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Individual Placement and Support for Adults with Severe Mental Illness

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**Disciplines**
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Individual Placement and Support for Adults with Severe Mental Illness

CRITICALLY APPRAISED TOPIC (CAT)

Prepared by: Emily Piper
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Date: November 14, 2008

CLINICAL SCENARIO
Approximately 6 percent of people living in the United States experience severe mental illness (SMI). In addition, mental illness is the leading cause of disability in the U.S. for ages 15-44, and often impedes performance in various areas of occupation, including employment (National Institute of Mental Health, 2008). SMI is commonly defined as major mental illness (schizophrenia, schizoaffective disorder, bipolar disorder, recurrent major depression, or borderline personality disorder) in conjunction with at least 2 years of major role dysfunction. Although signs of SMI generally present by early adulthood, any one of these major mental illnesses may affect an individual at any time, regardless of age or ethnicity.

Although the majority of people with SMI prefer competitive jobs over prevocational training, typically less than 15% of people with SMI are competitively employed. Individual placement and support (IPS) is an approach to supported employment that differs from many models of vocational rehabilitation in that it focuses primarily on working interdisciplinary with the mental health team to assist individuals in rapid search for competitive employment within a natural setting followed by individualized, follow-along supports (i.e., transportation, counselling, or intervening with an employer). Other models of vocational rehabilitation generally involve some form of pre-vocational training and placement in transitional or sheltered employment based on work-readiness assessment outcomes, and are usually separate from other mental health services.

According to the Occupational Therapy Practice Frame Work: Domain and Process (American Occupational Therapy Association [AOTA], 2002), employment is an area of occupation in which occupational therapists are qualified to provide evaluation and intervention for individuals experiencing difficulties in obtaining or maintaining employment due to injury or illness. In order to provide best practice, it is important for occupational practitioners to determine the model of vocational rehabilitation that is best supported by evidence-based research.
FOCUSSED CLINICAL QUESTION
What is the effectiveness of the individual placement and support (IPS) model of vocational services compared with other methods of vocational rehabilitation for adults with severe mental illness?

SUMMARY OF FINDINGS
Of the five Level I studies that examined the effectiveness of IPS compared with other vocational rehabilitation models, four (Bond et al., 2007; Burns et al., 2007; Drake et al., 1999; and Mueser et al., 2004) utilized services provided by outsourced vocational rehabilitation agencies and programs for the control variable; and Twamley, Padin, Bayne, Narvaez, Williams, & Jeste, 2005 examined one control program that was integrated with psychiatric services and another that was separate. The key findings, with subfindings follow.

- Bond et al. (2007) compared the IPS model of supported employment with the Diversified Placement Approach (DPA) which focused on any type of paid employment as the end goal; and consisted of prevocational training, assessment of unpaid work, and placement based on level of readiness. Main findings include:
  1. Greater effectiveness of IPS compared to DPA in improving competitive employment outcomes for individuals with SMI (large to moderate effect size for most comparisons).
  2. IPS participants reported greater job satisfaction than DPA participants
  3. Paid employment outcomes did not differ among groups (hypothesized that DPA would have superior paid employment outcomes).

- Burns et al. (2007) studied the effectiveness of IPS compared to six offsite vocational rehabilitation programs that provided high quality vocational rehabilitation according to train-and-place model; and consisted of assessment of clients’ rehab needs and provision of structured training program aimed at combating deficits, training in appropriate work skills, time management, or information technology. Even with an adequate sample size, many of the findings were shown to be insignificant and are listed as follows.
  1. The IPS model of supported employment was effective in Europe despite the difference in economy and labor market.
  2. Socioeconomic context did effect IPS rates, especially local unemployment rates.
  3. Benefit trap (employment and income undesired due to loss of benefits) demonstrated impediment to successful vocation rehabilitation overall in this group.

- In a well controlled Level I study (Drake et al., 1999), the IPS model was compared with outsourced enhanced vocational rehabilitation (EVR) provided by ten well established agencies that all endorsed competitive employment as their goal but used stepwise approaches that involved prevocational experiences. Main findings include:
  1. IPS was more effective than EVR in helping participants obtain competitive employment.
2. IPS participants were more satisfied than EVR participants that the program was helping them achieve their goals.

- Mueser et al. (2004) examined the effectiveness of IPS compared to psychosocial rehabilitation (PSR) separate from mental health services that provided preparatory training activities, followed by transitional employment, followed by help obtaining competitive employment. IPS was also compared with standard, off-site vocational services that focused on employment in sheltered workshops. Findings include:
  1. Clients who participated in IPS had significantly better work outcomes, especially competitive work, than clients who participated in PSR program or who received standard vocational services.
  2. For Latino clients, IPS more effective at improving vocational outcomes than PSR or stand services.
  3. Clients in PSR reported increased satisfaction with social relationships compared with clients in standard services or IPS (suggesting a limitation of IPS—that it does not adequately address social needs of clients).

- Twamley et al. (2005) compared the effectiveness of the IPS model of supported employment with the Wellness and Vocational Enrichment (WAVE) and the Department of Rehabilitation/Employment Services (DOR) for middle-aged and older clients with SMI. WAVE offered VA services including prevocational job contracts with community employers, and was integrated with psychiatric services. DOR was an off-site program where individuals first became clients and were then referred to employment services, vocational evaluation, employment preparation, job development, job retention. Main findings include:
  1. IPS participants were more likely to work than WAVE or DOR participants, suggesting that place-then-train models are more effective than train-then-place models.

**CLINICAL BOTTOM LINE**

The results of an evidence-based literature review reveal that occupational therapy practitioners should consider the use of individual placement and support (IPS) over other models of vocational rehabilitation in helping most individuals with SMI obtain and maintain competitive employment. It is important to note, however, that it is critical for the occupational therapist to determine what type of employment the client prefers, as the IPS model focuses solely on securing jobs within typical, competitive work environments and may not be appropriate for use with individuals who prefer sheltered workshops.

**Limitation of this CAT:** This critically appraised topic paper is not representative of a comprehensive review of all existing IPS research, and has not been externally peer-reviewed.

**SEARCH STRATEGY**
Terms used to guide Search Strategy:

- **Patient/Client Group:** Adults with severe mental illness/disorders
- **Intervention (or Assessment):** Individual Placement and Support (IPS), vocational rehabilitation
- **Comparison:** Critical reviews, meta-analysis, randomized control trials, randomized controlled study
- **Outcome(s):** Not included in search

<table>
<thead>
<tr>
<th>Databases and sites searched</th>
<th>Search Terms</th>
<th>Limits used</th>
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<tr>
<td>OT Search</td>
<td>Mental illness, supported employment, vocational rehabilitation</td>
<td>None</td>
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<td>CINAHL</td>
<td>Supported employment, mental illness, occupational therapy</td>
<td>None</td>
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<td>EBSCOhost (Academic Search Premier, Alt HealthWatch, Health Source, MasterFILE Premier, MEDLINE, Psychology and Behavioral Sciences Collection, and Vocational and Career Collection)</td>
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<td>DARE</td>
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<td>None</td>
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**INCLUSION CRITERIA**

- Published between 1998 and 2008
- All levels of evidence were included in search parameters, however, only Level I research studies were located and reviewed
- Participants were persons with severe mental illness/disorders, including schizophrenia, schizoaffective disorder, bipolar disorder, recurrent major depression, or borderline personality disorder
- Participants were adults (> 18 years)
- Written in English
- At least one intervention must be the IPS model of vocational rehabilitation

**EXCLUSION CRITERIA**

- Longitudinal observational studies of natural history of recovery
• Description of programs or of treatments without testing effects
• Written before 1998

RESULTS OF SEARCH

Five relevant studies were located and categorised as shown in Table 1 (based on Levels of Evidence, Centre for Evidence Based Medicine, 1998).

Table 1: Summary of Study Designs of Articles retrieved

<table>
<thead>
<tr>
<th>Study Design/Methodology of Articles Retrieved</th>
<th>Level</th>
<th>Number Located</th>
<th>Author (Year)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Two groups, nonrandomized studies (e.g., cohort, case-control)</td>
<td>II</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>One group, nonrandomized (e.g., before and after, pretest and posttest)</td>
<td>III</td>
<td>0</td>
<td></td>
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<tr>
<td>Descriptive studies that include analysis of outcomes (single subject design, case series)</td>
<td>IV</td>
<td>0</td>
<td></td>
</tr>
<tr>
<td>Case Reports and expert opinion, which include narrative literature reviews and consensus statements</td>
<td>V</td>
<td>0</td>
<td></td>
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<tr>
<td>Qualitative studies</td>
<td></td>
<td>0</td>
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</table>

BEST EVIDENCE

The following study/paper was identified as the ‘best’ evidence and selected for critical appraisal. Reasons for selecting this study were:

• Level I research study with adequately randomized and controlled variables
• Adequate and appropriate analysis methods
• Statistically significant results

SUMMARY OF BEST EVIDENCE

Table 2: Description and appraisal of a RCT by Drake et al. (1999)

Objective of the Study: To evaluate the effectiveness of 2 approaches of vocational services, individual placement and support (IPS) and enhanced vocational rehabilitation (EVR), for persons with severe mental disorders (SMD).
**Study Design:** Randomized controlled trial (RCT). Random assignment was stratified according to work history, then a computer randomly assigned participants to one of two vocational rehabilitation groups. Outcome measurements occurred at baseline, 6, 12, and 18 months.

**Setting:** Community setting, southeast Washington, DC.

**Participants:** 152 participants were recruited in southeast Washington, DC at Community Connections, an agency that serves patients with SMD who need intensive case management. Eligibility criteria consisted of a diagnosis with a SMD, unemployment, willingness to give informed consent, and lack of memory impairment or medical illness that would preclude working or participating in research interviews. Randomly assigned groups were demographically comparable except that IPS participants were slightly younger (mean age 38.3 vs. 40.6) and had a higher rate of current drug use disorder (17 IPS participants vs. 5 EVR participants) than EVR participants. Two participants dropped out before study completion for reasons not indicated. Complete vocational data were obtained on 150 participants.

**Intervention Investigated:**

*Control:* Enhanced vocational rehabilitation (EVR)—a stepwise approach to employment obtainment consisting of prevocational experiences (i.e., prevocational training and sheltered employment). EVR services were provided by several well-established agencies recommended by the District of Columbia Rehabilitation Services Administration. The EVR condition was considered “enhanced” because an extra vocational counselor was placed at the office specifically to ensure that EVR group study participants were promptly referred to appropriate rehabilitation agencies. All EVR agencies implicated competitive employment as their end goal, but utilized stepwise approaches, such as prevocational training and initial employment in sheltered workshops, to get there.

*Experimental:* Individual placement and support (IPS)—a supported employment program designed to assist clients in searching for jobs rapidly, then providing individualized, follow-along supports (i.e., transportation, counselling, or intervening with employer) once employment is achieved. IPS services are generally delivered by employment specialists who joins multidisciplinary care management teams. For this study, 3 employment specialists were hired to implement IPS at Community Connections. IPS was administered according to a manual, monitored by researchers, and received high fidelity scores using the IPS Fidelity Scale.

**Outcome Measures:**

*Primary: Vocational*

- Rates of competitive employment—defined as “work in the competitive job market at prevailing wages with supervision provided by personnel employed by the business and in integrated work settings,” assessed weekly by employment specialists in both programs
- Rates of sheltered employment—assessed weekly by employment specialists
- **Financial support adequacy**— evaluated by research interviewers at each major assessment (baseline, 6, 8, and 12 months) using the Employment and Income Review
- **Satisfaction with finances**— evaluated by research interviewers at each major assessment (baseline, 6, 8, and 12 months) using the Employment and Income Review
- **Satisfaction with vocational services**— assessed every 2 months by research interviewers via face-to-face interviews
- **Vocational services helped meet goals**— assessed every 2 months by research interviewers via face-to-face interviews
- **QOL, satisfaction with jobs**— assessed using the Indiana Job Satisfaction Scale

**Secondary: Nonvocational**
- **Global assessment of functioning**— evaluated by research interviewers at each major assessment (baseline, 6, 8, and 12 months) using the Global Assessment Scale
- **Self-esteem**— evaluated by research interviewers at each major assessment (baseline, 6, 8, and 12 months) using the Rosenberg Self-Esteem Scale
- **General QOL**— evaluated by research interviewers at each major assessment (baseline, 6, 8, and 12 months) using the Quality of Life Interview
- **Satisfaction with housing**— evaluated by research interviewers at each major assessment (baseline, 6, 8, and 12 months) using sections of the Quality of Life Interview
- **Satisfaction with town**— evaluated by research interviewers at each major assessment (baseline, 6, 8, and 12 months) using sections of the Quality of Life Interview
- **Satisfaction with leisure**— evaluated by research interviewers at each major assessment (baseline, 6, 8, and 12 months) using sections of the Quality of Life Interview
- **Satisfaction with services**— evaluated by research interviewers at each major assessment (baseline, 6, 8, and 12 months) using sections of the Quality of Life Interview
- **Hospital days**— evaluated at the end of 18 months using medical records
- **Brief Psychiatric Rating Scale (BPRS) total score**— evaluated by research interviewers at each major assessment (baseline, 6, 8, and 12 months)
- **BPRS affect**— evaluated by research interviewers at each major assessment (baseline, 6, 8, and 12 months) using the Brief Psychiatric Rate Scale (BPRS)
- **BPRS anergia**— evaluated by research interviewers at each major assessment (baseline, 6, 8, and 12 months) using the Brief Psychiatric Rate Scale (BPRS)
- **BPRS thought disorder**— evaluated by research interviewers at each major assessment (baseline, 6, 8, and 12 months) using the Brief Psychiatric Rate Scale (BPRS)
- **BPRS activation**— evaluated by research interviewers at each major assessment (baseline, 6, 8, and 12 months) using the Brief Psychiatric Rate Scale (BPRS)
- **BPRS disorganization**— evaluated by research interviewers at each major assessment (baseline, 6, 8, and 12 months) using the Brief Psychiatric Rate Scale (BPRS)
Main Findings:

Vocational:
- IPS participants report receiving more total vocational services during the study (p = .002)
- Groups received similar amounts of job support and same proportion of each group received MH case management services throughout
- IPS participants were more likely than EVR participants to obtain competitive employment (60.8% of employed IPS participants as compared to 9.2% of employed EVR participants) (p < .001)
- EVR participants were more likely than IPS participants to work in sheltered jobs (71.1% of employed EVR participants as compared to 10.8% of employed IPS participants) (p < .001)
- IPS participants earned an average hourly rate of $5.82 per hour during the 18-month study, compared to EVR participants average hourly rate of less than $1 per hour.
- Satisfaction with income, job, and vocational services were generally high for both groups, but sometimes favored IPS
- Participants in both groups reported greater financial support adequacy (p < .05), satisfaction with finances (p < .05), and satisfaction with vocational services (p < .05)
- IPS participants more satisfied with vocational services over time, were more satisfied that vocational program was helping them achieve goals, and reported higher QOL I job satisfaction ratings than were EVR participants

Non-vocational:
- Both groups improved on global functioning, general QOL, and self-esteem (all (P < .05))
- Both groups decreased hospital use after starting their vocational programs, but reductions were not significant

Original Authors’ Conclusions:
- IPS was more successful than EVR in helping multiply impaired, inner-city patients with SMD to obtain competitive employment, while EVR approaches involved similar proportions of patient in sheltered work with few transition to competitive employment
- Participants in IPS program obtained competitive employment faster and maintained their advantage throughout 18 months
- IPS is superior to EVR for patients who are usually considered poor candidates for vocational services due to complicated conditions, poor employment history, dual diagnosis, and homelessness
- It is believed that group differences were primarily explained by direct placement and support vs. stepwise pre-vocational training and sheltered employment; however, they could also be due to IPS integration within the mental health team, whereas EVR is usually separate
- Lack of evidence that entering vocational services in general or the more intensive, high expectation approach of IPS in particular produced negative
outcomes in non-vocational areas; however, vocational services may enhance outcomes in non-vocational areas (global functioning, self-esteem, general QOL)

• Hypothesis that IPS participants earn more in wages than EVR participants was not confirmed
• Competitive employment was favored over sheltered workshops—IPS participants were more satisfied than EVR participants that program was helping them achieve goals

Critical Appraisal

Validity:

Methodology: Researches utilized randomized controlled trial study design. Random assignment was stratified according to work history, then the computer randomly assigned participants to IPS group or EVR group. Design was appropriate for the question of comparing the effectiveness of 2 vocational rehabilitation models.

Clinical Importance: The study recognizes that the IPS program hires employment specialists to work directly with the mental health treatment team which generally leads to better communication. This implies that treatment centers should hire employment specialists to work with clients, versus referring clients to separate vocational rehabilitation centers.

Bias/Limitations: Both groups received identical assessments throughout the course of the study, however, researchers were unable to maintain blindedness of interviewers who delivered assessments. In addition, high-risk inner-city participants of this study received intensive case management in a program that integrated mental health, substance abuse, and hosing services. As a result, generalizability of these findings are questioned because inner-city patients in a less-integrated systems may not benefit from IPS to the same extent.

Interpretation of Results:
The following study produced favourable, statistically significant results revealing that the IPS model is more effective than the stepwise EVR model in terms of competitive employment obtainment and maintenance (p < .001), wages earned (p < .001), and job satisfaction(p < .001).

Summary/Conclusion: “The IPS model of supported employment is more effective than standard, stepwise EVR approaches for achieving competitive employment, even for inner-city patients with poor work histories and multiple problems” (Drake et al., 1999).

Table x: Characteristics of included studies

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</table>
Comparison intervention | Psychosocial rehabilitation (PSR); standard services | Diversified Placement Approach (DPA) | High quality vocational rehabilitation according to train-and-place model | Wellness and Vocational Enrichment (WAVE); Department of Rehabilitation/Employment Services (DOR)
---|---|---|---|---
Outcomes used | Vocational and non-vocational outcomes (i.e., QOL, GAF, self-esteem, etc.) | Vocational outcomes; psychiatric hospitalizations | Vocational and non-vocational outcomes | Multiply vocational outcomes (not adequately defined)
Findings | IPS is a more effective model that PSR or standard vocational services for improving employment outcomes in clients with SMI. | IPS is more effective than DPA in achieving competitive employment, but not paid employment for persons with SMI. | IPS was more effective than vocational services for every vocational outcome. | Middle-aged and older adults with SMI who participated in the IPS program were more likely to work than WAVE or DOR participants.

IMPLICATIONS FOR PRACTICE, EDUCATION and FUTURE RESEARCH

Further research is required to examine the effectiveness of IPS with additional models of supported employment in which vocational specialists who provide vocational services are integrated within the mental health team, as opposed to referring clients to off-site vocational services and programs. Again, it is important for occupational therapists to determine the client’s employment preferences before implementing vocational rehabilitation as the main tenant of IPS is to place clients in competitive employment. Lastly, qualitative research is needed to examine, in-depth, the individual experience of vocational rehabilitation.

REFERENCES


