

# Improving vocational recovery among people with psychosis: a two-pronged approach

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## Abstract

**Purpose** – This paper aims to investigate the feasibility of conducting research on a two-pronged vocational intervention for people with first episode psychosis. The paper also aims to empirically examine the impact of this two-pronged vocational intervention for people with first episode psychosis by determining what effect, if any, its introduction to an early intervention for psychosis service (EIPS) has on vocational outcomes using a prospective follow-up design. The approach consisted of supported employment (individual placement and support, IPS) for participants without a productive role and a job retention programme for those employed or studying.

**Design/methodology/approach** – Between 2010 and 2013, a supported employment specialist joined an EIPS where occupational therapy was available to all attenders. The appropriate intervention was determined by the occupational therapist at the service. Participants were interviewed at baseline and one follow-up. Ethical approval was attained. The Individual Placement and Support Fidelity Scale was used to ensure the quality of IPS implementation.

**Findings** – In total, 39 (20 men, 19 women) consented; 21 (54 per cent) of these participants were unoccupied; 18 (46 per cent) had a productive role; 87 per cent ( $n = 34$ ) were followed up. The mean length of follow-up was 18 months. At follow-up, 50 per cent ( $n = 10$ ) of unoccupied participants had attained a productive role, and 17 of the 18 participants had retained their productive role. Overall, participants were found to have spent an average of 62 per cent of the follow-up period in a productive role.

**Research limitations/implications** – Rates of vocational recovery among people affected by psychosis may be enhanced by a two-pronged approach that allows for the persons individual work circumstances to be taken into account.

**Originality/value** – This study highlights the impact of a two-pronged vocational intervention for people with first episode psychosis in Ireland. It is the first study of its kind to be published in the Republic of Ireland and the first world-wide to include a job retention element in its design.

**Keywords** Occupational therapy, Psychosis, Schizophrenia, Job retention, Vocational recovery

**Paper type** Research paper



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## Introduction

Despite research highlighting the poor extent of vocational recovery among people affected by psychotic conditions, evidence-based interventions for addressing the problem are not widely available (Boardman and Rinaldi, 2013; McGurk and Mueser, 2016). Rates of employment of over 50 per cent are reported among clinical trial populations who receive approaches such as individual placement and support (IPS), whereas without such interventions rates of 25 per cent are typically reported (Becker *et al.*, 2014; Bond *et al.*, 2012; Bond *et al.*, 2015; Burns *et al.*, 2007; Modini *et al.*, 2016a; Marwaha and Johnson, 2004; Marwaha *et al.*, 2007). Furthermore, prospective studies have highlighted that the level of employment typically declines over time among schizophrenia cohorts (Lindgren *et al.*, 2006; Marwaha and Johnson, 2004; Marwaha *et al.*, 2014).

Occupational therapy has a longstanding interest in productivity. While this is not restricted to paid employment, it is an important component given it is the commonest form of productive occupation adults engage in (Central Statistics Office, 2016). Assisting people to return to work after illness or injury is regarded, at least by some occupational therapists, as one of the roots of the profession (Thurgood and Frank, 2007). While a number of studies of supported employment have been conducted by occupational therapists in Ireland and elsewhere, the literature remains underdeveloped (Hynes and Harb, 2017; Oka *et al.*, 2004; Noyes *et al.*, 2018).

As highlighted by the systematic review of the *American Journal of Occupational Therapy* and two Cochrane Reviews, supported employment, particularly IPS, is the most effective model for enabling people affected by severe mental health conditions to return to work (Modini *et al.*, 2016b; Noyes *et al.*, 2018; Kinoshita *et al.*, 2013; Marshall *et al.*, 2001). More recently, the evidence has emerged that those newly diagnosed with psychosis can also be effectively assisted to return to work or college after their first episode of psychosis with this approach (Bond *et al.*, 2015; Rinaldi *et al.*, 2010; Modini *et al.*, 2016a; Killackey *et al.*, 2008; Becker *et al.*, 2014). However, more research is warranted particularly in European countries.

Notwithstanding the strong evidence based for IPS, it is also important to continue to innovate and investigate other possible avenues for improving vocational recovery among people with psychotic conditions, both first episode and enduring. Research with employed people with mental health conditions has highlighted the significant challenges are encountered to manage the challenges of the work environment; as a result, they often experience interruptions in their work life (Russinova *et al.*, 2007). Despite this, rarely if ever, are they provided with vocational assistance such as a job retention programme (Cameron *et al.*, 2012). Job retention interventions offer a range of supports including assisting with problem-solving, examination of the specifics aspects of the person's job and their working environment and communication within the workplace. There is some evidence, that job loss can be averted through the provision of such assistance, albeit with clinical populations other than those with psychotic conditions (Cameron *et al.*, 2012). The models described have clear synergies with occupational therapy models particularly the Person-Environment-Occupation model (Strong *et al.*, 1999).

This study empirically examines the impact of a two-pronged vocational intervention for people with first episode psychosis (FEP) by determining what effect, if any, its introduction to an early intervention for psychosis service (EIPS) has on vocational outcomes using a prospective follow-up design. Participants were offered IPS if they were not in paid employment or education. They were offered a job retention programme if they were. The outcomes investigated were (i) engagement with the interventions and (ii) work outcomes following receipt of the appropriate intervention. The working hypotheses, based on international research published to date, is that there will be high engagement with the

supported employment intervention and a positive impact on outcomes (Boardman and Rinaldi, 2013).

## Methods

### *Aims and design*

We determined conducting a randomized controlled trial was unviable due to limited duration and extent of the funding provided. Additionally, given the strength of the evidence-base for IPS, we were concerned about the ethics of withholding it from some participants. In such circumstances, it has been recommended that experimental studies such as uncontrolled and non-randomized control trials be used (Song and Chung, 2010).

The ongoing programme of service evaluation at the EIPS allowed the impact of the vocational intervention to be investigated with two separate research methods. A comparative study with a matched historical control group was conducted with data available from a one year outcome assessment. The findings have been published elsewhere (Turner *et al.*, 2016). Additionally, a prospective follow-up study to establish the extent of productivity among participants was carried out and it is this study that the remainder of this paper describes.

### *Recruitment*

The admission process to the EIPS has been described in detail previously (Renwick *et al.*, 2015). In short, all cases of suspected FEP presenting to secondary mental health services in a geographical area were referred to the EIPS. A standardized assessment protocol was conducted to ascertain diagnosis and clinical presentation. Those found to have a first episode of psychosis were offered a number of evidence-based interventions including occupational therapy. Between June 2010 and June 2013, a supported employment specialist (SES) was employed at the EIPS through a grant provided by the Mental Health Commission of Ireland. The SES offered the appropriate intervention to all those internally referred to them. People admitted to the service between August 2009 and December 2012 were eligible.

### *The vocational intervention*

The two-pronged vocational intervention included an option for those who had a productive role (paid employment or education) and those without one.

*Individual placement and support.* Descriptions of the IPS model have been widely disseminated over the past two decades (Becker and Drake, 1994; Drake and Becker, 1996). The SES trained in IPS through the online course provided by the developers of IPS at Dartmouth University and was supervised by the occupational therapy manager experienced in the use of the model.

The approach used in this study had some minor adaptations to the original model. Like IPS in other EIPs, the provision of supported education was included as part of the role of the SES (Nuechterlein *et al.*, 2008). Additionally, the SES co-delivered the job retention programme. They were based in the EIPS which is a tertiary service for the secondary mental health services in a geographical region. They attended the EIPS clinical team meeting but not all the community mental health team meetings. Fidelity to IPS principles for the adapted model was found to be 106 which would be regarded as “good” (Waghorn, 2009).

*Job retention programme.* The job retention programme delivered was based on the Workplace Fundamentals Module (WFM), a training module produced in the social and independent living skills series of the University of California (Wallace and Tauber, 2004). A

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group format is used to allow peer support and interactive learning. Seven “learning activities”, are followed sequentially:

- (1) introduction;
- (2) videotaped demonstration;
- (3) role-play;
- (4) generation and evaluation of solutions to management problems;
- (5) generation and evaluation of solutions to outcome problems;
- (6) completion of in vivo assignments; and
- (7) completion of homework.

Three highly structured components: a videotape, a trainer’s manual and a participant’s workbook were provided by UCLA as part of the WFM package. At the time of the study, these were available for purchase. The handouts are now freely available online ([www.psychrehab.com/pdf/Prosectus.pdf](http://www.psychrehab.com/pdf/Prosectus.pdf)). WFM was delivered over eight weeks and involved attending one two-hour evening group per week which was facilitated by the SES and an occupational therapist. With this combination of facilitators, there was a significant application of occupational therapy theory and philosophy to its delivery. The mobile phone number of the SES was also provided for support during working hours.

#### *Ethical approval*

Ethical approval for the study was granted by the Provincial Ethics Committee of the Hospitaller Order of St John of Gods, St. Vincent’s University Hospital and Newcastle Community Mental Health Services. Separate written informed consent was attained from participants for their involvement in the study and to have access to data collected at various time points while they were involved with the service. One of the ethics committees recommended that the intervention be available to all participants and not restricted to those willing to participate in the research project.

#### *Assessment*

Demographical and basic clinical information was provided to the SES through the referral. Subsequently, a semi-structured interview schedule documented current and past engagement in productive occupations. The baseline interview of the Employment Intervention Demonstration Programme study was adapted for this purpose as favourable findings regarding its reliability have been previously published (Salyers *et al.*, 2001). This interview was completed again at follow-up focussing on engagement in productive occupations since baseline.

#### *Data analysis*

For data analysis, a number of variables were created. The number of months spent engaged in a productive occupation (paid employment or formal education/training) was summed. The percentage of time in a productive occupation was calculated by dividing the length in a productive occupation by the length of the follow-up period. Education equivalent to completing second level education was considered a reasonable level of educational attainment and therefore was used to create a binary variable of “completed 2nd education/did not complete 2nd education”. Binary variables were also created for nationality and relationship status. A three-level categorical variable for diagnosis was created – those diagnosed with schizophrenia and schizophreniform disorder were grouped

into a “schizophrenia” category; those with an affective condition with psychotic symptoms and those with schizoaffective disorder were grouped into a “affective psychosis” category; and all those with other psychotic conditions were assigned to an “other psychotic illness” category.

Descriptive statistics were initially used for the whole population and then by group, IPS recipients and WFM attenders. This was to determine what, if any, benefit there was to having WFM available in addition to IPS. Subsequently, correlational analysis was used to investigate for significant linear relationships. Student *t*-tests were used for group comparisons for the engagement analyses. IBM SPSS version 22 was used for the analysis.

**Results**

*Overall engagement*

In total, 129 people were offered the interventions – 12 people were offered both; 72 were offered IPS alone (total offered IPS = 86); 45 people were invited to WFM alone (total offered WFM = 57) – 64 accepted of whom 61 used the interventions. The referral information of those who declined and those who attended each intervention is presented in [Tables I and II](#).

Of the 61 people who used the interventions, 39 consented to participate in the research project. A comparison of those who consented (*n* = 39) and did not consent (*n* = 22) determined that mean age was the only significant distinguishing factor [mean age (SD) consenters 38 (10) vs no consent 30 (10), *t* = 2.80; *p* = 0.007] (based on de-identified, aggregated data for non-participants).

The final sample consisted of 20 men and 19 women. Half of the sample had completed 2nd level education or better and 18 participants were considered to be in paid employment or full-time education. The most common diagnostic group was schizophrenia type conditions with 18 participants, 10 were categorized as having an affective condition with psychotic features and the remaining 11 participants classed as having an “other” psychotic condition.

With regard to the interventions that were used – 21 participants used IPS alone; nine participants used the WFM programme alone and nine participants used both interventions. Participants categorized as using both interventions were those who attended the group intervention and got additional support from the SES on a one-to-one basis outside of the group programme hours.

Variable	IPS		Statistics
	Declined ( <i>n</i> = 36)	Attended ( <i>n</i> = 48)	
<i>Gender</i>			
Male	18 (50%)	27 (56%)	$\chi^2 = 0.32; p = 0.66$
Female	18 (50%)	21 (44%)	
<i>Age (years)</i>			
Mean (SD)	37 (11)	35 (11)	<i>t</i> = 0.79, <i>p</i> = 0.43
<i>Education<sup>a</sup></i>			
</= 2nd level	20 (59%)	28 (60%)	$\chi^2 = 0.01; p = 1.00$
>/= 2nd level	14 (41%)	19 (40%)	
<i>Diagnosis</i>			
Schizophrenia	16 (44%)	26 (54%)	$\chi^2 = 0.78; p = 0.68$
Affective psychosis	8 (22%)	9 (19%)	
Other psychoses	12 (33%)	13 (27%)	

**Table I.**  
Engagement of an early intervention for psychosis service population with IPS

**Table II.**  
Engagement of an early intervention for psychosis service population with WFM

Variable	WFM		Statistics
	Declined ( <i>n</i> = 34)	Attended ( <i>n</i> = 23)	
<i>Gender</i>			
Male	17 (50%)	11 (48%)	$\chi^2 = 0.03; p = 1.00$
Female	17 (50%)	12 (52%)	
<i>Age</i>			
Mean (SD)	30 (9)	35 (9)	$t = -2.15; p = 0.04$
<i>Education<sup>b</sup></i>			
</= 2nd level	19 (59%)	8 (35%)	$\chi^2 = 2.76; p = 0.17$
>/= 2nd level	13 (41%)	14 (65%)	
<i>Diagnosis</i>			
Schizophrenia	16 (47%)	5 (22%)	$\chi^2 = 5.65; p = 0.06$
Affective psychosis	6 (18%)	10 (43%)	
Other psychoses	12 (35%)	8 (35%)	

**Notes:** <sup>a</sup>Data missing on four people; <sup>b</sup>data missing on three people; #for cohort attenders = yes

### Work attainment outcomes

In total, 34 of 38 (87 per cent) were followed up. The mean length of follow-up was 18 months (SD 12; range 2-44). A number of work-related outcomes were examined:

- change in work status between baseline (T1) and follow-up (T2);
- participation, defined as at least one month or more, in paid employment or education, during the follow-up period; and
- the percentage of the follow-up period spent in paid employment and education.

*Change in work status between T1 and T2.* Seventeen participants (50 per cent) were categorized as having a positive productive role at T1 and T2; eight participants (24 per cent) had attained a positive productive role by T2 and eight participants (24 per cent) were categorized as not having a positive productive role at both time points. One participant (3 per cent) lost their productive role between T1 and T2. Accumulatively, there were 25 out of 34 participants (74 per cent) in a productive role at T2.

*Participation in education or employment during the follow-up period.* Twenty-seven participants (79 per cent) were found to have engaged in at least one month of paid employment or education during the follow-up period. Twenty-one participants (62 per cent) had spent at least one month in paid employment and nine participants (27 per cent) had spent at least one month in formal education. Four participants (12 per cent) had engaged in both paid employment and formal education. When the length of time spent in the various forms of productive occupations was summed and divided by the length of the follow-up period the mean percentage of the follow-up period engaged in these productive occupations was on average 62 per cent (SD 44 per cent, range 0-100 per cent). More specifically, participants with a productive role at T1 (*n* = 18) spent an average of 90 per cent (SD 29 per cent) of the interval between T1 and T2 with a productive role; while the average among those unoccupied at T1 (*n* = 16) was 49 per cent (SD 44 per cent).

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**Discussion**

While limited by the modest sample size, this study does advance our understanding of vocational rehabilitation in EIPS settings in a number of ways.

*Engagement*

An engagement rate of 50 per cent reflects the typical uptake of psychosocial interventions offered in routine clinical settings (Doyle *et al.*, 2014). While this may be lower than engagement in other studies of IPS in EIP settings these populations are typically restricted to research cohorts which may be biased due to this. We found no significant factors associated with engagement with IPS however only a limited number of variables were available for analysis. Those older and with an affective psychotic disorder were found to be more likely to attend the job retention programme. A third of those who used the interventions declined to participate in the research when given the option to be able to accept the offer of the intervention without being obliged to participate in the study. Those who did not consent tended to be younger than those who agreed to take part.

*Outcomes*

The finding that three out of four participants (i.e. 74 per cent by T2) engaged in productive roles during the follow-up period is consistent with the previous studies on the efficacious of IPS for FEP (Modini *et al.*, 2016a, Rinaldi *et al.*, 2010; Killackey *et al.*, 2008). IPS successfully assisted 50 per cent of those without a productive role to attain one which would be consistent with typical outcomes attained for this intervention. The finding provides support for the feasibility and efficacy of IPS in the geographical location where the study was conducted and also adds further weight to the evidence base for IPS in EIPS contexts.

The outcomes also indicate a clear benefit to having the job retention intervention available in addition to IPS. Qualitative research has highlighted the various stressors to managing a job while living with a serious mental health condition (Cameron *et al.*, 2012). These needs have tended to be overlooked as the focus has inclined to be on those with no productive role. Our findings highlight the potential of a preventative approach to improving work outcomes among people with psychosis; however, more research is required. This is particularly important as EIPS may reduce duration of untreated psychosis and thereby lead to an increased number of people presenting who have not lost their productive role (Turner *et al.*, 2009).

Occupational therapy undertook a significant role in the delivery of this intervention and was assisted by the SES. This may be a model that could be adopted in other EIPS and also adult community mental health teams where the occupational therapist acts in a consultancy role for SES rather than the hands on delivery of the vocational intervention. This ensures that the expertise of the occupational therapist is not exclusively used on productive occupational performance alone. It is important to highlight however that returning to work is regarded as central to recovery (Dunn *et al.*, 2008; Connell *et al.*, 2011), and it is therefore important that occupational therapy does not undervalue the importance of providing adequate support for this to be achieved when it is in line with their clients ambitions and goals.

*Strengths and limitations*

This study had a number of limitations. The sample size of 38 participants would be considered small for a clinical trial which reduces the generalizability of findings and increases the risk of biases within the sample. In addition, the average age of participants is older than other studies conducted with FEP populations possibly due to the younger

participants exercising their right to use the interventions but not participate in the study. Another limitation is the variable length of follow-up making it difficult to analyse and interpret some of the results. With regard to the research team it was not possible to employ both a research assistant and a SES with the resources provided, so the assessor at baseline and follow-up was the person in the SES role. However, by chance, due to changes in personnel during the project the SES who completed the follow-up assessment rarely was the same person who had conducted the baseline assessment. It must also be acknowledged that it was also not possible to determine which intervention was the important ingredient for outcome among participants who availed of both interventions. It would also have been preferable to have an IPS expert complete the IPS fidelity scale; however, resources were not available. Despite these limitations, it is the first study of its kind to be conducted in the country of the EIPS; the inclusion of the job retention programme is a novel approach, and a high rate of follow-up was achieved. The work outcome examined included both paid work and study, and it was possible to calculate the quantity of time of the follow-up period productively occupied rather than a point prevalence outcome. Furthermore, while some funding was provided, the study was conducted within a naturalist setting in a European country which has differing social and labour conditions to those countries where IPS has been extensively studied to date.

### *Conclusion*

This study adds some additional evidence to the already strong case that using evidence-based supported employment can significantly reduce the extent of unemployment amongst people affected by psychotic conditions. It has highlighted that adding a preventative approach can enable individuals' work circumstances to be taken into account and assist those with productive roles to retain them.

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