

Best Evidence Summaries of Topics in Mental Healthcare

BEST *in* **MH** *clinical question-answering service*

Question

In adults with psychosis, or a related diagnosis, how effective is individual placement support when compared to vocational rehabilitation in increasing long term employment?

Clarification of question using PICO structure (PICTRO for diagnostic questions)

Patients: In adults with psychotic symptoms

Intervention: Individual placement support (IPS)

Comparator: Vocational Rehabilitation

Outcome: Increasing long term employment / achieving improved patient outcomes

Clinical and research implications

No definite clinical implications can be found from the available evidence. There is, however, some evidence to suggest that individual placement and support is more efficacious than other vocational services for increasing employment and other patient outcomes, such as hospitalisation. No clear indications for future research were reported.

What does the evidence say?

Number of included studies/reviews (number of participants)

One systematic review (SR) (Twamley 2003) and two randomised controlled trials (RCTs) published in four papers (Burns 2008; 2009; Catty 2008 and Twamley 2012) met the inclusion for this BEST summary.

Main Findings

Of the 11 included studies in the SR, six compared individual placement and support (IPS) or supported employment (SE) with other vocational services (Twamley 2003). Based on information from five studies, 51% of the participants receiving IPS/SE worked competitively at any time during the study, whereas only 18% of those receiving traditional vocational rehabilitation services worked competitively (weighted mean effect size = 0.79). In addition, IPS/SE participants were about 4 times more likely than control group participants to obtain competitive work (odds ratio 4.14, 95% CI: 1.73 to 9.93). Data on increasing long term employment was not reported. It is noted that while this review aimed to evaluate individuals with schizophrenia, the majority of studies included a more heterogeneous group of patients with severe mental illness.

One of the RCTs (published in three papers: Burns 2008; 2009; Catty 2008) evaluated the effectiveness of IPS compared with vocational services in 312 participants, 80% who had a diagnosis of schizophrenia. The authors reported that over an 18 month follow-up period, those who received IPS worked significantly more hours (429 vs. 119), were employed for a greater number of days (130 vs. 31) and had a longer job tenure (214 vs. 108 days). In addition, the authors reported that IPS patients were less likely to be hospitalised.

Another RCT evaluated the effectiveness of supported employment compared with conventional vocational rehabilitation (CVR) in middle-aged or older people with schizophrenia. The authors reported that over a year, a significantly greater percentage of participants who received IPS worked competitively compared with those who received CVR (57% vs. 29%) and a significantly greater percentage of IPS participants obtained any paid work (70% vs. 36%). In addition, the median number of weeks of competitive work were significantly greater (4.5 vs. 0, $p=0.02$), and the time to competitive work was on average, 94 days in the IPS group compared with 138 days in the CVR group.

Authors Conclusions

The authors of the SR concluded that supported employment programmes in general, IPS specifically, have produced consistently better outcomes than traditional vocational rehabilitation in terms of both competitive employment and employment of any type. A second conclusion is that although IPS/SE appears to be the most effective type of work rehabilitation, nearly half (49%) of IPS/SE participants did not obtain competitive work at any time during the study. Thus, it appears that IPS/SE is “on the right track,” but also that further improvements should be made so the intervention will result in positive outcomes for more consumers.

Both RCTs concluded that IPS was more effective than vocational rehabilitation and that this was also observed in middle-aged and older adults with schizophrenia.

Reliability of conclusions/Strength of evidence

Two of the included papers did not report enough information on their study methodology to enable judgements of risk of bias. One RCT was well-conducted (Burns 2008; 2009; Catty 2008), and the results from this study are likely to be reliable.

What do guidelines say?

NICE (2010)

“Mental health services should work in partnership with local stakeholders, including those representing BME groups, to enable people with mental health problems, including schizophrenia, to access local employment and educational opportunities. This should be sensitive to the person’s needs and skill level and is likely to involve working with agencies such as Jobcentre Plus, disability employment advisers and non-statutory providers.” (pp. 72-73).

Pages 345-349 discuss vocational rehabilitation in psychosis, especially schizophrenia. It concludes with the following clinical summary;

“There is evidence from studies in the US to suggest that supported employment is superior to prevocational training programmes in helping people with serious mental health problems gain competitive employment.” (pp. 349).

Date question received: 02/04/2013

Date searches conducted: 09/04/2013

Date answer completed: 26/04/2013

References

Guidelines

1. National Institute for Health and Care Excellence (2010) Schizophrenia. The NICE Guideline on Core Interventions in The Treatment and Management of Schizophrenia in Adults in Primary and Secondary Care (Updated Edition). CG82. London: National Institute for Health and Care Excellence.
2. <http://www.nice.org.uk/nicemedia/live/11786/43607/43607.pdf>

SRs

3. Twamley, E.W., Jeste, D.V. and Lehman, A.F. (2003) Vocational Rehabilitation in Schizophrenia and Other Psychotic Disorders. A Literature Review and Meta-Analysis of Randomized Controlled Trials. *The Journal of Nervous and Mental Disease* 191 (8) pp. 515-523.

RCTs

4. Burns, T., Catty, J., White, S., Becker, T., Koletsis, M., Fioritti, A., Rossler, W., Tomov, T., van Busschbach, J., Wiersma, D. and Lauber, C. (2009). The impact of supported employment and working on clinical and social functioning: results of an international study of individual placement and support. *Schizophrenia Bulletin* 35(5) pp. 949-958.
5. Burns, T., White, S. and Catty, J. (2008). Individual placement and support in Europe: The EQOLISE trial. *International Review of Psychiatry* 20(6) pp. 498-502.
6. Catty, J., Pascale, L., White, S., Becker, T., Drake, R.E., Fioritti, A., Knapp, M., Lauber, C., Rossler, W., Tomov, T., van Busschbach, J., Wiersma, D. and Burns, T. et al. (2008). Predictors of employment for people with severe mental illness: Results of an international six-centre randomised controlled trial. *The British Journal of Psychiatry* 192 (3) pp. 224-231.
7. Twamley, W., Vella, L., Burton, C., Becker, D.R., Bell, M.D. and Jeste, D.V. (2012). The efficacy of supported employment for middle-aged and older people with schizophrenia. *Schizophrenia Research* 135(1-3) pp.100-104.

Results; Systematic Reviews

Author (year)	Search Date	Inclusion criteria	Number of included studies	Summary of results	Risk of bias
Twamley, Jeste and Lehman (2003)	2002	<p><i>Patients:</i> Participants with schizophrenia were included, although many studies had a mixed population group. The majority (66%) of participants had a primary psychotic disorder. Participants were generally young (weighted mean age 38 years), and 58% were male.</p> <p><i>Intervention:</i> Individual Placement and Support (IPS) or supported employment (SE). The length of the trials ranged from 5 to 36 months, and length of active treatment ranged from 10 weeks to 36 months.</p> <p><i>Comparator:</i> Job-related social skills training, and Incentive Therapy</p> <p><i>Outcome:</i> Most trials used primarily work-related outcome measures <i>e.g.</i>, percentage of participants who obtained employment, number of hours worked, mean wages earned, and mean job tenure.</p> <p><i>Study design:</i> RCTs</p>	11 RCTs (n=1,617 participants)	<p>Of the 11 included studies, six compared IPS/SE to other vocational services, and all of these reported better results for IPS/SE. Five of these studies reported data on the percentage of participants who worked at any time during the study: 51% of the participants receiving IPS/SE worked competitively at any time during the study, whereas only 18% of those receiving traditional vocational rehabilitation services worked competitively (weighted mean effect size = 0.79). IPS/SE participants were about 4 times more likely than control group participants to obtain competitive work (odds ratio 4.14, 95% CI: 1.73 to 9.93).</p> <p>Data for other comparisons are not reported as they are not relevant to this BEST abstract.</p>	Unclear

RCTs






Author (year)	Inclusion criteria	Number of participants	Summary of results	Risk of bias
Burns, White and Catty (2008); Catty (2008); Burns (2009)	<p><i>Patients:</i> Individuals with psychotic illnesses with major role dysfunction for a minimum of two years; had been unemployed for a minimum of a year and were in contact with the specialist mental health services for a minimum of six months. Participant characteristics: 60% male, average age 38 years, 80% schizoaffective disorder, schizophrenia, others with bipolar disorder. Recruited from sites in; London (UK), Ulm-Gunzburg (Germany), Rimini (Italy), Zurich (Switzerland), Groningen (the Netherlands) and Sofia (Bulgaria).</p> <p><i>Intervention:</i> IPS, as close as possible to that used in the USA. This involved initial staff training and intensive supervision throughout the project and regular measurement of model fidelity. IPS workers had a maximum of 25 clients and were well integrated with the mental health services.</p> <p><i>Comparator:</i> Standard vocational rehabilitation. Sites had to be able to offer a well-established train-and-place vocational rehabilitation service that was currently used and respected by local clinicians.</p> <p><i>Outcome:</i> vocational outcomes, hospitalisation, global functioning (Global</p>	N = 312	<p>During the 18 month follow-up period, IPS was found to be twice as effective as the vocational services in the primary outcome of returning to open employment (working for at least one day) (54.5% versus 27.6%).</p> <p>There was a significant difference between IPS and vocational rehabilitation, such that those who received IPS worked for more hours (428.8 (SD 706.77) vs. 119.1 (SD 311.94) (MD 308.7 [95% CI: 189.22, 434.17])), were employed for a greater number of days (130.3 (SD 174.12) vs. 30.5 (SD 80.07) (MD 99.8 [95% CI: 70.71, 129.27])), and had a longer job tenure (213.6 days (SD 159.42) vs. 108.4 days (SD 111.95) (MD 104.9 [95% CI, 56.03, 155.04])). In addition, a significantly smaller percentage of participants who received IPS dropped out from service (12.8% vs. 44.9%).</p> <p>Regression analysis showed that previous work history was the only patient characteristic predictive of all employment outcomes. Those who had worked for at least 1 month in the previous 5 years were more than twice as likely to enter competitive employment as those who had not; they obtained their first job more quickly and were also more likely to work for more hours. For the subgroup of patients who obtained jobs, job tenure was predicted only by satisfaction with safety at baseline, with patients who felt safer having shorter job tenure.</p>	Low

	Assessment of Functioning – Symptoms (GAF–S) and Disability (GAF–D)), symptoms (Positive and Negative Syndrome Scale; PANSS), anxiety and depression (Hospital Anxiety and Depression Scale; HADS), social disability (Groningen Social Disability Schedule; GSDS), quality of life (Lancashire Quality of Life Profile – European Version; LQoLP–EU), self-esteem (Rosenberg Self-Esteem Scale; RSE), needs for care (Camberwell Assessment of Need – European short version; CAN–EU).		Also, fewer participants in the IPS group were hospitalised (20% vs. 31.3%) and the mean number of days spent time in hospital was shorter (4.6 days vs. 8.9).	
Twamley et al. (2012)	<p><i>Patients:</i> Outpatients with schizophrenia (n=23) or schizoaffective disorder (n=35) from a community mental health clinic, all aged 45 or older, unemployed, and stating a goal of working. Participants were excluded for substance abuse/dependence within 30 days, history of head injury with loss of consciousness over 30 minutes, mental retardation, or neurological disorders.</p> <p><i>Intervention:</i> IPS emphasizes competitive work, integrated mental health and SE services, any client can participate, rapid job searching, service-users' preferences, time-unlimited follow-along support, benefits counseling, and providing services in community settings.</p> <p><i>Comparator:</i> conventional vocational rehabilitation (CVR) were referred to the Department of Rehabilitation</p>	N = 58	Fifty-seven percent of IPS participants worked competitively, compared with 29% of CVR participants (p=0.03); 70% of IPS participants obtained any paid work, compared with 36% of CVR participants (p=0.009). In addition, the median number of weeks of competitive work were significantly greater in participants who received IPS (4.5 vs. 0, p=0.02), and the time to competitive work was on average, 94 days in the IPS group and 138 in the CVR group.	Unclear









	<p>for orientation, intake, and eligibility determination, then became clients of a brokered program for individuals with mental illness. Vocational counselors carried caseloads of 35 clients; additional staff provided job-readiness and prevocational coaching/classes. To promote engagement and reduce attrition, study staff assisted CVR participants with appointment-setting, reminder calls, and transportation, if needed, to the first three appointments.</p> <p><i>Outcome:</i> The UCSD Performance-Based Skills Assessment (UPSA; Patterson et al., 2001) measured functional capacity in five domains (Household Chores, Communication, Finance, Transportation and Planning Recreational Activities). Psychiatric symptom severity measures included the Positive and Negative Syndrome Scale (PANSS; Kay et al., 1987) and Hamilton Rating Scale for Depression (HAM-D; Hamilton, 1960). Raters were blinded and reliable (ICCs>.80). Hours worked and wages earned (verified with pay-stubs) were collected weekly via self report. Competitive work was defined as employment paying at least minimum wage and not reserved for the disabled; other paid employment included set-aside jobs and work paying below minimum</p>			
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Risk of Bias: SRs

Author (year)	Risk of Bias				
	Inclusion criteria	Searches	Review Process	Quality assessment	Synthesis
Twamley 2003					

RCT

Study	RISK OF BIAS					
	Random allocation	Allocation concealment	Blinding of participants and personnel	Blinding of outcome assessment	Incomplete outcome data	Selective Reporting
Burns 2008; 2009; Catty 2008			Not applicable	Not applicable		
Twamley 2012			Not applicable	Not applicable		

 Low Risk

 High Risk

 Unclear Risk

Search Details

Source	Search Strategy	Number of hits	Relevant evidence identified
<i>SRs and Guidelines</i>			
NICE	Employment support Vocational rehabilitation	267	1
DARE	1 (vocational rehab*) IN DARE 2 (supported employment) IN DARE 3 (employ* OR work OR occupation OR job OR vocat* OR placement) IN DARE 4 (placement adj3 support) IN DARE 5 (ips) IN DARE 6 MeSH DESCRIPTOR Psychotic Disorders EXPLODE ALL TREES 7 MeSH DESCRIPTOR Schizophrenia EXPLODE ALL TREES 8 MeSH DESCRIPTOR Schizophrenia and Disorders with Psychotic Features EXPLODE ALLTREES 9 (psychosis OR psychotic OR schizo*) IN DARE 10 MeSH DESCRIPTOR Employment, Supported EXPLODE ALL TREES 11 MeSH DESCRIPTOR Employment EXPLODE ALL TREES 12 #1 OR #2 OR #3 OR #4 OR #5 OR #10 OR #11 13 #6 OR #7 OR #8 OR #9 14 #12 AND #13	97	1
<i>Primary studies</i>			
CENTRAL	6 MeSH descriptor: [Rehabilitation, Vocational] explode all trees 309 #7 MeSH descriptor: [Psychotic Disorders] explode all trees 1375 #8Enter terms for searc"individual placement and support"45 #9Enter terms for searc#6 and #7 and #8 8 Central only 7	7	
PsycINFO	Search History: 1. PsycINFO; exp PSYCHOSIS/; 86457 results. 2. PsycINFO; psychosis.ti,ab; 25385 results. 3. PsycINFO; 1 OR 2; 95229 results.	21	

	4. PsycINFO; exp VOCATIONAL REHABILITATION/; 5690 results. 5. PsycINFO; "individual placement support".ti,ab; 3 results. 6. PsycINFO; "individual placement and support".ti,ab; 130 results. 7. PsycINFO; IPS.ti,ab; 777 results. 8. PsycINFO; 5 OR 6 OR 7; 814 results. 9. PsycINFO; 4 AND 8; 117 results. 10. PsycINFO; 3 AND 9; 21 results.		
Embase	11. EMBASE; exp PSYCHOSIS/; 195228 results. 12. EMBASE; psychosis.ti,ab; 29932 results. 13. EMBASE; 11 OR 12; 199543 results. 14. EMBASE; exp VOCATIONAL REHABILITATION/; 8041 results. 15. EMBASE; "individual placement support".ti,ab; 5 results. 16. EMBASE; "individual placement and support".ti,ab; 162 results. 17. EMBASE; IPS.ti,ab; 5658 results. 18. EMBASE; 15 OR 16 OR 17; 5704 results. 19. EMBASE; 14 AND 18; 94 results. 20. EMBASE; 13 AND 19; 36 results.	36	
Medline	11. MEDLINE; exp PSYCHOSIS/; 36419 results. 12. MEDLINE; psychosis.ti,ab; 21844 results. 13. MEDLINE; 11 OR 12; 47855 results. 14. MEDLINE; exp VOCATIONAL REHABILITATION/; 8858 results. 15. MEDLINE; "individual placement support".ti,ab; 3 results. 16. MEDLINE; "individual placement and support".ti,ab; 106 results. 17. MEDLINE; IPS.ti,ab; 4378 results. 18. MEDLINE; 15 OR 16 OR 17; 4413 results. 19. MEDLINE; 14 AND 18; 84 results. 20. MEDLINE; 13 AND 19; 15 results.	15	
CINAHL	6. CINAHL; exp PSYCHOSIS/; 0 results. 7. CINAHL; psychosis.ti,ab; 2680 results. 8. CINAHL; 6 OR 7; 2680 results. 9. CINAHL; exp VOCATIONAL REHABILITATION/; 0 results.	12	

	10. CINAHL; "individual placement support".ti,ab; 2 results. 11. CINAHL; "individual placement and support".ti,ab; 93 results. 12. CINAHL; IPS.ti,ab; 386 results. 13. CINAHL; REHABILITATION, VOCATIONAL/; 4046 results. 14. CINAHL; exp PSYCHOTIC DISORDERS/; 48180 results. 15. CINAHL; 7 OR 14; 48808 results. 16. CINAHL; 10 AND 11 AND 12 AND 15; 0 results. 17. CINAHL; 10 OR 11 OR 12; 417 results. 18. CINAHL; 13 AND 17; 66 results. 19. CINAHL; 15 AND 18; 12 results.		
Summary	NA	NA	

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