Schizophrenia Research xxx (2016) xxx–xxx

Contents lists available at ScienceDirect

Schizophrenia Research

journal homepage: www.elsevier.com/locate/schres

Supported employment and education in comprehensive, integrated care for first episode psychosis: Effects on work, school, and disability income

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ARTICLE INFO

Article history:
Received 3 May 2016
Received in revised form 13 September 2016
Accepted 16 September 2016
Available online xxxx

Keywords:
Schizophrenia
Supported employment and education
First episode psychosis treatment

ABSTRACT

Background: Participation in work and school are central objectives for first episode psychosis (FEP) programs, but evidence effectiveness has been mixed in studies not focused exclusively on supported employment and education (SEE). Requirements for current motivation to work or go to school limit the generalizability of such studies.

Methods: FEP participants ($N = 404$) at thirty-four community treatment clinics participated in a cluster randomized trial that compared usual Community Care (CC) to NAVIGATE, a comprehensive, team-based treatment program that included ≥5 h of SEE services per week, , grounded in many of the principles of the Individual Placement and Support model of supported employment combined with supported education services. All study participants were offered SEE regardless of their initial interest in work or school. Monthly assessments over 24 months recorded days of employment and attendance at school, days of participation in SEE, and both employment and public support income (including disability income). General Estimation Equation models were used to compare CC and NAVIGATE on work and school participation, employment and public support income, and the mediating effect of receiving ≥3 SEE visits on these outcomes.

Results: NAVIGATE treatment was associated with a greater increase in participation in work or school ($p = 0.0486$) and this difference appeared to be mediated by SEE. No group differences were observed in earnings or public support payments.

Conclusion: A comprehensive, team-based FEP treatment approach was associated with greater improvement in work or school participation, and this effect appears to be mediated, in part, by participation in SEE.

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1. Introduction

Recent research suggests that specialized treatment programs for first episode psychosis (FEP) can improve clinical and functional outcomes in early phase schizophrenia (Bird et al., 2010; Craig et al., 2004; McGorry et al., 2010; Petersen et al., 2005). Two cluster-randomized trials demonstrate the generalizability of such programs to routine service settings (Kane et al., 2015a; Ruggeri et al., 2015). A major goal of specialized early intervention is rapid restoration of FEP patients' instrumental role functioning, particularly competitive employment or participation in school, with the hope that rapid engagement can improve functioning and prevent disability.

Evidence regarding the impact of early intervention programs on work and school outcomes has been mixed. The most comprehensive review (Bond et al., 2015) identified eleven early psychosis studies, including three randomized controlled trials (RCTs), that tested specific supported employment and education (SEE) interventions, largely based on the Individual Placement and Support (IPS) model (Drake et al., 2012). Meta-analysis of the three IPS studies found a cumulative employment rate of 49% among participants in SEE compared to only 29% among controls ($p < 0.0001$), and a greater differential increase in employment from baseline, of 41% among those in SEE compared to only

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http://dx.doi.org/10.1016/j.schres.2016.09.024
0920-9964/Published by Elsevier B.V.

17% among controls ($p < 0.0001$). No significant differences were observed in school participation between SEE and comparison groups.

Bond and colleagues' (Bond et al., 2015) identified only one RCT of a vocational intervention other than IPS, which also reported significant benefits in work-school involvement (Garety et al., 2006). Five other RCTs evaluated the effectiveness of FEP programs that lacked a specific vocational component. Compared to control groups, two of these programs had better work outcomes (Eack et al., 2011; Penn et al., 2011), one program had higher rates of work or school involvement (Bertelsen et al., 2008), and two programs showed no significant differences (Bechdolf et al., 2007; Fowler et al., 2009).

A more recently published RCT compared usual services to an experimental FEP program that brokered existing clinic-based services for employment support as well as educational assistance available through area colleges (Srihari et al., 2015). Participants in the experimental intervention showed a significant increase in work or school participation from baseline to one year, while work/school involvement declined for those in usual care.

An important difference among FEP studies reviewed here is that the three RCTs examining the efficacy of IPS-SEE restricted entry to persons with stated goals of obtaining employment or going to school, whereas the studies of broader interventions included all eligible participants with FEP, regardless of personal vocational or academic aspirations. Two critical questions arise from reported findings. First, what is the effectiveness of comprehensive FEP programs that incorporate an SEE component for the broader range of FEP patients, including those with no immediate specific interest in work or school? Second, to the extent that comprehensive FEP programs that include an SEE component do improve work or school outcomes, are these gains mediated by participation in SEE?

To address these questions, this study used data from a cluster randomized trial funded by the National Institute of Mental Health (NIMH): the Recovery After an Initial Schizophrenia Episode-Early Treatment Program (RAISE-ETP) study (Kane et al., 2016). RAISE-ETP compared outcomes of the comprehensive NAVIGATE care program for FEP to those of usual services (Community Care; CC). The RAISE-ETP study was an effectiveness trial conducted in routine service settings that did not require motivation for work or school as a prerequisite for admission. SEE was only one of several components of the NAVIGATE intervention. In addition, the usual community care condition also could include employment or rehabilitation services as they would be available in typical service systems in the US.

The current study contributes to previous FEP research by (1) examining whether participation in SEE mediates gains in instrumental functioning when offered in an effectiveness study as one component within a comprehensive specialty care program and is compared to usual care; (2) extending FEP outcome analyses to include employment earnings and receipt of public income supports (including payments from Social Security Disability and Supplemental Security Income programs); and (3) examining the broader relationship between receipt of public support income receipt and work-school participation.

2. Methods

The RAISE-ETP study design (Kane et al., 2015b), the clinical interventions (Mueser et al., 2015), and two-year clinical outcomes, including the CONSORT diagram of recruitment have been previously published (Kane et al., 2016). A total of 404 individuals aged 15–40 who presented for treatment for FEP and had taken antipsychotic medication for ≤6 months were enrolled between July 2010 and July 2012. Written informed consent was obtained from adult participants or from legal guardians for minors. The study was approved by the Institutional Review Board of the coordinating center and at each participating site. An NIMH Data and Safety Monitoring Board provided oversight. Thirty-four community mental health treatment centers were chosen following a national invitation and selection process and were randomized equally to provide either NAVIGATE or CC.

2.1. Intervention

2.1.1. Navigate

included four primary components: a) personalized medication management; b) family psychoeducation; c) individual, resilience-focused training (IRT) in illness self-management; and d) SEE. Weekly team meetings focusing on each service component facilitated communication and coordination between providers. NAVIGATE team members received ongoing training, on-site supervision, and external expert consultation for each intervention component. CC sites provided treatment following clinician choice and service availability. Treatment continued for up to 24 months.

2.1.2. SEE program

We assumed that many if not all FEP patients would be interested in the prospect of going to work or school (Iyer et al., 2011). Accordingly, SEE specialists met with all NAVIGATE patients to discuss how the SEE program could be helpful. For patients who were not initially interested in work or school, other interventions (especially IRT) sought to bolster motivation to work or attend school and encouraged participation in SEE, which was available at any time during the 24-month treatment period. SEE was based on principles of the IPS model (Becker and Drake, 2003; Drake et al., 2012), expanded to include school as in other FEP programs based on IPS (Killackey et al., 2008; Nuechterlein et al., 2008). Other than not requiring desire to work or attend school, SEE services were consistent with IPS; services were integrated with other clinical services of the NAVIGATE team; the focus was on competitive employment or enrollment in mainstream educational programs; emphasis was placed on rapid job search or enrollment in school commencing soon after enrollment in the program with no requirement for pre-vocational or pre-educational training; attention was given to patient preferences regarding job/school type and disclosure of psychiatric disorder; most services were provided in the community; follow-along supports were provided after job attainment or enrollment in school; and active benefits counseling was provided. Further details of the program are provided in Mueser et al. (2015).

The SEE intervention was standardized in a detailed manual (Lynde et al., 2014). Administratively, the director of the NAVIGATE team was designated as the supervisor of the SEE specialist, and weekly supervision sessions by the supervisor of the specialist were established as an expectation at the beginning of the project. Each NAVIGATE team received study funds to support at least at 5 h of SEE services per week. Using state and local resources, the availability of SEE specialists was expanded to 6–10 h per week at 9 NAVIGATE sites (52%), and to >10 h/week at 3 sites (17%).

SEE specialists participated in an initial 3-day training with their NAVIGATE team, and 7–8 other NAVIGATE teams, which was mostly devoted to breakout sessions focusing on the training of the specific interventions (e.g., SEE, IRT, etc.) supplemented by some team training. The directors of each NAVIGATE team participated in some of this SEE training. Following the initial training, twice-monthly group consultation calls were conducted with 5–7 SEE specialists per call. Program directors were also encouraged to join the calls. New specialists were trained through directed readings, individual training by the NAVIGATE director or one of the SEE specialists, shadowing other SEE specialists, participation on consultation calls, and enrollment in interactive online IPS courses. Among the 17 participating sites, 6 had IPS programs or previous IPS research projects at their agencies, and of these 4 had SEE specialists who were either part of IPS teams or had prior training in IPS.

Please cite this article as: Rosenheck, R., et al., Supported employment and education in comprehensive, integrated care for first episode psychosis: Effects on work, school, and dis..., Schizophr. Res. (2016), http://dx.doi.org/10.1016/j.schres.2016.09.024