

# Interventions for adults with traumatic brain injury may improve employment status



*At-home training and supported employment appear promising, but these interventions do not appear to be widely used.*

## What is the aim of this review?

This Campbell systematic review examines the effectiveness of vocational rehabilitation interventions to help adults with traumatic brain injury get competitive employment. Three randomized controlled trials are included: two of military populations in the United States and two of the civilian population in China (Hong Kong).

**Programs for adults who have suffered traumatic brain injury may improve employment status. All programs lead to employment, although no single program was more effective than the other programs.**

## What is this review about?

The unemployment rate in the United States for people who have suffered traumatic brain injury (TBI) was around 60 percent for 2001-10, compared to a national average of around 7 percent.

Post-acute rehabilitation services – such as residential community reintegration programs, comprehensive day treatment programs, and community re-entry programs - focus on helping individuals adjust to ongoing impairments and to re-enter their communities, workplaces, and education. This review assesses the most effective type of intervention for returning individuals with TBI to work.

## What studies are included?

Studies are included which assess interventions focused on assisting helping working-aged adults with TBI return to competitive employment, including self-employment. Participants must have been between 18 and 65 years of age, experienced a non-penetrating TBI, been engaged in either full-time or part-time employment at time of injury, and been unemployed or on medical leave at time of receipt of the intervention. The studies must have competitive employment as an outcome.

Three randomized controlled trials (RCT) are included in the analysis, two studying US military personnel and one of civilians in China (Hong Kong). All three studies compared alternative programmes. One compared an intensive in-hospital program versus an at-home program. The second study compared the CogSMART program plus supported employment with supported employment alone. And in the third study the control group received psycho-educational training



#### How up-to-date is this review?

The search was completed in 2015. This Campbell Systematic Review was published in July 2016.

#### What is the Campbell Collaboration?

The Campbell Collaboration is an international, voluntary, non-profit research network that publishes systematic reviews. We summarise and evaluate the quality of evidence about programmes in the social and behavioural sciences. Our aim is to help people make better choices and better policy decisions.

#### About this summary

This summary was written by Howard White (Campbell Collaboration). This PLS is based on Campbell Systematic Review 2016:6 'Employment Interventions for Return to Work in Working Aged Adults Following Traumatic Brain Injury (TBI): A Systematic Review' by Carolyn W. Graham, Michael D. West, Jessica L. Bourdon, Katherine J. Inge and Hannah E. Seward (DOI:10.4073/csr.2016.6). Anne Mellbye (RBUP, Norway) designed the summary, which was edited and produced by Tanya Kristiansen (Campbell Collaboration).

with the treatment group receiving the same content via a virtual reality-based training platform.

#### How effective are the programmes?

None of the programs were better at improving employment outcomes than the comparator program to which it was compared. The intensive in-hospital program was no better than the at-home alternative, CogSMART added no value to supported employment alone, and virtual reality-based training was no better than psycho-educational training. Comparison of employment before and after the interventions showed the interventions in the United States improved employment status. The intervention in China did not improve employment status.

None of the studies reported secondary employment outcomes: hours worked and wages earned.

It was not possible to conduct analysis of the relative effectiveness of different types of programme because of the small number of included studies.

#### What are the implications of this review for policy makers and decision makers?

These three studies have limited implications for practice and policy. No intervention was found to be more effective than any other. In two of the studies the populations were limited to military subjects, who present with significantly different challenges such as posttraumatic stress disorder.

The comparator interventions of at-home training and supported employment appear promising.

#### What are the research implications of this review?

There is a need for more RCTs on return-to-work interventions for adults with TBI, preferably separating competitive employment from school attendance. Military interventions should be conducted with civilian samples in order to determine their effectiveness in the civilian population, including on populations outside the United States. A broader range of employment outcomes should be studied, with regular follow up at standard intervals (e.g., six months, 12 months, 18 months, etc.).