Individual Placement and Support Supported Education in Young People with Mental Illness: An

Exploratory Feasibility Study

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Illness: An Exploratory Feasibility Study

Abstract

Objective: This study aimed to evaluate the feasibility and effectiveness of adapting Individual Placement and Support (IPS) to education for young people presenting to a tertiary mental health service who wished to re-engage with or be supported in their education.

Methods: The study was an uncontrolled trial. Twenty young people with severe mental illness were recruited and worked with an Educational Specialist providing adapted IPS for education (IPSed). Demographic, educational and symptom measures were collected at baseline. Educational outcome was collected at the end of the 6-month intervention. Data presented are descriptive.

Results: IPSed was found to be feasible with 95% of the participants successfully completing the intervention. Eighteen of the 19 who participated through to the conclusion of the intervention achieved positive educational outcomes.

Conclusions and Implications for Practice: It is well established that education is the foundation of career, but many people with mental illness drop out of their education with the onset of illness in adolescence or early adulthood. There has been a dearth of interventions to reconnect people with mental illness to secondary education and training. This study demonstrates that it is feasible to adapt IPS to focus exclusively on education at the outset of illness. Further larger studies are needed to confirm these results and create an evidence base for implementation of IPSed in routine practice for the treatment of early stage mental illness.

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Objective

Education is the foundation of career. In both the general community ^{1,2} and in communities of people with mental illness³, increased educational attainment has been shown to be predictive of employment, and of higher income, allowing for greater economic and social participation. However, an impact of the typical onset of mental illness occurring in adolescence and early adulthood ⁴ is the disruption or derailment of education ⁵. This is particularly so in relation to secondary education ⁶. Consequently, compared to the general population, a larger proportion of people who develop mental illness do not complete secondary education or its equivalent, and they have a much lower rate of post-secondary educational achievement ^{6,7}. Traditional Supported Education approaches are defined as being concerned with post-secondary education ⁸. For young people who have not finished, or who wish to re-engage with secondary level education a different approach is required. Even though there is a lack of focus of supported education on the secondary level, and despite data showing significant disruption to secondary education ⁶, young people with mental illness consistently identify education as a primary goal 9-11. However, there are few interventions targeting educational rehabilitation with a focus on young people in the early stages of illness ¹². Those that have been evaluated, in keeping with the hitherto stated aims of supported education ⁸ tend to focus on adults with schizophrenia reconnecting with *post-secondary* study. For example in the largest supported education study $(N=397)^{13}$, participants had either finished high school or were in the process of gaining high school equivalency. The average age of the sample was 37 years and participants had mental illness for a mean of 14 years ¹⁴. Some authors have suggested that the appropriate role of supported education interventions is in the support of post-secondary training 8,15. The opportunity to

support the completion of secondary education at the outset of illness and hence limit the development of vocational disability while simultaneously building the foundation for career seems to have been missed.

Individual Placement and Support (IPS) is an approach that has a proven track record of efficacy in helping people with severe mental illness return to employment ¹⁶. Importantly, it has also demonstrated efficacy at the outset of illness ^{17,18}. IPS has 8 principles ¹⁹. It has been suggested that IPS should be adapted to include supported education as an augmentation to its employment function. In the case of first-episode psychosis this has been done by including educational goals and outcomes as targets where clients indicated that they wanted to focus on education in their vocational recovery ^{17,18}. This is also the approach taken in the RAISE SEE intervention that integrated employment and education in an adaptation of IPS for young people with psychosis ²⁰. Interestingly, while IPS produces superior results with respect to employment in young people with early stage mental illness, the outcomes for education are no better than in control conditions ²¹. However, the present study sought to further this work in two ways. Firstly, instead of adding on education to employment, we sought to focus exclusively on education. To that end we adapted IPS to education by substituting the employment consultant for a person with expertise in education (a qualified teacher). Secondly, we adapted the 7 education relevant IPS principles as follows:

- 1. Individual Placement and Support for education (IPSed) is focussed on enrolment in a community education or training course as an outcome at a level appropriate to the individual;
- 2. IPSed is open to any person with mental illness who would like to return to school/training, or who feels that they would like extra support to remain in

- their current educational environment. Acceptance into the program is not determined by measures of learning-readiness or illness variables;
- Identifying appropriate courses and where possible enrolment into them,
 commences directly on entry into the program;
- 4. IPSed is integrated with the mental health treatment team;
- 5. Potential courses are chosen based on consumer preference with reference to their educational and career goals;
- 6. The support provided in IPSed is time-unlimited, continuing where possible to the end of the course, or where the student no longer feels the support is necessary;
- 7. The education consultant makes relationships with local education providers.

The aim of this project was to explore if adapting IPS to education was feasible with young people presenting for the first time with a severe mental illness and if it had the potential to lead to successful educational outcomes.

Methods

Setting

The study was carried out at Orygen Youth Health Clinical Program (OYHCP).

OYHCP is a public mental health service for young people aged 15-25 years living in the north and north-west of metropolitan Melbourne, Australia. The catchment area covers a population of approximately 1 million people. OYHCP has a number of specialised clinics that treat young people with a range of severe mental illnesses including mood and anxiety, personality and psychotic disorders and those at ultrahigh risk of developing a psychotic disorder.

Participants

Any client who expressed an interest in educational support or rehabilitation, whether that was to enrol in an educational course or to receive support to stay in a current course was eligible to be referred by their case manager to the study. Referral could occur at any time during their engagement with OYHCP.

The study was approved by the Melbourne Health Mental Health Research and Ethics Committee.

The inclusion criteria were that the participant was a current client of OYHCP aged between 15 and 20 years of age. The restriction on age range was due to funding for this study being provided by the Victorian State Department of Education. The Department only funds for the provision of services for people up to the age of 20 years. The participant had to have expressed a desire to pursue an educational objective.

Exclusion criteria were severe intellectual disability or florid psychosis that would have prevented the determination of ability to provide informed consent.

There was a short rolling admission over a three-month period. In keeping with IPS principles, the caseload was capped at 20.

Intervention

As discussed above we adapted the well-defined method of supported employment called Individual Placement and Support to focus on education. We called this IPSed. In this study we employed a teacher with over 25 years' experience working with this population and linking them back to mainstream and alternative education settings.

Supervision for her practice of IPSed was provided by the Vice Principal of
Travencore School and clinical supervision was provided by the Head of the
Psychosocial Recovery Unit of OYHCP. She collaborated with the young person to
help them re-engage with their place of educational enrolment or identify educational
courses that they felt matched their educational goals, prepared for enrolment and
crucially, supported the person in the course. This support included: transportation to
the course; support in the classroom; assistance with homework assignments; or, other
issues that arose. In all cases the educational specialist liaised with the client's case
manager, and clinical care continued throughout. Further, the educational specialist
liaised with support staff at the educational facility in order to develop the supports
that the student had available to them.

Due to this being a feasibility study and funding restrictions, the intervention covered a period of approximately 6 months or a complete semester. During this time the education specialist (EdS) worked 50% of a full time load.

Measures

As this was an exploratory study, the assessment battery was kept minimal. Details of the measures used are below. The assessments were administered by a trained Research Assistant.

Baseline Measures

For descriptive purposes a range of baseline measures were administered.

Demographic variables included age, gender, educational achievement and history; current employment; current financial support, and; treatment information (Orygen sub-clinic attended, medication, compliance, family history of mental illness etc.).

The symptom section of the assessment included a number of standard psychopathology assessments and self-report questionnaires. The Brief Psychiatric Rating Scale ²², the Center for Epidemiological Studies – Depression ²³ scale and the Scale for the Assessment of Negative Symptoms ²⁴ were used.

Functioning was assessed using the single item Social and Occupational Functioning Assessment Scale ²⁵.

A record of whether the participant was enrolled in education and if so, whether they were attending was recorded. Highest level of education was also recorded.

Outcome Measure

At the end of the 6-month intervention, descriptive information was collected about the educational outcomes that had been achieved. Specifically, whether the individual was attending and what level of education they had achieved.

Statistical analyses

As this was a small exploratory study, analyses consisted of descriptive statistics only using IBM SPSS Version 20.

Results

Twenty people were rapidly referred and consented over three months. Nobody who was approached to participate initially refused. Assessments were conducted with 19 participants, as one person chose not to continue in the study (reason not disclosed). The participants came from the early psychosis clinic of OYHCP (EPPIC n=12), the ultra-high risk clinic (PACE n=1) and the mood and anxiety clinic (n=6). For simplifying the descriptive statistics, the PACE and EPPIC groups were collapsed.

Importantly at baseline none of the participants were attending education. 11 were enrolled and not attending and 8 were not enrolled. Table 1 shows baseline demographic and clinical characteristics of the sample in total and by originating clinic.

Table 1 about here

At 6-month outcome, 18 of the 19 participants were enrolled in education and attending. All except one were studying beyond their previous highest level of education. One participant was in hospital for most of the study period due to mental ill health. The participants' baseline level of highest academic achievement and the level engaged in following the intervention are shown in Table 2.

Table 2 about here

Conclusions and Implications for Practice

This study examined the feasibility of IPSed in a group of young people aged 15-19 receiving treatment at a tertiary mental health service. In indication that IPSed was feasible was the high demand for this intervention demonstrated by the caseload of the EdS reaching capacity within 3 months, and that 95% of the sample remained in the study throughout. The demand for an educational intervention is not surprising. As well as being obviously important to vocational development ²⁶, education is named as a primary life and treatment goal by young people with severe mental illness ^{9,10}. In the present study, because funding came from the State Department of

Education we were not able to include people aged 20-25. It is possible that people in this older age group may be equally keen to re-engage with their education as they become more aware of the vocational disadvantage of restricted educational achievement. A further measure of the feasibility of IPSed is that as with IPS for employment, it integrated well with the clinical team. Although not formally measured, there were no reports of any adverse impact on ongoing clinical care from the study.

In terms of outcomes, this small feasibility study provides preliminary, but encouraging, results suggesting that IPSed may be an effective intervention for young people with mental illness who wish to re-engage with education that has been disrupted by the onset of their illness. At outcome, 18 out of 19 (95%) were actively engaged with their education, and all bar one of them at levels higher than the point at which they had previously disengaged. That the majority of the sample had a favourable outcome suggests that symptom status at baseline is not necessarily associated with outcome and should not be used as a justification to prevent people from pursuing their educational goals. Waghorn and colleagues have shown that people with psychosis have less education ⁶, a fact that is also true for people with non-psychotic illnesses ²⁷. The corollary of this is that people with mental illness do not experience the same employment opportunities and rewards as the rest of the community. There is encouraging evidence that this intervention goes some way to addressing that.

IPS has been very successful for employment outcomes in adults and young people with severe mental illness. As more attention is given to the vocational functioning of

young people with mental illness, greater focus is needed on their educational attainment. While it has been shown that many IPS programs are also providing supported educational interventions ²⁸, there is a dearth of literature examining educational interventions for young people re-engaging with secondary level schooling or training. In some ways the question could be posed: does the lack of focus on education as an intervention expose a hidden acceptance of the vocational stigma attached to people with mental illness by those working in the mental health field? In order to ensure that people with mental illness do not have their vocational options reduced, education must be a key part of the vocational offering to them. As early intervention in mental illness becomes an increasing feature of mental health services worldwide, focusing on functional domains such as education becomes more important. This study indicates that this is both feasible and potentially effective.

Limitations

There are a number of limitations that must be considered in relation to the present study. The first is that this was an uncontrolled trial. As such it is possible that these results would have occurred anyway. Mitigating against this being either a chance finding or something that would have happened anyway is the well-known lack of educational success in this population. The study was very small with a sample of 20; 19 of whom completed the trial. Further, the only outcome considered was education. As mentioned we were restricted in the age range of participants we could include and it may be that including the full range of young people (15-25 years) would have produced different outcomes. This study utilised a teacher with significant experience working similarly to the model of IPSed. To generalise this intervention in future research or practice, training would be required to be developed. There was no

measurement of fidelity to the model in this study. This is in part because the model does not have a fidelity scale. Such a scale, specific to IPSed is needed for future studies and clinical practice. Because of limitations imposed by the level of the funding of the study there was no capacity for a longer term follow-up of these clients. Therefore, it is not possible to speculate about the persistence of a positive effect from the intervention.

Conclusion

Aut

Personal accounts of the lived experience of mental illness, testify to the benefit of being supported to engage in education ²⁹. As well as the benefits of linking to career, education is a powerful intervention for allowing the individual to stay connected, or reconnect with, their own sense of identity beyond a sick role. As the onset of illness most typically happens in adolescence and early adulthood, there is a pressing need to have specialist interventions at the outset of treatment to reconnect people with their education. This study provides preliminary evidence of the capacity of IPS adapted for education to do just that. However, further research is needed in order to establish the evidence base for IPSed, as well as justify the economic case for its inclusion in routine service delivery.

References

1998;44(8):739-747.

- 1. Australian Bureau of Statistics. *Education and Training Experience*. Canberra: Australian Bureau of Statistics;2010.
- 2. Bureau of Labor Statistics. Earnings and unemployment rates by educational attainment. 2015; http://www.bls.gov/emp/ep_chart_001.htm. Accessed 30/07/2015, 2015.
- 3. Waghorn G, Chant D, Whiteford H. The strength of self-reported course of illness in predicting vocational recovery for persons with schizophrenia. *Journal of Vocational Rehabilitation*. 2003;18(1):33-41.
- 4. Kessler RC, Amminger GP, Aguilar-Gaxiola S, Alonso J, Lee S, Ustun TB. Age of onset of mental disorders: a review of recent literature. *Curr Opin Psychiatry*. Jul 2007;20(4):359-364.
- 5. Swanson CL, Jr., Gur RC, Bilker W, Petty RG, Gur RE. Premorbid educational attainment in schizophrenia: Association with symptoms, functioning, and neurobehavioral measures. *Biological psychiatry*. Oct
- 6. Waghorn G, Saha S, Harvey C, et al. 'Earning and learning' in those with psychotic disorders: The second Australian national survey of psychosis.

 Australian and New Zealand Journal of Psychiatry. August 1, 2012 2012;46(8):774-785.
- 7. Kessler RC, Foster CL, Saunders WB, Stang PE. Social consequences of psychiatric disorders, I: Educational attainment. *American Journal of Psychiatry*. Jul 1995;152(7):1026-1032.
- 8. Rogers ES, Kash-MacDonald M, Bruker D, Maru M. Systematic Review of Supported Education Literature, 1989 2009. 2010; http://www.bu.edu/drrk/research-syntheses/psychiatric-disabilities/supported-education/. Accessed 10/12/2014, 2014.
- 9. Ramsay CE, Broussard B, Goulding SM, et al. Life and treatment goals of individuals hospitalized for first-episode nonaffective psychosis. *Psychiatry Res.* Oct 30 2011;189(3):344-348.
- 10. Iyer SN, Mangala R, Anitha J, Thara R, Malla AK. An examination of patient-identified goals for treatment in a first-episode programme in Chennai, India. *Early Interv Psychiatry*. 2011;5(4):360-365.
- 11. Morgan VA, Waterreus A, Jablensky A, et al. People Living with Psychotic Illness 2010. In: Department of Health and Ageing, ed. Canberra: Commonwealth of Australia; 2011.
- 12. Goulding SM, Chien VH, Compton MT. Prevalence and correlates of school drop-out prior to initial treatment of nonaffective psychosis: Further evidence suggesting a need for supported education. *Schizophr Res.* 2010;116(2–3):228-233.
- 13. Mowbray CT, Collins ME, Bellamy CD, Megivern DA, Bybee D, Szilvagyi S. Supported Education for Adults with Psychiatric Disabilities: An Innovation for Social Work and Psychosocial Rehabilitation Practice. *Social Work*. Jan 2005;50(1):7-20.
- 14. Mowbray CT, Collins M, Bybee D. Supported education for individuals with psychiatric disabilities: Long-term outcomes from an experimental study. *Social Work Research.* Jun 1999;23(2):89-100.
- 15. Murphy AA, Mullen MG, Spagnolo AB. Enhancing Individual Placement and Support: Promoting Job Tenure by Integrating Natural Supports and

- Supported Education. *American Journal of Psychiatric Rehabilitation*. 2005;8(1):37-61.
- 16. Bond G. Evidence for the effectiveness of the individual placement and support model of supported employment. 2012; http://www.dartmouth.edu/~ips2/resources/12-ips-evidence-10-23.pdf. Accessed November 20, 2012.
- 17. Killackey E, Jackson HJ, McGorry PD. Vocational Intervention in First-Episode Psychosis: A Randomised Controlled Trial of Individual Placement and Support versus Treatment as Usual. *British Journal of Psychiatry*. 2008;193:114-120.
- 18. Nuechterlein KH, Subotnik KL, Turner LR, Ventura J, Becker DR, Drake RE. Individual placement and support for individuals with recent-onset schizophrenia: integrating supported education and supported employment. *Psychiatr Rehabil J.* Spring 2008;31(4):340-349.
- 19. Drake R, Bond G, Becker D. *Individual Placement and Support: An Evidence-Based Approach to Supported Employment (Evidence-Based Practice)*. New York: Oxford University Press; 2012.
- 20. Mueser KT, Penn DL, Addington J, et al. The NAVIGATE Program for First-Episode Psychosis: Rationale, Overview, and Description of Psychosocial Components. *Psychiatr Serv.* Jul 1 2015;66(7):680-690.
- 21. Bond GR, Drake RE, Luciano A. Employment and educational outcomes in early intervention programmes for early psychosis: a systematic review. *Epidemiology and Psychiatric Sciences*. 2014;On line ahead of print.
- 22. Overall JE, Gorham DR. The Brief Psychiatric Rating Scale. *Psychiatic Reports*. 1962;10:799-812.
- 23. Radloff LS. The CES-D Scale: A self-report depression scale for research in the general population. *Applied Psychological Measurement*. Sum 1977;1(3):385-401.
- 24. Andreasen NC. Scale for Assessment of Negative Symptoms (SANS).. Iowa City: University of Iowa; 1984.
- 25. Goldman HH, Skodol AE, Lave TR. Revising Axis V for DSM-IV: A review of measures of social functioning. *American Journal of Psychiatry*. Sep 1992;149(9):1148-1156.
- 26. Mueser KT, Cook JA. Supported employment, supported education, and career development. *Psychiatr Rehabil J.* Dec 2012;35(6):417-420.
- 27. Degney J, Hopkins B, Hosie A, Lim S, Rajendren AV, Vogl G. *Counting the Cost The Impact of Young Men's Mental Health on the Australian Economy*. Melbourne: Inspire Foundation and Ernst & Young;2012.
- 28. Manthey TJ, Holter MC, Rapp CA, Davis JK, Carlson L. The Perceived Importance of Integrated Supported Education and Employment Services. *Journal of Rehabilitation*. 2012;78(1):16-24.
- 29. Rinaudo B, Ennals P. Mental illness, supported education, employment and recovery: Ben's story. *Work.* 2012;43:2012.

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Table 1: Baseline demographics and clinical characteristics

	EPPIC (n=13)	Mood and Anxiety	Total (n=19)
		(n=6)	
Sex	Female 9 (69.2%)	Female 3 (50%)	Female 12 (63.2)
Age	17.5 (1.0)	17.4 (1.2)	17.5 (1.0)
Highest level of			
school passed			
6	1 (7.7%)	0 (0%)	1
7	0 (0%)	0 (0%)	0
8	1 (7.7%)	0 (0%)	1
9	4 (30.8%)	0 (0%)	4
10	3 (23.1%)	4 (66.7%)	7
11	3 (23.1%)	2 (33.3%)	5
12	1 (7.7%)	0 (0%)	1
Ever married	0	0	0
Have children	0	0	0
Born in Australia	12 (92.3%)	4 (66.7%)	16
CESD	22.5 (11.1)	28.8 (13.2)	24.5 (11.8)
BPRS	47.9 (9.4)	44.3 (16.5)	46.8 (11.7)
BPRS PS	8.9 (2.2)	6.8 (4.3)	8.3 (3.1)
SANS	15.9 (9.7)	23.5 (19.1)	18.3 (13.3)
SOFAS	61.0 (5.5)	59.7 (9.9)	60.6 (6.9)
Medication			
Antipsychotics	9 (69.2%)	1 (16.7%)	10/19
Compliance	4.0 (0.0)	4 (-)	4.00 (0.00)
Antidepressants	4 (36.4)	4 (66.7%)	8/17 (2 missing)
Compliance	3.8 (0.4)	3.5 (1.0)	3.7 (0.67)

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Participant	Highest previous achievement	Outcome level
1	Year 11	Yr 12 part-time
2	Year 10	TAFE full-time
3	Year 11	Yr 12 full-time
4	Year 8	Yr 10 part-time
5	Year 10	TAFE full-time
6	Year 9	TAFE full-time
7	Year 12	TAFE part-time
8	Year 9	Year 10 full-time
9	Year 11	Year 12 full-time
10	Year 10	Year 12 full-time
11	Year 6	Year 12 part-time
12	Year 9	Year 11 full-time
13	Year 9	Year 10 full-time
14	Year 11	Yr 12 full-time
15	Year 10	Yr 11 full-time
16	Year 10	Year 11 full-time
17)	Year 11	Year 12 part-time
18	Year 10	Year 11 part-time
19	Year 10	In hospital

Table 2: Highest previous academic achievement and the level engaged in at outcome