

Results

Evaluations of Specific Additions to or Components of a Vocational Intervention

As noted in the primary text, we identified three studies that evaluated specific additions to, or individual components of, a given vocational service. One of these was an RCT that assessed the impact of adding motivational interviewing (MI) training for the clinical staff of early intervention programs that were providing IPS to young people with early-stage psychosis (40). The aims of the MI training were both to address the ambivalence and fears that staff may hold about their clients pursuing competitive employment, and equip the staff with specific MI-based strategies to implement with the young people they serve. Over the 12-month follow-up, significantly more participants served by the IPS + MI (combined intervention) teams engaged in competitive employment compared to those served by the IPS-only teams; in addition, results suggested that the combined intervention was associated with gains in formal education over the initial 6 months. The other two evaluations of “add-on” components included comparison groups but did not randomly assign participants to conditions, and thus were more limited with regard to inferring potential treatment effects. Both included young people with various psychiatric conditions who were receiving SE services. Specifically, McGahey and colleagues (41) found that participants who worked with SE staff to develop a formal plan regarding managing and disclosing personal information (e.g., psychiatric status) to potential employers were significantly more likely to achieve employment over a 6-week follow-up period compared to those who indicated a preference not to disclose any personal information to potential employers. Gervy and Kowal (42) compared the outcomes of job interviews of SE clients based on whether the job developer was present during the interview or not; of note, for this program, the job developer accompanied participants into all interviews unless requested otherwise by the participant. Results indicated that job offers were significantly more likely to occur if the job developer was present during the interview.

Treatment Effects Based on Age: Burke-Miller et al. and Bond et al.

As discussed in the primary text, Burke-Miller et al. (44), observed differential treatment effects based on the age of their participants, suggesting that youth in their late teens and early 20s (ages 18-24)

may not benefit from the employment-focused services evaluated by this study to the same degree as young adults in their mid- to late 20s (ages 25-30), at least with regard to securing competitive work. Notably, these findings are not consistent with Bond et al. (43; Table 1, primary text), who observed superior competitive employment outcomes among IPS participants in both their younger (ages 20-24) and older (ages 25-29) subgroups. Both of these studies evaluated SE services designed for adults in general rather than young people specifically, and both included unemployed young people with various psychiatric conditions who were interested in working. However, the youth subgroup of Burke-Miller et al. included participants as young as age 18, whereas Bond et al. did not include participants under the age of 20; thus, it is possible that the proportion of youth participants focusing on educational pursuits may have differed across the two studies. In addition, the type of SE services evaluated by the studies may have contributed to the differences in results obtained; specifically, the parent RCTs of Bond et al. all delivered high-fidelity IPS, whereas the type of SE assessed by Burke-Miller et al. varied across study sites, although as noted in the primary text, they all included components that aligned with several features of IPS (also see the Table below).

Appendix A – Standardized Set of Search Terms Used Across Databases

I. Population-related terms:

mental disorder*
 mental illness*
 axis I
 psychiatric disorder*
 psychiatric condition*
 mood disorder*
 affective disorder*
 bipolar disorder
 major depression
 major depressive disorder
 anxiety disorder*
 acute stress disorder
 post-traumatic stress disorder
 posttraumatic stress disorder
 obsessive-compulsive disorder
 generalized anxiety disorder
 panic disorder
 phobia
 social anxiety
 eating disorder*
 schizophrenia
 schizoaffective
 psychosis
 psychotic disorder*
 phobic disorder*

II. Intervention-related terms:

career education
 recovery
 intervention
 program
 training
 supported education
 supported employment
 rehab*
 workplace
 career development

III. Educational/employment outcomes and other topical terms:

higher education
 high school
 trade school
 undergraduate
 graduate
 college
 postsecondary
 post-secondary
 technical school
 employ*
 vocation*
 job
 paid work

Note: The symbol “*” indicates that a “truncation” search was employed for the term; truncation searches include the terms as written as well as variations of the term that are formed with various suffixes (e.g., a search for “mental illness*” would include the terms “mental illness” and “mental illnesses.” For databases that did not allow for such truncation searches, we included all variants for the terms marked with an asterisk above.

Appendix B – Inclusion Criteria Used for Evaluation of Research Article Records at Phases 1 and 2

Phase 1 – title and abstract review:

1. Confirm that the article:

- A. Is in English.
- B. Was published in or after 2000.
- C. Is a peer-reviewed article of original research.

If Criteria 1A-C are met, continue to evaluate; if not, exclude.

2. Does the title and/or abstract refer to a sample of human participants (or is it unclear whether the title and/or abstract refers to a study with human participants)?

If yes, continue to evaluate; if no, exclude.

3. The record should be retained for Phase 2 if it meets Criteria 3A-3C **or** Criterion 3D.

- A. Participants are described as having a psychiatric condition (other than a primary neurodevelopmental, substance-use, or personality disorder).
- B. Either the age of participants is not identified or it is clear that the sample includes participants who were between the ages of 14-35.
- C. The record describes an intervention that targets employment and/or educational outcomes, or describes a more general intervention but mentions employment and/or educational outcomes.
- D. It cannot be determined from the information provided that the record meets all of the Phase-1 criteria above.

Phase 2 – full-text review:

The article should be retained for inclusion in the final set of studies if it meets Criteria 1-4.

1. Sample.

- A. Participants are described as having a psychiatric condition (other than a primary neurodevelopmental, substance-use, or personality disorder) as their primary disabling condition;

AND

- B. Participants were between the ages of 14-35¹ OR the article reports outcomes by age such that conclusions regarding youth and/or young adults (any age between 14-35) specifically can be drawn.

2. Intervention.

The article describes a study that evaluated a vocational intervention that targeted postsecondary educational and/or employment outcomes.

3. Outcomes.

The article reports outcomes related to:

- A. Postsecondary education. Eligible education outcomes include application for, entry into, attendance of, and performance related to any integrated postsecondary educational program, including vocational training institutes and college/university programs. We will not include studies for which the outcome was restricted to placement and/or performance in a non-integrated educational program (e.g., “contained classrooms”);

AND/OR

B. Competitive employment. Eligible employment outcomes include application for, acquisition and/or maintenance of, performance in, wages earned for, and hours (or weeks, months, etc.) worked in any part-time or full-time competitive, integrated job (including positions for which supported-employment services were received). We will not include studies for which outcomes were restricted to sheltered workshop or non-integrated employment positions².

4. Study design.

A. The study included both a treatment and comparison group;

AND

B. The article reports statistical results from this study of putative treatment-related effects on educational and/or employment outcomes obtained through between-group comparisons.

Note:

Several articles that met the inclusion criteria above reported results from the same (or a subset of the same) participant sample; in these cases, we determined which article was considered the primary report of the study (i.e., which reported on the full sample and included the most comprehensive results applicable to this project), and included this article. Secondary analysis papers were considered and included in the final set only if they reported non-redundant applicable results.

¹If the age range and descriptive statistics provided regarding the age of the sample made it clear that most participants were between the ages of 14-35, the study was included (e.g., some studies included participants over the age of 35 but reported a mean age that suggested most participants were between ages 14-35).

²Some reports combined outcomes related to competitive employment and volunteer positions; in such cases, we only included the study if, based on the information provided, it was clear that the results referred primarily to competitive employment.

Appendix C – Included Studies (N=10)

Studies of Vocational Interventions*Randomized Controlled Trial-Based Studies:*

Bond et al., 2016 (43): Effectiveness of individual placement and support supported employment for young adults; *Early Interv Psychiatry*

Burke-Miller et al., 2012 (44): Supported employment outcomes for transition age youth and young adults; *Psychiatr Rehabil J*

Killackey et al., 2008 (31): Vocational intervention in first-episode psychosis: individual placement and support v. treatment as usual; *Br J Psychiatry*

Killackey et al., 2019 (23): Individual placement and support for vocational recovery in first-episode psychosis: randomised controlled trial; *Br J Psychiatry*

Nuechterlein et al., 2020 (30): Enhancing return to work or school after a first episode of schizophrenia: the UCLA RCT of Individual Placement and Support and Workplace Fundamentals Module training; *Psychol Med*

Quasi-Experimental Studies:

Ferguson et al., 2012 (45): Adapting the Individual Placement and Support model with homeless young adults; *Child Youth Care Forum*

Hegelstad et al., 2019 (46): Job- and schoolprescription: A local adaptation to individual placement and support for first episode psychosis; *Early Interv Psychiatry*

Honeycutt et al., 2017 (47): Public provision of postsecondary education for transition-age youth with mental health conditions; *Psychiatr Rehabil J*

Major et al., 2010 (34): Evidence of the effectiveness of a specialist vocational intervention following first episode psychosis: a naturalistic prospective cohort study; *Soc Psychiatry Psychiatr Epidemiol*

Mattila-Holappa et al., 2016 (48): Psychotherapeutic and work-oriented interventions: employment outcomes among young adults with work disability due to a mental disorder; *Int J Ment Health Syst*

Online Supplement Table, Part 1: Diagnostic Groups and Study Conditions of the Included Vocational Intervention Studies

Study	Diagnostic group	Intervention	Control condition
<i>Randomized controlled trials</i>			
Bond et al., 2016 (43) ^a	Mixed; primarily DSM-IV-based psychotic and mood disorders; all participants met each state's criteria for severe mental illness	<u>IPS</u> <u>All study participants were clients in public mental health programs.</u>	<u>Other vocational services; varied across parent RCTs (e.g., group skills training, enhanced vocational rehabilitation, and/or brokered SE).</u> <u>All study participants were clients in public mental health programs.</u>
Burke-Miller et al., 2012 (44); EIDP ^b	Mixed; primarily DSM-IV-based psychotic and mood disorders; all participants met criteria for severe and persistent mental illness	<u>SE programs that aligned with several core features of IPS; specifics varied across sites.</u> Shared components of IPS included the integration of vocational and clinical services; placement into competitive employment that was based on client preference; rapid job search; and the provision of ongoing vocational supports. Specific treatment models across sites included IPS, Assertive Community Treatment, and other hybrid programs; see Cook et al. (16) for additional details. <u>All study participants were receiving outpatient mental health services.</u>	<u>Other vocational services that varied across sites; included standard vocational rehabilitation services available in the local area; an "unenhanced" version of the experimental SE model; and clubhouse services.</u> <u>All study participants were receiving outpatient mental health services.</u>
Killackey et al., 2008 (31); EPPIC	DSM-IV-based recent-onset psychotic disorder	<u>IPS plus treatment as usual; IPS was adapted to include educational supports. Thus, participants who identified a goal related to school or vocational training were provided with educational support in a manner consistent with IPS principles.</u> <u>*For a description of treatment as usual (received by all participants), see the control condition column to the right.</u>	<u>Treatment as usual: specialized early-intervention services for psychosis through EPPIC; received by all participants, regardless of group assignment; included individual case management, a group treatment program, and referral to external vocational agencies at the case manager's discretion.</u>

Study	Diagnostic group	Intervention	Control condition
Killackey et al., 2019 (23); EPPIC	DSM-IV-based recent-onset psychotic disorder; diagnoses included schizophreniform disorder, schizophrenia, schizoaffective disorder, major depressive disorder with psychotic features, bipolar disorder, and psychosis NOS.	<p><u>IPS plus treatment as usual</u>: IPS was adapted to include educational supports. Thus, participants who identified a goal related to school or vocational training were provided with educational support in a manner consistent with IPS principles.</p> <p>*For a description of <u>treatment as usual (received by all participants)</u>, see the control condition column to the right.</p>	<p><u>Treatment as usual: specialized early-intervention services for psychosis through EPPIC</u>; received by all participants, regardless of group assignment; included individual case management, a group treatment program, and referral to external employment agencies at the case manager's discretion.</p>
Nuechterlein et al., 2020 (30); UCLA Aftercare Research Program	RDC-based recent-onset schizophrenia or schizoaffective disorder, with the initial psychotic episode beginning within the last 2 years and psychotic symptoms of this episode persisting for at least 2 weeks.	<p><u>IPS plus Workplace Fundamentals Module (IPS-WFM)</u>; IPS was expanded to include supported education components, which were delivered in accord with IPS principles. Ongoing individualized support was provided for education and/or employment, based on the young person's goals and preferences. Staged educational supports included assistance with applying to and enrolling in educational programs, planning out assignments, and developing study skills and habits. WFM is a group-based skills training and psychoeducation program that is designed to support functioning and persistence in work settings, specifically emphasizing the development of social and problem-solving skills as they relate to vocational performance; of note, this program was adapted to include skill areas related to school functioning in addition to those for work. See Nuechterlein et al., 2008 (14) for additional details.</p> <p>Regardless of group assignment, <u>all participants also received outpatient psychiatric treatment at the UCLA Aftercare Research Program</u>, as described in the control condition column to the right.</p>	<p><u>Brokered vocational rehabilitation (BVR) plus social skills training</u>. Case managers actively linked participants with outside agencies that provided VR services, including the Department of Vocational Rehabilitation; this included discussing VR options with the participant, ensuring that the participant had an initial appointment with the agency, and serving to facilitate communication between the participant and agency. The social skills training component involved participating in skills training groups (e.g., medication management, communication skills) that were equated in time with the WFM component of the active intervention.</p> <p><u>All participants, regardless of group assignment, also received outpatient psychiatric services at the UCLA Aftercare Research Program</u>. Treatment components included case management, family psychoeducation, and a standardized approach to pharmacotherapy; specifically, all participants were provided with atypical antipsychotic medication, namely oral risperidone as the initial medication, with a switch to another atypical antipsychotic as needed due to side effects or lack of efficacy. Note that medication adherence was not a requirement for study participation.</p>

Study	Diagnostic group	Intervention	Control condition
<i>Quasi-experimental studies</i>			
Ferguson et al., 2012 (45)	Mixed; DSM-IV-based; > 80% had an MDE, commonly with comorbid diagnoses; all were homeless.	<p data-bbox="753 305 1373 483"><u>IPS plus standard services.</u> IPS was adapted for homeless young adults with psychiatric conditions; this included providing educational supports to better assist those who sought to obtain a degree or technical training, with the larger aim of improving employability and self-sufficiency.</p> <p data-bbox="753 524 1373 610">*For a description of <u>standard services (received by all participants)</u>, see the control condition column to the right.</p>	<p data-bbox="1409 305 2003 329"><u>Standard services provided by a separate agency.</u></p> <p data-bbox="1409 370 2003 734"><u>Both the host agency that provided IPS and the control-group agency offered homeless at-risk youth comprehensive services</u>, including health care, case management and psychotherapy, and drop-in services; standard care also included educational and employment services (details were not provided regarding the nature of these services), and controls received a similar degree of staff contact as did the IPS participants; note that the host agency also provided shelter services whereas the control-group agency referred out to local housing resources.</p>

Study	Diagnostic group	Intervention	Control condition
Hegelstad et al., 2019 (46); TIPS (1, 2)	<p>DSM-IV-based recent-onset psychotic disorder; diagnoses included schizophrenia, schizophreniform disorder, schizoaffective disorder, delusional disorder, affective psychosis with mood-incongruent psychotic symptoms, psychotic disorder NOS, and substance-induced psychotic disorder. Participants were recruited from an ongoing study of an early detection and intervention program for FEP; additional criteria for this parent study included active psychotic symptoms, i.e., a PANSS score of ≥ 4 on at least 1 of the following items: delusions, hallucinatory behavior, grandiosity, suspiciousness/ persecution, or unusual thought content; and no previous adequate treatment for psychosis, defined as antipsychotic medication of >3.5 haloperidol equivalents for >12 weeks or until remission of psychotic symptoms; see (3).</p>	<p><u>Job- and SchoolPrescription plus standard early-intervention treatment through TIPS.</u> Job- and SchoolPrescription was an adaptation of IPS that provided both educational and employment supports in accord with IPS principles in the context of an early-intervention program. One of the primary “local” adaptations to IPS was the inclusion of publicly-funded internships, which were designed to serve as a transitional step towards competitive employment and increase the likelihood that employers would offer participants a standard position, given Norway-specific employment regulations. Such internships were also viewed as a means to facilitate career exploration and development. Job- and SchoolPrescription was delivered by an IPS-trained team that included 2 members who specialized in SEd, in addition to SE, and had extensive knowledge of the educational system. The program aimed to support participants as they transitioned between, and combined, employment and education, and provided opportunities for the exploration of various career paths. In addition, IPS workers were certified users of motivational interviewing, which was implemented with participants as needed.</p>	<p><u>Generic employment and educational services</u> (details of which could not be located in the sources reviewed), <u>plus standard early-intervention services according to the Treatment and Intervention in Psychosis (TIPS) protocol (received by all participants, regardless of group assignment)</u>; these comprehensive services included standardized antipsychotic pharmacotherapy, assertive outreach-based individual psychotherapy, and psychoeducational multi-family groups (1, 2).</p>
		<p>*For a description of the <u>standard early-intervention treatment for psychosis through TIPS (received by all participants)</u>, see the control condition column to the right.</p>	

Study	Diagnostic group	Intervention	Control condition
Honeycutt et al., 2017 (47)	Mixed, including psychotic, mood, and anxiety disorders; all were eligible for VR services due to a psychiatric condition.	<u>VR services that included college and/or vocational training support</u> ; specific supports and services varied based on the particular agency and the recipient's Individualized Plan for Employment, but these services potentially included tutoring and counseling, and financial support for postsecondary education-related costs such as tuition, books, and housing. <u>Participants who received college and/or vocational training support may have also received the other VR services described in the control condition column to the right.</u>	<u>VR services other than college and/or vocational training support.</u> VR service provision was based on the recipient's Individualized Plan for Employment; possible services included one or more from the following categories: diagnosis and evaluation; training (such as on-the-job or job readiness training); employment (such as job search or job placement services); restoration (such as rehabilitation technology); maintenance (such as transportation services); and other (such as personal attendant or interpreter services).
Major et al., 2010 (34)	Recent-onset psychotic disorder, defined as the presence of psychotic symptoms that persisted for at least a week and/or resulted in hospital admission or crisis team intervention; exclusions included ≥ 6 weeks of antipsychotic medication exposure at therapeutic doses and a previous diagnosis of psychotic illness by a specialist mental health service.	<p><u>VIBE, a modification of IPS-based SE specialized for early psychosis, plus treatment as usual.</u> VIBE shared several features with IPS, including full integration with clinical services, an emphasis on client preference and competitive employment, and the provision of indefinite support (for the duration of early-intervention services); the modifications made to tailor this service for FEP included a greater emphasis on education and the addition of components designed to bolster vocational functioning during the early stages of recovery, such as the provision of vocation-oriented and social groups, specific skills training (e.g., in interview techniques), and support aimed at helping with rebuilding confidence and structuring time.</p> <p>*For a description of <u>treatment as usual (received by all participants)</u>, see the control condition column to the right.</p>	<u>Treatment as usual:</u> specialized early-intervention services for psychosis; controls were served in another borough that did not offer VIBE; <u>all participants, regardless of group assignment, received multi-disciplinary early-intervention services for psychosis that actively promoted social recovery.</u>

Study	Diagnostic group	Intervention	Control condition
Mattila-Holappa et al., 2016 (48)	Mixed, including psychotic and mood disorders; all were receiving fixed-term work disability due to a psychiatric condition.	Planned intervention(s): <u>work-oriented (WO) only; psychotherapy (P) only; or work-oriented and psychotherapy (WO & P)</u> . The authors grouped intervention participants into these 3 groups (WO, P, or WO & P) based on the planned interventions specified in the medical certificate that accompanied their disability pension applications (without verification that such interventions were received). Planned WO interventions included several types, including: evaluations of working capacity and rehabilitation needs; rehabilitative courses and training, e.g., group and individual trainings designed to increase work skills, knowledge of working life, and contact with potential employers; on-the-job rehabilitation, including non-competitive work trials; and social rehabilitation, including rehabilitative work and clubhouse activities. P interventions included cognitive-behavioral (which was the most commonly planned), psychodynamic, and supportive psychotherapy.	<u>No treatment plan for WO or P interventions.</u> Regardless of group assignment, however, <u>all study participants were receiving treatment in a psychiatric clinic, health center, or occupational health center.</u>
		Of note, <u>all study participants were receiving treatment in a psychiatric clinic, health center, or occupational health center.</u>	

Note. DSM-IV=Diagnostic and Statistical Manual of Mental Disorders, Fourth Edition; EIDP=Employment Intervention Demonstration Project; EPPIC=Early Psychosis Prevention and Intervention Centre; FEP=first-episode psychosis; IPS=Individual Placement and Support; MDE=major depressive episode; NOS=not otherwise specified; PANSS=Positive and Negative Syndrome Scale; RCT=randomized controlled trial; RDC=Research Diagnostic Criteria; SEd=supported education; SE=supported employment; TIPS=Treatment and Intervention in Psychosis; UCLA=University of California, Los Angeles; VIBE=Vocational Support Within Early Intervention; VR=vocational rehabilitation.

^aThis is a secondary analysis of a pooled sample of young adults from 4 general-adult published RCTs.

^bThis is a report of results from the young-adult participants of EIDP, a multi-site study of SE; additional study details were obtained from Cook et al. (16).

Online Supplement Table, Part 2: Vocational Status of Participants at Baseline and Measurement of Vocational Outcomes for the Included Vocational Intervention Studies

Study	Intervention	Control condition	Vocational status of participants at baseline	Follow-up	Measurement of vocational outcomes	Primary outcomes and results ^a
<i>Randomized controlled trials</i>						
Bond et al., 2016 (43) ^b	IPS	Other vocational services; varied across parent studies	Unemployed; interested in working in a competitive job	18 mo	<ul style="list-style-type: none"> • A standardized measurement battery was employed by the 4 parent RCTs on which the sample was based. • Employment was assessed weekly by employment specialists either through direct interviews with subjects or through logs completed by vocational staff or case managers; information on employment was also assessed through interview-based assessments conducted with subjects by research staff (see 4-7). • Subjects were assessed on the following competitive employment outcomes over f/u; the authors examined these outcomes in the total sample and in the worker sample (as applicable): <ul style="list-style-type: none"> -job acquisition: attained competitive employment at any time during f/u (y/n); -total weeks worked over f/u; -job tenure (in weeks) in longest-held job; -total hours worked; -average hours worked per week; -total earnings from competitive work; -number of days from admission to vocational program to first job; -working \geq 20 hours per week at some point during f/u (y/n); -number of jobs held over f/u. 	Multiple competitive employment outcomes, including proportion employed at any point and total weeks employed: IPS > ctrl

Study	Intervention	Control condition	Vocational status of participants at baseline	Follow-up	Measurement of vocational outcomes	Primary outcomes and results ^a
Burke-Miller et al., 2012 (44); EIDP ^c	SE programs that aligned with several core features of IPS; specifics varied across sites	Other vocational services; varied across sites	Unemployed; interested in working	24 mo	<ul style="list-style-type: none"> The EIDP was a multi-site study of SE; uniform data collection methods were used across sites, including interview-based assessments conducted with subjects every 6 months. Information on workforce participation and all paid work was collected weekly (see 16). With regard to competitive employment, the authors examined: <ul style="list-style-type: none"> -employed at any point over f/u in a competitive job (y/n). 	Proportion competitively employed at any point: <i>Youth: NS; YA: SE > ctrl</i>
Killackey et al., 2008 (31); EPPIC	IPS + treatment as usual	Treatment as usual: specialized early-intervention services for psychosis through EPPIC	Unemployed or seeking a different job if employed; all interested in working; 5% of IPS and 10% of ctrl subjects working	6 mo	<ul style="list-style-type: none"> Subjects were assessed at baseline and at 6 months. The authors reported statistical results for the following employment and educational outcomes: <ul style="list-style-type: none"> -obtained employment (y/n); -obtained employment and/or enrolled in a course (y/n); -total number of jobs found (by group) over the intervention period; -total weeks worked; -total amount of money earned; -hours worked per week (among the subjects who worked); -hourly rate of pay (among the subjects who worked). 	Multiple vocational outcomes, including proportion who obtained employment, proportion who obtained employment and/or enrolled in a course, and number of weeks worked: IPS > ctrl

Study	Intervention	Control condition	Vocational status of participants at baseline	Follow-up	Measurement of vocational outcomes	Primary outcomes and results ^a
Killackey et al., 2019 (23); EPPIC	IPS + treatment as usual	Treatment as usual: specialized early-intervention services for psychosis through EPPIC	Interested in working or pursuing an educational goal; 16% in paid work ^d ; 18% studying	18 mo (6 mo tx; 12 mo post-tx f/u)	<ul style="list-style-type: none"> Subjects were assessed at baseline, 6 mo, 12 mo, and 18 mo, including regarding employment and educational activities since the previous assessment (see 27). Employment was defined as working at least 1 day within a given f/u period in a job that paid at least minimum wage. The authors assessed the following employment and educational outcomes for each f/u period (0-6 mo, 6-12 mo, and 12-18 mo): <ul style="list-style-type: none"> -employed at any point (y/n); -total hours worked over the f/u period; -enrollment in an educational course at any point (y/n). 	Proportion employed at any point ^e 0-6 mo: IPS > ctrl ; 6-12 mo and 12-18 mo: NS . Total hours worked: all f/u periods NS . Proportion enrolled in education ^e : all f/u periods NS

Study	Intervention	Control condition	Vocational status of participants at baseline	Follow-up	Measurement of vocational outcomes	Primary outcomes and results ^a
Nuechterlein et al., 2020 (30); UCLA Aftercare Research Program	IPS + Workplace Fundamentals Module (IPS-WFM)	Brokered vocational rehabilitation + social skills groups	Possibly interested in work or school; 44% of IPS-WFM and 22% of ctrl subjects in work or school at randomization ^f	18 mo ⁹	<ul style="list-style-type: none"> Competitive employment and school participation were assessed with a modified version of the work section of the Social Adjustment Scale; this assessment was completed by the case managers, who had ongoing interactions with subjects, employers, educators, and family members. Subjects were considered to be in school if they were participating in school courses relevant to a degree or vocational interest. The authors reported statistical results for the following employment and educational outcomes: <ul style="list-style-type: none"> -participation in competitive employment or school at any point (y/n), assessed for 0-6 mo, 7-18 mo, and 0-18 mo f/u periods; -total weeks in work or school, 0-18 mo; -participation in school at any point (y/n), assessed for 0-6 mo and 7-18 mo f/u periods; -total weeks in school, 0-18 mo; -mean duration of individual periods of schooling (for those who attended school); -number of separate periods in school (for those who attended school); -participation in competitive employment at any point (y/n), assessed for 0-6 mo and 7-18 mo f/u periods; -total weeks worked, 0-18 mo; -mean duration of individual periods of employment; -number of jobs held; -participation in both competitive employment and school at any point (y/n). 	Multiple vocational outcomes reported; proportion competitively employed at any point ^h 0-6 mo: NS ; 7-18 mo: IPS-WFM > ctrl ; total weeks worked over f/u: IPS-WFM > ctrl ; proportion in school at any point ^h 0-6 mo: IPS-WFM > ctrl ; 7-18 mo: NS ; total weeks in school over f/u: IPS-WFM > ctrl

Study	Intervention	Control condition	Vocational status of participants at baseline	Follow-up	Measurement of vocational outcomes	Primary outcomes and results ^a
<i>Quasi-experimental studies</i>						
Ferguson et al., 2012 (45)	IPS adapted for homeless YA with psychiatric conditions + standard services	Standard services	Interested in working; if employed, received assistance in maintaining or transitioning to another job; 36% working; 42% in school	10 mo	<ul style="list-style-type: none"> • Subjects were assessed at baseline and following the 10-month intervention period; employment information was collected directly from subjects during these interview-based assessments, and from the employment specialists, as noted below. • The authors reported statistical results for the following employment outcomes: <ul style="list-style-type: none"> -employed in any type of paid work at any point during f/u, as evidenced by showing the employment specialist a pay stub (y/n); -working at f/u: employment in any type of competitive work or other forms of paid work in the past month, based on subject report at the 10-mo f/u (y/n); -number of months over the 10-mo f/u in which the subject worked at any point in the month, as evidenced by showing the employment specialist a pay stub for that month; -total hours worked per week at f/u as reported by subjects; -weekly income earned from all forms of paid employment at f/u as reported by subjects. 	Multiple vocational outcomes reported; proportion in any type of paid employment at any point and number of months in which participant worked at any point in the month: IPS > ctrl¹

Study	Intervention	Control condition	Vocational status of participants at baseline	Follow-up	Measurement of vocational outcomes	Primary outcomes and results ^a
Hegelstad et al., 2019 (46); TIPS	Job- and SchoolPrescription, an adaptation of IPS + standard early-intervention treatment through TIPS	Generic employment and educational services + standard early-intervention treatment through TIPS	45% had a competitive job and 66% were enrolled in school; % actively engaged unclear as some were on sick leave ^l	24 mo (12 mo tx; 12 mo post-tx f/u)	<ul style="list-style-type: none"> • Subjects were assessed at baseline, 1 year (post intervention), and 2 years. • The authors adapted items from the Carpenter Level of Functioning scale to assess employment and educational outcomes. • Competitive employment at the time of assessment was categorized as: none; < 20 hours a week; and ≥ 20 hours a week. • Education (i.e., participation in a mainstream educational curriculum) at the time of assessment was categorized as: none; participation in a part-time or full-time program for up to about half the time; and participation in a full-time program for more than half the time, up to full-time since inclusion. • For their primary analyses, the authors combined employment and educational outcomes into a composite dichotomous score for the 1-year and 2-year f/u: <ul style="list-style-type: none"> -competitively employed and/or in education ≥ 20 hours a week (y/n). 	Proportion competitively employed and/or in education ≥ 20 hours a week at 1-year f/u: Job- and SchoolPrescription > ctrl^k ; at 2-year f/u: NS
Honeycutt et al., 2017 (47)	VR services that included college and/or vocational training support	VR services other than college and/or vocational training support	First-time VR applicants; 15% employed and 30% in school at time of application	Variable; up to 10 yrs, with most exiting VR within 4 yrs	<ul style="list-style-type: none"> • The authors examined case report and administrative data, including closure data, from state VR agencies from 2002 through 2013. • The employment outcome used for this study, “employment at VR exit,” was derived from these administrative records and defined as being employed for at least 3 months at the time of VR exit (y/n). 	Employment at VR exit: Receipt of college and/or vocational training support was positively associated with being employed for at least 3 months at time of VR exit^l

Study	Intervention	Control condition	Vocational status of participants at baseline	Follow-up	Measurement of vocational outcomes	Primary outcomes and results ^a
Major et al., 2010 (34)	VIBE, a modification of IPS-based SE specialized for early psychosis + treatment as usual	Treatment as usual: specialized early-intervention services for psychosis	14% in competitive work; 16% in school	12 mo	<ul style="list-style-type: none"> Subjects were assessed at baseline and at 12 months. Standardized data, including on employment and educational activities, were collected through a comprehensive clinical interview that was conducted as part of routine clinical practice to facilitate service evaluation. The authors reported statistical results on “vocational recovery,” defined as follows: <ul style="list-style-type: none"> -gaining or returning to competitive employment or an educational activity leading to a vocational qualification or degree, at any point over f/u (y/n). 	Gaining or returning to competitive work and/or entering education leading to a vocational qualification or degree, at any point over f/u: VIBE > ctrl^m
Mattila-Holappa et al., 2016 (48)	Planned interventions: work-oriented (WO) only, with types including rehabilitative courses & training, on-the-job rehabilitation, and social rehabilitation; psychotherapy (P) only; or WO & P	No treatment plan for WO or P interventions	Unemployed; all on fixed-term work disability	5 yr	<ul style="list-style-type: none"> Employment status data for the outcomes reported were derived from the National register of the Finnish Centre for Pensions. The authors examined the following outcomes: <ul style="list-style-type: none"> -employment status at f/u: employed on the last day of the f/u period (y/n); -time to entry into employment: number of days from the first day of work disability pension to the first day of employment (or to the end of the f/u period). 	Proportion employed at f/u ⁿ : WO only: NS; P only: NS; WO & P > ctrl. Time to entry into employment ⁿ : WO only: overall NS; WO rehabilitative courses & training: quicker entry than ctrl; WO & P: NS.

Note. Ctrl=control group; EIDP=Employment Intervention Demonstration Project; EPPIC=Early Psychosis Prevention and Intervention Centre; f/u=follow-up; IPS=Individual Placement and Support; mo=months; NS=no significant group difference; RCT=randomized controlled trial; SE=supported employment; TIPS=Treatment and Intervention in Psychosis; tx=treatment; UCLA=University of California, Los Angeles; VIBE=Vocational Support Within Early Intervention; VR=vocational rehabilitation; YA=young adult; y/n=yes/no; yr=year.

^aConcerning employment and/or educational outcomes for which statistical results were reported by the authors, with a focus on the proportion employed and/or in school and duration of employment and/or school participation; all group differences noted were statistically significant ($p \leq 0.05$).

^bThis is a secondary analysis of a pooled sample of young adults from 4 general-adult published RCTs.

^cThis is a report of results from the young-adult participants of EIDP, a multi-site study of SE; additional study details were obtained from Cook et al. (16).

^dThere was a trend-level group difference in baseline employment status; specifically 22% and 11% of those in the IPS and control groups, respectively, were employed.

^eThe authors controlled for gender and baseline depressive symptoms, along with baseline employment status for the employment outcome, and baseline school status for the school outcome.

^fGroup differences in the percent of participants in competitive work or school at baseline were non-significant; see footnote below regarding the treatment of these differences.

^gThe intervention was provided for 18 months; however, treatment was most intensive during the first 6 months (e.g., the frequency of WFM groups was gradually reduced after the first 6 months).

^hThe authors controlled for baseline work status for the work outcome, and baseline school status for the school outcome.

ⁱSignificantly more controls than IPS participants dropped out (50% and 10%, respectively); for the proportion in employment, the authors included all participants (using the last observation available), and for number of months worked, the n was 18 and 8 for the IPS and control groups, respectively.

^j53% and 36% of the Job- and SchoolPrescription and control participants, respectively, had a job, and 75% and 58% of the Job- and SchoolPrescription and control participants, respectively, were enrolled in school; as noted, some were on sick leave. The percentages reported here were calculated based on the subset of participants with available data. Groups did not differ significantly on the percent enrolled in school or with jobs. The authors indicated that an inclusion criterion was an interest in school or work, but it was not clear whether this applied to all participants or only to the Job- and SchoolPrescription participants.

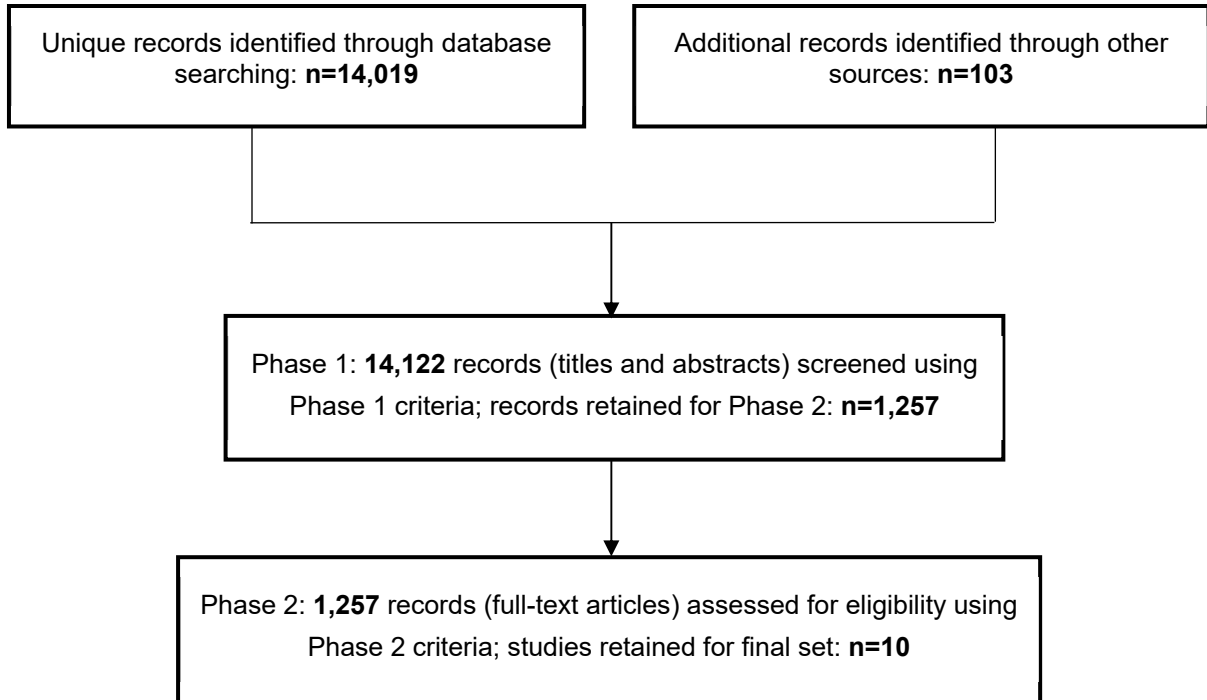
^kWhen controlling for baseline educational level.

^lA multiple regression model predicting employment at VR exit was estimated that included indicators for VR service categories, including college support and vocational training support (separately); note that the control group (i.e. those who did not receive the specific type of service) for each category received services from one or more of the other categories. Other variables entered into this model as predictor variables were disability type, gender, age, race/ethnicity, application year, baseline educational level, baseline school enrollment status, baseline employment status, social security benefit status, and whether the participant had an individual education plan (y/n). Note that all service categories significantly predicted employment at VR exit, with employment services, vocational training, and college support, respectively, being the strongest predictors.

^mWhen controlling for baseline educational level, baseline 'occupation' status (in competitive work, school, or being a homemaker; y/n), baseline Global Assessment of Functioning Disability scores, duration of untreated psychosis, and diagnosis other than schizophrenia (y/n).

ⁿCovariates included gender, age, educational level, primary diagnosis, history of psychiatric hospitalization (y/n), and 2 years of employment during the last 3 years (y/n).

Online Supplement Figure. Flow diagram indicating the number of unique journal article records identified and the number retained at each phase of review.



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