Does the Model Matter? A Review of Literature on Vocational Outcomes for Consumers of Mental Health Services

Project Summary

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Background
Understanding relationships between vocational models and vocational outcomes is an important area of focus for occupational therapists. A large body of literature has confirmed the relationship of employment to well being in the general population (Vaillant & Vaillant, 1981). Research has also been developing over the past decade with regards to persons with severe mental illnesses. Studies suggest that like other populations, mental health consumers experience significant benefits through employment. For example, Meuser et. al. (1997) showed that formerly unemployed psychiatric patients who obtained competitive employment while participating in a vocational program tended to have lowered symptoms, better overall functioning, and higher self-esteem after controlling for baseline levels of these variables.

Despite positive findings regarding the subjective and objective effects of work on mental health consumers, vocational outcomes remain poor. Studies generally show that less than 20% of consumers are competitively employed (Farkas, Rogers & Thurer, 1987; Tessler & Goldman, 1982; Waslenki, Goering, Lancee, Ballantyne & Farkas, 1985). In an attempt to address and improve this rather discouraging state of affairs, a wide array of philosophies, models and programs have been developed. As these approaches develop and change within the current climate of fiscal responsibility and accountability, occupational therapists must make educated choices about the models of service delivery and principles of practice to incorporate within their range of services.

Occupational therapists have practiced within a variety of models and settings in order to assist individuals to obtain and maintain employment and positive vocational and other outcomes. The roots of the profession of occupational therapy in Canada lie in its focus on work and work-related therapy, and work remains a central focus for many OT’s. However, literature regarding outcomes associated with various models of vocational rehabilitation within occupational therapy practice is limited and difficult for many practitioners to interpret. Enabling Occupation: An Occupational Therapy Perspective, identifies Stage 2 of the occupational performance process to be “selecting theoretical approach(es)”, a process which involves “selecting a conceptual system to guide and justify decisions…. [this includes] developing models, existing models, and tested theories” (Stanton, Thompson-Franson, & Kramer, 1997, p. 65.). Few systematic reviews have been done to examine vocational outcomes as they relate to specific models or approaches within the vocational rehabilitation continuum, which can make the process of selection of models and theoretical perspectives quite difficult.

Therefore, for occupational therapists to continue to be at the forefront of assisting consumers in the field of vocational rehabilitation, there is a need to examine the effects of differing models of service delivery on vocational outcomes, and to have a clear
understanding of the evidence which has accumulated to date in this area. This review provides occupational therapists with a summary of this evidence in ways that would be useful in practice.

Objectives
This literature review addresses the relationship of current models of vocational rehabilitation to vocational outcomes for people with severe mental illness. Models which have been incorporated into occupational therapy (OT) service delivery are reviewed along with an emerging model which has potential for OT practice. Specifically, the models reviewed are: (1) traditional vocational assessment and counselling, (2) case management (CM), (3) assertive community treatment (ACT) and (4) supported employment (SE), particularly the individual placement and support (IPS) model. Literature in each of these is systematically reviewed and information which sheds light on their relationship to vocational outcomes is reported.

Specifically, the review has the following objectives:

1. To analyze literature on specific approaches and models of vocational rehabilitation to determine their relationship to vocational outcomes. Models of practice that have particular relevance to occupational therapy are addressed.

2. To track important characteristics of service delivery documented in the literature which cross models and enhance outcomes in vocational rehabilitation.

3. To relate models and characteristics to future directions for OT practice in the area of work integration for people with severe mental illness in order to assess and develop strategies useful to occupational therapists assisting their clients with work integration.

Methods
A comprehensive and strategic search of the literature was conducted in consultation with library staff from the University of Toronto. A computerized search from 1980 to 2000 was carried out using the following databases and key words:

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<td>Medline, Cinahl, Psychlit, Embase, Biological Abstracts, Health Star, Sociological Abstracts and Canadian Periodical Index</td>
<td>mental illness, vocational assessment, vocational rehabilitation, assertive community treatment, case management, treatment, job placement, individual placement and support, supported employment and others</td>
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In addition, the researchers searched the holdings of the Canadian Mental Health Association National Library, and conducted a hand search of the Psychiatric Rehabilitation Journal and Community Mental Health Journal. Lastly, a call to the OT Listserv was issued, requesting published or unpublished materials relevant to the project.

Inclusion Criteria:
Articles were included in the review if they met all of the following inclusion criteria:
1. The article addressed persons with severe mental illness;
2. One or more of the aforementioned models was examined;
3. The article was either a research study or review article with discussion of vocational outcomes.

A total of 1560 abstracts were generated from the search and were reviewed by the researchers. Of these, 497 were identified for hardcopy retrieval as they were assessed to have the potential to meet the inclusion criteria. Five of the 497 articles could not be found; therefore the researchers reviewed 492 full articles. Using the criteria outlined above, 437 of these articles were excluded and 55 were included. Thirty of the 55 articles were empirical studies and 25 were review articles. This report synthesizes the findings of these 55 articles. The process is summarized below:

The Review Process:
Included articles were reviewed using the COTF Guidelines for Critical Review Form to guide the extraction of information. Particular emphasis was placed on documenting vocational outcomes of the four models. This information then was entered onto charts. In addition, program characteristics which cross models and which were reported to influence vocational outcomes were also tracked. Finally, background or contextual information which was thought to have had an effect on vocational outcomes was documented, for example country, year, effects of legislation.
Results
Results of this review highlight not only what is known about vocational outcomes, but also what is not known. Research designs, control groups, and outcome measures are by no means consistent across studies, and therefore definitive statements about the value and utility of the models are difficult to make. Nevertheless, some trends are suggested by the literature and they are discussed within the context of the four models:

Case management:
Empirical studies examining vocational outcomes related to case management models fail to show significant differences in employment between persons receiving case management services and those receiving other mental health services. This is a consistent finding in three studies comparing case management clients to controls. Goering et al. (1988) found a nonsignificant difference in full-time and part-time employment between case management clients and controls (people in a large aftercare study). Nesbitt and Nelson (unpublished) found that CM clients and those on the waiting list did not differ on work activities. In a randomized controlled study, Okapu et al. (1997) found that although CM appeared to increase noncompetitive employment, there was no significant difference in competitive employment between CM and controls. However, two of the three studies (Goering, 1988 and Okapu et al., 1997) did demonstrate higher though nonsignificant rates of employment for their case management groups. A fourth study which examined outcomes of two modes of CM (Sands and Cnaan, 1994) also showed nonsignificant differences in employment rates between groups. The authors speculated that it may be unrealistic to expect differences between programs that purport to do the same thing. In summary, it may be said that although case management shows slightly increased rates of employment as compared to other programs, the differences are not substantial. This model may, however, enhance outcomes in noncompetitive employment such as sheltered, transitional or supported employment.

Assertive Community Treatment (ACT):
The efficacy of this model has been well documented with regards to treatment and hospitalization outcomes. Results of this review point to promising findings around employment as well. Several studies comparing ACT clients to other groups demonstrate significant differences in employment rates in favour of ACT. For example, a study comparing ACT to traditional mental health services showed significant differences between groups in the numbers of people who tried paid employment (Chandler et al., 1996). Mowbray et al. (1997) showed significant differences in employment between ACT and controls (typical hospital admission and discharge) but these differences were evident only at 30 months and not at 66 months, leading the authors to hypothesize that a treatment plateau effect may be associated with this model. A retrospective analysis by Becker et al. (1999) showed that 63% of clients in ACT for longer than a year were employed at some time, and the average rate of employment over a 10 year period was 33%. Although these figures are impressive relative to employment rates for this population as a whole, there is no indication as to how long employment was maintained. Finally, studies examining FACT (family-aided assertive community treatment) show promising results associated with this ACT-based model. A comparison between FACT and conventional mental health service delivery resulted in dramatically fewer
unemployed FACT clients as compared to those in conventional treatment (McFarlane et al. 2000). The research suggests that the ACT model, with its emphasis on work and its specialized vocational staff, is one which is associated with positive and promising results in the area of employment outcomes.

Traditional Vocational Rehabilitation:
Empirical studies addressing traditional vocation rehabilitation are difficult to compare as this is not one clearly defined model, and these studies often use different methods and outcome measures. Allen et.al. (1994) describes an intensive vocational readiness program in which 14% of clients were placed and maintained competitive employment for a minimum of 60 days, while 52% were in supported or sheltered employment, volunteer work, or training. Blankertz and Robinson (1996) in a project which intended to increase work participation by linking clients to the Vocational Rehabilitation (VR) system, reported that at 9 months, 10% were in competitive employment, while another 46% had involvement in another vocationally related outcome such as work training. This was compared to only 1.6% in the control group, those who were not given specific assistance in connecting with the VR system. Bozzer, Sampson and Anson (1999) reported that 22% of the clients in a 3 phase vocational program were competitively employed at follow-up, with another 56% in a work experience placement. Perhaps the most dramatic results are from the projects comparing traditional vocational rehab and IPS. For example, Drake et.al. (1994) report results of a study which found statistically significant differences between the two groups: 39% of those in IPS were competitively employed compared to 12.5% in the comparison group who were receiving rehabilitative day treatment. Others studies report similar findings, and are further detailed in the next section on IPS.

Studies from non-North American countries present mixed findings. McCrum, Burnside and Duffy (1997) report that 17% were in full time employment in the first 15 months of vocational rehabilitation program in Ireland, with another 75.5% in training or other vocationally related endeavours. Fuller et.al. (2000) describe a program in Japan in which 100% had achieved competitive employment for some period of time, with 39% in competitive employment at the time of the study. Reker and colleagues (1997) found in a large prospective study in Germany that 19% were employed in the open labour market at the time of 3 years follow-up, while 54% were in sheltered work or social firms, or remained in the rehabilitation program. Despite the variation in these studies, the results suggest that the employment related outcomes of vocational rehabilitation are consistent with employment rates documented in the literature without intervention, but may increase vocationally related behaviours and involvement.

Individual Placement and Support:
Several studies have now been reported which compare IPS to other services. Drake and colleagues (1994) compared IPS with a rehabilitative day treatment program. As indicated above, the findings were statistically significant in favour of IPS. Further analysis found that the benefits were especially effective for those who had not been employed during the baseline year (28% of those in the IPS program compared to 8.2% in the day treatment program obtained competitive employment). In replication studies
Drake et. al. (1996a), Drake and colleagues (1996b) Drake et.al. (1999) similar results were obtained. Mueser et. al. (1997) found that 60% of those involved in an IPS program obtained competitive employment, with approximately 30% working during each month of the study. A descriptive study by Meisler and colleagues (1998) report on an attempt to compare IPS with ACT; when the initial plan could not be carried out, the two models were integrated into one program, maintaining IPS principles. 60% of participants obtained at least one job, with the employment rate over the two-year period of the report 25-40%. These IPS studies present promising results, with participants obtaining employment rates documented in the literature for this population.

Review Articles
The results of nine key review articles (out of a total of 25 included in the project) are presented. These results have been divided into four categories as follows: reviews which specifically address ACT, reviews which specifically address SE (since many of the reviews which address IPS are SE reviews), reviews which specifically address schizophrenia, and reviews which specifically address a variety of models including CM.

Reviews Which Specifically Address ACT:
In their reviews on the effectiveness of ACT, Burns and Santos (1995) and Marshall and Lockwood (2000) both included studies with RCT designs which address vocational outcomes. The results of the Burns and Santos (1995) review indicate that two out of the four RCTs which reported vocational outcomes showed a statistically significant difference in favour of ACT (p>.05) (Audini, Marks, Lawrence, et al., 1994; McFarlane, Stastny & Deakins, 1992, cited in Burns & Santos, 1995). Audini et al. and McFarlane et al. are the authors of the 2 studies which found statistically significant differences in favour of ACT. Similarly, when addressing unemployment, Marshall and Lockwood (2000), found statistically significant differences between ACT and 1) standard community care, and 2) hospital-based rehabilitation. In both comparisons, clients receiving ACT were less likely to be unemployed.

Reviews Which Specifically Address SE:
In their reviews of SE, both Drake, Becker, Clark, and Mueser (1999) and Bond, Drake, Mueser, and Becker (1997) report research which suggests a statistically significant advantage for clients in SE programs compared to those in non-SE programs. Drake et al. (1999) state that “several studies of shifting clients with severe mental illness from day treatment settings into IPS show that the potential for competitive employment is much higher than previously believed” (p. 293). For example, Drake, Becker, Biesanz, et al.(1994) found that within one year of change to IPS from day treatment, competitive employment went from 33% to 56% for day treatment clients with SMI. Similarly, Bond et al., (1997) reported a mean for the six experimental studies they reviewed. They found that 58% of clients in the experimental condition (SE) had competitive employment compared to 21% for the control group.

Reviews Which Specifically Address Schizophrenia:
In their reviews of vocational rehabilitation for people with schizophrenia, Lehman (1995) and Cook and Razzano (2000) present many positive findings related to
vocational outcomes for this population. Lehman’s (1995) overall conclusion however, is that “most vocational rehabilitation programs have a positive influence on work-related activities, but most have failed to show substantial and enduring impacts on independent, competitive employment” (p. 645). In attempting to explain the link between schizophrenia and poor work function, Cook and Razzano (2000) state that “findings suggested that it may not be the diagnosis of schizophrenia itself but the intensity and type of symptoms associated with this particular disorder that influence employment outcome and work performance” (p. 94). For example, social skills deficits and cognitive impairments may play a role. In a similar review by Lauriello, Bustillo, and Keithe (1999) schizophrenia and the effectiveness of psychosocial treatments on a variety of outcomes including vocational ones is addressed. While several findings are presented in this review, the overall conclusion is that “psychosocial treatments have been shown to reduce schizophrenic relapses but have not convincingly generalized to improving other facets of the illness” (p. 1409). Specifically, they concluded that both sheltered vocational programs and SE were unable to significantly improve competitive employment.

Reviews Which Specifically Address Several Models Including CM:
In their review of psychiatric rehabilitation, Baronet and Gerber (1998) addressed several models. With respect to ACT, they included four articles which addressed occupational outcomes and two of these favoured ACT: Marks et al.,(1994) looked specifically at quality of work functioning and Cook et al.(1993) looked at occupational activities (cited in Baronet & Gerber, 1998). With respect to vocational rehabilitation, they included at least eight articles which addressed vocational outcomes and report that most found an improvement in occupational status. Lastly, with respect to CM, they included three articles which addressed vocational outcomes and found that “both RCM (regular case management) and ICM (intensive case management) studies had a positive impact on occupational…status” (p. 211). In the final review article which will be addressed here, Marshall, Gray, Lockwood, and Green (1999) addressed the effectiveness of CM in comparison with standard community care. In this review, the clinical and social outcome category includes employment status. In contrast to the Baronet and Gerber (1998) review, their overall finding was that “it looks unlikely that case management produces substantial improvement in clinical or social outcome” (p. 10).

Characteristics Influencing Vocational Outcomes

Many of the reviewed articles not only put forth outcomes associated with the model under investigation but also examined characteristics within the model that were thought to facilitate positive outcomes. These characteristics may in fact be more enlightening than the models themselves, for their application is most often possible across models and contexts. A listing and brief discussion of these characteristics follows.

Work as a Prominent Program Theme: Recognition of the importance of work in the lives of consumers and the priority attached to it within the model or program is reported to be an essential characteristic. Becker et al. (1999) reflected on substantive rates of employment achieved in their ACT program, and gave credit to the theme of work which pervaded interactions between clients and staff. The importance of emphasizing
employment is also supported by the Blankertz and Robinson study (1996) and the IPS studies (Drake et al, 1994; 1996a;1996b; 1999).

Motivation/Participation: The level of commitment to or participation in the particular program under investigation is frequently addressed as an important factor relating to outcomes. In a study examining models of CM, participants were rated as participating/nonparticipating based on their degree of program participation. A significant difference between participating and nonparticipating groups was found in the area of "getting jobs", although this difference was nonsignificant when limited to competitive jobs (Okapu, Anderso, Sibulkin & Bickman, 1997)

Presence of a vocational specialist on the team: Many studies indicate that the vocational specialist is an important member of the team, one who can make a difference in vocational outcomes as the responsibility of employment is attached to an accountable person. For example, a study by McFarlane et al. (2000) achieved dramatically lower unemployment rates in a FACT program which had a vocational specialist on the team.

Other characteristics such as paid work, client choice and organizational culture have also been suggested as deserving of further attention.

Dissemination

Dissemination of the evidence from this kind of review needs to be multipronged as the literature on changing professional practice indicates that publication in scholarly journals, while important, is not sufficient to alter professional behaviours. Accordingly, several strategies will be used to disseminate our results:

Publications
We will submit for publication to a peer reviewed journal one overall review article. In addition, we plan to submit more detailed articles to OT or other journals, which focus on some of the particular aspects of this area which became apparent in the review, such as characteristics which support employment outcomes or vocational outcomes in one particular model.

Conferences:
We have already presented at two conferences, the Tri-Joint Conference held in Toronto, May 2000 and at the ACTivate conference, in Kingston, Ontario, October, 2000. If opportunities are available, we will present at other conferences, both for OT’s and for other professional groups. We have had discussion with CAOT regarding Tel-Ed sessions, and may participate in the spring of 2001. We may also consider hosting a short conference through Continuing Education at the University of Toronto OT department.

Discussion Groups
One effective method for practitioners to understand information is to have the opportunity to discuss it. The OT Psychiatric Interest group in Toronto requested that we come to present and discuss our finding with them; this was done in November 2000 to a
group of about 20 OT’s. This session appeared particularly useful as there was ample
time for discussion, several therapists talked about how the material would influence their
practice, and the feedback was quite positive. In addition, we have received invitations
from the OT groups at the Centre for Addiction and Mental Health, and the ACT
Network in Toronto, as well as an interest group in California. We anticipate that once
our final report is available, others will also want to discuss it with us, and as much as
possible, we will encourage those opportunities.

World Wide Web
It is our understanding that COTF will be posting reports and related materials from the
literature review project on its website. For optimal linking, we would like to have a link
to our report from the U of T website.

Hard Copy
Many frontline practitioners continue to use paper-based materials in their continuing
education. Therefore we will make available paper copies of a practically oriented
synopsis available for those who request them for the next year.

Education of entry level practitioners
As we are both based at the Department of Occupational Therapy, University of Toronto,
this research will be incorporated into the education of students in this program.
Reference List

References Included in Literature Review


References Included in the Report


