users who used the portal became more involved in activities reflecting the first two of Le Boutillier et al’s [35] practice domains—personal recovery processes and citizenship—regardless of the practices of their provider. This was observable for the approximately 10 active forum posters and 17 café participants who also reported benefits similar to those reported in studies of online [37] and offline [38] peer support. Combining online and offline peer support with toolbox resources was an empowering common frame of reference for service users. Service users valued working more concretely on their personal life domains and goals, and in having a common vocabulary in discussing their experiences with peers. The opportunity to do so represented itself a shift toward recovery-oriented practices. Not only were service users offered a choice in terms of how they received mental health services, they could also choose to participate in defining their personal recovery processes and participate in community-promoting arenas. The service user who reported obsessive use of the forum, which was resolved together with his/her provider, was the only negative health-related experience reported among services users.

The positive role that the e-recovery portal played as a service separate from traditional services was highly dependent on the role played by the service user consultant (LSE) who moderated the forum and cafés. Although knowledge of optimal models for peer-run interventions is still evolving [12], communities who seek to promote recovery through similar portals will need to invest in similar types of expertise and role models for hope. Our experience suggests that the success of this role is closely linked with the acknowledgment of experiential knowledge as an asset within the community, in-depth familiarity of the principles of recovery, and the availability of discussion partners in health care when difficulties or dilemmas arise (LSE’s experiences will be elaborated on elsewhere). When sufficiently supported, such consultants with “lived experience” can contribute to mobilizing resources among service users and communities in ways that also can be valuable for improving the quality of health care services [12].

Use of the portal to augment treatment and its role relative to working relationships (the third practice domain) was less obvious. Dyad diversity, along with the nondirective way in which ReConnect was introduced to dyads (“use it as you see fit”), was reflected in highly diverse uses of the various portal resources. A total of 30% of providers never initiated or responded to messages, a source of frustration for service users. After 6 months, both service users and providers reported they were still discovering resources in the portal and adapting uses to their needs and preferences. This may partly be due to the shift in locus of control in that service users’ could now control the content of their own story and had a lowered threshold for linking documentation (eg, personal goals) to requests for follow-up. Both parties in working relationships can experience transitions of control as challenging [17,39], which likely adds to the time it takes to adjust.

Even if some dyads did not use the available resources in the portal to engage service users, the mere existence of the portal, and the dyads’ agreements to use it, inserted the topic of control into service users’ reports of their experiences in working with their provider. Some service users reported becoming empowered to make or request changes in the treatment they received, and that providers responded positively to these requests. However, such examples probably reflect good working relationships prior to use of ReConnect. Poor working relationships did not appear to improve through use of ReConnect, but rather were more clearly exposed as such. To explore how ReConnect can more systematically support working relationships in future studies, we have incorporated a short feedback-informed treatment measure to help dyads attend to the quality of their working relationship [40].

The largest community whose leadership had committed to recovery principles (ie, fourth practice domain) was also...
prepared to address the infrastructure barriers to implementing ReConnect as a permanent service. This may reflect greater financial and political resources compared to the smaller community, who did not make implementation of ReConnect a priority. More importantly, however, the largest community viewed ReConnect as a means for more effectively reaching quantified policy goals for user involvement in individual action plans [28]. This type of match between organizational values and the characteristics of the eHealth tool is an important success criterion for eHealth implementations [41]. Once an organizational commitment is in place, portals such as ReConnect can facilitate more rapid shifts in practices toward recovery, in addition to more rapid dissemination of new knowledge within communities.

Limitations
We are not able to offer plausible explanations for the lack of men despite considerable efforts to recruit them, an issue which future service design studies need to address. Our opportunistic selection of quotes from superficially coded data to illustrate the four practice domains is not a balanced reflection of the experiences of participants. Thorough inductive analyses of participant experiences relative to collaboration and personal recovery are forthcoming. Nevertheless, we argue that the approach in this paper is justified in light of our aim of exploring the role such portals might play in shifting practices.

Comparison to Prior Work
This study complements reviews of technically supported self-management interventions in general [6,42-44], as well as more specific recovery-oriented self-management interventions [45,46]. Our own scoping review of e-recovery found 20 studies of six recovery-oriented portals in five countries [47]. These studies have promising, but as yet no definitive findings related to enhanced shared decision making [48], strengths and resilient self-care strategies [49], social connectedness and empowerment [7,50], and patient-centered care [51,52], to mention a few. This study is one of the few to use a participatory approach with an exploratory design using mixed methods and, to our knowledge, the first to discuss e-recovery findings more systematically in light of a recovery framework. Several of the components in our portal are similar to other solutions with promising findings (ie, access to health records [44], shared decision making [42], and peer support [45,46]). Combining multicomponents into a single portal, as we have done, increases the challenge of sorting out active ingredients. At the same time, our study of how such a multicomponent intervention is used and influences ongoing practices helps pave the way for implementation of subsequent, more evidence-supported interventions in communities.

Based on this exploratory study, the following hypotheses can be proposed for future studies:

Personal recovery: people who have Internet-based tools that help them articulate what is important to them, coupled with providers who help operationalize “what is important” into concrete goals, are more likely to become actively engaged in their recovery processes than those without such tools and support.

Citizenship: e-recovery portals that combine Internet-based peer support with local in-real-life peer support are more likely to lead to community engagement than those who have access exclusively to one or the other.

Working relationships: working relationships via e-recovery are more likely to be effective if coupled with low-threshold feedback mechanisms that monitor the quality of such relationships than those without.

Organizational commitment: organizations with commitments to recovery principles are more likely to invest in and benefit from e-recovery portals than those without such commitments.

Although policy-pushes toward recovery and eHealth are so far largely based on values and resource constraints, e-recovery is unlikely to survive without evidence of its efficacy in helping people live fulfilling lives. Progress toward efficacy trials will need to build on more in-depth understandings of how digital resources interplay with recovery processes and for which service users, dyads/teams, and community contexts. Future research would benefit from recovery researchers joining forces with computer scientists in sorting out key recovery-oriented factors that can be co-created, boosted, tested in larger controlled trials, and implemented through digital innovations.

Conclusions
The 24/7 availability of peer support and support for articulating personal goals in recovery processes represented itself a shift toward recovery-oriented practices within the participating communities. It is nevertheless the two practice domains, working relationships, and organizational commitment that are key to the more fundamental role that e-recovery portals can play in shifting practices toward recovery. Given organizational goals of monitoring service user involvement in care and the quality of working relationships, e-recovery portals can play a role in helping practices become more responsive to needs and aspirations as defined by service users.

Acknowledgments
This project was made possible by the Norwegian Research Council, the Norwegian ExtraFoundation for Health and Rehabilitation, the Norwegian Council for Mental Health, the Northern Norway Regional Health Authority, Vestre Viken Hospital Trust, and University Hospital in North-Norway. We are immeasurably grateful to all community participants whose experiences and insights gave life to this work.
Conflicts of Interest

DG and CMR are the developers of ReConnect, but have no financial or ownership rights to the portal. All authors are affiliated with the research center, but have no financial or nonfinancial interest to declare in relation to this study.

Multimedia Appendix 1

Service users’ use of Internet and e-mail (n=29).

[PDF File (Adobe PDF File), 23KB - jmir_v19i5e145_app1.pdf]

Multimedia Appendix 2

Health care provider characteristics and experience with use of Internet and e-mail of (n=27).

[PDF File (Adobe PDF File), 34KB - jmir_v19i5e145_app2.pdf]

References


Abbreviations

IT: information technology
PAM: Patient Activation Measure
RAS: Recovery Assessment Scale

©Deede Gammon, Monica Strand, Lillian Sofie Eng, Elin Borassund, Cecilie Varsi, Cornelia Ruland. Originally published in the Journal of Medical Internet Research (http://www.jmir.org), 02.05.2017. This is an open-access article distributed under the terms of the Creative Commons Attribution License (http://creativecommons.org/licenses/by/2.0/), which permits unrestricted use, distribution, and reproduction in any medium, provided the original work, first published in the Journal of Medical Internet Research, is properly cited. The complete bibliographic information, a link to the original publication on http://www.jmir.org/, as well as this copyright and license information must be included.
Exploring Working Relationships in Mental Health Care via an E-Recovery Portal: Qualitative Study on the Experiences of Service Users and Health Providers

Monica Strand1,2,3, MSc; Deede Gammon1,4, PhD; Lillian Sofie Eng1; Cornelia Ruland1,3, PhD

1Centre for Shared Decision-Making and Collaborative Care Research, Oslo University Hospital, Oslo, Norway
2Division of Mental Health and Addiction, Department of Psychiatry Blakstad, Vestre Viken Hospital Trust, Ask, Norway
3Faculty of Medicine, University of Oslo, Oslo, Norway
4Norwegian Centre for E-Health Research, University Hospital of North Norway, Tromsø, Norway

Corresponding Author:
Deede Gammon, PhD
Centre for Shared Decision-Making and Collaborative Care Research
Oslo University Hospital
Sogn Arena Pb. 4950 Nydalen
N-0424 Oslo
Oslo,
Norway
Phone: 1 004790977963
Fax: 1 004747231109
Email: deede.gammon@rr-research.no

Abstract

Background: The quality of working relationships between service users and health providers is fundamental in the processes of recovery in mental health. How Internet-based interventions will influence these relationships for persons with long-term care needs, and the measures that can be taken to maintain and enhance working relationships through Internet, is still not well understood.

Objective: The aim of this study was to gain insights into how service users and health providers experience their working relationships when they are offered the option of supplementing ongoing collaboration with an e-recovery portal.

Methods: In this exploratory and descriptive study, an e-recovery portal was used by service users and their health providers in 2 mental health communities in Norway for at least 6 months and at most 12 months (2015-2016). The portal consists of secure messaging, a peer support forum, and a toolbox of resources for working with life domains including status, goals and activities, network map, crisis plan, and exercises. The portal was owned and managed by the service user while health providers could remotely access parts of the service user-generated content. The participants could use the portal in whatever way they wished, to suit their collaboration. Data from 6 focus groups, 17 individual interviews, and an interview with 1 dyad about their experiences of use of the portal over the study period were inductively coded and thematically analyzed.

Results: The thematic analysis resulted in 2 main themes: (1) new relational avenues and (2) out of alignment, illustrated by 8 subthemes. The first main theme is about dyads who reported new and enriching ways of working together through the portal, particularly related to written communication and use of the goal module. Illustrative subthemes are ownership, common ground, goals and direction, and sense of presence and availability. The second main theme illuminates the difficulties that arose when service users’ and health providers’ expectations for portal use were not aligned, and the consequences of not addressing these difficulties. Illustrative subthemes are initiative and responsibility, waiting for the other, feeling overwhelmed, and clarifications and agreements.

Conclusions: The degree to which dyads benefited from using the e-recovery portal appeared to be mainly associated with the degree to which the dyads’ relations were open and flexible before the portal was introduced. For those who experienced frustrations, the portal may have both exposed and added to suboptimal working relationships. Use of the goal module appeared to strengthen the person-centered nature of collaboration. A key question is how health providers balance between enabling service users’ greater control over their care, without relinquishing responsibility for the quality of the working relationship, also when using an e-recovery portal. Implications for implementation are discussed.
KEYWORDS
eHealth; recovery; mental health; psychiatry; user involvement; empowerment; working relationship; secure email; e-recovery; participatory research

Introduction
Therapeutic alliances, or therapeutic relationships, between service users and health providers in mental health care have repeatedly been found to be of significance for outcomes [1] across a range of diagnoses and treatment settings [2]. Moreover, service users report that their relationship with their health provider is the most important component of care [3] along with their own engagement [4,5]. The study reported here builds on a recovery-oriented approach that uses concepts such as working relationship and partnership to underline the collaboration between health providers and persons in need of long-term mental health treatment and support [6]. The aim of mental health care, and the focus of helping relationships, is to help individuals to live meaningful lives with or without the presence of symptoms [7-9]. Personal recovery is conceptualized as personal processes comprising five dimensions: connectedness to others and the community; hope and optimism about the future; identity building beyond being a patient and toward a positive sense of identity without stigma; meaning in life; and empowerment [10]. Health providers contribute with their professional expertise, whereas service users contribute as the experts in their own lives (eg, their personal values, own needs, and goals) [8]. Accordingly, people are referred to as service users, rather than patients, thus underlining the equality of the roles and expertise (ibid). In recovery-oriented approaches, working relationships focus on fostering service users’ own strengths and resources while developing mutually shared goals, action plans, and outcomes that service users are in charge of, or, through recovery, ultimately take charge of [11,12].

Knowledge about what service users find to be helpful and nonhelpful relationships with service providers is increasing [13,14].

Internet-based interventions are increasingly incorporated into mental health services in ways that can be expected to influence the quality of working relationships [15]. Studies have shown similar or even enhanced working relationships when compared with face-to-face therapies [16,17]. Reported benefits of Internet-based working relationships include facilitation of therapeutic engagement, greater self-disclosure and therapeutic writing, and extensions of the working relationship beyond the active therapy period [18]. Among challenges reported are difficulties in articulation and nonverbal cues, thereby increasing possibilities for misunderstandings [19], as well as a lack of possibilities to respond in real time [20]. Also described is a lack of guidance about how service users and health providers can appropriately engage with each other through the Internet [21]. There is a need for in-depth insights into how such relationships unfold when supported by the Internet [16,20,22], especially when such support is introduced into ongoing care relationships [23,24].

This study examines the use of an Internet-based portal designed to support recovery processes for service users and their ongoing collaboration with their health providers (here referred to as an e-recovery portal). Although research on traditional patient portals has mostly focused on factors such as patient demographics, use and nonuse, and patient engagement and satisfaction [25], attention is increasingly turning to how portals may affect care practices [26]. In this study, we ask: How do service users and health providers in ongoing mental health care describe their experiences of using an e-recovery portal relative to their working relationships?

Methods
The E-Recovery Portal: ReConnect
ReConnect was designed with service users involved and is described in more depth elsewhere [27]. The portal consists of secure messaging, a peer support forum, and a toolbox of diverse resources that support service users in articulating and working with various aspects of their lives (ie, life domains and associated goals and activities; network map; crisis plan; different exercises related to mindfulness, coping, and symptom management; medication overview; information about user involvement, working relationship, personal recovery, and how to use ReConnect; and links to local activities and service users’ organizations). The portal is owned and managed by the service user while health providers can remotely access parts of the service user–generated content (eg, goals and activities). The portal enables collaboration between the service user and their health provider (here referred to as the dyad) in between or during consultations. Two-hour group and/or individual training sessions were offered in both communities where the study was conducted, so as to accommodate participants’ various schedules and preferences for format. On the basis of the participants’ personal preferences, some dyads participated in a training session together, others participated in group sessions for service users and health providers separately, and a few requested individual training sessions. Local in-real-life ReConnect cafes were held monthly in both communities, at which service users could meet and discuss issues related to their own recovery processes, including the working relationship with their health provider, and portal use. The ReConnect cafes were facilitated by a service user consultant with lived experience of mental health problems.

Study Methodology and Design
This explorative and descriptive study with a qualitative and participatory design [28-30] studied the use of an e-recovery portal used by service user and health provider dyads in 2 mental health communities in Norway (see the Setting section below). Participants used the portal for at least 6 and at most 12 months (2015-2016). The dyads were told they could use the portal in whatever way they thought might benefit their working
relationships and were encouraged to clarify and agree on uses beforehand. The service user consultant was part of the research team throughout all phases of the research process, and participants from the study were invited to give feedback about both the implementation of the portal and the study’s findings as they unfolded (further elaborated below).

**Setting**

Norway has universal health care that is publicly funded as part of the national budget through general and earmarked grants. The municipalities are responsible for providing primary health care and social services, while the Regional Health Authorities provide specialist services (eg, hospital wards and district psychiatric centers). As used in this paper, the word “communities” refers to care at primary and specialist levels provided to residents of 2 municipalities in Norway: 1 small community in the North with about 5500 inhabitants within an area of 1493 km² and 1 large community on the outskirts of the capital with about 52,000 inhabitants within an area of 100 km². These were selected for participation to obtain desired contrasts in terms of rural/urban dimensions and access to care. Service users in Norway have at least one specific health provider responsible for the follow-up at each level of care, often a registered nurse, psychologist, and/or psychiatrist. Both communities had expressed commitments to policies promoting eHealth, user involvement, and collaborative practices. The largest community expressed commitments to recovery principles in policy and strategy documents. Local steering committees were established in both communities to ensure that the study and its implementation had local organizational backing.

**Recruitment and Participant Inclusion**

Written information about the study, along with verbal presentations individually and in groups, was provided by the research team to multiple health services at both levels of care and to local service user organizations. Interested health providers conveyed the information to service users who they believed might be interested and relevant to the study. In addition, some service users who had heard about the study from other sources requested that their health providers participated with them. Participating service users had to fulfill the following criteria: over 18 years of age, had received mental health services for at least 6 months before inclusion, and had expectations of needing services at least 6 months forward, Internet access with a public key solution for secure electronic identification, and at least one health provider willing to participate in the study. For the health providers, employment in the participating communities and a willingness to participate in the study for at least 6 months with at least one service user were inclusion criteria. Efforts were made to recruit a wide range of participants in terms of age, gender, mental health problems or professional background, and types of ongoing support or workplace. Service users and health providers were invited by the research team, administrators, and/or health providers to take part in focus groups and/or individual interviews about their experiences with use of the portal. For focus groups, participation in the study was the only inclusion criteria. For the individual interviews and interviews with dyads, we intentionally sought participants who had experience of using the e-recovery portal, defined as having logged on to ReConnect >15 times.

**Focus Groups and Interviews**

Data were collected using focus groups [31,32] and individual interviews [33], as well as one interview with a dyad who requested that format. Focus groups are suitable for exploring experiences and attitudes among people who cooperate, or have a common frame of reference, and can complement other methods [31]. The focus groups were held at an early stage of implementation so that discussions among participants could also serve to stimulate use and collaboration, a recognized objective of focus groups [34]. The individual interviews were used to facilitate collection of more personal and detailed information (ibid) and were held at a later stage when participants had gained more experience with collaborating through the portal over time. The individual interviews enabled us to explore understandings, perceptions, and constructions of issues that participants have some personal stake in, in line with the objectives of individual interviews (ibid).

The focus groups were conducted with service users and health providers separately to facilitate free-flowing conversations [32]. The interview guide consisted of questions about ReConnect relative to working relationships and recovery processes (see Multimedia Appendix 1). A first draft of the interview guide was discussed with 2 service user consultants who were not part of the research team. In line with the explorative nature of the study, the questions were few and open-ended to stimulate group dialogue [31,32] about the overall study’s 2 main topics: experiences with portal use relative to working relationships and experiences with the role that ReConnect might play in recovery processes. The first of these topics is reported here; the second will be reported in a subsequent paper. Participants were given the opportunity to elaborate on subjects they considered relevant and important. Prompts that could encourage openness, examples, and detail (eg, “That is interesting, can you tell us more about that?”) were used frequently. The focus groups were conducted by MS, who is a trained nurse with clinical experience from the field, and LSE, who was the study’s service user consultant and who had first-hand experience of mental health problems and recovery on both primary and specialist levels of mental health care. The focus groups were conducted after approximately 3 months of participation in the study and lasted for approximately 90 min for the service users and 50 min for the providers.

In the individual interviews and in the 1 dyad interview, we sought more in-depth personal experiences relative to the same topics as the focus groups, also based on semistructured interview guides with open-ended questions (see Multimedia Appendix 2). The individual and the dyad interviews were conducted by MS, with the exception of one individual interview conducted by LSE. These interviews were conducted after 6 to 8 months of participation in the study and lasted for approximately 60 min.
Thematic Analysis

The focus groups, individual interviews, and the 1 dyad interview were audio-recorded and transcribed verbatim and constitute the entire dataset for this study. Data analysis was aided by use of NVivo software version 11. The data were analyzed by applying a 6-phase thematic analysis for identifying, analyzing, and reporting patterns within the data [35]. The main goal during the analysis was to inductively sort the material into overarching themes and subthemes across the entire dataset, guided by the research question (ibid): How do service users and health providers in ongoing mental health care describe their experiences of use of an e-recovery portal relative to their working relationships? MS led the analysis process that entailed the first 3 authors meeting routinely throughout all 6 phases to identify, discuss, and resolve potential differences in, for example, coding and interpretive practices (eg, detail and level of abstraction), thus facilitating multiple perspectives in the process of interpreting the data. In the first phase, authors familiarized themselves with the data, noted initial ideas, and made and discussed preliminary descriptive codes. In the second phase, conducted primarily by MS, relevant extracts of the data (ie, part or all of a sentence, or a small paragraph about a particular subject identified in the data related to the research question) were systematically identified and entered into NVivo software version 11 nodes (codes) across the entire dataset. The third phase consisted of collating related codes into preliminary themes and gathering all data relevant to each potential theme. In the fourth phase, the themes were reviewed and adjusted relative to overlaps or inconsistencies both to the coded extracts and the entire dataset. With the goal of generating clear definitions and names for each theme, the fifth phase refined the wording of each theme and the overall story of the analysis. Finally, in the sixth phase, we produced the report by selecting vivid and compelling quotes and to produce a final analysis relating back to the research question. These phases are described sequentially, but in practice, they were conducted as a recursive process (ibid), moving back and forth as needed. Thus, in line with inductive qualitative analysis, the codebook evolved continuously during the analysis [34].

In line with participatory approaches [28-30], participants were invited to give feedback on written and oral tentative summaries of the data through secure messaging, in ReConnect-cafés, or in the individual interviews. This not only facilitated the participants’ contribution to understanding the data but also how to use the e-recovery portal.

The quotes that illuminate identified themes were initially translated from Norwegian to English by DG, a native northern American who is fluent in Norwegian. To minimize the known threats to validity when translating culturally bound expressions [36], the original quotes were kept alongside the translations throughout the development of the manuscript. This enabled all authors to assess the validity of translations, as well as to backtrack to the dataset when context was needed to ensure that the translation captured the quotes’ meaning.

Ethics

This study was approved by the Regional Committees for Medical and Health Research Ethics in Norway and the Privacy Protection Committees at the participating sites. Participants signed a Web-based consent form with information about the study, which was repeated verbally at the time of the interviews. Service users consented to use ReConnect exclusively for nonemergency purposes and that ordinary channels had to be used for acute needs. Moreover, the participants were given information about security procedures and recommendations for ensuring privacy.

Results

A total of 14 service users and 17 health providers from both primary and specialist levels of mental health care participated in 6 focus groups, 17 individual interviews, and 1 interview with a dyad.

The participants

The service users were from 22 to 63 years of age, reporting various mental health diagnoses. The health providers had 1 year to 35 years of clinical experience and represented various professions. Further description of the characteristics of the participants in the different types of interviews is given in Tables 1 and 2.

The thematic analysis resulted in 2 main themes: (1) new relational avenues and (2) out of alignment. These and the 8 identified subthemes are presented below.

New Relational Avenues

This theme encompasses the ways in which dyads used the options offered by ReConnect to enrich their working relationship and is illustrated through the following subthemes: ownership, common ground, goals and direction, and sense of presence and availability. The process of writing, and uses of the service users’ writings in consultations, is fundamental to this theme and is common to the 4 subthemes.

Ownership

In ReConnect, the service users had control over the self-generated content and who had access to it (in contrast to, eg, traditional health records). This shift in locus of control from health providers to service users was described as closely linked to the process of writing that was facilitated by the portal, particularly related to goals, activities, and crisis plans. Health providers, in particular, described how the portal enabled service users to set the agenda for collaboration by describing, in their own words, their situation, priorities, and goals. This in turn strengthened service users’ ownership, or sense of engagement and responsibility, of their recovery processes.
Table 1. Characteristics of participants in focus groups.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Service users, N=11</th>
<th>Health providers, N=14</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age in years, median (range)</td>
<td>45 (22-63)</td>
<td>47 (24-63)</td>
</tr>
<tr>
<td>Gender, n (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>11 (100%)</td>
<td>13 (93%)</td>
</tr>
<tr>
<td>Male</td>
<td>0 (0%)</td>
<td>1 (7%)</td>
</tr>
<tr>
<td>Site, n (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large community (52,000 inhabitants)</td>
<td>6 (55%)</td>
<td>8 (57%)</td>
</tr>
<tr>
<td>Small community (5500 inhabitants)</td>
<td>5 (45%)</td>
<td>6 (43%)</td>
</tr>
<tr>
<td>Primary level</td>
<td>5 (45%)</td>
<td>6 (43%)</td>
</tr>
<tr>
<td>Specialist level</td>
<td>4 (37%)</td>
<td>8 (57%)</td>
</tr>
<tr>
<td>Both levels</td>
<td>2 (18%)</td>
<td></td>
</tr>
<tr>
<td>Diagnosis, n (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>6 (55%)</td>
<td></td>
</tr>
<tr>
<td>Bipolar disorder</td>
<td>2 (18%)</td>
<td></td>
</tr>
<tr>
<td>Generalized anxiety</td>
<td>2 (18%)</td>
<td></td>
</tr>
<tr>
<td>Post-traumatic stress disorder</td>
<td>2 (18%)</td>
<td></td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>1 (9%)</td>
<td></td>
</tr>
<tr>
<td>Schizoaffective disorder</td>
<td>1 (9%)</td>
<td></td>
</tr>
<tr>
<td>Phobic anxiety</td>
<td>1 (9%)</td>
<td></td>
</tr>
<tr>
<td>Panic anxiety</td>
<td>1 (9%)</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>2 (18%)</td>
<td></td>
</tr>
<tr>
<td>Number of diagnosis, median (range)</td>
<td>1 (1-5)</td>
<td></td>
</tr>
<tr>
<td>Profession, n (%)</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Registered nurse</td>
<td>6 (43%)</td>
<td></td>
</tr>
<tr>
<td>Social worker</td>
<td>3 (21%)</td>
<td></td>
</tr>
<tr>
<td>Occupational therapist</td>
<td>1 (7%)</td>
<td></td>
</tr>
<tr>
<td>Interdisciplinary specialist</td>
<td>1 (7%)</td>
<td></td>
</tr>
<tr>
<td>Priest</td>
<td>1 (7%)</td>
<td></td>
</tr>
<tr>
<td>Psychologist (clinical)</td>
<td>1 (7%)</td>
<td></td>
</tr>
<tr>
<td>Psychiatrist</td>
<td>1 (7%)</td>
<td></td>
</tr>
<tr>
<td>Years of clinical experience, median (range)</td>
<td>15 (1-20)</td>
<td></td>
</tr>
</tbody>
</table>
Table 2. Characteristics of participants in individual and dyad interviews.

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Service users, N=11</th>
<th>Health providers, N=8</th>
</tr>
</thead>
<tbody>
<tr>
<td>Age in years, median (range)</td>
<td>45 (24-67)</td>
<td>47 (27-61)</td>
</tr>
<tr>
<td><strong>Gender, n (%)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>11 (100%)</td>
<td>7 (88%)</td>
</tr>
<tr>
<td>Male</td>
<td>0 (0%)</td>
<td>1 (12%)</td>
</tr>
<tr>
<td><strong>Site, n (%)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large community (52,000 inhabitants)</td>
<td>6 (55%)</td>
<td>5 (63%)</td>
</tr>
<tr>
<td>Small community (5500 inhabitants)</td>
<td>5 (45%)</td>
<td>3 (37%)</td>
</tr>
<tr>
<td>Primary level</td>
<td>7 (64%)</td>
<td>7 (88%)</td>
</tr>
<tr>
<td>Specialist level</td>
<td>3 (27%)</td>
<td>1 (12%)</td>
</tr>
<tr>
<td>Both levels</td>
<td>1 (9%)</td>
<td></td>
</tr>
<tr>
<td><strong>Diagnosis, n (%)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>8 (73%)</td>
<td></td>
</tr>
<tr>
<td>Generalized anxiety</td>
<td>2 (18%)</td>
<td></td>
</tr>
<tr>
<td>Post-traumatic stress disorder</td>
<td>4 (36%)</td>
<td></td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>1 (9%)</td>
<td></td>
</tr>
<tr>
<td>Schizoaffective disorder</td>
<td>1 (9%)</td>
<td></td>
</tr>
<tr>
<td>Phobic anxiety</td>
<td>1 (9%)</td>
<td></td>
</tr>
<tr>
<td>Panic anxiety</td>
<td>1 (9%)</td>
<td></td>
</tr>
<tr>
<td>Drug addiction</td>
<td>1 (9%)</td>
<td></td>
</tr>
<tr>
<td>Mania</td>
<td>1 (9%)</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>3 (27%)</td>
<td></td>
</tr>
<tr>
<td><strong>Number of diagnosis, median (range)</strong></td>
<td>1 (1-7)</td>
<td></td>
</tr>
<tr>
<td><strong>Profession, n (%)</strong></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Registered nurse</td>
<td>4 (50%)</td>
<td></td>
</tr>
<tr>
<td>Occupational therapist</td>
<td>1 (13%)</td>
<td></td>
</tr>
<tr>
<td>Psychologist (bachelor)</td>
<td>1 (13%)</td>
<td></td>
</tr>
<tr>
<td>Psychiatrist</td>
<td>1 (13%)</td>
<td></td>
</tr>
<tr>
<td>Physician</td>
<td>1 (13%)</td>
<td></td>
</tr>
<tr>
<td><strong>Years of clinical experience, median (range)</strong></td>
<td>11.5 (3-20)</td>
<td></td>
</tr>
</tbody>
</table>

In addition to the processes of writing itself, the use of the service users’ own writings in consultations was described by a health provider in a focus group as “enabler of ownership and essential for their [service users’] recovery processes.” Another put it this way:

My client and I have written several crisis plans earlier. And she’s said things about “what are my symptoms” [...] But it’s just recently that she has worked independently with her issues. And put her thoughts into her own words to a much greater degree than before. She’s also done so earlier, but now she has greater ownership to her crisis plan. And that’s important. [Health provider, focus group]

Health providers also described how writing appeared to entice service users into taking on a more active role in the relationship and providers could stay more in the background. This is illustrated through the following exchange in a focus group:

A: When it comes to goals...because I’ve been interested in that. I was going to write the action plan. So, it became a kind of win-win situation. The same with the crisis plan which has been very valuable for the service users. And it’s really nice, because they formulate it and write it themselves. So we can kind of sit on the side-lines and...

B: Be lazy...[group laughter]

A: Yes and no. It’s that they work more with it themselves. Their role is a little different when they...

B: Have greater ownership to it. [Health providers, focus group]
The opportunity to share what was important and perhaps difficult to share face-to-face further helped service users set the agenda for consultations. It also helped dyads stay focused on what mattered, rather than sliding into conversational habits about nonimportant issues. Health providers reported that receiving messages before consultations helped them prepare and know more of what was expected of them, as shown in the quote below:

> It’s sort of nice to have in front of you. To include it in the consultation, if there is something one wants to expand on. Yes, I think it’s good. Just to have an overview of the things the service user had thought about. [Health provider, focus group]

Another put it this way:

> It’s been...I think a well-ordered way of working on things...A good way of handling our collaboration. In a way, it’s clearer what’s being requested of me. [Health provider, individual interview]

### Common Ground

The secure and asynchronous nature of ReConnect facilitated the transferral of clinically relevant information from service users that strengthened the common basis for collaboration in ways not available in ordinary face-to-face consultations. Services users could now describe thoughts and emotions whenever issues arose in real life, rather than having to wait for the next meeting. Because some found it difficult to share thoughts face-to-face, writing helped health providers gain relevant insights.

One service user portrayed the portal as kind of vault where valuables (eg, ruminations) could be safely transferred to the health provider, stored, and dealt with in time. This functioned as a remedy for sleeplessness, as evident from the quote below:

> I often write the messages after [health provider] has gone home from work. So, I don’t expect to get an answer until the next day. But for me it’s a way of transferring it to [health provider], thus allowing me to sleep. Instead of ruminating about all this stuff and not getting to sleep. [Service user, dyad interview]

The health providers who remotely accessed the service users’ modules (eg, goals and activities) reported that ReConnect yielded qualitatively new and different information than that typically talked about in consultations. In addition, it allowed health providers to monitor progress and tailor their help in a more timely manner, as echoed in the quote below:

> It’s much easier to see where my service users are. If some support is needed, if I need to meet with them in-person, or if it’s sufficient to have the appointment that’s already booked, if I need less...sort of knowing how my service user’s everyday life is. I get a grip on this through ReConnect, compared with having a consultation every other week. Then I don’t get so much perspective on the person. [Health provider, individual interview]

Despite service users consenting to not using ReConnect for emergency needs, some of their messages could be alarming. One health provider described allowing such messages from 1 service user whom the health provider had worked with over time, before ReConnect. Acceptance of whatever messages came from the service user was described as important to their relationship and common basis for collaboration, despite the dilemmas that this entailed, as shown in the quote below:

> I don’t know if I would have been so courageous with others, the way I’ve been with [service user]. To receive and take in what has come [in messages], and dare to let it run its course. Because it’s been a question of living, or not living. It has. But I have also been very clear that this is your choice. I can help you, if you choose to live, but I can’t help you if you choose to die. That’s the way it is. [Health provider, dyad interview]

### Goals and Direction

The mere availability of the goal module appeared to introduce and promote the topic of goals in working relationships, even though actual use of the module itself could vary considerably. Health providers reported working with goals before ReConnect, whereas service users reported that working with goals was new or different after starting with ReConnect. Service users’ descriptions of status in their different life domains, and the formulation of goals from this overview, gave the dyad a greater sense of direction and a basis for monitoring progress. It also helped facilitate insights that service users could experience as more relevant. This is evident from the following quote by a health provider:

> She [service user] has most likely come into a new stage in her recovery process, to use it [portal] together with other things that have happened in her life. It [ReConnect] helped her to gain greater insight...she understands herself better. Why she reacts like she does in different situations and what she can do to avoid it. It’s a topic we discuss all the time, but now it’s more like...“Oh, so this is why things are as they are right now.” [Health provider, focus group]

An important aspect of working with the modules was that communication in the dyad about issues became more concrete and substantial in ways service users found relevant, as stated by 1 service user below:

> So, I feel that I could make things more specific. And have gotten a good start with my providers in ReConnect. That’s probably the most important. That things are more concrete. With my earlier provider, things were really scattered and diffuse[...]Now I’m more receptive to working on things and this tool [portal] has helped, it’s encouraged me to get a grip on things. To get specific. To get an overview. To put things into words, in writing. [Service user, individual interview]

In addition to a shift in ownership of the priorities and goals in the working relationship, service users’ resources and knowledge of what helps in everyday life came more into focus.
Such topics ranged from exercising and making friends to getting through the many activities and tasks during Christmas. One of the service users stated:

_"I think it has actually changed the way we work together. Earlier it’s always been that [health provider] asked me if I’d taken my medications, and then what openings there were in our calendars for my next consultation. Those two issues were what [health provider] seemed mainly preoccupied with. Now with ReConnect we work more on my resources and goals—it can be as simple as managing to get through Christmas. How do I do it? Sub-goals and activities can be: buy the steak, avoid stress, get everything in the house, that type of thing—it was actually very useful to get ideas from another perspective—how to break down the problem...It really helps to break down the problem into smaller pieces." _[Service user, focus group]

**Sense of Presence and Availability**

Both service users and health providers reported that the portal’s 24/7 availability gave service users a sense of flexibility, extra time, and support in their daily lives. One service user said:

_"She [health provider] has been really good at giving me feedback [...] like when I can’t sleep, she answers me when she comes to work at 8 o’clock [in the morning], but then it doesn’t wake me up." _[Service user, individual interview]

Both persons in the dyad described that the opportunities for written communication between consultations facilitated a sense of availability. One service user explained that it was like the health provider was with her in her own living room and that the opportunity to send messages prevented long waiting hours through the night. One of the health providers underlined the importance of having a sense of presence and availability as follows:

_"It’s sort of that they feel that they are part of something greater; maybe. That there is a connection somewhere out there. Either through the forum, or...maybe their health provider, or someone they can be in touch with. To know someone is there." _[Health provider, individual interview]

For another health provider, the portal enabled greater flexibility in that the health provider could respond promptly to the needs of service users outside consultations. Although this did not necessarily require more time, service users might experience it that way, as described in the quote below:

_"To be completely honest, I really think they feel like they get more time with me and feel more appreciated." _[Health provider, individual interview]

**Out of Alignment**

This theme illustrates difficulties that participants described about working together through ReConnect and contains 4 subthemes: initiate and responsibility, waiting for the other, feeling overwhelmed, and clarifications and agreements.

**Initiative and Responsibility**

Service users reported difficulties in taking the initiative and responsibility to work with their health provider through ReConnect. Some did not know exactly what they needed or how to ask for help and reported that they did not want to disturb the health provider, who had an already heavy workload. Although service users acknowledged their own responsibility to take action and to set the agenda in the collaboration through ReConnect, they also described how this could be difficult as follows:

_"When you’re struggling, at least I find it very difficult to sit down and write things to my helper. I would prefer that my helper would write to me first." _[Service user, focus group]

Health providers explained their lack of initiative by referring to characteristics of the portal, which was intended to be owned and managed by service users. They also argued that the initiative and responsibility should be with the service users as part of their recovery process. Health providers also expressed concerns that encouraging use might be an added burden for the service users. However, health providers also stated that they did not consider the portal suitable for everyone. One of the health providers said:

_"Yes, I’ve read some things about user involvement. How it should be. And then you think that maybe it doesn’t work for everyone [...]. I’ve maybe thought of this as being user-controlled, so you [service user] can do more for yourself." _[Health provider, individual interview]

Mainly, it was the service users’ initiatives that determined the health providers’ activity in the portal, mostly for reading and/or responding to messages. However, some health providers described that they encouraged activities in ReConnect such as working with different modules in the portal, initiating messages, and following up work with goals and activities both online and in consultations. The health providers’ initiatives toward use of ReConnect were highly appreciated and considered essential for successful use by some of the service users. For other health providers, the service users’ expectations to take initiative and responsibility for use were difficult to fulfill, as described below:

_"I have a feeling that she had somewhat higher expectations on my...that I should have been more active. But...it’s not really the way we work." _[Health provider, individual interview]

**Waiting for the Other**

For service users, the lack of response from their health providers to their initiatives through ReConnect resulted in feelings of mistrust and not being appreciated. As one service user said,

_"Just feeling that one is not believed. Feeling not being taken seriously." _[Service user, individual interview]

Some service users described the work in ReConnect without the support of the health provider as meaningless. One service user reported needing support especially in working with goals, but that the health provider had not responded, as follows:

_http://mental.jmir.org/2017/4/e54/_

JMIR Ment Health 2017 | vol. 4 | iss. 4 | e54 | p.8

(page number not for citation purposes)
But then it’s really important that you have your helper on the other end. That you work together in ReConnect with goals for example. I haven’t had that. [Service user, focus group]

Health providers expressed awareness of how unmet initiatives and expectations could potentially be harmful for service users. However, difficulties in expressing oneself in writing about complex issues was one health provider’s explanation for not responding to service users’ messages:

I find it difficult to answer in writing, sort of...in some ways...when there are a lot of questions. And she wanted me to say what I think. It gets very difficult. Because it’s the kind of thing that’s best discussed in a dialogue. Verbally. It gets so...when there isn’t any wrong and right, sort of, in what we’re working on. And I can’t do it in writing. This is something that she experienced as a disappointment, and thought, yeah, we should have clarified that ahead of time. [Health provider, individual interview]

Some health providers also described frustration over a lack of response to their initiatives to use ReConnect. For one health provider, a lack of response from the other decreased her motivation to take new initiatives:

So...you know I feel that...when that after that long response, and [service user] doesn’t answer. Then the gas sort of goes out of my balloon. [Health provider, focus group]

Feeling Overwhelmed

Several health providers described different experiences of being overwhelmed when using ReConnect. Frequent messages, ambiguities in how to respond, and a call for being more proactive in the use of ReConnect were found difficult. One health provider elaborates,

...if there are three A4 pages with dense text that I have to go through, then it’s sort of...then I can feel that I don’t measure up sort of. And she might have experienced that she didn’t get the response that she was hoping for. [Health provider, individual interview]

Furthermore, therapeutic responses to messages from the service users were found time-consuming, in addition to causing concerns with how the text could be interpreted by the receiver. As one health provider stated:

You’ve got to watch what you write. Many patients can be easily offended. Some patients are really obsessed with details. And it’s not your intention to hurt feeling, or...right. But it can be perceived like that. So that’s why you have to be very careful with how you express yourself. Where the commas, and the periods are. And I experience that as demanding. [Health provider, individual interview]

The work with ReConnect came on top of what health providers described as a heavy workload and was difficult for some to balance. During a group interview with health providers, the interviewer conveyed a wish expressed by a service user who would have liked it if the health provider could send a message asking “How are you doing?” now and then. This prompted 1 health provider to burst out that she regretted participating in ReConnect, as shown in the quote below:

So, when I hear that kind of thing I get...I don’t have a problem being nagged at, that doesn’t upset me. But having to go around with other peoples’ issues in my head all the time, I just don’t have the capacity. So, when you said that...you know what? [...] I need to get out of this. That was exactly what I felt. [Health provider, focus group]

Clarifications and Agreements

As was evident throughout the above 3 subthemes, few dyads reported explicitly addressing expectations or making agreements about how they would use ReConnect. In hindsight, most of the health providers expressed that such discussions would have made the collaboration easier and reduced uncertainties. One health provider stated:

Yes, I think it would have been best to set aside time at the beginning and do things, test it out together. That would probably have contributed to a safer basis for using the portal in a better way. [Health provider, focus group]

However, a lack of clarifications and agreements was not necessarily experienced as a problem, as reported by 1 service user below:

No, we have never really had any agreement about how we would work. [...] ReConnect has in a way been an extended arm for me. It’s very seldom [health provider] writes anything on her own initiative. So, it’s me who opens communication. [Service user, individual interview]

One health provider underlined a need for recurrent discussions about use and expectations as collaboration progressed and needed adaptations, as shown in the quote below:

Back to the issue of expectations. I think there are, in a way, several layers to the issue. The first is to clarify expectations about response times and such. That’s one thing, but then if a service user is active, that they use exercises, or are working on new goals that you need to be involved in, then it’s important to make new clarifications. What type...where are we now? How do we do this together? So, that you have to take a new round each time. [Health provider, individual interview]

Discussion

Principal Findings

This study describes service user and health provider experiences in ongoing mental health care with an e-recovery portal as a basis for exploring the potential role it may play in working relationships. The 2 main themes that emerged from our data depict 2 contrasting roles.
Exploiting New Relational Avenues

The main theme new relational avenues describes how dyads used the e-recovery portal to enrich their working relationship. Mainly described by the health providers, ReConnect strengthened service users’ sense of ownership in their care, largely through the goal module and writing process. The writings from service users also offered health providers broader and more nuanced insights from the service users’ perspectives, and thus a more person-centered basis for working together, also during in-person consultations. ReConnect was described as helping to focus collaboration on the needs and goals that service users considered relevant to their daily lives; for example, a positive Christmas for one’s family. Service users’ 24/7 access to the portal promoted a sense of providers’ presence and availability despite asynchronous, and sometimes lengthy, response times.

In addition to coinciding with other studies showing the potential of e-health technologies in fostering engagement in treatment and care, self-disclosure, and therapeutic writing [18], our study found that use of the goal module, in particular, appeared to boost the person-centered nature of collaboration. Setting the agenda and doing things for oneself is central to recovery-oriented practices [37,38]. However, findings from a review study of care plans indicate that goals and actions are mostly formulated in terms of actions to be taken by providers on behalf of service users [39]. Incorporating support for goal formulation and follow-up into service users’ own portal for collaboration with providers, as done in this study, appears to be a promising way of counterbalancing this. Moreover, the examples of successful uses of the goal module illustrate how service users’ values, preferences, strengths, and resources relevant to their everyday lives came more to the forefront of collaboration. This coincides with recovery-oriented approaches [39] and descriptions of helpful relationships [13]. However, such benefits are not given. Common among dyads reporting positive portal use was that they had health providers who elicited and were responsive to service users’ initiatives and needs.

Aligning Expectations and Responsibilities

The main theme out of alignment highlights the difficulties that arose when service users’ and health providers’ expectations were not aligned and when the resulting difficulties were not addressed. Nonhelping relationships have earlier been described as impersonal and lacking space for negotiation of the relationship, and the support and treatment provided through it [14]. Although participants were encouraged during the training sessions to discuss beforehand how they would use the portal, few did so explicitly. Those who expressed frustrations, both among service users and health providers, reported expecting initiatives or responses via the portal that the other party failed to fulfill. Service users experienced this as not being taken seriously, whereas some health providers reported losing motivation to use the portal.

Some health providers who neglected to initiate contact with service users via the portal explained this by referring to the information about the study underlining that ReConnect was mainly the service users’ portal that they owned and managed. When service users were uncertain about use, or needed encouragement from their health providers to use the tool, a lack of initiative from health providers brought use to a standstill, which service users described as frustrating. This raises the issue of how health providers can balance between enabling service users’ greater engagement, responsibility, and control of their recovery process, without relinquishing responsibility for the quality of the working relationship in care processes when using e-recovery portals.

The factors collectively grouped under the subtheme feeling overwhelmed refer to the experiences of health providers, especially related to well-known difficulties with the use of written communication in a working relationship [19]. Such factors include discomfort in receiving frequent and long messages, service users’ expectations about frequency and content of responses, difficulties in articulating oneself in writing, fear of misunderstandings due to lack of nonverbal cues, and heavy workload. It should be noted that none of the service users reported expecting immediate or therapeutic responses to their messages. Interestingly, health providers’ frustrations over not being able to respond in real time [20] were not reported by service users. Instead, nonsynchronicity was described as enabling them to rest after transferring difficult issues over to the provider, knowing it would be addressed in time.

Although some dyads clarified their understandings about how to use the portal and adjusted accordingly, others did not. Dyads that were enriched by use of ReConnect, despite not explicitly agreeing on how to use the system, appeared to have relationships that were open and adaptable at the outset. For some of those who experienced frustrations, the portal appeared to expose and sometimes reinforce suboptimal working relationships. An earlier study of portal use reported that service users and health providers seek guidance for how to appropriately engage with each other through the portal [21]. Although such guidelines may have helped reduce some of the difficulties the participants experienced in reaching a common understanding in our study, it is not clear that relationships that are nonhelping at the outset will be improved by such guidelines.

Limitations

Our own involvement in the design of ReConnect, as well as participants’ knowledge of our involvement, poses known risks to the trustworthiness of our findings [40]. We have sought to limit these risks by addressing them repeatedly in the research team throughout the study and by providing thorough and transparent descriptions of context and method. Discussions with participants about our preliminary findings (see Methods section) helped us critique and nuance our evolving interpretations of the data. The conduct of the study as part of ongoing community practices and the inclusion of participants with diverse ages, mental health problems, and professional backgrounds should strengthen the transferability of findings, at least in a Norwegian context. However, the study’s dependability, that is, awareness of the degree to which the data changed over time, could have been discussed by the research team in further detail (ibid). The gender bias toward women,
Implications for Practice and Further Research

In efforts to ensure that e-recovery portals such as ReConnect enhance rather than undermine the quality of working relationships, some suggestions can be derived from our findings.

Instead of introducing a portal to dyads by saying “use it as you see fit,” as done in this study, more detailed information and recommendations would likely have benefited dyads. Such information would include the advantages and disadvantages that others have experienced with portal use, recommendations for how to clarify mutual expectations (eg, response times, type of content, and how to resolve disagreements about preferences for use), and that agreements for use need to be revisited as parties gain experience with use.

Furthermore, implementation of an e-recovery portal into organizations is probably more likely to be successful if coupled with organizational commitments to recovery principles as described in the literature [6]. This includes training providers in how to foster good working relationships (eg, responsiveness to service users’ initiatives). Although we have yet to test this, we believe such training might be more effective if feedback-informed methods [41] were incorporated into the portal. Without the above dyad clarifications and organizational support, our findings suggest that health providers who are skeptical to using a portal for collaborating with service users should probably refrain from use regardless of the wishes of service users.

Our hypothesis that the quality of preexisting working relationships is the primary determinant of the benefits of an e-recovery portal (rather than the portal itself) needs closer study. If such portals can play an independent role in benefiting or undermining working relationships, then we need to know more about how and by which mechanisms, some of which are suggested by our findings. A key question is how health providers can balance between enabling service users’ greater engagement, responsibility, and control in their own care, without relinquishing responsibility for the quality of the working relationship, also when using e-recovery portals.

Furthermore, we propose that the goal module in particular strengthens person-centered collaboration and is worthy of further study. For example, how does collaboration through the goal module affect providers’ engagement in the service users’ priorities and goals? More knowledge is also needed about gender preferences to ensure that tool and intervention design is inclusive of both genders. Finally, more knowledge is needed about how to optimally leverage the expertise of service user consultants in promoting positive working relationships both online and in real life.

Conclusions

The degree to which service user-health provider dyads benefited from portal use appeared to be mainly associated with the degree to which the dyads’ relations were open and flexible before the portal was introduced. For those who experienced frustrations, the portal may have both exposed and added to suboptimal working relationships. Use of the goal module, in particular, appeared to strengthen the person-centered nature of collaboration. A key question is how providers balance between enabling service users’ greater control over their own treatment and care, without relinquishing responsibility for the quality of the working relationship, also when using an e-recovery portal.

Acknowledgments

This project was made possible by the Norwegian Research Council, the Norwegian ExtraFoundation for Health and Rehabilitation, the Norwegian Council for Mental Health, the Northern Norway Regional Health Authority, Vestre Viken Hospital Trust, and University Hospital of North Norway. The authors are immeasurably grateful to all community participants whose experiences and insights gave life to this work.

Conflicts of Interest

None declared.

Multimedia Appendix 1

Interview guide for focus groups.

[IMG File, 69KB - mental_v4i4e54_app1.JPG]

Multimedia Appendix 2

Interview guide for individual and dyad interviews.

[IMG File, 99KB - mental_v4i4e54_app2.JPG]

References


Combining online and offline peer support groups in community mental health care settings: a qualitative study of service users’ experiences

Monica Strand1,2*, Lillian Sofie Eng1 and Deede Gammon1,3

Abstract

Background: Peer support for people with long-term mental health problems is central to recovery-oriented approaches in mental health care. Peer support has traditionally been conducted offline in face-to-face groups, while online groups on the Internet have increased rapidly. Offline and online peer support groups are shown to have differing strengths and weaknesses. However, little is known about how combining the two formats might be experienced by service users, which this paper aims to illuminate.

Methods: In this exploratory and descriptive study, a recovery-oriented Internet-based portal called ReConnect was used by service users in two mental health communities in Norway for 6–12 months. The portal included an online peer support group which also facilitated participation in local offline peer support groups. Both group formats were moderated by an employed service user consultant. Qualitative data about service users’ experiences were collected through focus groups and individual interviews and inductively analyzed thematically.

Results: A total of 14 female service users 22–67 years of age with various diagnoses participated in three focus groups and 10 individual interviews. Two main themes were identified: (1) balancing anonymity and openness, and (2) enabling connectedness. These themes are further illustrated with the subthemes: (i) dilemmas of anonymity and confidentiality, (ii) towards self-disclosure and openness, (iii) new friendships, and (iv) networks in the local community. Three of the subthemes mainly describe benefits, while challenges were more implicit and cut across the subthemes. Identified challenges were related to transitions from anonymity online to revealing one’s identity offline, confidentiality, and barriers related to participation in offline peer support groups.

Conclusions: This study suggests that online and offline peer support groups complement each other, and that combining them is mainly described as beneficial by service users. Identified benefits appeared to arise from service users’ options of one format or the other, or that they could combine formats in ways that suited their individual values and comfort zones. Moderation by a trained service user consultant appeared essential for both formats and can be used systematically to address identified challenges. Combining online and offline peer support groups is a promising concept for facilitating recovery-oriented care and warrants continued research.
Keywords: eHealth, Mental health, Recovery, e-Recovery, Peer support, Social support, Qualitative research, Participatory research

Background

Peer support for people with long-term mental health problems has shown promise in facilitating personal recovery processes as well recovery-focused changes in services [1–7]. Peer support in mental health care, whether provided one-on-one or in groups, is defined as “a system of giving and receiving help founded on key principles of respect, shared responsibility, and mutual agreement on what is helpful” [6] and involves people with lived experiences of mental health problems supporting others in their recovery process [4, 8]. An underlying premise for peer support, is that individuals facing a similar life event or health-related problems are in a unique position to understand one another in ways that one’s professionals, friends and family may not [9]. For recovery-oriented approaches to mental health, where peer support is an integral component, recovery has been defined as a personal process comprising of five dimensions: connectedness to others and the community; hope and optimism about the future; identity building beyond being a patient and towards a positive sense of identity without stigma; meaning in life; and empowerment [10]. Peer support is identified as a key resource in promoting hope and the belief that recovery is possible for persons with similar mental health problems [8]. It is also integral to the increased emphasis on the relational aspects of recovery [11–13]. Peer support groups are often moderated by peers or professionals, or a combination of both and can take different forms, for example, run independently in the community or as an adjunct to ongoing mental health care [14–16]. In peer support groups the social exchanges of mutual support and experiential knowledge are believed to be central to therapeutic processes [1, 17], including the therapeutic effect of helping others [14, 18]. However, the complexity of researching the diverse types and contexts of peer support, whether provided individually or in groups, has hampered efforts to amassed conclusive evidence of its effectiveness [16, 19]. Research nevertheless suggests that peer support can improve outcomes such as quality of life and hope [4, 20], increase social network and wellness [21], and reduce treatment costs and rates of re-hospitalization [17].

While much of the literature on peer support is based on offline face-to-face settings, online peer support has evolved rapidly in recent years [22, 23], also for mental health issues [24] exemplified through different types of interventions and target groups [25–27]. An online support group or community is defined as “any virtual social space where people come together to get and give information or support, to learn, or to find company” [28]. Predictors of participation in online peer support are: (i) limited access to adequate support within traditional social network(s), (ii) living with health-related stigma, (iii) perceived similarity and credibility of support providers, (iv) and convenience and other features of computer-mediated communication [23]. Communication in online peer support groups is often conducted through e-mail, bulletin boards, or specific software for live interaction with other group members (ibid.) with 24/7 accessibility regardless of location. Online peer support could be either public and open or closed and private [14]. Several studies have found that people are more willing and feel more comfortable sharing sensitive information or asking sensitive questions on the Internet [29, 30].

Studies of online peer support groups find many positive aspects that resemble those of offline peer support groups, including: social connectedness [31–33], help cope with day-to-day challenges and stigma reduction [33], and facilitate insights into health care decisions [32], empowerment [34], and recovery processes [33, 35]. Additionally, online peer support groups have been found to provide emotional support, insights and experiences about living with mental health problems which are not typically available through traditional mental health care [36]. Online peer support groups that are moderated either by peers or professionals have been found to have higher levels of retention, engagement, acceptability, perceived social support and efficacy than for online peer support without moderators [37]. The anonymity offered online is suggested to be important for an open and non-judgmental atmosphere [38, 39]. Disinhibition and self-disclosure, which is often associated with online communication, is also evident in online peer support groups [40] which might be related to that some find it easier to express one’s ‘true-self’ online compared to offline [41]. This type of atmosphere has also been found to lower thresholds for participation for those concerned with stigma, or who experience from social anxiety [36].

Challenges related to online peer support groups have also been reported. While the social relationships that have evolved through online communities can migrate to the real world [38], it is also suggested that online interactions might undermine exposure to real-life social exchanges and relationships which can be decisive for recovery processes and stigma reduction [36]. Concerns about online peer support include risks for excessive
use leading to a decrease in offline interactions [42, 43] and reported negative effects such as social avoidance and excessive dependency of online peer support [44, 45]. It remains unclear whether feeling less alone, learning from peers, and gaining confidence from interacting with others online translate into tangible and meaningful improvements in recovery, employment, or mental and physical wellbeing in the real world [46].

Implementation of recovery-oriented practices in mental health is demonstrated to be challenging [47–50]. While offline peer support is established as integral to recovery-oriented practice, research into the role that online peer support might play in shaping recovery processes in mental health care is still in its formative stages [51, 52]. Online and offline formats for peer support groups have qualities that are potentially complementary and research into the possible outcomes of interactions between the two formats has been called for [23]. In the current study we explored use of both formats when introducing ReConnect to two mental health communities in Norway. ReConnect is a recovery-oriented Internet-based intervention designed to support both personal recovery processes and collaboration with health providers for service users in mental health care, referred to as an e-recovery portal [51, 53]. The portal provided service users online peer support, and was also used to organize monthly offline peer support in the local community. We sought insights into service users’ experiences of combined peer support relative to their recovery processes by posing the following research question: With a particular focus on potential benefits and challenges, how do service users describe their experiences of combining online and offline peer support groups?

Methods

The e-recovery portal—ReConnect

ReConnect consists of a secure messaging system between service users and health providers, an online peer support group (forum), and a toolbox with a set of resources that support service users in articulating and working with various aspects of their lives, such as setting goals and planning activities. Other resources include: a network map; a crisis plan; different exercises related to mindfulness, coping, and symptom management; a medication overview; information about user involvement, working relationships, personal recovery, and how to use ReConnect; and links to local activities and service users’ organizations. ReConnect was self-managed by service users in that they had exclusive access to all content, while their health providers could remotely access parts of the content generated by service users. ReConnect was designed to support collaboration between service users and their health providers during or between consultations. The forum was asynchronous and all participants could initiate topic threads. Service users from two communities participated in the same forum. In addition, local offline peer support groups (ReConnect-cafés) where service users could meet face-to-face were held separately once a month in the participating communities. Both the ReConnect-cafés and the forum were moderated by an employed service user consultant with lived experience of mental health problems and with training in peer support.

Over a 6-month period, 29 service users participating in a mixed methods study about use of ReConnect wrote 524 forum posts and viewed them 1870 times [51]. Seventeen service users participated in a total of 12 ReConnect-cafés (range 3–9 participants per meeting), six per site, over a period of 8 months. All of the participants viewed forum posts, while 19 wrote at least one post.

Study methodology and design

This explorative and descriptive study with elements of participatory approaches [54–57] studied services users’ experiences of use of ReConnect as an adjunct to ongoing mental health care. Participants used the portal for at least 6 months and at most 12 months. The service user consultant was in addition to moderator of the peer support groups also part of the research team as a co-researcher. She contributed to refinement of research questions and methods, coordinating input from a network of service users about our emerging findings, and was actively involved in dissemination of findings. She also introduced topics relevant for recovery processes in both formats of peer support. Study participants were invited to give feedback about the research process, e.g. about the interview guide, implementation of the portal and the study’s findings as they unfolded (further elaborated below). Conscientious of power imbalances in collaborations between service users and researchers [57], a number of steps were taken to foster confidence in the important role of the service users and for building rapport within the research team [58]. Data were generated in focus groups [59, 60] and individual interviews [61]. The focus groups were held approximately 3 months into the study so that discussions among participants could also serve to stimulate use and their own recovery processes in the remainder of the study. The individual interviews were used to generate more personal and detailed information [62], and were held after 6 to 8 months of study participation, when participants had more experience of using ReConnect (further detailed below).

Setting

Norway has universal health care that is publically funded as part of the national budget through general
and earmarked grants. The municipalities are responsible for providing primary health care and social services, while the Regional Health Authorities provide specialist services (e.g., acute wards, district psychiatric centers). As used in this paper, the word “participating communities” refers to care at primary and specialist care levels provided to residents of two municipalities in Norway: one small community in the north with about 5700 inhabitants within an area of 1493 km², and one larger community on the outskirts of the capital with about 59,000 inhabitants within an area of 100 km². These two communities were chosen to ensure breadth in size and location of communities in a Norwegian setting. Both communities expressed commitments to policies promoting eHealth, user involvement, and collaborative practices [51].

Recruitment and participant inclusion
Participants in the current study were recruited among 29 service users participating in a mixed methods study about the use of ReConnect among service users in mental health care including collaboration with their health providers [51]. Inclusion criteria for service users in the mixed methods study were: over 18 years of age, had received mental health services for at least 6 months prior to inclusion, and had expectations of needing services at least 6 months forward. Internet access with a public key solution for secure electronic identification, and at least one of their health providers willing to participate in the study. For the current study, service users in the mixed methods study were invited by the research team and/or health providers to take part in focus groups and/or individual interviews about their experiences with the use of ReConnect. For the focus groups, all of the included service users were invited to participate. For the individual interviews, we intentionally sought participants who had experience of using ReConnect, defined as having logged on >15 times. In both the focus groups and individual interview we sought range of participants in terms of age, gender, mental health problems, and types of ongoing mental health care support.

Focus groups and individual interviews
The interview guide for the focus groups consisted of questions about ReConnect relative to working relationships and recovery processes (see Additional file 1), the latter of which is of relevance for the current study. In line with the explorative nature of the study, the questions were few and open-ended in order to stimulate group dialogue [59, 60] about the role that ReConnect, including online and offline peer support, might play in their recovery processes. Participants were given the opportunity to elaborate on subjects they considered relevant and important. Prompts that could encourage openness, and elicit examples and detail were used frequently. The focus groups were conducted by the first author who is a trained registered nurse with clinical experience from the field, and the second author who was the study’s service user consultant, and who had first-hand experience of mental health problems and recovery at both primary and specialist levels of mental health care. The focus groups lasted for approximately 90 min.

The individual interviews sought to elicit more in-depth personal experiences relative to the same topics as in the focus groups, also based on semi-structured interview guides with open-ended questions (see Additional file 2). Individual interviews were conducted by the first author, with the exception of one individual interview conducted by the second author, and lasted approximately 60 min. All focus groups and individual interviews were conducted in Norwegian.

Thematic analysis
The focus groups and individual interviews were audio-recorded and transcribed verbatim. Data analysis was aided by NVivo software version 11. The data were analyzed by applying a six-phase thematic analysis for identifying, analyzing and reporting patterns within the data [63]. The main goal during the analysis was to inductively sort the material into overarching themes and subthemes across the entire data set, guided by the research question [63]. The first author led the analysis process, involving the other authors in identifying, discussing and resolving potential differences in coding and interpretive practices (e.g., detail, level of abstraction). This facilitated multiple perspectives in the process of interpreting the data. In the first phase, the first author familiarized herself with the data, noted initial ideas, and assigned and discussed preliminary descriptive codes. In the second phase, relevant extracts of the data (i.e. part or all of a sentence, or a small paragraph about one particular subject identified in the data related to the research question) were systematically identified and entered into NVivo nodes (codes) across the entire data set. The third phase consisted of collating related codes into preliminary themes and gathering all data relevant to each potential theme. In the fourth phase, the themes were reviewed and adjusted relative to overlaps or inconsistencies both to the coded extracts and the entire data set. With the goal of generating clear definitions and names for each theme, the fifth phase refined the wording of each theme and the overall story of the analysis. Finally, in the sixth phase the authors produced the report by selecting vivid and compelling quotes to use in a final analysis relating back to the research question. These phases are described sequentially, but in practice, they were conducted as a
After finalizing the report, the third author, a native northern American who is fluent in Norwegian, translated the selected quotes to English. To assess the validity of translations, as well as to backtrack to the dataset when context was needed to ensure that the translation captured the quotes’ meaning, the original quotes were kept alongside the translations [64].

Applying elements of participatory approaches [54–56], participants were invited to give feedback on tentative written and oral summaries of the data through secure messaging, in ReConnect-cafés, or in the individual interviews. The project also conducted a workshop with the aim of eliciting service users’ reflections about the preliminary findings of the focus groups interviews. This not only facilitated the participants’ contribution to understanding and validating the data, but it also facilitated sharing ideas about how to use ReConnect relative to their recovery process in the remaining participation period. Because of this process, experiences on how ReConnect facilitated friendship among the participants was underlined, inspiring the researchers to highlight this as an independent theme.

Ethics
The study was approved by the Regional Committees for Medical and Health Research Ethics in Norway and the Privacy Protection Committees at the participating sites. Participants signed an online consent form with information about the study which was repeated verbally at the time of the focus groups and individual interviews. Participants consented to use ReConnect exclusively for non-emergency purposes, and to use ordinary channels for acute needs. Participants were given information about security procedures and recommendations for ensuring privacy including how to safeguard anonymity and confidentiality in the forum. Additionally, the participants were registered under a self-selected pseudonym to preserve anonymity. Also, the participants were asked to safeguard confidentiality about information gained at focus groups and in the forum as well as in the ReConnect-cafés. Participants were regularly reminded of the actions they needed to take if they wanted to remain anonymous (i.e. refrain from sharing detailed personal information about oneself in one setting which could lead other participants to discovering one’s identity in another setting).

Additional efforts were made to foster trust and safety among participants, largely by following ethical guidelines for recovery-oriented approaches in mental health care [65]. For example, whether the participants met either online or offline, the research team focused on experiences related to personal recovery topics such as connectedness and empowerment [10] as they related to their uses of ReConnect. When participants themselves raised sensitive issues, whether they were relevant to the research or not, they were heard and acknowledged while at the same time efforts were made to find positive perspectives on what was shared. Regardless of the content expressed by a participant in the forum or in the ReConnect-cafés, the service user consultant found something honest and positive to acknowledge (e.g. I think you are brave to be dealing with this; I admire how you can write so simply about something so difficult; I love your sense of humor). Never once was there a need to censor the forum.

Results
The participants
A total of 14 female service users from both primary and specialist levels of mental health care participated in 3 focus groups and 10 individual interviews. Eleven service users participated in the focus groups (range 2–6 participants), while 10 service users participated in the individual interviews. Seven of the service users participated in both focus groups and individual interviews, while seven service users participated either in the focus groups or in the individual interviews.

The service users were females from 22 to 67 years of age, and reported various mental health diagnoses (see Table 1).

The thematic analysis generated two main themes that described experiences of combined peer support groups: (1) balancing anonymity and openness; (2) enabling connectedness. The themes and their four subthemes are presented below.

Balancing anonymity and openness
The combined access to peer support groups online and offline gave rise to the first main theme which highlights participants’ descriptions of transitioning between different levels of anonymity and degrees of self-disclosure.

Dilemmas of anonymity and confidentiality
Both the positive and negative aspects of online anonymity in the forum were described by participants as having implications for their face-to-face interactions in the ReConnect-cafés. They reported gradual transitions between different degrees of anonymity in the two formats: from total anonymity online, to revealing online one’s local community, to meeting face-to-face, to making one’s online identity known to peers face-to-face.
Table 1 Characteristics of participants in the focus groups and individual interviews

<table>
<thead>
<tr>
<th>Characteristics</th>
<th>Focus groups (N = 11)</th>
<th>Individual interviews (N = 10)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td>n (%)</td>
<td>n (%)</td>
</tr>
<tr>
<td>Age (years), median (range)</td>
<td>45 (22–63)</td>
<td>47 (24–67)</td>
</tr>
<tr>
<td>Gender</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Female</td>
<td>11 (100)</td>
<td>10 (100)</td>
</tr>
<tr>
<td>Male</td>
<td>0 (0)</td>
<td>0 (0)</td>
</tr>
<tr>
<td>Site</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Large community (59,000 inhabitants)</td>
<td>6 (55)</td>
<td>6 (60)</td>
</tr>
<tr>
<td>Small community (5700 inhabitants)</td>
<td>5 (45)</td>
<td>4 (40)</td>
</tr>
<tr>
<td>Primary care level</td>
<td>5 (45)</td>
<td>6 (60)</td>
</tr>
<tr>
<td>Specialist care level</td>
<td>4 (37)</td>
<td>3 (30)</td>
</tr>
<tr>
<td>Both levels</td>
<td>2 (18)</td>
<td>1 (10)</td>
</tr>
<tr>
<td>Diagnosis</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Depression</td>
<td>6 (55)</td>
<td>7 (70)</td>
</tr>
<tr>
<td>Bipolar disorder</td>
<td>2 (18)</td>
<td></td>
</tr>
<tr>
<td>Generalized anxiety</td>
<td>2 (18)</td>
<td>1 (10)</td>
</tr>
<tr>
<td>Posttraumatic stress disorder</td>
<td>2 (18)</td>
<td>3 (30)</td>
</tr>
<tr>
<td>Schizophrenia</td>
<td>1 (9)</td>
<td>1 (10)</td>
</tr>
<tr>
<td>Schizoaffective disorder</td>
<td>1 (9)</td>
<td>1 (10)</td>
</tr>
<tr>
<td>Phobic anxiety</td>
<td>1 (9)</td>
<td>1 (10)</td>
</tr>
<tr>
<td>Panic anxiety</td>
<td>1 (9)</td>
<td>3 (30)</td>
</tr>
<tr>
<td>Drug addiction</td>
<td>1 (10)</td>
<td></td>
</tr>
<tr>
<td>Mania</td>
<td>1 (10)</td>
<td></td>
</tr>
<tr>
<td>Others</td>
<td>2 (18)</td>
<td>3 (30)</td>
</tr>
<tr>
<td>Number of diagnoses, median (range)</td>
<td>1 (1–5)</td>
<td>1 (1–7)</td>
</tr>
</tbody>
</table>

For some, anonymity in the online forum made it easier to share sensitive and personal issues in difficult times. In response to the interviewer's question about the high activity observed in the forum, one responded thus:

*It has to do with the anonymity [...]. It's often easier to get things across when you're sitting and writing compared to when you're sitting and talking, and you know it's safe. No one other than us [forum participants] that can see it. It's really nice [...]. And you know that if you meet one of the girls at the mall, then they don't know it's you. [Individual interview]*

For others, anonymous communication was also described as difficult and impersonal, representing a barrier to openness and sharing in the online forum. One participant described:

*I feel like I'm sitting and talking to ... I don't know who. You sort of talk out into the air. Then the response comes from the air. You don't know who they are. If feels so unbelievably impersonal. [Focus group]*

The participants’ widely varying experiences of anonymity appeared to be reflected in shared dilemmas about how to maintain the benefits, while minimizing the challenges of combining the formats. Concerns with maintaining confidentiality, a concern also emphasized by the research team, seemed to complicate paths towards resolving the dilemmas, especially when participants had become acquainted through the ReConnect-cafés. Handling confidentiality gave cause concern for some, especially when participants had become acquainted through the ReConnect-cafés. Concern about protecting each other's identity led some to avoid revealing things in the forum that they had learned from face-to-face-meetings so as not to compromise anonymity online. Not knowing each other's identity made online communication feel unimportant or superfluous. On the other hand, knowing each other's identity could also represent a barrier for sharing delicate issues online e.g. about difficult group dynamics experienced at ReConnect-cafés. Also, sharing seemingly innocent information online (e.g. today's weather) gave cause for concern that identifying information could be pieced together when meeting face-to-face. Moreover, not knowing each other’s forum identities made it reportedly awkward to initiate conversations about topics discussed online when meeting face-to-face. As a way of resolving these challenges, being able to share their identities without compromising others’ identities were advocated. Another suggestion was to offer closed threads for those who had revealed their identities. Underlining these discussions was an expressed acknowledgement of differing needs and preferences, and the difficulties in finding a single solution that would be ideal for everyone. Having different options that allowed each to explore one’s own needs and preferences, and adapt one’s use over time, emerged as something participants valued.

**Towards self-disclosure and openness**

Participants described differing degrees of self-disclosure and that openness about their own situation evolved during the study period, partly due to inspiration from peers, as well as discovering their own preferences. The service user consultant’s role of providing honest and positive responses (see “Ethics”) was reflected in participants’ descriptions of the groups as safe and supportive, and thus also an arena where one could be open.

Openness was initiated by online interactions that were followed up in face-to-face café encounters. Feelings of shame and abnormality were reportedly eased when reading about others with similar experiences, thus
facilitating greater self-disclosure and openness online but also offline. One of the participants elaborated:

Those who have come in [to the online forum] see that they get support through what others write, and maybe they feel like ... "Hey, I'm not the only one with problems." And dare to write more about themselves. Not so afraid of being identified. They see that it's not something to be ashamed of. That it's not something to be silent about. ...And I think it is wonderful. [Individual interview]

Shared stories from participants inspired others to share personal issues in both formats. However, several noted that building the capacity and sense of security required for sharing could take time. Being open about personal issues in the ReConnect-cafés was said to be difficult, but since their need for personal sharing and support was met online, it was not considered a problem. One said:

Everyone who's there [in the online forum] understands that all of us struggle with a lot of stuff. And we understand that it can be difficult to talk about it. When we meet at a regular ReConnect-café, it's not like we talk about that kind of thing. But when we have the forum to chat in, then we can come a little closer to the core. [Individual interview]

Another reported that the experience of trust among the participants allowed more openness regardless of format:

It [access to combined online and offline peer support] has led to me getting many good friends... It means that I can be open when I meet them [at ReConnect-cafés]. I feel like I have people I can trust. People I can talk with, also when I meet them other places. And in a totally different way than before. [Individual interview]

Overall, participants appreciated having the opportunity to share sensitive and personal issues, both in the forum and in the ReConnect-cafés. They described hopes of maintaining the quality of self-disclosure and openness in their future relationships. One of the participants elaborated:

We've agreed that after the project ends, outside of ReConnect, that we can still meet and share. Not just pleasantries, but we can also share when we aren't doing so well. At the same time, we agree that if you don't have a good day, it's OK to say that today isn't a good day to meet. We've talked a lot about that. Then we can also have days when we need to be able to share troubles, and that the others can say supportive things... You can fish a bit... "Are you OK today?" And then the other can say: "No, I didn't sleep well last night"... and then we can talk a little about that. [Individual interview]

Enabling connectedness

The second main theme encompasses participants' descriptions of how combining online and offline peer support groups facilitated connections with one another and the local community, but also posed some challenges.

New friendships

The friendships that evolved through online and offline peer support was described by participants in both communities as one of the most important benefits of participation in the study—"it meant the world to me [...] probably the best help I could get", one said. Several expanded their networks, and for one who had recently moved to the community, ReConnect enabled making her first friends there. Participants described that the friendships developed through ReConnect were unique due to common experiences of having mental health problems. They characterized these friendships with words such as recognition, understanding, fellowship and joy, and that they were qualitatively different from other relationships. One participant described her friendships through ReConnect with these words:

I do have friends outside [of ReConnect], but it's good that ReConnect is there. Because there I have people who understand me and what I struggle with. People who understand how it is if I relapse... It's not certain that those (other) friends of mine understand me as well as those in ReConnect do, because they haven't experienced the same things that I have. I feel that I've got very close friends now thanks to ReConnect. Both those I met there [in the online forum], but also in daily life. [Individual interview]

Meeting each other face-to-face in ReConnect-cafés was described as important in facilitating a sense of kinship and empathy among the participants, as illustrated by the following quote:

Everyone has been able to tell their story. And you've seen the face of the person sitting there talking. So, you get to know each other in that way as well. And then you think, "Wow, that person struggles with a lot of the same problems that I have". So, you feel really...together. It makes me feel really warm in my heart. [Individual interview]
The service user consultant in the study was described as essential for the participants’ positive experiences of combining online forum and the ReConnect-cafés. In a conversation about how the ReConnect-cafés were experienced as safe and useful, one participant noted that online facilitation by the service user consultant played a positive role:

The forum is what is important for me. Lillian [the service user consultant] gives us exercises, things we can reflect over before [meeting in] the cafés. I don't think [the cafés] would be the same without the forum. [Individual interview]

Engagement in the local community
Participants described that the study contributed to increased engagement in the local community. In addition to study-initiated activities such as ReConnect-cafés, participants also initiated gatherings themselves, such as a spontaneously meeting for coffee, or more planned involvement together in activities organized in the local community. The online forum in ReConnect was used to exchange reminders and encourage participation in the various local activities. Some reported planning to volunteer to help refugees in the community, while one started organizing support for establishing a local service user organization so people with mental health problems can meet. The process of becoming more active together with people in the community was described by one of the participants as a process of “getting out of hibernation” and by another as “things that contribute to happiness”.

While the face-to-face ReConnect cafés in the local community were described as supportive and caring, both practical and emotional barriers to participation were also reported. One described feeling insecure about participating at gatherings with people she did not know, while another pointed to practical obstacles for attending such as dependency on others for transport. Another described discomfort even though she had been to ReConnect-cafés before and that she knew other people that would be attending at local activities. One reluctant participant reported giving into peers’ persistent solicitations about attending at a local arrangement:

I've got such a nervous stomach that just going to the store, or filling the car with gas, I had to run to the WC probably 4–5 times before I got out the door. [...] And I told you that I wasn't sure I'd get there because I dreaded it so much. Dreaded and dreaded and dreaded. But then you [another participant] sent the message yesterday, and then I thought, yeah, I'll just say yes. [Focus group]

The persistent peer referred to in the above quote acknowledged that she herself might have strengths that could be important in helping others, something she had not considered before. Similarly, participants also reported meeting before ReConnect-cafés, to help each other build courage to attend at ReConnect-cafés. The blended online and offline peer support was referred to as vital in lowering the threshold for engaging in meaningful daily activities as described above (e.g. volunteering for refugees, meeting for coffee), and even the process of getting back to work. The mutual support and “cheering for each other” was described as invaluable. As one participant who succeeded in returning to part-time work explained:

It's sort of been alpha and omega for me. Having that support at my back [online and offline peer support], that's what made it possible for me to get back into my life as well as I have now. It's been nothing but positive. [Individual interview]

The face-to-face relationships that evolved during the course of the study were valued to the extent that many started working on ideas for projects that could help them stay in touch. One idea was to get together to run a property that someone had donated to the municipality for mental health purposes, as illustrated by one participant:

We don't want to lose each other. So we've been discussing what we can do. We've got lots of ideas. Someone [in community] donated a piece of land with a pond for a park; it just has to be used for something to do with mental health. So those who struggle with their mental health can meet, be there, bring their families and that sort of thing. [Individual interview]

This quote is also illustrative of many other similar expressions of reciprocal support, acknowledgement of ones strengths to others, and a collectiveness that together signaled a sense of empowerment.

Discussion
Principal findings
To our knowledge this is the first study to systematically explore the benefits and challenges of combining online and offline peer support groups as an adjunct to ongoing mental health care for people with long-term mental health problems. Prevalent throughout the findings were known features of online peer support such as recognition, acknowledgement and self-disclosure [40]. It appeared important that both formats were peer moderated and offered outside the context of mental health services and its health providers [33, 66]. In addition, the
analysis identified a number of benefits and challenges of combined online and offline peer support. The participants’ descriptions of their experiences touched on two main themes: (1) balancing anonymity and openness, and (2) enabling connectedness. Three of the four subthemes mainly describe benefits, while challenges were less clearly stated and cut across the subthemes. Identified challenges were linked to transitioning between anonymity and being known in-person, how to protect confidentiality, and issues related to participation in offline peer support groups in the local community.

The first theme, balancing anonymity and openness, indicates that the open and non-judgmental atmosphere found in anonymous peer support groups [38, 39] may be enhanced by combining online and offline peer support groups. This is illustrated by how self-disclosure and openness in one format could migrate and be reinforced toward greater openness about personal issues in the other format. The mutual self-disclosure in an anonymous and secure online environment appeared to reduce a sense of stigma and fostered the trust necessary to muster courage to self-disclose when also meeting face-to-face. As others have found, some find it easier to express one’s ‘true-self’ online [41], and being accepted for who one is online can reduce fear of acceptance offline. Both group formats appeared to facilitate the sharing of personal stories that participants characterized as instilling hope and inspiration, reflecting support for an essential dimension in personal recovery [10]. The combination of formats opened for more opportunities for discovering, for example, that helping another participant get to the ReConnect-café revealed one’s own strengths which could in itself create hope and inspiration, also referred to as helper therapy [18]. In sum, these experiences can be said to promote an identity as “normal”, rather than as a “service user” or “patient”, which many find pacifying and/or stigmatizing [10]. In addition, the service user consultant served as a role model for participants when moderating the peer support groups, while she identified and praised respective peers’ personal strengths. Discovering that one is not alone, or not so different from others, and that others value one’s viewpoints is also inherent to peer support regardless of format.

The second theme, enabling connectedness, comprises of participants’ descriptions of new friendships and engagement in the local community, reflecting a vital dimension in recovery [10]. The analysis revealed a sense of belonging or connectedness among participants that could have been achieved through one of the formats alone, but that appeared strengthened or amplified by combining them. The very nature of peer support groups, whether offered online or offline, fostered connectedness through the common frame of reference that members now shared. In line with recovery-oriented approaches [67], this common frame of reference was not a specific diagnosis, or formal status as patient, but rather common life experiences related to striving towards fulfilling lives regardless of what symptoms they may have. This second theme, enabling connectedness, suggests that combining online and offline peer support groups opened new paths towards friendships and engagement in the local community. While knowledge about how online peer support relationships migrate to in-person meetings is scarce [46], the combination of formats appeared to facilitate friendships and in-person engagement in the local community that were otherwise unlikely. Our findings suggest that the risk of online formats undermining face-to-face relationships, particularly for those with social anxiety [36], might be counteracted by explicitly using the online format to facilitate in-person encounters. Connectedness through the combined formats was reportedly instrumental in regaining employment for one participant, suggesting at least a potential for the types of tangible improvements that others have found elusive [46] are possible. One study suggest that online peer support offers help for specific questions such as housing and employment [33]. The participants’ reciprocal focus upon personal strengths and what they could do collectively, as well as their engagement in community activities or the job market appeared to be empowering and meaningful, both of which are predictors of recovery-oriented outcomes [68].

The findings in this study also reflect challenges related to combining the peer support formats. Participants’ commitments to preserving confidentiality, while at the same time weighing exposure of one’s own identity online, was reported as challenging and, at least initially, a deterrent to self-disclosure. Online anonymity was also described as being less genuine and hence limiting a sense of connection and community. A recent study also reflects on similar dilemmas related to solely online support groups [33]. In this study anonymity is described as a “double-edged sword” (p. 7) in the sense that it allowed the users to let more out, but at the same time they had to be careful about who knows who you are in the offline world. For those who value online formats because of their social anxiety, or concern with stigma, such considerations may well deter participation in the offline group [36]. Participants who resolved these types of dilemmas did so differently, but in ways that appeared to be in line with their own values and comfort zones. As others have found [69], participants appreciated having options (e.g. the choice of participating online, offline or in both group formats) that can be explored and tailored to their personal preferences.
Limitations
A major limitation to this study was our failure to recruit male participants, despite considerable efforts to do so. In the mixed methods study only two of 29 service users were men, none of whom volunteered for this study. Possible explanations include the fact that all of the research team members were women and that apparent gender differences in e.g. online social activity [70] may have been at play. This study analyzed participant experiences with peer support groups that were part of a larger, complex intervention that included multiple online resources as an adjunct to ongoing care. We do not know if these experiences would have been different if the two group formats had been offered without the broader intervention components. We did not explicitly explore how the different settings might have influenced the findings, which might have added value to the study. The methods used in this study do not allow for immediate generalization of the findings, but the insights may have relevance to other contexts. The authors were involved in designing ReConnect as well as in generating data about its use. Efforts to reduce potential biases included inviting participants to give critical feedback both about the portal and our tentative data analyses, and by collecting the data over time. The inclusion criteria for the individual interviews (having logged on ReConnect > 15 times) favors those who actively used ReConnect, thus excluding those who may have neglected to use ReConnect due to negative attitudes or experiences.

Implications for practice and future research
The findings in this current study indicate that combined formats for peer support groups enabled options that can represent a valuable resource in recovery-oriented services. In efforts to leverage the respective strengths of peer support groups in combined online and offline formats, some issues are worth attention.

The service user consultant played a critical role in this study not only as a peer in line with international recommendations [71] and research [37], but also as moderator and facilitator for both formats. Although we did not study this role explicitly, some observations are worth considering for future research and practice. Having a well-versed basis in recovery-oriented principles helped guide the moderator in responding to participants in positive and ethically sound ways. The relational continuity of having the same moderator for both formats, appeared to foster a sense of familiarity and security among participants, as well as positive synergies between the formats, in ways that may have been less likely had the formats had separate moderators. This issue is worth more attention in future studies. Guidelines that help participants anticipate challenges, e.g. in transitioning between levels of anonymity and in safeguarding confidentiality, need to be developed to support both moderators and participants. Combining offline and online peer support groups in conjunction to ongoing mental health care moderated by a service user consultant versed in recovery might be particularly well suited for engaging service users in the implementation of recovery-oriented care [51].

Although the forum functioned well in this study despite a small number of participants, a greater number of participants would be preferable in future practice and research. This may ensure a minimum level of activity necessary for maintaining interest in revisiting on a regular basis, as well as help ensure a breadth of experiences and perspectives. Also, a higher number of participants may protect the anonymity and confidentiality of individuals from the same community. Future research needs to address ways of facilitating the translation of social relationships in online and offline peer support formats into health-promoting relationships within local communities. Research into gender differences in recruitment and participation in peer support groups for both formats is also needed. Reasons for non-use should also be addressed in future research.

Conclusion
This study suggests that online and offline peer support groups as an adjunct to ongoing mental health care for people with long-term mental health problems are complementary and that combining the two formats can facilitate social relationships, promote friendship and community connectedness. These benefits appeared to stem from the service users’ opportunity to choose between, or combine the two formats, according to their individual needs, values and comfort zones. The challenges identified were linked to transitions from anonymity to becoming identified, protection of confidentiality, and participation in offline peer support groups in the local community. Moderation of peer support by a trained service user consultant is suggested essential in both formats. Combining online formats that offer users round-the-clock access regardless of location, anonymity and a non-judgmental atmosphere, while at the same time fostering local, in-person community ties, appears to be a promising concept for facilitating recovery-oriented care and is worthy of continued research.

Supplementary information
Supplementary information accompanies this paper at https://doi.org/10.1186/s13034-020-00370-4.

Additional file 1. Interview guide for focus groups.
Additional file 2. Interview guide for individual interviews.
Acknowledgements

The authors are immeasurably grateful to all community participants whose experiences and insights gave life to this work. We also thank Cornelia Ruland for her valuable advice and reflection throughout the process.

Authors’ contributions

All of the authors conceived the idea and design for this paper. MS generated all of the data except one individual interview. LSE participated in all of the focus groups and conducted one of the individual interviews. MS analyzed the data with contributions from DG and LSE. MS constructed the first draft of the paper, while DG gave substantive contributions to the structure and arguments made within the paper. All authors read and approved the final manuscript.

Funding

This project was funded by the Norwegian Research Council, Grant # 213014.

Availability of data and materials

The datasets generated and analyzed during the current study are not publicly available due to considerations of confidentiality. Anonymized data (Norwegian only) are available from the corresponding author on reasonable request.

Ethics approval and consent to participate

The study was approved by the Regional Committees for Medical and Health Research Ethics in Norway and the Privacy Protection Committees at the participating sites. Informed consent was obtained from all individual participants included in the study.

Consent for publication

Not applicable.

Competing interests

The authors declare that they have no competing interests.

Author details

1 Department of Digital Health Research, Division of Medicine, Oslo University Hospital, Oslo, Norway. 2 Department of Mental Health Research and Development, Division of Mental Health and Addiction, Vestre Viken Hospital Trust, Drammen, Norway. 3 Norwegian Center for eHealth Research, University Hospital of North-Norway, Tromsø, Norway.

Received: 11 February 2020 Accepted: 16 May 2020

Published online: 29 May 2020

References

52. Strand M, Gammon D, Ruland CM. Transitions from biomedical to recovery-oriented practices in mental health: a scoping review to explore the experiences of service users and health providers. JMIR Ment Health. 2017;4(4):e54.

Publisher’s Note
Springer Nature remains neutral with regard to jurisdictional claims in published maps and institutional affiliations.
APPENDIX

Appendix I: Forespørsel om deltagelse – samtykke, brukere
Appendix II: Forespørsel om deltagelse – samtykke, hjelpere
Appendix III: Interview guide focus groups
Appendix IV: Interview guide individual and dyad interviews
Appendix V: List of errata
Samtykke, bruker - ReConnect

Forespørsel om deltakelse i forskningsprosjektet

ReConnect – nettbasert støtteverktøy for bedring og samarbeid


Bakgrunn og hensikt:

Dette er en forespørsel til deg om å delta i en forskningsstudie. Formålet med studien er å utvikle, prøve ut og evaluere et nettbasert støtteverktøy for brukere innen psykiske helsestjenester. I tillegg ønsker vi kunnskap om hvordan et slikt verktøy kan innvirke på brukernes helse og bruk av helsestjenesten. Verktøyet kalles ReConnect.

Hensikten med ReConnect er å støtte brukere av psykiske helsestjenester til egen bedringsprosess, i samarbeid med helsepersonell. ReConnect bygger på tidligere forskning om slike verktøy i tillegg til kunnskap om oppfølgning og behandling av psykiske helseutfordringer.


Om du velger å delta i forskningsprosjektet, vil du få nødvendig opplysning og støtte i bruk av verktøyet.

Hvem kan delta?

Deltakelse forutsetter at:
- Du mottar tjenester innen psykisk helse fra
  - Askerven kommune og/eller Askerven distriktspsykiatrisk senter (DSPS), Psykiatrisk avdeling Blakstad, Vestre Viken HF eller
  - Balsfjord kommune og/eller Psykiatrisk senter for Troms og omegn (PSTO), Universitetssykehuset Nord-Norge.
- Du har mottatt psykiske helsestjenester i minst seks måneder forut for deltagelse i studien og det er rimelig å anta at oppfølgningen værder i ytterligere seks måneder frem i tid.
- En eller flere helsepersonell ønsker å delta sammen med deg i en utrøkstidspørde på seks måneder og at dere samarbeider om bruk av ReConnect.
- Ut 18 år og har samtykkekompetanse.
- Har tilgang til datamaskin som er tilgjengelig internet.
- Har BankID, Bypass eller Commifides - for sikker innlogging.

Hva innebærer deltakelse i studien?

Deltakelse innebærer å:
- Fyll ut et skjema som personalia som navn, fødselsnummer, adresse, mobilnummer og e-post for å bli registrert som bruker av verktøyet.
- Får tilpasset opplæring i bruk av verktøyet før du tar det i bruk, ca 3 timer.
- Kan få støtte og veiledning til bruk av verktøyet underveis i hele prosjektperioden.
- Tillater prosjektet å logge din bruk av ReConnect. Vi har ikke tilgang til innholdsområdet i det som skrives, men vårt datasystem vil registre aktivitet om hvordan verktøyet brukes (antall loggåpninger, helleriale av verktøyet som er blitt tatt i bruk og lignende).

Deltakelse innebærer at du kan bli invitert til, men selv velger hva du vil delta på:
- Intenju om dine erfaringer med bruk av ReConnect, inntil 2-3 ganger i løpet av utrøkstidspørden. Intenjuene foregår hovedsakelig i grupper med andre deltagerende brukere. Intenjuen med deg og helsepersonell som deltar sammen deg eller individuelle interjuu, vurderes ved behov. Intenjuene leses av en forsker og en medforsker/erfaringsskonsulent. Varighetene av interjuene vil være inntil 1,5 timer og vi tar pause etter behov. Intenjuene ønskes tatt opp på lydbilde, noe du kan reservere deg mot.
- Samlingene vil være opprett 2 timer og vi tar pause etter behov. Det er ønskelig å ta opp samlingene på lydbilde, noe du kan reservere deg mot.

Mulige fordelar og ulemper

Gjennom deltakelse i prosjektet har du mulighet til å påvirke utvikling og bruk av ReConnect. Dine erfaringer bidrar til viktig kunnskap om hvordan nettbaserte støtteverktøy kan tillpasses slik at det kan være til hjelp for mennesker med psykiske helseplager. Prosjektet medfører ingen kostnader for deg. En ulempe ved deltagelse er at verktøyet er nytt og kan ha feil og mangler. Verktøyet kan også bli forbedret underveis i utviklingen, og slike endringer vil kunne oppleves som frustrerende.

Hva skjer med informasjon om deg?

Universitetssykehuset Nord-Norge HF (UNN) er prosjekter, forskningsansvarlig og databehandlingsansvarlig for alle data samlet i prosjektet. Data lagres, bearbeides og behandles ved forskningsserver på UNN. UNN har inngått følgende samarbeid om innhenting og lagring av data i prosjektet:
- Databehandlerutløp med Check Warehouse AS om elektronisk innhenting og lagring av sensitive helsedata (daglig drift av ReConnect) til forskningsformå.
- Databehandlerutløp med tjenester for sensitive data (TSV) ved USIT, Universitetet i Oslo (UIO) for elektronisk innhenting og lagring av sensitive helsedata.

https://nettskjema.uio.no/user/form/preview.html?id=57015
All informasjon om deg slettes etter at studien er avsluttet, senest 31.12.2027. All informasjon er beskyttet gjennom strenge datatekniske sikkerhetstilltak hos alle som innhenter, lagrer og behandler data i denne studien. Alle opplysninger vil bli behandlet uten navn og fødselsnummer eller andre direkte gjenkjennde opplysninger. En kodeliste knytter opplysninger om deg til ditt navn. Denne kodelisten oppbevares kun for å kunne ha mulighet til å kvalitetssikre at riktig informasjon blir lagret om riktig person. Det er kun forskere (men ikke erfaringsskonsulent/medforsker) knyttet til prosjektet som har adgang til kodelisten.

Ingen informasjon vil kunne tilbakeføres til deg som person når resultater fra studien skal presenteres. Du har rett til innsyn i hva som er registrert av opplysninger om deg og til å kreve at eventuelle feil korrigeres. Som deltaker har du rett til å få informasjon om resultater av studien.

Forskerne vil ha tilgang til hva du skriver i ennefeltet i meldinger til helsepersonell. De vil også ha tilgang til det du skriver i forum, hvor du anonymt kan diskutere teamer som f.eks. bruk av verktøy, samarbeid med helsepersonell og egen bedringsprosess. Forskerne vil også få oversikt over hyppighet og hvilke deler av støtteverktøyet som brukes. Forøvrig vil ikke forskerne ha tilgang til noe annet av innholdet av det du skriver i støtteverktøyet eller de svar du får fra helsepersonell. IT-teknologier som bistår ved datasupport, vil ha tilgang til din ReConnect-side, men vil kun gå inn her ved tekniske problemer.


Ivaretagelse av sikkerhet

Studien oppfyller myndighetskrav vedrørende sikkerhet for nettbaserte støtteverktøy og elektronisk kommunikasjon. Det er viktig at du selv også gjør tiltak for å sikre at uvedkommende ikke får tilgang til hva du skriver i ReConnect. Viktige tiltak er å logge seg av ReConnect-siden når du forlater datamaskinen. Det er også viktig ikke å dele påloggingsinformasjon for sikker innlogging.

Frevillig deltakelse

Det er frivillig å delta i studien. Om du velger å delta eller ikke, vil ikke påvirke hva du mottar av oppfølging og behandling. Dersom du ønsker å delta, krysser du av for samtykke nedenfor. Om du sier ja til å delta, kan du senere når som helst trekke tilbake ditt samtykke uten å oppgi grunn. Du kan i så fall også be om at opplysningene vi allerede har fått fra deg blir slettet, så fremt opplysningene ikke er blitt gjort del av en felles analyse og dermed blitt utilgjengelig for spore tilbake til deg.

Om studien

Studien er godkjent av Regional komité for medisinsk og helsefaglig forskning (REK) og personvernombudet ved Universitetssykehuset Nord-Norge HF (UNN).

Øvrige partnere i prosjektet er Senter for pasientmedvirkning og samhandlingsforskning ved Oslo Universitetssykehus, kommunene Askøy og Balsfjord, Psykiatrisk senter for Tromsø om omegn ved UNN samt Askøy DPS, Psykiatrisk avdeling Blakstad og Forsknings- og utviklingsavdelingen og Læring- og mestringssenteret i Vestre Viken HF. Studien er finansiert av Extrastiftelsen, Norges Forskningsråd, Helse Nord RHF og Vestre Viken HF.

Kontakt: Om du har spørsmål om studien eller om du senere ønsker å trekke deg fra studien, kan du kontakte prosjektleder Deede Gammon mobilnummer 909 77 963 eller stipendiat Monica Strand mobilnummer 934 552 01.

Samtykke om deltakelse i forskningsprosjektet: *

Jeg har lest informasjon om prosjektet ReConnect – nettstøtte for bedring og samarbeid og ønsker å delta i studien:

- Ja
- Nei

Navn: *

Telefonnummer: *

Kontaktinformasjonen gir forskerne mulighet for å kontakte deg ved evt. behov.
Samtykke, helsepersonell - ReConnect

Forespørsel til helsepersonell om deltakelse i forskningsprosjektet

ReConnect – nettbasert støtteverktøy for bedring og samarbeid

Vennligst les gjennom informasjonen og kryss av om du samtykker til deltagelse nederst på siden.

Bakgrunn og hensikt:
Dette er en forespørsel til deg om å delta i en forskningsstudie. Formålet med studien er å utvikle, prøve ut og evaluere et nettbasert støtteverktøy for brukere innen psykiske helsetjenester. I tillegg ønsker vi kunnskap om hvordan et slikt verktøy kan innvirke på brukernes helse og bruk av helsetjenesten. Verktøyet kalles ReConnect.

Hensikten med ReConnect er å støtte brukere av psykiske helsetjenester til mestring i hverdagen, i samhandling med helsepersonell. Verktøyet baserer seg på gode erfaringer fra tidligere verktøy for fysisk helse (se www.communicaretools.org) og bygger på etablerte tilnæringer til psykiske helseplager.


Vi vil samarbeide med brukere og helsepersonell som ønsker å prøve ut verktøyet og bidra med sine meninger og erfaringer. På denne måten søker vi å videreutvikle et verktøy som oppleves både nyttig og enkelt i bruk.

Hvem kan delta?
Deltakelse forutsatt at du:
- Er ansatt innen psykiske helsetjenester i Åsker kommune, Åsker distriktspsykiatrisk senter (DPS), Psykiatrisk avdeling Blakstad, Vestre Viken HF, Balsfjord kommune eller Psykiatrisk senter Troms og omegn (PSTO), Universitetssykehuset Nord-Norge HF.
- Er villig til å prøve ut ReConnect i en periode på seks måneder
- Deltar sammen med bruker(e) over 18 år som har mottatt psykiske helsetjenester i minst seks måneder forut for deltakelse i studien og det er rimelig å anta at oppfølgingen varer i ytterligere seks måneder frem i tid.
- Har godkjenning fra nærmeste leder om deltakelse.
- Har tilgang til en datamaskin som er tilklopt internett.
- har BankID, Bypass eller Comffides - for sikker innlogging.

Hva innebærer deltakelse i studien?
Deltakelse innebærer at du:
- Sammen med bruker og evt. andre helsepersonell er enige om å prøve ut verktøyet i minimum seks måneder.
- Fyller ut et skjema med personaal som navn, fødselsnummer, mobilnummer, e-post og tjenestetest for å bli registrert som bruker av verktøyet.
- Fyller ut et skjema om bakgrunnsinformasjon som kjønn, alder, profesjon, arbeidsføring og internettbruk.
- Får opplysninger om bruk av verktøyet før du tar det i bruk, ca 3 timer.
- Tiltaler prosjektet å loggføre din bruk av ReConnect. Vi har ikke tilgang til innholdet i det som skrivs, men vårt datasystem vil registrere aktiviteten om hvordan verktøyet brukes (antall pålogginger, hvilke deler av verktøyet som er blitt tatt i bruk og lignende).

Deltakelse innebærer at du kan bli overrasket med hvilken du vil delta på:

Mulige fordel og ulemper
Gjennom deltakelse i studien har du mulighet til å påvirke utvikling og bruk av ReConnect. Dine erfaringer bidrar til viktig kunnskap om hvordan internettstøtte kan tilpasses slik at det kan være til hjelp for mennesker med psykiske helseplager. Prosjektet medfører ingen kostnader for deg. En ulempe ved deltakelse er at verktøyet ikke er ferdig og kan ha feil og mangler, noe som kan oppleves negativt.

Hva skjer med informasjon om deg?
Universitetet Nord-Norge HF (UNN) er prosjekterer, forskningsansvarlig og databehandlingsansvarlig for alle data som sammels inn i prosjektet. Data lagres og behandles ved forskningsserver på UNN.

UNN har inngått folgende samarbeid om innhenting og lagring av data i prosjektet:
- Databehandleravtale med Check Ware AS om elektronisk innhenting og lagring av sensitive helsedata (daglig drift av ReConnect) til forskningsformål.
- Databehandleravtale med tjenester for sensitive data (TSD) ved USIT, Universitetet i Oslo (UiO) for elektronisk innhenting og lagring av sensitive helsedata (alle skjemar som fylles ut) til forskningsformål.

https://nettskjema.uio.no/user/form/preview.html?tid=57018
All informasjon om deg slettes etter at studien er avsluttet, senest 31.12.2027. All informasjon er beskyttet gjennom strenge datatekniske sikkerhetstiltak hos de som innhenter, lagrer og behandler data i dette prosjektet. Alle opplysninger vil bli behandlet uten navn og fødselsnummer eller andre direkte gjenkjennende opplysninger. En kodeliste knytter opplysninger om deg til ditt navn. Denne kodelisten oppbevares kun for å kunne ha mulighet til å kvalitetssikre at riktig informasjon blir lagret om riktig person. Det er kun forskere knyttet til prosjektet som har adgang til kodelisten.

Ingen informasjon vil kunne tilbakeføres til deg som person når resultater fra studien skal presenteres. Du har rett til innsyn i hva som er registrert av opplysninger om deg og til å kreve at eventuelle feil korrigeres. Som deltaker har du rett til å få informasjon om resultater av studien.

Forskerne vil få oversikt over hyppighet og hvilke deler av verktøyet du bruker. De vil også ha tilgang til emnefeltet i meldingene som sendes i støtteverktøyet, men de vil ikke ha tilgang til øvrig innhold i det du skriver. IT-teknologier som bistår ved datasupport, vil ha tilgang til din ReConnect-side, men vil kun gå inn her ved tekniske problemer.

Ivaretagelse av sikkerhet

Studien oppfyller myndighetskrav vedrørende sikkerhet for nettbaserte støtteverktøy og elektronisk kommunikasjon. Det er viktig at du selv også gjør tiltak for å sikre at uvedkommende ikke får tilgang til hva du skriver i ReConnect. Viktige tiltak er å logge seg av ReConnect-siden når du forlater datamaskinen. Det er også viktig ikke å dele påloggingsinformasjon for sikker innlogging.

Frivillig deltagelse

Det er frivillig å delta i studien. Dersom du ønsker å delta, krysser du av for samtykke nedenfor. Om du sier ja til å delta, kan du senere når som helst trekke tilbake ditt samtykke uten å oppgi grunn. Du kan i så fall også be om at de opplysninger vi allerede har fått fra deg blir slettet så fremt opplysningene ikke er blitt gjort del av en felles analyse og dermed blitt umulig å spare tilbake til deg.

Om du velger å delta i studien, vil en kopi av dette informasjonsskrivet være tilgjengelig på din ReConnect-side.

Om studien

Studien er godkjent av Regional komite for medisinsk og helsefaglig forskning (REK) og personvernombudet ved Universitetet i Nord-Norge HF (UNN).

Øvrige partnere i prosjektet er Senter for pasientmedvirkning og samhandlingsforskning ved Oslo universitetssykehus, kommunene Askja og Balsfjord, Nasjonalt senter for samhandling og telemedisin ved UNN, Psykiatrisk senter for Tromsø og omegn ved UNN, Lærings- og mestringssenteret, Psykiatrisk avdeling Blaakastad og Forsknings- og utviklingsavdelingen i Vestre Viken HF.

Studien er finansiert av Extrastiftelsen, Norges Forskningsråd, Helse Nord RHF og Vestre Viken HF.

Kontakt: Om du har spørsmål om studien eller om du senere ønsker å trekke deg fra studien, kan du kontakte prosjektleder Deede Gammon mobilnummer 909 77 963 eller stipendiat Monica Strand mobilnummer 934 552 01.

Samtykke for behandlere om deltakelse i forskningsprosjektet: *

Jeg har lest informasjon om prosjektet ReConnect – nettstøtte for bedring og samarbeid og ønsker å delta i studien:

- Ja
- Nei

Navn: *

Telefonnummer: *

Kontaktinformasjonen gir forskerne mulighet for å kontakte deg ved evt. behov.
Appendix III Interview guide focus groups

1) Let us please start with a short presentation of ourselves – first name, how you have used ReConnect and for how long.

2) Could you please say a word or two about your reasons for, and expectations towards, participation in the study?

3) Please describe how you have used ReConnect – both on your own and when you have used it together with your health provider/service user. What works well, and what would you like to be different? Examples are helpful.

4) For health providers only: Service users have reported both in the focus groups, forum and cafés, that they would like their health providers to take more initiative in using ReConnect. For example, to work with the different modules together during and between consultations. What thoughts do you have about this?

5) Do you have any thoughts about how ReConnect could be beneficial for yourself, and for your collaboration with your health provider/service user, during the rest of the study period?

6) Do you have any questions or comments before we try to summarize what we have talked about?
Appendix IV Interview guide individual and dyad interviews

Individual interviews

1) Could you please start with a short presentation of yourself – first name, how you have used ReConnect and for how long?
2) If you participated in a previous focus group, has anything changed with regard to how you use ReConnect since then? How?
3) Can you tell more about how you and your health provider/service user collaborate by using ReConnect? What works well and not so well? Examples are helpful.
4) Please describe more about how you use ReConnect on your own. What works well and not so well? Examples are helpful.
5) For service users only: Please describe how you have experienced participating in the discussion forum and/or the ReConnect-café.
6) Has ReConnect played a role for you personally, and in how you work with your health provider/service user (both positive and negative)? Please describe.
7) If ReConnect were to become an ordinary service after the project, what would be important in order for you to benefit from it?
8) Before we end, do you have any questions or comments on what we have talked about today?

Interview with dyad

1) Could you please start with a short presentation of yourselves – first names, and how you have used ReConnect together and for how long.
2) Can you tell more about how you collaborate by using ReConnect? What works well and not so well? Examples are helpful.
3) Has ReConnect played a role for you personally, and in how you work together (both positive and negative)? Please describe.
4) If ReConnect were to become an ordinary service beyond the project, what would be important in order for you to benefit from it?
5) Before we end, do you have any questions or comments on what we have talked about today?
Appendix V List of errata

Name of candidate: Monica Strand

Title: The role of Internet-based interventions for recovery-oriented mental health care. Experiences of use from the perspectives of service users and health providers.

<table>
<thead>
<tr>
<th>Page</th>
<th>Line</th>
<th>Original text</th>
<th>Corrected text</th>
</tr>
</thead>
<tbody>
<tr>
<td>viii</td>
<td>4</td>
<td>digitale løsninger tjenester</td>
<td>digitale løsninger</td>
</tr>
<tr>
<td>ix</td>
<td>3</td>
<td>spesialist-helsetjenesten</td>
<td>spesialisthelsetjenesten</td>
</tr>
<tr>
<td>xi</td>
<td>5</td>
<td>BMC health services research</td>
<td>BMC Health Services Research</td>
</tr>
<tr>
<td>xi</td>
<td>10-11</td>
<td>Journal of medical Internet research</td>
<td>Journal of Medical Internet Research</td>
</tr>
<tr>
<td>xi</td>
<td>21</td>
<td>Submitted, under review</td>
<td>International Journal of Mental Health Systems, 14, 1-12.</td>
</tr>
<tr>
<td>23</td>
<td>25</td>
<td>right inclusion</td>
<td>right to inclusion</td>
</tr>
<tr>
<td>23</td>
<td>27</td>
<td>i.e., housing</td>
<td>i.e., housing</td>
</tr>
<tr>
<td>25</td>
<td>15-16</td>
<td>Slade et al., 2014; Shadmi et al., 2017</td>
<td>Slade et al., 2014; Shadmi et al., 2017</td>
</tr>
<tr>
<td>26</td>
<td>10</td>
<td>such as such as</td>
<td>such as</td>
</tr>
<tr>
<td>32</td>
<td>9-10</td>
<td>senior scientist, a psychologist and senior scientist at</td>
<td>senior scientist, a psychologist at</td>
</tr>
<tr>
<td>32</td>
<td>12</td>
<td>e-health</td>
<td>eHealth</td>
</tr>
<tr>
<td>33</td>
<td>13</td>
<td>service user</td>
<td>service user consultant</td>
</tr>
<tr>
<td>36</td>
<td>5</td>
<td>at least 6 months</td>
<td>at least six months</td>
</tr>
<tr>
<td>37</td>
<td>6</td>
<td>the entire 6-month</td>
<td>the entire six month</td>
</tr>
<tr>
<td>37</td>
<td>26</td>
<td>patient</td>
<td>patient</td>
</tr>
<tr>
<td>38</td>
<td>13</td>
<td>fourteen</td>
<td>14</td>
</tr>
<tr>
<td>39</td>
<td>12</td>
<td>e-health</td>
<td>eHealth</td>
</tr>
<tr>
<td>40</td>
<td>14</td>
<td>the investigator</td>
<td>the research team</td>
</tr>
<tr>
<td>55</td>
<td>6</td>
<td>more than 6 months</td>
<td>more than six months</td>
</tr>
<tr>
<td>59</td>
<td>27-28</td>
<td>characteristics of non-helpful professionals..</td>
<td>characteristics of non-helpful professionals.</td>
</tr>
<tr>
<td>61</td>
<td>12</td>
<td>in this project</td>
<td>in this dissertation</td>
</tr>
<tr>
<td>66</td>
<td>26</td>
<td>in this dissertation project.</td>
<td>in this dissertation.</td>
</tr>
<tr>
<td>68</td>
<td>1</td>
<td>e-health in general</td>
<td>eHealth in general</td>
</tr>
<tr>
<td>69</td>
<td>7</td>
<td>reported 6 months</td>
<td>reported six months</td>
</tr>
<tr>
<td>70</td>
<td>2</td>
<td>e-health</td>
<td>eHealth</td>
</tr>
<tr>
<td>72</td>
<td>6</td>
<td>2016) 2016)</td>
<td>2016)</td>
</tr>
<tr>
<td>97</td>
<td>9</td>
<td>Submitted, under review.</td>
<td>Int J Ment Health Syst, 14, 1-12.</td>
</tr>
</tbody>
</table>