



# Video communication as a tool for psychosocial support for people recovering from severe mental disorder: social workers' experiences

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**Background:** This paper focuses on a Danish social tele-rehabilitation project, which uses video technologies to support mentally ill citizens in their recovery process in their homes. The aim of the study is to explore how social workers experience using video communication as part of a tele-social-rehabilitation program aimed at citizens discharged from a psychiatric hospital and lives in their own home with mental disorders recovering from a mental illness.

**Methods:** The research strategy in this study is the case study method. Data collection techniques for the case study were based on triangulation of several data sources, such as analysis of relevant documents, participant observation and qualitative interviews with clients and with social workers assisting citizens in their recovery process.

**Results:** The social workers stated that video technology gave them the opportunity to make changes in their working practices with the citizens. They also felt they were better able to meet the citizens' need to improve their everyday lives. The social workers found that video technology was less intrusive than a physical visit to the citizen's home. The technology helps to promote the client's recovery process.

**Conclusions:** The social workers who used video technology in a tele-social-rehabilitation program experienced a community of practice, changes in their work routine and changes in the way they carried out social rehabilitation for clients in their recovery following discharge from mental hospital.

**Keywords:** Video communication; social worker; mental illness; qualitative study; case study

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## Introduction

Each year, 27% of Europe's population are affected by various forms of mental disease (1). The challenge for the national health systems lies in ensuring proper care and treatment for the millions of Europeans suffering from a mental illness. It is critical to reduce the burden of mental illness in order to reach those patients or citizens in greatest need of services (2). One way to meet this need may be

to apply technology-based mental health interventions such as computer-based cognitive behavioral therapy, online self-help or telepsychiatry. Telepsychiatry (3,4) has become widespread and is now used on a regular basis in the United States, Australia and New Zealand (5-7). In Europe, telepsychiatry is still at an early stage, with predominantly pilot studies. A review of the literature shows that research has focused mainly on telepsychiatry

involving treatment and therapy (4,8-10). One study has shown that users accept telepsychiatry because it increases their quality of life across a broad range of demographic groups and diagnoses. Moreover, telepsychiatry has proven to be cost effective (9). However, while we are discovering the benefits of telepsychiatry treatment, we know very little of what happens to patients or citizens after discharge from psychiatric hospital and returning to everyday life and using video communication in the recovery process as a part of a social-rehabilitation program in collaboration with their social workers. This phase is defined as a recovery phase. Anthony (11) defines recovery as *“a deeply personal, unique process of changing one’s attitudes, values, feelings, goals, skills and/or roles. It is a way of living a satisfying, hopeful, and contributing life even with limitations caused by the illness. Recovery involves the development of new meaning and purpose in one’s life as one grows beyond the catastrophic effects of mental illness”* (11).

This project focuses on tele-social-psychiatry, defined as the use of information and communication technologies (ICT) by citizens with mental illness/disorder in their rehabilitation and contact with their assigned social worker. A review of the literature in this area has identified a single review over the past 10 years describing technology-based interventions in social work practice (12). The review concludes that technology-based interventions are associated with improved mental health outcomes, but that further research is still needed within this area.

We have identified only one study (13) that focuses on social tele-rehabilitation within a municipality framework.

This paper focuses on a Danish social tele-rehabilitation project called the Video Assist in Esbjerg Municipality, which uses video technologies to support mentally ill citizens in their recovery process. The aim of this study is to explore how social workers experience using video communication as part of a tele-social-rehabilitation program aimed at citizens with mental disorders recovering from a mental illness.

## Methods

The overall research strategy in this study is the case study method (14). Data collection techniques for the case study were based on triangulation of several data sources, such as analysis of relevant documents, participant observation and qualitative interviews with clients and with social workers assisting citizens in their recovery process. Data collection will be elaborated in the following sections.

## Recruitment of participants

Inclusion criteria for enrolling participants in the tele-social rehabilitation program were:

- ❖ Persons diagnosed according to the WHO’s ICD-10 criteria for depression, bipolar disorder (F30-39) or schizophrenia and paranoia (F20-29);
- ❖ Persons with reduced mental capacity who do not have the ability to take care of their own needs and interests and who receive personal assistance in everyday life according to the Danish Act on Social Services;
- ❖ Persons must be over 18 years and be a legal person;
- ❖ Have had an admission to a mental health institution within the past year prior to enrollment in the project;
- ❖ Live in their own home (with family member or alone);
- ❖ Have a feeling of anxiety or are uncomfortable while living in their own home;
- ❖ Receives two or more home visits per week from the staff of social workers.

The exclusion criteria for enrolling participants in the project were:

- ❖ Physical disabilities;
- ❖ Mental retardation (ICD-10; F70-F79).

## Ethical approval

The local Ethics Committee was contacted to determine whether the study had to be reported to the Ethics Committee, but since the study did not use a new intervention, it did not have to be reported. The study was performed according to the Declaration of Helsinki. All participants gave their written informed consent.

## Theoretical framework

The theoretical framework consists of theories from the fields of recovery theory and learning theory.

Recovery concerns the ability to recover from a mental disorder and to overcome the social consequences of a serious mental illness. We take our point of departure in recovery as a social recovery process measured relative to the person’s social functioning (11,13) in terms of work, relations with family and friends, and social workers.

Learning theory, described in the work of Wenger *et al.* (15) has been applied in order to highlight the emergence

of ‘communities of practice’. Wenger *et al.* (15) defined ‘communities of practice’ as groups of people who share a concern or passion for something they do and who interact on a regular basis. The strategy here was to investigate how the video technologies used in the Video Assist project affected the collaboration and interaction between the citizens with mental illness and the social workers.

### ***The Tele-Social-Rehabilitation Program***

Based on user-driven innovation (16) with citizens, social workers, a private firm and researchers, we developed a tele-social-rehabilitation program. The purpose of the program was to support the individual citizen in returning to a normal life again following discharge from a mental health facility. On discharge, an individualized rehabilitation plan was formulated based on the client’s level of functioning and needs. Each individual had access to a secure video conferencing system—called the Video Assist—by which they could communicate with their social workers on a 24/7 basis. The Video Assist serves the recovering mentally ill person in two ways: (I) as practical help, calls to and from staff help them to make and keep appointments, pay bills, take medicine and other everyday tasks; (II) clients could also use the Video Assist if they find themselves in an acute situation of experiencing anxiety, where they might be hearing voices, having hallucinations or suicidal thoughts. Here they could obtain immediate video assistance from a social worker and talk with them so that they calm down. Clients and social workers can choose between different types of video communication technologies: (I) a PC with a touch screen that can be used only for video communications, which is preferred by those with few IT skills; (II) a traditional laptop PC, where video software has been installed; or (III) use of a dedicated mobile phone line. Compared to traditional video software, where one can conduct conversations with many users simultaneously, the setup in the Video Assist was that the participant could only phone someone from a team of social workers. The video solution software used in the pilot test was provided by a Danish firm.

### ***Recruitment process***

Participants were recruited to the study on the basis of referral by their social workers in the period from August 2013 to August 2016. The client was first asked if he or she might be interested in participating in the study. The

client was then informed about the project verbally and in a follow-up letter. If the client was still interested in participating, he or she was invited to visit one of Esbjerg municipality’s social service centers in order to observe, try out and ask questions regarding the use of the video solution. After this visit, participants were asked if they would like to participate in the full study. The participant then signed a letter of consent. During the recruitment process, one person decided to withdraw, referring to his paranoia. For the other participants, a date was agreed upon for when and where the video equipment would be installed in the client’s home.

In total, there are fifty-five participants, of which females (n=30) average age 35.3 (range, 22–67) years, and males (n=25), average age 38.9 (range, 19–67) years. The 55 adults suffered from diseases such as depression, bipolar disorder, schizophrenia and paranoia. They each received a video-based communication system installed in their homes for use in communicating with their social worker. Each participant has used the system for a period of 6–18 months. Some participants withdrew after six months, while one remained in the study for 18 months.

### ***Data collection***

A triangulation of data collection techniques has been used in order to provide multiple sources of evidence (14) in the case study. The data consisted of documents, participant-observation and interviews with the participating social workers. These are discussed below.

### ***Documents***

Documents were collected in order to obtain knowledge and understanding of the context for the mentally ill citizen’s situation and their current rehabilitation program. In addition, the researchers have studied policies, planning documents and brochures from the municipality’s rehabilitation center.

### ***Participant-observation***

The participant observation (17) had three aims: (I) to gain a basic understanding into the lives of the citizens with mental illness and how they used the video technology in collaboration/interaction with their social workers; (II) to observe how the social workers used the video communication in collaboration/interaction with the

citizens; (III) to observe how the social workers adapted the video technology as part of their work routines. Participant-observation took place in the homes of the citizens when they were having video meetings with their social worker, at the offices of the social workers or while driving with social workers while they had video conversations with their clients. A total of 76 hours of participant-observation was carried out. The observations have been documented in a text file. The first author carried out the observations.

### *Interviews with social workers*

The aims of interviews (18) with social workers were to explore: (I) how the social workers experienced using the video technology in the process of supporting citizens in their recovery process and participation in the tele-social rehabilitation program; (II) how the social workers adapted the technology in their work routines.

The social workers were selected for interviews based upon the following criteria:

- ❖ Employed in Esbjerg Municipality;
- ❖ Participated in education on how to use video technology;
- ❖ Had to be involved in the daily work by using video technology to assist in the recovery of mentally ill citizens.

The social workers were invited to participate in interviews one year after the implementation of the video technology and recruited over a period of six months. The interviews were conducted upon semi-structured interviews and lasted between 45 and 65 minutes. The interviews were recorded on a digital recorder with prior informed consent given by the social workers. The digital files were all transcribed by a research assistant.

### *Data analysis*

Using NVivo 10, the transcribed data has been analyzed in steps inspired by Kvale and Brinkmann (18). The data were analyzed using a combination of deductive and inductive strategies. Based on key definitions and concepts (*in vitro* nodes) from the theoretical framework and from interviews (*in vivo* nodes), the code tree was formed. When formulating the concepts from the respondents, qualitative interviews were studied and coded based on initial impression. Based on these first impressions, the concepts of respondents in the qualitative interviews were examined and coded. The next step consisted of a rough encoding

and a refined coding based on reviews of the coded data and adjustments. The key themes and patterns were then identified, focusing on those most relevant to categories of experiences connected to tele-social rehabilitation of citizens. This final phase included a detailed interpretation in light of the participants' own understandings. In this phase, the interviews were analyzed in order to identify the participants' experiences and perceptions. The coding and the analysis were carried out based on the preliminary analysis and discussed between the authors.

## **Results**

We interviewed 3 managers and 7 social workers. The managers had 11.7 mean years of experience and the social workers was 8.4 years.

*Table 1* gives an overview of themes and findings from analysis of the qualitative analysis of data. There are quotes to illustrate the findings as well.

In the next section, we discuss the findings in the wider context.

## **Discussion**

The aim of this study has been to explore how social workers experience using video communication as part of a tele-social-rehabilitation program aimed at citizens with mental disorders.

The findings indicate that the social workers formed a community of practice among themselves despite the changes in their work routines and in the way, they carried out social rehabilitation for citizens discharged from psychiatric hospital.

The social workers experienced a community of practice with the citizens suffering from mentally illness and participating in the tele-social-rehabilitation program. The social workers experienced that the video technologies helped them to facilitate citizens in carrying out everyday life activities under the supervision of the social workers. The social workers stated that they had developed a community of practice with the citizens. We have not been able to identify studies with the same results.

The social workers found that the video technology gave them the chance to make changes in their work practice with the citizens. This finding indicates that they felt better able to meet the needs of the citizens for improving their everyday life skills. The social workers found that the video technology was less intrusive than a physical visit to the

**Table 1** Findings from interviews with social workers

| Themes   | Findings  | Quotes from social workers  |
|--|---|---|
| Community of practice                            | Mutual learning between staff and citizens  | <i>I regularly discuss with my colleagues the different experiences I obtain in cooperating with the citizens through video conversations. It has been an instructive experience for me</i>   |
|  | Social workers act like technology stewards in implementing the video solution  | <i>We are three institutions, where the night shift staff share experiences through video systems. We have been a group of colleagues who took the opportunity to work with the video system. We share what we have learned with other interested colleagues</i>  |
| Changes in work practice                         | The technology makes it possible for the staff to meet the citizens' need for a sense of security and enhancement of skills | <i>We have become more focused and use video calls as an educational method. Citizens find that it creates peace of mind for them</i>   |
|  | Visits via video are less intrusive than a physical visit at the citizen's home   | <i>The citizens tell us that it is nice that we do not have to have of our routine (home) visit in the evening. A virtual evening visit is sufficient for some citizens</i>   |
|  | Psychosocial support and training via distance communication  | <i>We use the video system proactively in the educational work. We had a citizen who did not dare go outside her front door. We therefore made an agreement with the citizen over the video so that she could recognize us later. We agreed to come and pick her up at the front door, and the next day 5 meters from the door, etc. Today she goes by bus without problems</i> |
| Change in the way of doing social rehabilitation | Problematic combining physical visits and virtual visits during the working day   | <i>It may be difficult to find the time and make the appointments fit into physical and virtual visits during the working day</i>   |
|  | Video technology helps to promote the client's recovery process   | <i>Video communication complements the educational effort. Citizens are co-players and want to use the video system. It promotes the citizens' recovery and they become more self-reliant. We follow up on appointments, and at the same time we can observe how they are doing. It gives us peace of mind</i>  |
|  | Some clients are more open to having a video conversation than a home visit   | <i>I find that some of the citizens are more open in their conversations over the video system than when I'm home with them</i>   |
|  | Reduces client's sense of isolation   | <i>The fast online access from citizens' homes to us helps reduce their sense of isolation. It can help tackle their anxiety</i>  |

citizen's home. We have not been able to identify other studies with this result. A major issue for this study was the degree to which the social workers could integrate the new ICT into their everyday work routines. A review from 2011 by Perron and Stearns (19) concluded that social workers need to be open and accept the ongoing development of ICT. In another study, Mishna *et al.* (7) explored how social workers use ICT in their work with citizens. Mishna *et al.* (7) found that the citizens forced them to adopt the new technologies. The ICT was like a 'Pandoras box'—that opened up new possibilities to connect and collaborate with each other. However, the ICT technologies also created an ethical grey zone concerning privacy. These latter issues have not been identified in the Video Assist project.

The video technology gave the social workers a new way of collaborating with the citizens and facilitating their social rehabilitation. The social workers were able to reduce the isolation of the citizens and create a more intimate relationship with those citizens who would otherwise not allow any social workers into their home. A review of technology-based intervention in social work practice (12) found that technology has been a useful tool to reach out to vulnerable citizens, a finding which is replicated in our study.

A study by de Wit *et al.* (13) conclude that technology is able to reduce the dependency of citizens and their relationship with their social workers regarding everyday life activities. This study supports the findings of the Video

Assist project.

The results from this study have similarities with findings from telepsychiatry conducted in the U.S. (4,9), while no similar findings have been identified for studies within a European context (12).

The limitation of the study is that it is a pilot study carried out with a limited number of persons (n=55). Future research is needed to assess the long-term effects of tele-social rehabilitation in order to measure the long-term effects of such an intervention.

In conclusion, the social workers who used video technology in a tele-social-rehabilitation program experienced a community of practice, changes in their work routine and changes in the way they carried out social rehabilitation for clients in their recovery following discharge from mental hospital. Video technology can be a valuable tool in aiding the recovery of discharged mental patients. With the help of mobile technologies, they can be eased back into everyday life. Future research is needed on the long-term impact of this technology in determining the longitudinal effects of the work practice of the social workers.

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### Footnote

*Conflicts of Interest:* The authors have no conflicts of interest to declare.

*Ethical Statement:* The authors are accountable for all aspects of the work in ensuring that questions related to the accuracy or integrity of any part of the work are appropriately investigated and resolved. The local Ethics Committee was contacted to determine whether the study had to be reported to the Ethics Committee, but since the study did not use a new intervention, it did not have to be reported. The study was performed according to the

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