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#165 - Using a Network Meta Analysis to inform the development of an evidence toolkit of employment and skills programs to improve labour market outcomes for young people

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Objectives/aims
A wide range of employment and skills interventions have been implemented in high income countries to assist young people to develop skills and gain experience required to enter the labour market. These interventions often consist of multiple components. We undertook a rapid evidence assessment (REA) to assist the Youth Futures Foundation with the development of their Youth Employment Toolkit (YET). With an intended audience of policymakers, intermediaries, practitioners and employers, the YET provides evidence summaries of interventions that improve employment outcomes for disadvantaged young people.

Methods
The REA adopted a pragmatic approach to identifying relevant studies — both published and grey — by reviewing those identified in an Evidence and Gap Map (EGM) that adhered to Campbell Collaboration standards by White and Apunyo (2021), which was supplemented with some additional searches.
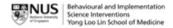
The population of interest was young people and emerging adults (16-30 years old) who were not currently in formal paid employment. Interventions of interest were interventions that included one or more of the following components: apprenticeships, basic skills training, life skills training, on-the-job training, off-the-job training or coaching and mentoring. Comparators included: services as usual, another intervention, no intervention, or wait-list control. The primary outcome was entry to employment post-intervention. The secondary outcome was completion of educational qualifications. Studies used experimental or non-randomised, quasi-experimental designs and were conducted in high-income countries.

Data from included studies were quantitatively synthesised using a network meta-analysis (NMA), an advance in synthesis that allows the results from multiple studies

that aim to achieve similar outcomes by combining direct and indirect evidence in a network. Since most of the studies included in this REA evaluated multi-component interventions, we coded interventions based upon their constituent components. We controlled for the fact that interventions also included additional 'active components' by coding for the presence of any 'other' components to capture their effect. We undertook: a standard NMA, to examine the impact of combinations of components as they were delivered; and a component NMA (CNMA) to disentangle the effect of each component integrated into the larger programs that were evaluated by the studies. The CNMA approach allowed for subgroup analyses, which allowed us to determine whether certain well-described populations within samples (e.g., age groups) do better than others when they receive specific components.

Main findings
Sixty studies met our inclusion criteria. Just over half (n=32) used randomised designs and two-thirds (n=40) were conducted in the United States. The standard NMA found that five combinations of components had a positive and statistically significant effect on employment status, but there were none that did the same for education completion. The CNMA found that one component (off-the-job training) had a statistically significant positive effect on employment, but no components had an impact on education completion.

Results the from subgroup analysis revealed that the effect of two components — on-the-job training and off-the-job training — on employment status was significantly larger when provided to populations who reported facing additional barriers (i.e., those living with a disability or had experience with the out-of-home care system, a mental health condition, experience with the juvenile justice system, identified as member of First Nations community, identified as LGBTIQ+ or were single parents. One interpretation of this is that young people without additional barriers may be more likely to find employment, even without such assistance, while those facing additional barriers appear to benefit from the assistance of these particular intervention components.

Our REA was limited by the scope of reporting on both the content of interventions (what exactly do they do, for how long and at what intensity), and a lack of local information about services as usual.