Psychosocial Intervention

What is the personal experience of jobseekers with severe mental illness undertaking a cognitive remediation program?

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ABSTRACT

Background: People with severe mental illness (SMI) can enhance their occupational outcomes by engaging with a comprehensive support team, which might include both cognitive and vocational support. To date, there have been no reports of the personal experience of individuals undertaking such interventions.
Aims: This study aimed to explore the subjective experience of participating in cognitive remediation (CR), as an adjunctive treatment to illness-self management psycho-education for jobseekers (HOPE).
Methods: Thirteen jobseekers with SMI, who had completed a CR program of 20 hours duration, in addition to a 20 hours of the HOPE program, responded to an individual semi-structured interview concerning their experience of the program. Data were analysed using content analysis.
Results: Feedback was predominantly positive. Participants described CR as a beneficial experience in improving their intrinsic (e.g. self-efficacy, motivation), cognitive and social functioning. It also revealed aspects to be addressed.
Conclusions: This study highlights the positive potential of this type of intervention, but also reveals the barriers that people with SMI may confront including the lack of CR availability and vocational/personal support. It is hoped that this study will assist in generating evidence on effective ways to improve the current CR approach.

¿Cuál es la experiencia de trabajadores con enfermedades mentales severas tras haber participado en un programa de rehabilitación cognitiva?

RESUMEN

Introducción: Personas con enfermedades mentales severas (SMI) pueden mejorar su funcionamiento laboral participando en programas de intervención integral, los cuales pueden ofrecer apoyo cognitivo y vocacional. Hasta la fecha, no existen reportes de la experiencia personal de individuos participando de tales intervenciones.
Objetivos: Esta investigación buscó explorar la experiencia subjetiva de personas diagnosticadas con SMI, tras haber participado de un entrenamiento de rehabilitación cognitiva (CR) en conjunto a HOPE, un programa psicoeducativo destinado al auto manejo de la enfermedad.

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Métodos: Trece buscadores de empleo diagnosticados con SMI completaron un programa que incluyó 20 h de CR, además de 20 h de HOPE. Tras la intervención, todos los participantes respondieron a una entrevista individual semiestructurada, diseñada para indagar sobre su experiencia tras el programa. Los datos se analizaron mediante análisis de contenidos.
Resultados: El feedback fue predominantemente positivo. Los participantes describieron la CR como una experiencia beneficiosa en el mejoramiento de su funcionamiento intrínseco (por ejemplo, autoeficacia, motivación), cognitivo y social. El análisis además reveló aspectos a mejorar.
Conclusiones: Este estudio destaca el potencial de este tipo de intervención. También revela los obstáculos que personas con SMI pueden llegar a enfrentar, como son la falta de disponibilidad de CR y el escaso apoyo profesional/personal. Se espera que este tipo de investigación favorezca el generar nueva evidencia sobre maneras efectivas para mejorar el actual modelo de CR.

Introduction

Unemployment rates amongst people with severe mental illness (SMI) remain high worldwide. More than 70% of these individuals do not have access to competitive work; reaching up to 90% in less wealthy nations (Waghorn & Lloyd, 2005). Negative associations with unemployment include social isolation, exacerbation of symptoms, low self-esteem, poor quality of life and financial distress (Provencher, Gregg, Mead, & Mueser, 2002). Thus, tailored interventions to enhance work participation in people with SMI are crucial.

Cognitive deficits are known to impact on functional outcomes in SMI, including gaining employment (Green, 1996; Green, Kern, Braff, & Mintz, 2000). Cognitive impairments are reported to exist in the areas of processing speed, attention, memory and executive functions (Gold & Harvey, 1993; Goldberg et al., 1995; Saykin et al., 1994). New psychosocial practices have emerged to reverse, or at least mitigate, the wide variety of disadvantages associated with this societal issue. Cognitive remediation (CR) is a well-researched skills-training intervention that has been shown to be beneficial for occupational outcomes in people with SMI. CR addresses the cognitive deficits they experience (Wykes, Huddy, Cellard, McGurk, & Czobor, 2011).

Thinking Skills for Work (TSW) is a specific psychosocial approach that has been shown to be highly beneficial in enhancing vocational outcomes, when offering CR alongside employment support (ES) in SMI (McGurk, Mueser, Feldman, Wolfe, & Pascaris, 2007; McGurk, Schiano, Mueser, & Wolfe, 2010; McGurk et al., 2015). This practise-based program provides individuals with vocational consultation, in addition to a comprehensive set of cognitive skills and compensatory strategies, through the implementation of a computer-based cognitive training (Cogpack). The model includes both a vocational specialist and cognitive trainer, who work together to teach participants how to overcome workplace difficulties (McGurk, Mueser, & Pascaris, 2005).

People with SMI can be assisted to get and keep jobs through provision of employment support. However, there is growing evidence that overcoming the fear of relapse and developing the capacity to manage oneself, one's illness, and the social settings of work and study are also critical factors for vocational success (Fossey & Harvey, 2010).

In Australia, the Health Optimisation Program for Employment (HOPE) was developed to provide job-seekers with SMI with psycho-education to address these other critical factors (Gilbert et al., 2012). The HOPE program was implemented to assist job-seekers with SMI. Initially the program did not include cognitive training as part of its protocol; recently, however, we conducted a pilot study where HOPE + CR was tested in jobseekers with SMI (paper under review). The study involved eligible individuals who completed 20 h. (Ten weeks) of psycho-educational group training which focused on teaching them new strategies to manage illness in the context of securing and maintaining work. Participants also completed a 10-week individual cognitive remediation program with one cognitive trainer (NC). In line with previous CR trials (Lindenmayer et al., 2008; McGurk et al., 2005), the HOPE + CR project showed significant improvements in the areas of global cognition ($d = 1.47$) and occupational outcomes (i.e. increased volunteering and educational enrolment).

To date, there is a growing body of quantitative evidence showing TSW's success in enhancing cognitive (e.g. verbal learning, memory and executive function) and vocational domains (e.g. higher wages, more work hours.) (McGurk et al., 2007; McGurk & Mueser, 2008; Sato et al., 2014). Other approaches have explored CR + Supported Education and shown similar findings (Kidd, Kaur Bajwa, McKenzie, Ganguli, & Khamneh, 2012; Kidd et al., 2014). Pre- and post- testing has repeatedly corroborated a moderate effect size of this adjunctive treatment, within a controlled environment. However, to the best of our knowledge, only a few investigations have explored the subjective experience of CR among participants with SMI (Corring, Campbell, & Rudnick, 2011; Reeder et al., 2015; Rose et al., 2008), more generally. Such a survey, for example, would include questions like: "What was the most useful element of doing this program?"; "Have you been able to apply what you have learnt during the sessions into your everyday activities?" and "How did the vocational training plus the cognitive training help you in returning to the workforce?" These questions would highlight the benefits of the intervention and aspects to improve. Undoubtedly, there is still a dearth of evidence on the qualitative content of cognitive remediation.

To address this gap, we performed a qualitative study aiming to explore the personal experiences of jobseekers with SMI who had undertaken a CR program, with a particular focus on the CR experience as an adjunctive treatment to psychoeducational training. In addition, we aimed to evaluate CR as a learning tool; in particular, if it can be translated into people's daily lives, especially work-related scenarios. Lastly, we questioned whether jobseekers can identify additional subjective benefits, to those previously identified in quantitative studies.

Method

This analysis was embedded into a previous quantitative study, which aimed to further our existing understanding of CR as a fundamental therapy, to enhance vocational outcomes in an Australian context.

Participants

Participants varied by age (33–52 years), gender (9 female, 4 male), marital status (11 never married, 2 divorced) and education level (4 had completed secondary, 5 had completed TAFE or

Diploma, 2 had completed a trade qualification, 3 had a tertiary degree).

Four participants were diagnosed with DSM-IV Schizophrenia, seven had Major Depressive disorder, and two had Bipolar disorder. They had no history of traumatic brain injury or neurological illness; were fluent in English; and were able to provide informed consent. At the beginning of the study, all participants were outpatients who were looking for work. Five of them were involved in paid work activities that were menial compared to previous qualifications; four as casual employees and the others as part-time employees. Eleven participants were receiving a governmental disability pension.

Procedure

Recruitment

Thirteen participants with severe mental illness (SMI) were recruited through Social Firms Australia (SoFA), a non-profit organisation which supports the employment of people with mental illness. In addition, all participants were jobseekers that had recently finished or almost completed HOPE (Health Optimisation Program for Employment), a ten-session psycho-educational group program which addresses the self-management of mental health in the context of job seeking and employment.

Ethics approval for this research was granted by The Alfred Hospital Human Research Ethics committees (Melbourne, Australia).

Data collection and analysis

In an effort to fully understand participants' overall experience during the cognitive training, a semi-structured interview was conducted at the end of the HOPE + CR trial, approximately 3 months baseline assessment. These interviews aimed to explore the participants' subjective experience of the CR program itself and the possible impact of this intervention on their vocational functioning (e.g. returning to work, increasing hours of work).

One senior researcher (SR) conducted all thirteen in-depth, face-to-face semi-structured interviews with six open-ended questions with responses were transcribed verbatim. The interviews consisted of simple questions that prompted participants to talk about their experience during the cognitive remediation therapy, these included:

1. *"What did you find most useful about CR?"*
2. *"How has this been helpful to you in looking for a job, getting a job or working?"*
3. *"How has this been helpful to you in other aspects?"*
4. *"What did you find less helpful?"*
5. *"What if anything do you think could make the CR more helpful for you in looking for a job, getting a job or working?"*
6. *"Is there anything else about the supports you received in looking for a job, getting a job or working while in the HOPE + CR that you would like to comment on?"*

These questions were chosen to specifically collect information about the possible personal implications of undertaking a CR program, for the first time, in addition to identifying and defining the areas that according to participants, needed further attention.

NC performed the data analysis following Braun and Clarke's guidelines for Thematic Analysis (Braun & Clarke, 2006). This approach was chosen due to its efficacy in reporting experiences but also, in examining and describing social events (Braun & Clarke, 2006). Once all participants were interviewed, responses were read through repeatedly. During this process, familiarisation with the content helped to identify relevant features or codes. Initial codes were then collated into patterns manually, which consequently led to setting up a broader category of themes. These themes were aimed to reflect important aspects of the data; therefore each of them was determined by its relevancy in addressing specific content of this research. Subsequently, thematic codes were reviewed, refined (following the question: what is this theme about?) and named. To guarantee consistency in the coding process, a second independent reviewer (EF) was invited to cross-check the coding structure.

Results

All study participants had previous experience within a work setting, as in part-time jobs, casual work or volunteering. However, at the time of the research they were all seeking competitive work. They were all living independently, receiving public employment assistance and governmental financial support. They all considered work to be a crucial aspect in their lives, which provided them with economic support and stability. For this reason, they had enrolled in the HOPE program, and thus were motivated to acquire new skills which would help them to be reintegrated into the workforce; manage their symptoms within the workplace, cope with stressors in social environments and accomplish their assigned job goals on a daily basis. When providing consent to undertake this project, most individuals had already finished their HOPE program, or were in the process of completing the last few sessions. Lastly, all participants had identified themselves as possessing cognitive deficits, however none of them had previously participated in any sort of cognitive training.

Analysis of the personal experience of participants undertaking the Hope + CR intervention revealed two themes: 'Benefits' and 'areas to improve'. In addition, there were several sub-themes underpinning these two main categories.

Theme I: benefits

No complaints (69%)

This theme centred on a broad variety of areas that people found to be positive about CR, on a personal and/or vocational level. Most participants (69%) did not associate any negative aspects to this program. As one participant reported: "*I don't have any complaints. Every component has been of value, everything" (12)*. On the contrary, it seems that it had encouraged people to explore new options in life: ". . .. *My training was on Monday mornings and it gave me a reason to start the week. It actually led to my current volunteer work. I was depressed before but now I'm not" (10)*. Only one person reported specific recommendations about the program structure itself and its level of difficulty: "*The place to do the training could have been better. . . a bit more quiet and controlled"*. She continued: . . ."*the computer software needed to be more interesting" (1)*. Overall, the responses provided by participants described the whole experience as pleasant and beneficial.

Build my confidence and self-belief (62%)

'Build my confidence and self-belief' emerged as one of the most meaningful sub-themes. As reported by 62% of the participants, the experience of doing this cognitive training built in them the assurance to perform with success in the tasks. According to their responses, the experience of CR increased their self-efficacy, self-control and motivation towards the computer tasks. After only a few sessions, individuals were able to identify improvements in their response, with increased feelings of: "*being active again and being able to achieve goals" (6)*. One participant explains: "*I became more positive with everything. Not sure, but I feel I believe in myself much more, and feel I am more capable" (1)*.

As a result of becoming conscious of their own improvements, participants then actively engaged the cognitive trainer to discuss

new compensatory strategies, and the potential value of these approaches in the real world.

'*I think the awareness that I have from the training is what gives me the confidence. I was always worried about my performance at work. NC has helped with this performance and confidence. I don't feel as anxious and scared any more, as NC has given me tools and ideas how to perform*' (1).

People found in this experience an opportunity to challenge themselves on specific cognitive domains, at the same time they worked on the management of their own symptoms, as in anxiety, stress and frustration: "*Yes, I think so, as it's been helpful in organising my mind, also problem solving. Actually, got a bit more confidence out of it as well*" (11).

Improving how I use my brain (77%)

Subsequently, 'improving how I use my brain' emerges as another significant sub-theme. This category refers to participants' awareness of improving their cognitive performance. Ten of the thirteen participants (77%) commented on the CR's potential as an active intervention capable of enhancing people's cognitive skills. In this regard, the content was described from two perspectives;

(a) CR helps in increasing specific cognitive domains. For example, "it was interesting, some parts that were hard. There was a maths program which encouraged me to remember numbers" (5), and
(b) CR helps in moderating thinking and emotional responses for example, "it helped me set a personal goal in regarding my personal abilities, like brain power, as in 'how to use my brain'. Being more aware of my mood swings which affects my concentration and ability to remember" (12).

Understand what I am good at (31%)

Early in the intervention, people started showing insight into their own personal strengths, 'to understand what I am good at'. Participants were able to identify and discuss their own cognitive and personal strengths and weaknesses: "*The range between words, maths and creativity was good, so you could tap into strengths and improve weaknesses. It taught me to persevere with tasks, even when didn't like them, which is good for work*" (3). The fact that people were allowed to explore the vast variety of computer tasks, enabled participants to consciously reflect on their cognitive performance. Thus, individuals were enabled to bring to light positive feelings/opinions about themselves: "*The way NC worked with me, helped me to understand the areas I'm not good at, and how I can improve them. I learnt new ways of thinking. It helped to know me as a person better*" (1).

Prevents isolation (39%)

This sub-category refers to the potential of CR in promoting a sense of belonging and social relationships. According to participants, the experience of meeting the trainer twice per week revived their interest in re-establishing social interaction. As commented by one person: "*Good thing was it gave me something to do whilst down, got me out of house. . . I could speak to someone, someone who I could speak to, about what was going on for me*" (6). It helped people to feel less isolated which, according to the comments, had positively influenced their mood: "*Yes, in came back to social life, where I have fallen into the trap of being a hermit plus helped me from getting out of my depression without the use of artificial stimulants*" (12). In addition, the CR program created a sense of routine, structure and commitment with others (i.e. trainer, family) and themselves: "*NC has personally given a great deal of support. The most important thing is to do things correctly, not quickly. I know now not to worry too much about others, what they say. I felt seeing NC every week forced me to get out of house. I couldn't disappoint her or myself*" (1).

According to participant (2): "*(CR provided with) . . .a little bit more structure to my week. Something to talk about with family. People found interesting so it was useful in personal and social life*".

Helped raise awareness about how cognition impacts on job performance (31%)

Participants were asked for their views of the impact of CR on their vocational outcomes. Although it was not a commonly expressed opinion, four of the thirteen participants identified the CR program as a useful tool in terms of showing them, as people with SMI, the role of cognitive functioning when performing in a work setting. As participant (3) explains: "*(CR is a. . .). . .good training for concentration that you would need in the workforce because you can have tasks that you need to complete. For talk-based job opportunities it would be good, as well*".

During the CR training, participants were exposed to different levels of difficulty and different sorts of mental exercises. In this process, participants were able to: (1) associate certain cognitive impairments with specific job issues in the past; (2) apply new cognitive skills within their new occupations; or (3) identify areas of interest according to their cognitive strengths. These aspects are reflected in some of the participants' comments:

- "*. . . . . . It did make me think about why I have certain issues with jobs, like my concentration problems*" (7).
- "*I am just doing volunteer work at the moment but I can see that if you push yourself you get further. With this research, I have trained myself to think faster and remember more. I think this is going to make a difference*" (9).
- "*Yes, extremely helpful, knowing what I want to look for, the types of work that I see myself involved in, that pays appropriately*" (12).

Theme 2: Suggested improvements to the HOPE + CR intervention

In addition to the previous theme, participants' comments revealed another main category associated with specific aspects of the intervention that needed improvement. Although the questions were structured to identify weaker features of the cognitive remediation program, most individuals identified these areas based on previous occupational experiences and current experiences with employers and their mental health support network.

Better tailor to my life or work situation (46%)

This sub-theme indicated the extent to which the cognitive remediation outcomes could be transferred into participants' normal routines. According to six individuals, the program failed in transferring the CR gains to everyday functioning, particularly into work-related settings: "*I didn't find any direct correlation between improvements in the program and everyday activities. I couldn't see it myself*" (2).

People believed that an effective way to enhance CR applicability was to 'tailor the program HOPE + CR to concrete situations'. According to peoples' feedback, the program needs to reduce the significant gap between the computer tasks and real job circumstances: "*It's all about memory and reflexes, perhaps more tasks that are relevant to work like leadership, working in a team, understanding office politics (9).*

Facilitate understanding and willingness to employ consumers (24%)

A minority of participants (24%) commented on the difficulties they traverse as jobseekers, when intending to return to work. The lack of knowledge in the mental health sector and the poor understanding of individuals with SMI, in particular shown by employers and case-workers, emerges as the main barrier when

aiming to return to the workforce. According to these participants, jobseekers with mental health issues require individual and continuing support and enough help to provide individuals with sufficient tools to cope with real work challenges. Moreover, it was suggested that there should be more community awareness and mental health staff education and training, to facilitate the understanding, empathy and willingness to employ, and offer ongoing support, to workers with SMI.

- "*The barriers are . . .'substantial'. Employers don't understand what mental health problems are. . . they need to learn. I still don't know whether I should tell potential employers or not.*" (13).
- "*We need talking support. . . and 'I need' help with employment providers. Agents and case-managers don't provide the right support. We need people that will take us through everything. The problem is that they don't have advocacy. They should be helping with all the elements regarding getting a job*" (1).
- "*Sometimes I feel they, like case-managers or employment agencies, don't know how to treat me, they don't understand what is happening to me*" (5).

Job specific (39%)

On the other hand, a set of individual job recommendations arose as another sub-theme. Five participants emphasised the importance of providing them with more specific training to assist in the different stages of accessing the workforce, for example, identifying areas of job interest, planning and searching for a job, writing a CV.

In regards to this code, participants assert:

- "*We need other survival skills. To keep us going. A lot more everyday skills and a place to start with*" (2).
- "*Yes, more training and focusing actually within job but also don't know what sort of job to do*" (4).
- "*Help with writing and organising CV. Also job interview practice*" (9).
- "*Yes, but I am not sure what. Maybe a job search course and how to write cover letters. Maybe I will do next year*" (10).

Assistance with self-management and motivation (24%)

Apart from the vocational assistance, personal support was also identified as one critical aspect to consider improving within the program. Some participants were aware of their need for improved illness self-management and coping skills; they require one-on-one guidance and encouragement to continue in their process of recovery.

- "*It's hard to keep yourself on track when you aren't very good at it. . . it's difficult to know how I can carry that forward. We need other survival skills*" (2)
- "*Ring us and see how we are going. See if improved or declined. If back in workforce ask how they are going. It's really important to check with us and I don't think people do it* (6)
- "*I have to be careful with this confidence I got now. I have a bit of fear to be honest. I need to use in a positive but not maniac way. Patient is not my virtue, I am quite impatient. Trying to control that is an issue. Would be nice to have someone helping me with that*" (12)

Discussion

The current paper describes a subset of qualitative data from a pilot intervention of cognitive remediation therapy (CR) with jobseekers with severe mental illness who had recently completed a psycho-educational training (HOPE).

Using thematic analysis, two main themes were associated with the experience of CR when embedded in a vocational support setting: *Benefits* and *Suggested improvements to the HOPE + CR intervention.*

Benefits (Theme I) identified the cognitive training as a constructive, engaging and enjoyable intervention (1). CR was identified as a valuable experience for improving not only specific cognitive deficits, but also facilitating participants' emotional regulation (e.g. frustration, anxiety) (3). With support of the cognitive trainer, people were enabled to explore their personal strengths and weaknesses, which helped them to develop a sense of awareness about their own cognitive, emotional and psychosocial functioning (4). Only a few participants identified an association between cognition and vocational outcomes, when performing in a job setting (6). These sub-themes match previous outcomes within cohorts of people with schizophrenia. In line with Contreras's (Contreras, Lee, Tan, Castle, & Rossell, 2016), Reeder's (Reeder et al., 2015) and Rose's (Rose et al., 2008) research, our participants also reported that they gained insight and better cognitive skills, particularly in the areas of memory, attention and general thinking. Comparable improvements have been revealed in patients with Anorexia Nervosa (AN) undertaking similar training. According to post-CR narratives, patients with AN identified an increased flexibility and holistic processing (Easter & Tchanturia, 2011; Pretorius et al., 2012), and better awareness about their cognitive profile and thinking styles (Lang, Treasure, & Tchanturia, 2015; Pretorius et al., 2012).

One of the most meaningful sub-themes, 'Build my confidence and self-belief' (2), highlights CR as an opportunity for individuals to uncover positive intrinsic aspects about themselves. Similarly, prior SZ (Reeder et al., 2015; Rose et al., 2008) and AN (Easter & Tchanturia, 2011; Lang et al., 2015) research, found that cognitive training enabled participants to develop a sense of confidence, self-control and achievement, towards specific cognitive tasks, as well as their global performance and symptomatology. Higher levels of awareness of cognitive strengths and weakness seem to have led participants to question, reflect and engage different cognitive patterns, to explore new cognitive coping strategies and to evaluate the potential impact of these learnings beyond the sessions. Early studies on motivation/confidence and self-efficacy have shown intrinsic and neurocognitive benefits, when participants had undertaken an intrinsically motivating instructional type of intervention (Choi & Medalia, 2010). Taking into consideration these findings, plus those showing an association between higher self-efficacy and better psychosocial outcomes (Kurtz, Olfson, & Rose, 2013; Pratt, Mueser, Smith, & Lu, 2005), it is reasonable to suggest that participants' progress was, in part, due to the intrinsic character of the CR setting (e.g. empowering, rewarding, empathetic). This argument is consistent with our Post-CR quantitative results, which revealed significant improvements in psychosocial factors (self-esteem, quality of life and social relationships) and occupational participation (31% volunteering, 46% education).

Participants viewed the program as beneficial, both in relation to cognition and in enhancing social contact. Despite the one-on-one type of intervention, people felt that the CR routine revived their motivation for social interactions. It promoted their interest for re-establishing personal relationships, while reducing the sense of being isolated (5). Social support is postulated to serve as a protective factor for diverse disorders (Buchanan, 1995); to predict course and treatment outcome, quality of life and functional status (Norman, Windell, Manchanda, Harricharan, & Northcott, 2012); and to correlate with less positive symptoms and hospitalisations (Norman et al., 2005). Given the abovementioned benefits, this sub-theme highlights the importance of conducting psychosocial treatments (as described in Corrigan et al. (2005)), such as CR, and to consider the social context of psychosocial interventions, when treating socially isolated populations.

Previous research has shown that the CR model is limited in transferring benefits into the real world. In line with these prior findings, our participants identified aspects of the HOPE + CR intervention that needed enhancement reflected in Theme 2. 'Better tailor to my life or work situation' (1) highlights the lack of applicability of cognitive gains into the real world, especially to the employment scenario. Furthermore, it emphasises the need to tailor the CR program to real life events. While this issue has been identified in the SMI quantitative literature, and a few AN reports (Easter & Tchanturia, 2011; Pretorius et al., 2012; Tchanturia, Davies, & Campbell, 2007), to our best knowledge, this is the first study reporting comparable qualitative findings.

With regard to jobseeking, some participants reported a lack of understanding and empathy from mental health professionals and employers towards people with SMI, (2). In addition, the need for assistance with specific employment-related tasks (e.g. applying for a job, writing a CV) (3), as well as continuous personal support (4) were identified as elements missing from the intervention. Both sub-themes bring to light the current discussion that is taking place in the Australian setting (Harris & Boyce, 2013)

In the last decade, one of the biggest challenges for evidence-based practice in supported employment, is the lack of integration between vocational support programs and public mental health services (Waghorn & Hielscher, 2015). Despite being an effective approach for younger and older populations (Killackey, Jackson, & McGorry, 2008; Killackey et al., 2013), the access to vocational services is still limited for most individuals with SMI living in Australia. Although the governmental policies and regulations have improved to a certain extent, these are not sufficient. There are still multiple ongoing organisational requirements that need to be met, such as including employment specialists in the clinical team, joint management or supplying external assistance (Waghorn et al., 2012). In our study, for example, the cognitive specialist did not have the opportunity to liaise with an employment specialist or vocational agent to assist with planning sessions (e.g. setting goals, finding areas of vocational interest, job search planning, job support), as in the TSW model (McGurk et al., 2010). Although participants were unaware of this lack of integration of supports, the consequences of this limitation were reflected in their responses in Theme 2. It is possible that these barriers negatively impacted on the participants' opportunity to integrate their new learnings into work-related situations.

Limitations

This study is not without its limitations. Although the semi-structured interview was thought to be the best option for the participants in helping them to follow the topic, this type of interview might have constrained the amount of data collected. Including more open-ended questions would have allowed us to obtain lengthier and more in-depth responses. In addition, more specific questions would have helped the interviewer, for example, to deepen their understanding regarding the impact of the CR intervention on vocational performance and identify better ways to improve the current CR setting for enhancing occupational outcomes. Also, given that the interviews were conducted only at the Post-CR assessment, a second follow-up interview at 3 months post-intervention would have allow the authors to evaluate whether the participants' views remained consistent/changed over time, and to measure the potential CR applicability in the long term. Given 46% of participants were involved in educational programs by the end of the CR program, an additional follow-up would have helped us to identify whether these participants received additional support (e.g. counselling) and what benefit it was to jobseeking in the longer term. Lastly, the small number of participants limited the conclusions that can be drawn. The diversity of diagnoses within the participant group may have influenced responses to the cognitive training and the quality and length of the answers provided in the interviews. However, while replication with a larger participant group will be important, this study has revealed significant themes regarding CR programs in a vocational context in SMI, which should be considered when implementing these programs in this population.

Conclusion

Although robust quantitative evidence on CR is now available, there is little information about the personal experience of people with SMI undertaking this sort of intervention. In particular, we know little about the impact of cognitive training on occupational outcomes when people additionally receive vocational support. To the best of our knowledge, this is the first study, reporting the personal experience of jobseekers undertaking such interventions. While the first theme presents different facets of the 'CR benefits', 'Suggested improvements' highlights the additional barriers that both participants and cognitive trainers need to overcome. Further qualitative research addressing these limitations will contribute to a more comprehensive understanding of the CR model and its practice.

Conflict of interest

The authors declare that there is no conflict of interest.

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