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# A strengths-based case management service for people with serious mental illness in Israel: A randomized controlled trial

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ABSTRACT

Case management services for people with serious mental illness are generally found to be effective, but controlled and randomized studies assessing such services are scarce. The aim of the present study was to assess the effectiveness of a new strengths-based case management (SBCM) service in Israel, using a randomized controlled approach. The sample consisted of 1276 individuals with serious mental illness, who consume psychiatric rehabilitation services (PRS) in the community, and were randomly assigned to receive or not to receive the SBCM service in addition to treatment-as-usual PRS. Quality of life, goal setting and attainment, unmet needs, self-efficacy, interpersonal relationships, symptom severity, and service utilization were assessed by clients at onset and after 20 months. Results show that SBCM participants improved in self-efficacy, unmet needs, and general quality of life, and set more goals than the control group. SBCM participants also consumed fewer services at follow-up. Results suggest that SBCM services are effective in helping individuals with serious mental illness set personal goals and use PRS in a better and more focused manner.



## 1. Introduction

Case management for people with serious mental illness can be described as a "process or method for insuring that the consumer is provided needed services in a coordinated, effective and efficient manner" (Pratt et al., 2007). The need for case management services originally arose out of the process of deinstitutionalization, through which the locus of treatment for people with serious mental illness moved from the hospital to the community (Mueser et al., 1998; Pratt et al., 2007). This required them to take a more active role in the selection and coordination of mental health services, a role with which they often need assistance (Mueser et al., 1998; Pratt et al., 2007). Case management services are designed to assess needs, create and carry out a service plan to help meet those needs, and monitor progress, in order to improve community participation and avoid relapse and re-hospitalization (Backus et al., 2008; Pratt et al., 2007).

The use of case management services has been steadily associated with a host of positive outcomes. These include reduced relapse rates, reduced hospital time, increased use of community services, reduced symptomatology, improved functioning, and improved quality of life (Bedell et al., 2000; Burns et al., 2007; Chamberlain and Rapp, 1991; Dietrich et al., 2011; Mueser et al., 1998; O'Brien et al., 2012; Ziguras and Stuart, 2000). A number of case management models currently exist, including broker case management (Intagliata, 1982), the clinical model (Kanter, 2010), the rehabilitation model (Anthony et al., 1993), assertive community treatment, sometimes referred to as intensive case management (Dietrich et al., 2011), and the strengths model for case management (Rapp and Goscha, 2006, 2008).

The latter model, unlike the common deficit-oriented, illness-focused approach, takes a goal-oriented approach that focuses on the clients' strengths and emphasizes their capacity for growth and recovery (Fukui et al., 2012; Rapp and Goscha, 2006, 2008). The strengths model emphasizes the importance of using and acquiring naturally existing resources in the community, and perceives the client as the one to lead his/her rehabilitation process (Rapp and Goscha, 2006, 2008). This reflects the growing emphasis in mental health on recovery from serious mental illness (Anthony, 1993; Deegan, 1988), which, in the rehabilitation process, translates into focusing on personal goals and the assessment

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of functioning and skills training (Anthony et al., 1988; Mueser et al., 1998).

Recent evidence suggests that people who receive strengths-based case management (SBCM) are hospitalized less frequently, are more independent in daily life, achieve more goals, function better in the competitive employment and educational domains, report greater social support, and have overall better physical and mental health (Barry et al., 2003; Fukui et al., 2012; Rapp and Goscha, 2006). A recent meta-analysis reviewing five experimental and quasi-experimental studies concluded that SBCM might not be better than other models of service delivery in improving quality of life or functioning (Ibrahim et al., 2014), but since none of the studies reviewed have monitored fidelity, those results are not unequivocally comparable to previous evidence (e.g., Fukui et al., 2012). Nonetheless, more sound additional evidence is required regarding the effects of SBCM.

In Israel, a milestone in the development of psychiatric rehabilitation services was the approval of the Rehabilitation of the Mentally Disabled in the Community Law (RMD) in the year 2000. The legislation specified a set of psychiatric rehabilitation services to be provided to people with serious mental illness. Those services aim to address key needs, and include case management services to facilitate optimal use of the services to meet those needs. While services in areas such as employment, education, or housing were rapidly developed and extensively consumed (Aviram et al., 2012; Roe et al., 2010a), the development and implementation of a systematic case management service lagged behind, even though the need for such a service was previously recommended (Aviram, 2010; Aviram et al., 2012; Roe et al., 2010a).

In response, a recent effort has been directed to develop and implement a strengths-based case management (SBCM) service, inspired by the strengths model (Rapp and Goscha, 2006, 2008) and the values of recovery (Anthony, 1993), and adapted to the administrative and cultural background of mental health services in Israel. The aim of this service is to promote active engagement of clients both in defining and attaining goals, mainly through the selection and support of recovery-relevant community resources (see Box 1 in the methods section for a full description).

Studies assessing the effectiveness of case management services, and particularly strengths-based case management, typically use non-experimental or quasi-experimental methods (Fukui et al., 2012; Ibrahim et al., 2014), and there is a need for more methodologically sound studies. The current study uses a randomized and controlled design to assess the impact of the SBCM service on client outcomes, including goal setting and attainment, quality of life, interpersonal relationships, unmet needs, self-efficacy, symptom severity, and service utilization.

## 2. Methods

### 2.1. Setting and design

The current study was conducted in the central and northern regions of Israel between January 2008 and March 2012. The study was performed by comparing individuals receiving the newly established strengths-based case management service in addition to regular psychiatric rehabilitation services (PRS) (SBCM-PRS—the experimental group) and individuals receiving only treatment-as-usual PRS (TAU-PRS—the control group). Clients' self-assessments were collected at two time-points, 20 months apart. In addition, demographic (including diagnosis) and service utilization data were obtained from the Rehabilitation Mental Health Registry (RMHR), a national registry which includes data from all individuals who have received mental health rehabilitation services from the Israeli Ministry of Health.

### 2.2. Procedure and randomization

Participants were randomly sampled from the overall pool of all individuals either receiving or about to receive PRS. Eligibility for PRS, being a public system of services, is having being diagnosed with a mental illness, which has caused at least a 40% psychiatric disability as determined by a medical committee, composed of a psychiatrist and recognized by the National Insurance regulations. Previous research has estimated that the majority (86%) of those who met these criteria had a diagnosis of a psychotic-related disorder (Struch et al., 2011). Additional inclusion criteria were fluency in Hebrew and sufficient competence to provide informed consent. Exclusion criteria were current hospitalization or currently being acutely psychotic or violent.

We continually received, from the Ministry of Health, a complete and updated (anonymous) list of individuals, who were current or future clients of PRS in the northern and central regions of Israel (n = ~10,000). When informed of new openings in the SBCM service, we regularly drew potential participants from this list in a randomized way, i.e., recruitment was ongoing. To obtain a first randomization procedure, we applied a simple computer-based randomization algorithm, which produced a list of potential participants, and ensured representative sampling by using a criteria matrix of age and service dependence (i.e., the level of care the person requires). Potential participants were then approached by Ministry of Health workers, and if they agreed to participate in the study and met the inclusion criteria, were approached by the research team interviewers (within about a week), who administered the questionnaires, and recorded information for follow-up purposes. Participants provided informed consent to participate in the study and to authorize the use of data from the RMHR. The interviews were conducted in person, took 20–40 min each, and the participants were paid NIS 35 ($10) for their time. After filling in the baseline questionnaire, individuals were randomly assigned (by coin-tossing) to the SBCM-PRS experimental group or the PRS only treatment-as-usual (TAU-PRS) control group. A follow-up assessment was performed approximately 20 months after baseline. Design and procedure for the current study were approved by the ethics committee of the University of Haifa.

### 2.3. Participants

Fig. 1 describes the flow of the 1545 clients participating in the various stages of the study, of whom 59.8% (n = 919) were male. The mean age was 39.2 (SD = 12.6). Of all participants, 917 (64.5%) were single, 260 (18.3%) were divorced or separated, 221 (15.5%) were married. 838 participants (66. %) were born in Israel. Most participants (n = 878, 65.7%) had 12 years or less of education. Most (n = 774, 81%) were diagnosed with schizophrenia, or schizoaffective or other psychotic disorders. Univariate analysis, comparing participants who completed the follow-up assessment with those who dropped out across main demographic and outcome measures at baseline, showed no difference between the groups. (Analysis is available from the corresponding author.) Additionally, a chi-square analysis comparing the number of dropouts across groups showed that control group participants dropped out of the study significantly more than experimental group participants, namely 58.4% of those who dropped out were in the control group ($\chi^2_{(1)} = 14.84$; $p < .001$).

### 2.4. Description of the strengths-based case management (SBCM) intervention and treatment as usual (TAU)

The objectives, core values, and guidelines of the strengths-based case management service (SBCM) assessed in the current study, as well as details regarding the role of the case manager, training and supervision, and adaptations to the cultural and organizational context in Israel, are described in Box 1. The psychiatric rehabilitation services (PRS), i.e., the treatment-as-usual intervention, are described in Box 2, including objectives, guiding principles, and rehabilitation domains.

### 2.5. Fidelity assessment of the SBCM intervention

A fidelity assessment scale was created to assess adherence of the SBCM service to key components of the present model. The scale includes five domains: (1) the rehabilitation alliance, (2) advocating, mediating, and collaborating with various elements in the client's life, (3) use of rehabilitation tools, (4) the rehabilitation plan, and (5) the case manager's work environment. Each domain includes 4–6 items rated on a 5-point Likert scale (1 − 5). Ratings are performed by clients, case managers, the service's director, and professional consultants. For the purpose of this study, ratings were calculated by compounding and averaging a sample of 50 clients, 27 case managers, the service's director and local professional consultants, as well as a sample of 30 case files. Results showed the SBCM service to have satisfactory fidelity (M = 3.69, SD = 0.5). Two domains, the rehabilitation alliance, and the case manager's work environment rated 4.4 and 4.3, respectively. No domain rated less than 3.05 (Roe et al., 2013).

### 2.6. Measures

The study tools were constructed after a comprehensive review of existing instruments assessing outcomes in mental health services. Different items were extracted from a variety of tools to provide a multidimensional outcome assessment of the current service, and were then adapted to the local cultural and organizational context. Both extraction of items and adaptation were performed by a committee of different stakeholders, including clients. A pilot study was initiated to