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# Effectiveness of interventions for improving livelihood outcomes for people with disabilities in low- and middle-income countries: a systematic review

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## **Title of the review**

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Effectiveness of interventions for improving livelihood outcomes for people with disabilities in low- and middle-income countries: a systematic review

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## **Background**

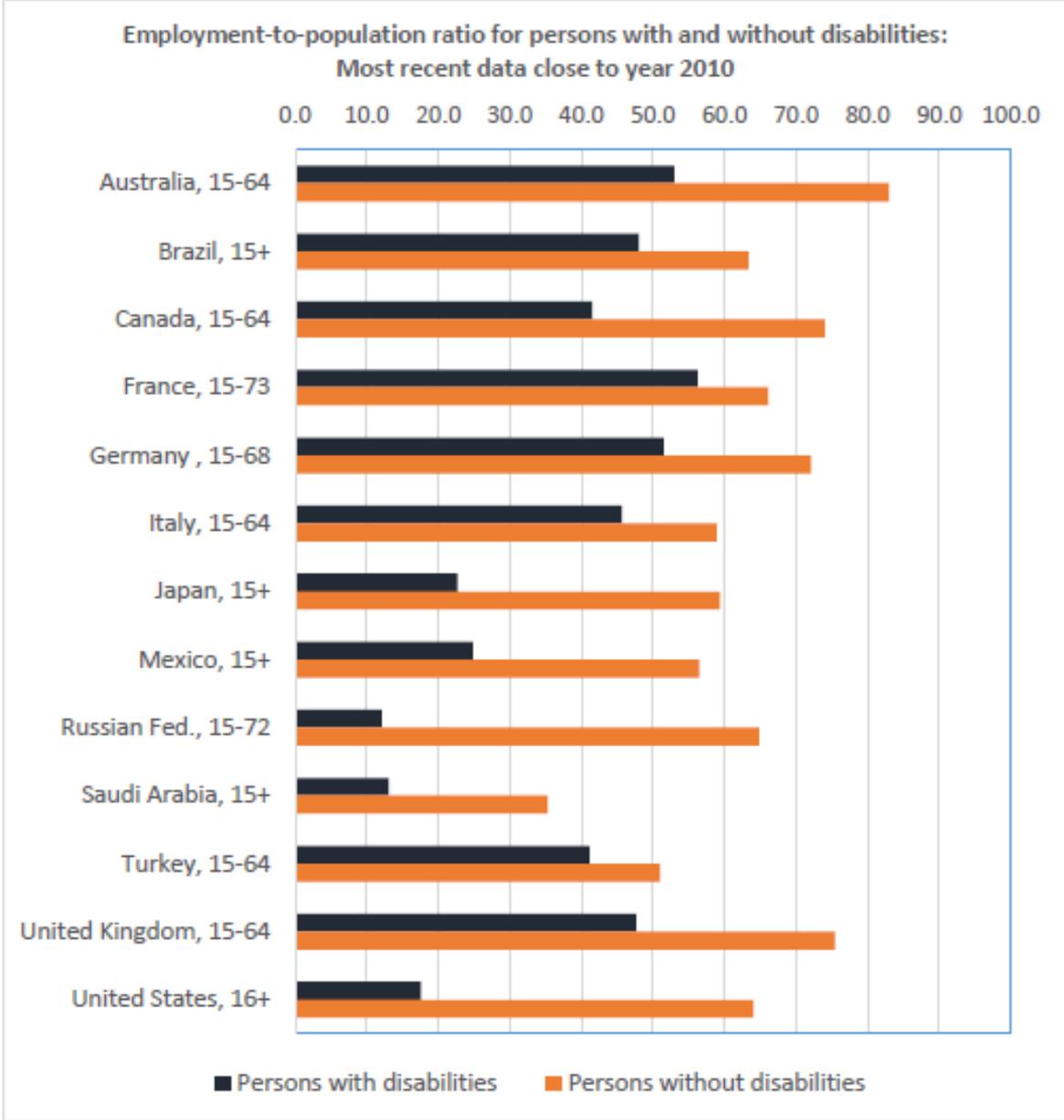
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The United Nations Convention on the Rights of Persons with Disability defines disability as “long-term physical, mental, intellectual or sensory impairments which, in interaction with various barriers, may hinder [a person’s] full and effective participation in society on an equal basis with others” (UN, 2006). More than 1 billion persons in the world have some form of disability. This figure corresponds to about 15% of the world's population (WHO, 2011). Disability and poverty are strongly linked. On a global level, there is higher disability prevalence (80%) in Low and Middle Income Countries (LMICs) than in high income countries (WHO, 2011). Within countries, disability disproportionately affects the most disadvantaged sector of the population (Banks, 2017).

One of the drivers of the association between poverty and disability is the widespread exclusion of people with disabilities from livelihood opportunities (WHO, 2011; Banks, 2014). Multiple studies have shown that people with disabilities are less likely to have jobs than their non-disabled peers, and when they do work it is more likely to be in the informal sector, part-time and for lower wages. (WHO, 2011; Banks, 2014) This pattern is illustrated by Figure 1, although differences in how disability and employment (especially informal employment) are measured makes international comparisons difficult. The inequity in employment associated with disability occurs despite the fact that almost all jobs can be done by people with disabilities, in particular, if the right supports are in place. However, it is unclear which interventions are most effective at improving employment inclusion and outcomes among people with disabilities in LMICs, and this question has not been previously explored through a systematic review.

Livelihood is broader than waged employment alone, and encompasses the means through which individuals or households are able to meet their basic needs. Livelihood therefore also includes social protection and financial support, as well as individual’s skills to be included in employment. Here too, data on “what works” to improve inclusion and outcomes for people with disabilities are lacking, (Banks, 2017) despite the fact social protection programmes and financial schemes are widely promoted globally in efforts to alleviate poverty.

**Figure 1: Employment-to-population ratio for persons with and without disabilities: Most recent data close to year 2010 (ILO, 2018)**



**Policy relevance**

The need to include people with disabilities in employment specifically, and in livelihood opportunities more broadly, is recognised by various international policies and UN directives.

The United Nations Convention on the Rights of Persons with Disabilities (UNCRPD) recognises the rights of people with disabilities to work and employment (article 27), including the “opportunity to gain living by work freely chosen and accepted in a labour market and work environment that is open, inclusive and accessible to persons with disabilities” (UN, 2006). This article also makes reference to the rights of persons with disabilities to access technical and vocational training, opportunities for self-employment

and entrepreneurship, and a good working environment that provides reasonable accommodation. Article 28 of the UNCRPD asserts the rights of persons with disabilities to accessing social protection programmes and poverty reduction programmes.

The Sustainability Development Goals (SDGs) are also relevant to this issue (UN, 2015). SDG1 is to “End poverty in all its forms everywhere”, and includes a specific target to “Implement nationally appropriate social protection systems and measures for all” (emphasis added). Furthermore, SDG 8 is to “Promote sustained, inclusive and sustainable economic growth, full and productive employment and decent work for all”. This goal is ambitious as “decent work for all”, according to the International Labour Organisation (ILO), means opportunities for work that are productive and deliver a fair income, security in the workplace and social protection for families, better prospects for personal development and social integration, freedom for people to express their concerns, organize and participate in the decisions that affect their lives and equality of opportunity and treatment for all women and men. (ILO, 2018) “Sustained” and “sustainable economic growth” places emphasis on long-term endurance. Finally, “inclusive” requires opportunities for work to be equal for different groups, and SDG8 explicitly states that it is inclusive of people with disabilities.

Community Based Rehabilitation (CBR) is promoted by the WHO to improve the lives of people with disabilities, and it has “livelihood” as one of its main pillars. (WHO, 2010) The focus on livelihood includes wage employment, but also includes skills development, self-employment, access to financial services (e.g. micro-credit schemes), and inclusion in social protection programmes.

In addition, most countries have policies in place protecting people with disabilities from discrimination in employment. Recent examples include the Law on the Rights of Persons with Disabilities adopted in India in 2016 and Indonesia Law no. 8/2016 on Persons with Disabilities.

It is clear that extensive policies are in place promoting livelihood opportunities for people with disabilities, yet evidence on which interventions are effective to achieve the specified policies have not been systematically reviewed.

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## **Objectives**

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The objectives of this review are to answer the following research questions:

1. What is the size and quality of the evidence base of the effectiveness of interventions to improve livelihood outcomes for people with disabilities in low- and middle-income countries?
2. What works to improve livelihood outcomes for people with disabilities in low- and middle-income countries?
3. Which interventions appear most effective for different categories of disability?

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## Existing reviews

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Several relevant systematic reviews and protocols exist that are relevant to the topic, but none which would address the stated objectives of this review.

Two relevant Campbell reviews have been completed. Iemmi et al sought to assess the effectiveness of CBR for people with disabilities in LMICs, but interventions to improve livelihood outcomes that do not operate through CBR were not identified for this review (Iemmi, 2015). Tripney et al assessed the effectiveness of interventions to improve the labour market situation of adults with physical and/or sensory disabilities in LMICs (Tripney, 2015). This review identified 14 eligible studies, which generally found positive impacts of the interventions, despite concerns about the quality of the data. While this latter review is relevant to the current proposed review, it did not include interventions aimed at people with psychosocial disabilities nor did it address broader livelihood outcomes (e.g. social protection, access to financial services). There is also likely to be relevant papers published since the review was undertaken.

There is a broader existing pool of reviews which focus on specific aspects of the central question of which interventions are effective at improving livelihood outcomes for people with disabilities. These reviews are restricted in terms of:

- Impairment type/condition included: Several reviews have been undertaken, or are planned, which focus on livelihood outcomes for people with specific impairments or conditions. Many of these addressed only employment among people with musculoskeletal conditions (Alexander, 2017; Cochrane, 2017; Sundstrup, 2018). Reviews also exist or are planned that focus on other conditions or impairment types, such as people with Autism, (Westbrook, 2013) acquired brain injury (Batavia, 2017), Stroke (Chan, 2013) or mental health conditions (Suijkerbuijk, 2017).
- Eligible livelihood outcomes: Reviews have been undertaken or planned that focus on restricted outcomes related to livelihood. As an example, Gensby et al addressed the effectiveness of workplace-based disability management programs for promoting return-to-work outcomes (Gensby, 2012), while Alexander et al focussed on work participation (Alexander, 2017.).
- Other socio-demographic restrictions: Several reviews focussed only on interventions for young adults (Ma, 2018; Jetha, 2018).

Another concern with existing reviews is that many are still at the protocol phase and have not yet been published (e.g. Alexander, 2017; Sundstrup, 2018). Furthermore, most existing reviews have either identified no eligible studies (e.g. Westbrook, 2013), or only studies from high income settings (e.g. Gensby, 2012 identified 13 studies – 8 from USA and 5 from Canada, or Jetha, 2018 restricted the review to OECD countries), and the findings from these reviews may not be generalizable to LMICs.

There is consequently a need for a review assessing the overall literature for people with disabilities, including broad livelihood outcomes, and focussing on LMICs.

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## Intervention

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As indicated in SDG guidelines to generate an inclusive and global dialogue, implementing the SDGs must be in line with, and build upon, existing international and national commitments and mechanisms. The WHO recognizes CBR as a comprehensive and multi-sectoral strategy to equalize opportunities and include people with disabilities in all aspects of community life. Therefore, the CBR will serve as a guiding framework for the intervention and outcome categories as listed below in order to realize the full inclusion and empowerment of persons with disabilities. For the purpose of this review, outcomes will be restricted to those that related to the livelihood pillar of the CBR matrix. These are:

Skills development	Training opportunities for jobs
Self-employment	Income generation program
Waged employment	Realistic quota legislation in jobs and Participation in labour intensive public works programs
Financial services	Access to credit, health insurance coverage
Social protection	International legislation like universal declaration of human rights, Social insurance schemes, birth registration, social assistance intervention, referral services

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## Population

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The target population are populations are people with disabilities living in low- and middle-income countries. Population sub-groups of interest include: women, vulnerable children (particularly children in care), conflict (conflict and post-conflict settings), migrants/refugees/internally displaced people, and ethnic minority groups.

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## Outcomes

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Eligible outcomes will relate to the livelihood pillar of the CBR matrix. These will include:

Employment in formal and informal sector	Men and women with disability have paid and decent work in the formal and informal sector on equal bases with others
	Women and men with disability earn income through their own chosen economic activities
	Youth and adults with disability acquire marketable skills on an equal basis with others through a range of inclusive training opportunities
Access to job market	
Control over own money	Women and men have control over the money they earn

Access to financial services such as grants and loans	Men and women with disability have access to grants, loans and other financial services on an equal basis with others
	Men and women with disability participate in local saving and credit schemes
Poverty and out-of-pocket payment	% of people with disabilities who are covered by social protection programs
Access to social protection programs	Men and women with disability access formal and informal social protection measures they need
Participation in development of inclusive policies	Inclusive policies, practices and appropriate resources, defined with people with disabilities, enable equal participation of women and men with disability in livelihood (training, finance, work opportunities and social protection)

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## Study designs

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Eligible designs include those in which one of the following is true:

- a) participants are randomly assigned (using a process of random allocation, such as a random number generation),
- b) a quasi-random method of assignment has been used,
- c) participants are non-randomly assigned but matched on pre-tests and/or relevant demographic characteristics (using observables, or propensity scores) and/or according to a cut-off on an ordinal or continuous variable (regression discontinuity design),
- d) participants are non-randomly assigned, but statistical methods have been used to control for differences between groups (e.g., using multiple regression analysis or instrumental variables regression),
- e) the design attempts to detect whether the intervention has had an effect significantly greater than any underlying trend over time, using observations at multiple time points before and after the intervention (interrupted time-series design),
- f) participants receiving an intervention are compared with a similar group from the past who did not (i.e., a historically controlled study), or
- g) observations are made on a group of individuals before and after an intervention, but with no control group (single-group before-and-after study).

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## References

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- Alexander, L., Cooper, L., Mitchell, D., & MacLean, C. (2017). Effectiveness of vocational rehabilitation on work participation in adults with musculoskeletal disorders: an umbrella review protocol.
- Arif, J. (2018). Work-focused interventions that promote the labor market transitions of young adults with chronic disease and disability: a systematic review.
- Banks LM, Mearkle R, Mactaggart I, Walsham M, Kuper H, & K., B. (2017). Disability and social protection programmes in low- and middle-income countries: a systematic review. . *Oxford Development Studies*.
- Banks, L. M., Kuper, H., & Polack, S. (2017). Poverty and disability in low- and middle-income countries: A systematic review. *PLoS One*, *12*(12), e0189996. doi: 10.1371/journal.pone.0189996

- Banks, L. M., & Polack, S. (2014). *The Economic Costs of Exclusion and Gains of Inclusion of People with Disabilities*. London: International Centre for Evidence in Disability.
- Batavia, M., Cox, D., Turner-Stokes, L., Khan, L., & Spencer, S. (2017). Vocational rehabilitation for people with acquired brain injury.
- Chan, Y., Krishnasamy, C., Tan, B., & Ko, H. (2013). Which rehabilitation and occupational therapy intervention(s) contribute to quicker return to work after stroke?
- Gensby, U., Lund, T., Kowalski, K., Saidj, M., Jorgensen A.M.K., Filges, T., . . . Labriola, M. (2012). Workplace-based disability management programs for promoting return-to-work. *Campbell Systematic Reviews, 8*.
- Iemmi, V., Gibson, L., Blanchet, K., Kumar, S., Rath, S., Hartley, S., . . . Kuper, H. (2015). Community-based rehabilitation for people with disabilities in low- and middle-income countries. *Campbell Systematic Reviews, 11*.
- ILO. (2018). *Labour market inclusion of people with disabilities*. Geneva: IOL.
- Ma, Z., Dhir, P., Bayley, M., Perrier, L., & Munce, S. (2018). The impact of vocational interventions on vocational outcomes, quality of life, and community integration in young adults with physical disabilities: a systematic review.
- Sundstrup, E., Glies, K., Seeberg, V., Andersen, L., & E., B. (2018). Effective workplace interventions in rehabilitating musculoskeletal disorders and preventing its consequences among workers with physical and sedentary employment: systematic review of RCTs and non-RCTs.
- Tripney, J., Roulstone, A., Hoglebe, N., Vigurs, C., Schmidt, E., & Stewart, R. (2015). Interventions to improve the labour market situation of adults with physical and/or sensory disabilities in low- and middle-income countries. *Campbell Systematic Reviews, 11*.
- UN. (2006). *Convention on the rights of persons with disabilities*. New York: United Nations.
- UN. (2015). Sustainable Development Goals. Retrieved 7/12, 2017, from <http://www.un.org/sustainabledevelopment/sustainable-development-goals/>
- Westbrook, J. D., Fong, C. J., Nye, C., Williams, A., Wendt, O., & Cortopassi, T. (2013). Pre-graduation transition services for person with autism spectrum disorders: effects on employment outcomes. *Campbell Systematic Reviews, 9(11)*.
- WHO. (2010). *Community-based rehabilitation guidelines*. Geneva: WHO.
- WHO. (2011). *World Report on Disability*. Geneva: World Health Organisation.

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## **Roles and responsibilities**

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### ***Content expertise:***

Professor Hannah Kuper, Director of the International Centre for Evidence in Disability, a research group at LSHTM that works to expand the research and teaching activities of LSHTM in the field of global disability. Her main research interest is disability in low and middle income countries, with a particular focus on assessment of the prevalence of disability and impairments, including in children, and development of new methods in undertaking these surveys (e.g. use of mobile technologies), investigation of the health and rehabilitation needs of people with disabilities, and how these can be met in low resources settings and research on the relationship between poverty and disability, and the potential role of social protection in breaking this cycle. She has an undergraduate degree from Oxford University in Human Sciences and a doctorate from Harvard University in epidemiology. She has worked at LSHTM since 2002.

Morgon Banks is a research fellow at LSHTM, specialising in poverty and disability, and livelihood interventions as mechanisms to alleviate poverty among people with disabilities.

### ***Systematic review method and statistical analysis expertise:***

All team members have previous experience in systematic review methodology, including search, data collection, statistical analysis, theory-based synthesis, which mean they are proficient in carrying out the various processes in a systematic review, such as search, eligibility screening, quality assessment and coding. Furthermore, all three authors have experience in statistical analysis of data generated through a systematic review.

### ***Information retrieval expertise:***

All authors have previous experience in developing search strategies.

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## **Potential conflicts of interest**

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No conflicts of interest.

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## **Preliminary timeframe**

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- Date you plan to submit a draft protocol: April 2019
- Date you plan to submit a draft review: December 2019