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Rapid Evidence Assessment (REA) of What Works to Improve Livelihood Outcomes for People with Disabilities in Low and Middle Income Countries

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Executive Summary

**Background**: There are approximately one billion people with disabilities globally, and on average, they are less likely to be employed, whether formally or informally, than their peers without disabilities. Where people with disabilities do work, they are more likely to be self-employed, work part-time and work for lower wages. Livelihood is broader than employment alone, however, and includes the means by which people meet their basic needs (e.g. social protection, financial services).

As such, improving livelihood outcomes is an important focus of disability-inclusive development initiatives, and this is also reflected in the Sustainable Development Goals (e.g. call for full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value). Inclusion of people with disabilities in livelihood opportunities is also an explicit right, as set out in the UN Convention on the Rights of Persons with Disabilities.

Nevertheless, people with disabilities face barriers to inclusion in livelihood opportunities, which operate at the level of the system (e.g. lack of policy protecting the rights of people with disabilities or political support for a focus on disability), programme (e.g. lack of accessible infrastructure in the workplace) or the family/person (e.g. lack of social capital, poor health). Consequently, effective interventions to improve livelihood outcomes should be identified that operate at these levels.

The aim of the Rapid Evidence Assessment is to provide an overview assessment of effectiveness of interventions to improve livelihood outcomes for people with disabilities in low and middle income countries.

**Methods**: The studies included in this assessment are taken from the Disability Evidence and Gap Map prepared by the Campbell Collaboration for DFID under the auspices of the Centre for Excellence for Development Impact and Learning (CEDIL).1 Systematic reviews and primary studies published in English from 2000 onwards that assessed the effectiveness of interventions to improve livelihood outcomes for people with disabilities in low and middle income countries (LMICs) were eligible for inclusion.

The search for the map comprised: (1) an electronic search of over 20 databases and sector-specific websites, and (2) screening of the included studies in the identified reviews. Screening was a two stage process of first screening by title and abstract and then full text. Studies were coded by intervention, outcomes and a range of filters such as study design and location.

This process resulted in identification of 10 primary studies and 8 systematic reviews, which are included in this assessment. The eligible individual studies from the reviews had already been included as primary studies, and so the reviews were not described further in order to avoid double counting.

A summary of included studies was prepared, in addition to the coding. This coding was conducted by pairs of coders and included: (1) basic study characteristics, (2) narrative summary, (3) summary of findings/results table, and (4) quality assessment (for individual studies and systematic reviews). The studies were grouped by sub-outcomes, that is: Skills development, self-employment, wage employment, financial services and social protection. For each sub-outcome a narrative summary was prepared for the main themes and findings, including consideration of where there was strong evidence for effect, where there were evidence gaps, and the quality of the evidence.

**Results:** Overall there are relatively few studies directly relevant to people with disabilities. The map contains around 60 primary studies – that is not much more than 1 per cent of the nearly 5,000 studies in the 3ie database of development impact evaluations despite the fact that people with disabilities constitute 15 per cent of the population.

Turning specifically to livelihoods, there were 10 eligible individual studies, including studies conducted in Asia (5), Africa (3) and Latin America (1) and 1 multi-country study.

*Skills development*: Two eligible studies were included that measured improvements in skill development among people with disabilities. One included people with visual impairment and the second people with physical impairment. One intervention attempted to improve motivation to work, and the second professional social skills. Both studies reported positive outcomes in terms of improved skills, however, the quality of both studies was judged to be low. Overall, there is “insufficient evidence” on what works to improve skills development for people with disabilities in LMICs, given the small number of eligible studies, and concerns about their quality.

*Employment:* Eight studies were included that measured improvements in employment outcomes. The studies often did not distinguish whether this was waged or self-employment, or reported both, and so these categories were combined. Of the 8 studies, 5 focused on people with physical impairments, and the remainder on people with intellectual impairment (n=1), mental health conditions (n=1) or all types of disability (n=1). All studies measured participation on waged or self-employment as an outcome, and some also assessed income or time spent working. A broad range of interventions were implemented (e.g. vocational rehabilitation, wheelchair provision, CBR, supported employment), yet all studies showed improvements in employment as a result of the intervention. Only one study was deemed to be of “moderate” quality, and the remaining 7 had a high risk of bias. Overall, there is “promising evidence” that interventions can be effective to improve employment outcomes for people with physical impairments in LMICs.

*Financial services:* No studies were identified that assessed interventions to improve outcomes in financial services (e.g. having a bank account), and so there was 'no evidence' of effectiveness for this category.

*Social protection*: One study assessed the impact of a CBR programme in improving receipt of pension and allowances. Although the findings showed a positive impact, this study was judged to be of low quality. Consequently, there is “insufficient evidence” that interventions are effective in improving social protection outcomes for people with disabilities in LMICs.

**Summary of evidence**

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| **Component of livelihood** |
| **Skills development: *Limited evidence*** |
| **Employment (waged or self): *Promising evidence*** |
| **Financial services: *No evidence*** |
| **Social protection: *Limited evidence*** |

**Evidence limitations and gaps:** The REA identified important evidence gaps, which is unsurprising given the neglect of people with disabilities in impact evaluations to date. More and better-quality studies are needed, in particular that explore outcome for system- and programme-level interventions and address social capital. Studies are also needed to explore what works for people with different impairment types, as the available literature concentrated on people with physical impairments. Evidence is also needed on the effectiveness of interventions by gender (assessed in only three studies); there was a lack of evidence from humanitarian settings (assessed in no studies); and there was a lack of evidence regarding outcomes other than employment inclusion, such as adequacy of pay, quality of employment, reported satisfaction, and attitudes. Critically, data are needed on what works to promote inclusion in social protection and financial services, as these programmes are widely implemented but without evidence of effectiveness.

**Conclusion:** Inclusion of people with disabilities in livelihood opportunities, so that they can meet their basic needs, is an important right, as well as a development need. Better evidence is needed on what works before specific approaches or programmes can be recommended, although there was promising evidence that interventions can be effective at improving employment inclusion among people with physical impairments.

**Recommendations:**

1. Despite talk of inclusivity, commissioning of impact evaluations has disproportionately neglected people with disabilities. To rectify this situation, intervention studies need to be funded and undertaken, using best-in-class methods, to provide evidence on What Works to improve livelihood outcomes for people with disabilities, focusing on the full range of impairment types, and taking a broad view of livelihood beyond employment alone (e.g. including social protection).
2. Interventions which include people with disabilities as an important target group should report disaggregated results for that sub-population. Relevant programmes should evaluate whether they are effective for improving livelihood outcomes for people with disabilities, beyond employment status alone.
3. Monitoring systems should be implemented that allow disaggregation by disability/impairment types (e.g. using the Washington Group measures), to assess the inclusion of people with disabilities in livelihood activities and whether parity is achieved with people without disabilities.
4. Policies and programmes should continue to support the provision of livelihood opportunities that are inclusive of people with disabilities, and these should be evidenced-based (where possible), more systematic and at larger scale.
5. Capacity to undertake impact evaluations must be strengthened, including by improving competence of civil society organizations and disabled people’s organizations who implement livelihood programmes to rigorously evaluate effectiveness.

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# Background

## People with disabilities and exclusion from livelihood opportunities

The 2011 World Report on Disability, produced by the World Health Organization (WHO) and the World Bank, estimated that more than 1 billion persons in the world have some form of disability. This figure corresponds to about 15% of the world's population.2 Disability is most common in older people and among women. Consequently, the magnitude of global disability is likely to rise further in the coming decades, with continued global population growth and ageing.

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| **Box 1**: What is disability?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”.*3  |

There is clear evidence that 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.2 Within countries, disability disproportionately affects the most disadvantaged sector of the population, however poverty is measured.4 A key driver of the association between poverty and disability is believed to be the widespread exclusion of people with disabilities from livelihood opportunities.5

The recently published UN Flagship report on disability highlighted the large gap in employment between people with and without disabilities.6 They reported that across 8 geographical regions, the employment to population ratio for people with disabilities aged ≥15 years was 36% compared to 60% for people without disabilities. This employment gap was observed in all regions of the world. The exclusion of people with disabilities from employment is repeatedly shown in the literature, as illustrated in Figure 1, although these international comparisons must be made with caution due to differences in how disability and employment (especially informal employment) are measured. The World Health Surveys used consistent methods across 51 countries, and showed that employment rates were lower in men with disabilities (53%) compared to non-disabled men (65%), and also among women with disabilities (20%) compared to non-disabled women (30%).7 It is also clear that when people with disabilities do work it is more likely to be in the informal sector, part-time and for lower wages.2 5 6 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.

**Figure 1: Employment-to-population ratio for persons with and without disabilities: Most recent data close to year 2010** 8



Livelihood is broader than employment alone, however, 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. This broad conceptualization is recognised by Community Based Rehabilitation (CBR), which is promoted by the WHO to improve the lives of people with disabilities, and has “livelihood” as one of its five pillars.7 Within the “livelihood” pillar of the CBR matrix, there are five specific components: wage employment, skills development, self-employment, access to financial services (e.g. micro-credit schemes, access to bank accounts), and inclusion in social protection programmes. Few studies have assessed whether people with disabilities are disadvantaged in terms of inclusion in livelihood opportunities more holistically, beyond waged employment alone, such as access to social protection or microcredit schemes.9 10

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| **Box 2**: What is livelihood?A livelihood comprises the capabilities, assets (including both material and social resources) and activities required for a means of living. A livelihood is sustainable when it can cope with and recover from stress and shocks and maintain or enhance its capabilities and assets both now and in the future, while not undermining the natural resource base.11 |

Disability is not a homogenous category – and the experience of exclusion will vary by gender, impairment type and context. Women already frequently face discrimination in terms of livelihood inclusion, and this may be compounded for women with disabilities, as shown in the data from the World Health Surveys.7 Exclusion may also vary by impairment type, as people with mental health conditions or intellectual impairments may be particularly at risk of exclusion from employment.7 Although data are lacking, people with disabilities may be particularly left behind within humanitarian settings.

## The importance of livelihood opportunities for all

The financial benefits for people with disabilities of inclusion in livelihood opportunities are obvious (Figure 1).5 By definition, improving livelihood outcomes will allow people to meet their basic needs. People who are employed will earn income, whether financial or in kind, which will reduce their poverty levels. These benefits will extend beyond the individual to his/her household, as they contribute to the household economy. Financial benefits are also reaped by employers, as they are able to select employees from the full range of skills and abilities, and as evidence suggests that people with disabilities may be particularly loyal and committed employees.12 The societal level will also see financial benefits through tax generated from the salary of people with disabilities.

The non-financial benefits of improving livelihood opportunities for people with disabilities must also be recognized. Employment is a cornerstone of social inclusion, and facilitates friendship and engagement in society. It also promotes human dignity and social cohesion. Fulfilling the right to livelihood inclusion may also help other rights to be met – for instance, the workplace is a key provider of healthcare, and receipt of social protection may help health care and educational costs to be met. These non-financial benefits may be particularly pronounced for women, and may include additional gains such as greater protection against abuse, and improved health and educational outcomes of their children.

**Figure 2. How livelihood can reap gains for people with disabilities5**



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, in recognition of the many positive impacts of livelihood inclusion.

Exclusion from livelihood opportunities is recognised as a violation of the rights of people with disabilities. 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”*.3 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.

Exclusion from livelihood opportunities is also a development issue. The Sustainable Development Goals (SDGs) are also relevant to this issue13. 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.8 “Sustained” and “sustainable economic growth” places emphasis on long-term endurance. Finally, “inclusive” requires opportunities for work to be equal for different groups. Accordingly SDG 8 explicitly states in target 8.5 that *“By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value.”* (Emphasis added)

## Barriers to inclusion of people with disabilities in livelihood

It is important to consider the barriers to livelihood opportunities experienced by people with disabilities, in order to identify how these may be overcome. People with disabilities are not a homogenous group, and the reasons for exclusion will vary for women and men, in different settings, and for people with different impairment types. Nevertheless, barriers can be broadly categorized as being experienced at the level of the System, the Workplace, the Family or the Person.14

* System-level barriers include the lack of legislation or policies to support the inclusion of people with disabilities in livelihood opportunities or political support for a focus on disability. Furthermore, even where there are good policies, these may not be implemented due to failure to monitor inclusion or to implement incentives or penalties to promote inclusion. Another important concern is inadequate resource allocation to support inclusion (e.g. lack of funds for access to work schemes). Policies may also be inappropriately formulated so that they penalize people with disabilities who work (e.g. create a benefits trap) or establish over-protective labour laws that discourage firms from employing disabled people.
* Programme-level barriers include lack of reasonable accommodation (including assistive technology) and physical accessibility of the workplace, transport or toilets, or the existence of negative attitudes from employers and co-workers towards people with disabilities, including around their ability to work. Programmes, such as micro-credit schemes, may also explicitly exclude people with disabilities (e.g. making people with long-term health conditions ineligible).
* Individual-level barriers include the lack of social capital, including the networks, connections, and relationships that people need to enjoy livelihood opportunities. They may also have lower levels of training or skills, following their higher risk of exclusion from education, which may make livelihood opportunities more difficult to obtain. People with disabilities may also experience poor health, including poor mental health, and require treatment and rehabilitation, which can make full-time employment more challenging. Depending on the impairment type, people with disabilities may have difficulties with different skills needed in many work environments, such as concentrating and controlled behavior, and this may reinforce negative attitudes that people with disabilities are not capable of learning or worth investing in. People with disabilities may experience higher costs of working (e.g. need for accessible transport), which creates a barrier to entry into the labour force.

## What works to increase livelihood inclusion and outcomes for people with disabilities?

Approaches to improve livelihood inclusion and outcomes for people with disabilities must act by targeting the barriers that they experience. In other words, they must operate at the level of the system (e.g. improving policy and legislation), the programme (e.g. making reasonable accommodations) and/or individual (e.g. providing training in new skills). These interventions should address inclusion in livelihood opportunities in the broadest sense, and not focus only on employment alone.

The World Report on Disability describes different approaches to addressing barriers and thereby enhancing livelihood opportunities.

* At the systems-level, most countries have laws and regulations in place protecting people with disabilities from discrimination in employment,[[1]](#footnote-1) but they should be implemented where they are lacking or improved if they are inadequate. Systems-level interventions may also include instituting requirement for reasonable accommodation in the workplace, implementation of quotas for employment of people with disabilities, establishment of tax incentives to employers, mainstreaming disability into public employment services, or promotion of affirmative action. A concern is that regulations can act as a disincentive to the employment of people with disabilities (e.g. due to expense of providing specialist resources, of strong protection of workers’ rights), and this must be avoided. Addressing social norms is also important, for instance, through media awareness campaigns about disability.
* Examples of programme level interventions include supported employment (e.g. specialist job training, social firms), sheltered employment (i.e. employment in segregated facilities) and specialist employment agencies for people with disabilities.
* Individual-level interventions include activities such as vocational rehabilitation programmes, which aim to restore the capabilities of people with disabilities so that they can participate in a competitive labour market, or other forms of skill development. Enrolment of individuals in microfinance schemes and social protection may also help people with disabilities meet their basic needs. However, care must be taken that they do not provide disincentive to work. Efforts to change attitudes are also important, so that people with disabilities are seen as capable of productive work.

The lack of data comparing these different approaches, or other interventions that try to improve livelihood outcomes for people with disabilities, makes it difficult to judge which strategies should be scaled up. Furthermore, the evidence on What Works to improve livelihood outcomes for people with disabilities in LMICs has not been reviewed previously, although components of the question have been considered. For instance, Tripney et al assessed the effectiveness of interventions to improve the labour market situation of adults with physical and/or sensory disabilities in LMICs15. 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, 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), and it may now be outdated. Other reviews have focused on how to improve livelihood outcomes for people with specific conditions (e.g. autism16) or specific interventions (e.g. return-to-work)17. A common concern is that the even when reviews have been undertaken, few relevant studies are identified from LMICs as in the case of the review on social protection for people with disabilities9. Furthermore, most studies focus on employment in formal and informal sectors, but not on other livelihood outcomes, such as access to financial services and social protection programmes, and access to training schemes.

## Aim of this Rapid Evidence Assessment

The improvement in livelihood inclusion and outcomes for people with disabilities is an important rights-based and development issue. The evidence has not been assessed to identify which strategies may be most effective. **The aim of the Rapid Evidence Assessment (REA) is to provide an overview assessment of effectiveness of interventions to improve livelihood outcomes for people with disabilities in low and middle income countries.**

Two complementary REAs have been undertaken – to assess the effectiveness of interventions to improve educational outcomes and social inclusion and empowerment for people with disabilities in low and middle income countries.18 19

# Methods

## Study identification and coding

The studies included in this assessment are taken from the Disability Evidence and Gap Map prepared by the Campbell Collaboration for DFID under the auspices of the Centre for Excellence for Development Impact and Learning (CEDIL).20 Systematic reviews and primary studies published from 2000 in English that assessed the effectiveness of interventions for improving livelihood outcomes for people with disabilities LMICs were eligible for inclusion.

The search for the map comprised: (1) an electronic search of over 20 databases and sector-specific websites,1 and (2) screening of the included studies in the identified reviews. Screening was a two stage process of first screening by title and abstract and then full text. Screening was undertaken independently by two screens, with a third party arbiter in case of disagreement. Coding was undertaken in the same way, with a check by a fourth party. Studies were coded by intervention, outcomes and a range of filters such as study design and location. Summaries of the studies were prepared by a separate team.

The primary studies included in the systematic reviews were also assessed for eligibility. As such, the REA does not include summarised findings of the systematic reviews in order to avoid duplication.

This evidence assessment is based on studies reporting outcomes in the domain livelihood. The list of studies coded as such was screened for eligibility by Ashrita Saran.

A summary of included studies was prepared, in addition to the coding, which included: (1) basic study characteristics, (2) narrative summary, (3) summary of findings/results table, and (4) quality assessment. This coding was conducted by pairs of coders, with comparison and discussion to resolve any discrepancies.

## Quality assessment tools

The tool used to assess study quality for primary studies is shown in Table 1. This tool[[2]](#footnote-2) contains six criteria:

1. Study design (Potential confounders taken into account): impact evaluations need either a well-designed control group, preferably based on random assignment, or an estimation technique which controls for confounding and the associated possibility of selection bias.
2. Masking (RCTs only, also known as blinding): masking helps limit the biases which can occur if study participants, data collectors or data analysts are aware of the assignment condition of individual participants.
3. Adequate sample size: small samples generally mean that a study is underpowered, i.e. there is a high risk of not finding an effect even if the intervention works.
4. Attrition can be a major source of bias in studies, especially if there is differential attrition between the treatment and comparison group so that the two may no longer be balanced in pre-intervention characteristics. The US Institute of Education Sciences What Works Clearing House has developed standards for acceptable levels of attrition, in aggregate and the differential, which are applied here.[[3]](#footnote-3)
5. Clear definition of disability: for a study to be useful the study population must be clear, which means that the type and degree of disability should be clearly defined, preferably with reference to a widely-used international standard.
6. Clear definition of outcome measures is needed in order to aid interpretation and reliability of findings and comparability with other studies. Studies should clearly state the outcomes being used with a definition and the basis on which they are measured, preferably with reference to a widely-used international standard.
7. Baseline balance shows that the treatment and comparison groups are the same at baseline. Lack of balance can bias the results.

Study quality is rated high, medium or low, for each of the criteria, applying the standards as shown in Table 1. Overall study quality is the lowest rating achieved across the criteria – the weakest link in the chain principle.

Where a study reports outcomes at more than one point in time it is possible that the study quality varies between those two points for two of the criteria: (1) an RCT may no longer be so if it used a waitlist or pipeline design so the control group has received the treatment (item 1), (2) there may be greater attrition rates at the later point in time. Hence in applying the tool an assessment is made for the earliest and latest outcome measures for items 1 and 4, and overall study quality assessed separately for the two points in time.

**Table 1 Study quality assessment criteria**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
|  | Criterion | Low | Medium | High |
|  |  |  |  |  |
| 1 | Study design (Potential confounders taken into account) | Before versus after. Naïve matching | IV, RDD, PSM, double difference | RCT, natural experiment |
| 2 | Blinding (RCTs only) | No mention of blinding | Blinding for analysis. | Blinding of data collection (where feasible). Blinding for analysis. |
| 3 | Losses to follow up are presented and acceptable | Attrition not reported, OR falls well outside WWC acceptable combined levels\* | Overall and differential attrition close to WWC combined levels\* | Overall and differential attrition within WWC combined levels\* |
| 4 | Disability/impairment measure is clearly defined and reliable | No definition OR overall attrition > 50% | Unclear definition OR Single question item only (e.g. are you disabled) | Clear definition, e.g. Washington Group questions, detailed measure of impairment |
| 5 | Outcome measures are clearly defined and reliable | No definition | Unclear definition | Clear definition using existing measure where possible |
| 6 | Baseline balance (N.A. for before versus after) | No baseline balance test (except RCT) OR reported and significant differences on more than five measures. PSM without establishing common support. | Baseline balance test, imbalance on 5 or fewer measures | RCT, RDD |
|  |  |  |  |  |
|  | Overall confidence in study findings | Low on any item | Medium or high confidence on all items | RCT with high confidence on all items |

*An example of applying the tool*

Table 2 shows the application of the quality assessment tool to the study of Grider (2014).21 This study is a controlled before-and-after study, comparing the change in measures of employment (e.g. hours worked per day, income) after receipt of wheelchair in comparison to matched controls using Propensity Score Mapping analyses. As summarised in the table below, many of the study characteristics were appropriate (e.g. large size). However, confidence in the study results was judged to be “medium, because the study did not use a randomised controlled design.

**Table 2 Application of study quality assessment tool to a sample study**

|  |  |  |  |
| --- | --- | --- | --- |
| No. | Item |  | Notes |
| 1 | Study design, sampling method is appropriate to the study question |   | Propensity Score Mapping |
| 2 | Adequate sample size, e.g. sample size calculations undertaken |   | Sample size was not small (120 current wheelchair users and 141 non-wheelchair users), but no power calculation was presented. |
| 3 | Attrition |   | 32% of people in the baseline survey were not included in the follow-up |
| 4 | Disability/impairment measure is clearly defined and reliable |   | People were classified on the basis of needing a wheelchair, but there was a lack of information on impairment type. |
| 5 | Outcome measures are clearly defined and relatable |  | Clear definition of outcomes was used (i.e. hours worked per day, income). |
| 6 | Baseline balance  |   | Propensity Score Mapping was used to adjust for baseline differences, although baseline balance was not demonstrated. |
|  |  |  |  |
|  | Overall confidence in study findings |   | Low on any item |

Scoring: Green – high”; Amber – “medium”; Red – “low”

## Evidence assessment

The studies were grouped by livelihood sub-outcomes, that is: Skills development, self-employment, wage employment, financial services and social protection. For each sub outcome a narrative summary was prepared for the main themes and findings, including consideration of where there was strong evidence for effect, where there were evidence gaps, and the quality of the evidence.

# Results

## Studies included in REA

**Figure 3. PRISMA flowchart of studies included in the** **REA**



The PRISMA flowchart (Figure 2) outlines the steps in the review process. Ultimately 10 individual studies 21-30 and 8 systematic reviews 9 15-17 31-34 were included in the Livelihood REA. The primary studies included in the 8 systematic reviews were also assessed for eligibility. The systematic reviews either did not identify eligible studies from LMICs, 9 16 17 31 32 or all eligible primary studies were already included in the REA (in the 10 individual primary studies identified). 15 As such, the REA does not include summarised findings of the systematic reviews in order to avoid duplication, and to ensure relevance since some studies in the included reviews do not meet our eligibility criteria.

Of the 10 included individual studies, one was a multi-country study (Chile, India, Vietnam), five were conducted in Asia (3 in Bangladesh, China, India), three in sub-Saharan Africa (Ethiopia, Kenya, Nigeria), and one in Latin America (Brazil). The studies are described in Boxes 3 and 4.

Given the scope of this REA, this is a very low number of included studies, reflecting the neglect of people with disabilities in impact evaluations. There are nearly 5,000 primary studies of the effectiveness of development interventions in the 3ie database, so the 60 odd studies in the disability EGM are not much more than 1 per cent of all studies.

## Individual intervention studies

### Skills development

Two studies were included in the REA that assessed the impact of interventions to promote skills development outcomes for people with disabilities.

**Box 3. Summaries of studies of interventions aiming to improve skills development outcomes**

|  |
| --- |
| 1. Eniola and Adebiyi (2007) 22 undertook a study to investigate the effectiveness of interventions to increase motivation to work among visually impaired students in Nigeria.* Study design: RCT
* Country: Nigeria
* Setting: “School for Handicapped Children”
* Participants: 32 people with visual impairments
* Impairment type: Visual
* Percentage female: 56%
* Humanitarian setting: No
* Intervention: One of two motivation skills interventions: emotional intelligence or goal setting
* Control: Two intervention groups compared
* Follow-up: 6 weeks
* Outcome measure: Motivation to work (Work Value Inventory)
* Cost-effectiveness considered: No

Overall, the summary results showed significant improvements in level of motivation to work for those who had experienced emotional intelligence and goal setting interventions, comparing the post-intervention to pre-intervention scores (p<0.05). The group means suggest that the emotional intelligence intervention may have had a more positive impact than the goal setting intervention, although a significant interaction was not found. Males and females appeared to benefit equally from the intervention. Confidence in the results of the study was low, as appropriate account was not reported for attrition and baseline balance. |
| 2. Pereira-Guizzo *et al*. (2012) 23 reported the findings of an evaluation of a professional social skills programme for unemployed people with physical impairments. * Study design: Before versus after study, without control group
* Country: Brazil
* Setting: Not specified
* Participants: 16 unemployed people with physical impairments (eight walkers, eight wheelchair users, aged 18–36)
* Impairment type: Physical
* Percentage female: Not stated
* Humanitarian setting: No
* Intervention: Programme for the development of social skills for the work environment, twice a week, 90 minutes per session, 16 sessions total
* Control: No control group
* Follow-up: One and two months
* Outcome measure: Social skills inventory and professional social skills
* Cost-effectiveness considered: No

Professional social skills scores increased significantly in both treatment groups after the intervention. The improvement in social skills scores was more rapid and marked among the people who could walk compared with those who were wheelchair users. Differences by gender were not reported. Confidence in the study findings was judged to be low, due to the lack of randomisation or a control group, and the small sample size. |

### Summary of studies reporting skills development related outcomes:

Overall, two studies were included that measured outcomes related to skills development. There was a limited range of **study settings** with one study conducted in Nigeria and the other in Brazil. In terms of **impairment type/disability**, one study focused on people with visual impairment and the second on people with physical impairment. Both **interventions** provided skills training to people with disabilities. The **study outcome** for the first intervention was the motivation to work of participants and the second was the professional social skills. The **study quality** of both studies was deemed to be low, because they were small and lacked a randomized design, among other issues.

**There were no areas of strong evidence** given that only two studies were included, but both found positive outcomes of the intervention in terms of improved skills development.

**Large evidence gaps remain:** Only two studies were included, and so large evidence gaps remain. Only one study attempted gender analyses, and assessment of cost-effectiveness of interventions was lacking. Neither of the studies were conducted in humanitarian settings. Studies including people with mental health conditions, hearing or intellectual impairments were absent, as were high quality studies.

### Self-employment and/or wage employment

Eight studies were included in the REA that assessed the impact of interventions to promote wage employment outcomes for people with disabilities. Several of these interventions also attempted to improve self-employment outcomes (e.g. Momin27 and Nuri28) or presented outcome categories that were not distinct (e.g. “time spent working” - Grider21), and so the self-employment and wage employment categories were combined.

**Box 4: Summaries of studies of interventions aiming to improve wage employment outcomes**

|  |
| --- |
| 1. Grider (2014) 21 studied the Economic Impact of Wheelchairs for the Disabled in Ethiopia* Study design: Case-control study with Propensity score matching
* Country: Ethiopia
* Setting: Community based
* Participants: 261 (120 current wheelchair users and 141 non-wheelchair users)
* Impairment type: Certified by physician as physically impaired to degree of needing a wheelchair
* Percentage female: Not stated
* Humanitarian setting: No
* Intervention: Wheelchair provision
* Control: Non-wheelchair users (n=141)
* Outcome Measure: Weekly income, employment, time spent working.
* Cost-effectiveness considered: Yes

Results show that current wheelchair users earn $6.23 more per week, have a 15 percent higher probability of employment and work 1.75 hours more per day than their non-wheelchair using counterparts. Results were not disaggregated by gender. Confidence in the study results were moderate, because it did not use a randomised controlled design, but did use Propensity Score Mapping.   |
| 2. Hansen et al (2007)24 considered the effectiveness of a programme for vocational training project for people with spinal cord lesions in Bangladesh.* Study design: Quasi-experimental, pre-post design without control
* Country: Bangladesh
* Setting: Centre for Rehabilitation of the Paralysed
* Participants: 46 people aged 15-50 years with spinal cord lesions admitted to the Centre for Rehabilitation of the Paralysed, living in Dhaka’s surrounding district (an NGO in Bangladesh)
* Impairment type: Physical (spinal cord lesion)
* Percentage female: 13%
* Humanitarian setting: No
* Intervention: Work rehabilitation programme. The programme was particularly aimed at re-integrating clients into the same sort of employment that they held prior to their injuries
* Control: None
* Follow-up: 3 years
* Outcome: Engagement in paid employment.
* Cost-effectiveness considered: No

Overall, 23 out of 46 individuals returned to work. 18 of the 46 participants were engaged in employment completely similar to or much the same as their previous employment. A further five participants were engaged in occupations which bore some or no resemblance to their former occupations. Only 4 of the 15 people who were wheelchair users compared to 5 out of 8 individuals who used crutches. There is some evidence therefore, that wheelchair users found re-employment more challenging compared to people who did not need mobility aids, or used crutches (p<0.028, x2 = 4.847, df=1). Problems faced by reemployed participants included financial struggles, inaccessible work environments, physical limitations and unhelpful attitudes of colleagues and employers. Gender stratification was not undertaken. Confidence in the study results was deemed to be low, due to lack of randomization or a control group, and lack of demonstration of baseline balance. |
| 3. Makanya *et al*. (2014) 25 studied the effectiveness of transitional and follow-up programmes to community integration of young adults with intellectual disabilities in Kiambu County, Kenya. * Study design: Before versus after study, without control group
* Country: Kenya
* Setting: Vocational institution
* Participants: 10 young adults with disabilities plus nine parents, one head teacher/employer and two vocational teachers
* Impairment type: Intellectual
* Percentage female: 30%
* Humanitarian setting: No
* Intervention: Vocational education and transitional services for young adults with intellectual impairments
* Control: No control group
* Follow-up: None after end of project
* Outcome measure: Employment inclusion
* Cost-effectiveness considered: No

Among the 10 young adults, 9 were employed after the intervention (all 7 men and 2 out of 3 women). The findings revealed that while young adults with intellectual impairments were offered vocational skills training in the special school, what they were trained in was not relevant to the tasks they were engaged in (e.g. trained in tailoring but not using those skills in their job). This led to some of them disliking the kind of jobs, and five out of seven respondents reported preferring other jobs to the one they had. It was evident that a well-specified vocational transitional service for persons with intellectual impairments was lacking. Confidence in the study results was low, due to the lack of a randomised design, and small sample size, among other concerns.  |
| 4. Mauro and colleagues (2014)26 considered the effectiveness of community-based rehabilitation programmes for people with disabilities in India.* Study design: Case-control study with Propensity score matching.
* Country: India
* Setting: Community based
* Participants: 2540 people with disabilities
* Impairment type: Physical, visual, hearing and speech, or intellectual
* Percentage female: 41.3% intervention, 44.2% control
* Humanitarian setting: No
* Intervention: Comprehensive CBR programme (n=1919)
* Control: 28 villages not covered by the programme (n=621)
* Follow-up: Up to 7 years
* Outcome measure: Paid job/work, and pension and allowances.
* Cost-effectiveness considered: No

In intervention areas where CBR was implemented, there were improvements in access to pensions and allowances and paid jobs, compared to control areas (increase 29.7% and 12.3%, respectively, after 7 years). Findings were not disaggregated by gender. Confidence in the study result was low, because it did not use a randomised design (although it did use Propensity Score Matching) and could not demonstrate balance of characteristics of the two groups at baseline or reported appropriately on attrition.  |
| 5. Momin *et al*. (2004)27 studied the impact of services for people with spinal cord lesion on economic participation in Bangladesh. * Study design: Before versus after study, with control group
* Country: Bangladesh
* Setting: Hospital and community
* Participants: 64 people with spinal cord lesion (aged 10–59)
* Impairment type: Physical (tetraplegia or paraplegia)
* Percentage female: 50%
* Humanitarian setting: No
* Intervention: Specialist services for people with spinal cord injury offered at Centre for Rehabilitation of the Paralysed, including medical treatment in the hospital and social and economic rehabilitation in the community (n=32)
* Control: Government hospital (n=32)
* Follow-up: Ex-post study
* Outcome measure: Employment
* Cost-effectiveness considered: No

People exposed to the Centre for Rehabilitation of the Paralysed programme were less likely to be unemployed (9%) compared with those who have been to the government hospital only (63%). People who had received the programme were also more likely to be self-employed (16%) or employed in service (16%) compared to people in the general hospitals sample (9% for both measures). Data were not disaggregated by gender. Confidence in the study findings was deemed to be low, due to a lack of randomisation, unclear definitions of outcomes used, and lack of demonstration of balance in baseline characteristics between cases and controls. |
| 6. Nuri and colleagues (2012)28 considered the impact of a vocational training programme on (re)entry of persons with disabilities into employment.* Study design: Before versus after study, without control group
* Country: Bangladesh
* Setting: Madhab Memorial Vocational Training Institute across 5 districts in Bangladesh
* Participants: 261 people with disabilities
* Impairment type: Physical
* Percentage female: 39%
* Humanitarian setting: No
* Intervention: Vocational training and job placement – 5 different courses offered (computer, electronics, garments operator, shop management, sewing-machine operator)
* Control: None
* Follow-up: Not specified
* Outcome measure: Waged or self-employment
* Cost-effectiveness considered: No

After the intervention, 60% of the sample had found some form of employment after the training either in the formal labour market or self-employment. This figure was higher among female (71%) than male (53%) participants. The vocational training programme that was considered the most effective was garment-operator training, because all participants managed to find full-time employment (although the sample size was small). Computer training was considered least effective. Appropriateness of the training (i.e. training that matched the participant’s skills, abilities and financial resources) was deemed the best indicator for finding employment. Confidence in the study result was judged to be low, because of a lack of a randomised design and absence of a control group. |
| 7. Shore and Juillerat (2012)29 assessed the impact of a low-cost wheelchair for people with disabilities in LMICs. * Study design: Before versus after study, without control group
* Country: India, Chile, Vietnam
* Setting: Community
* Participants: 519 people who received a wheelchair
* Impairment type: Physical
* Percentage female: 39.8%
* Humanitarian setting: No
* Intervention: Wheelchair receipt
* Control: No control group
* Follow-up: 12 months
* Outcome measure: Employment, adequate income.
* Cost-effectiveness considered: No

Simple, depot-style wheelchairs increased the proportion of people who reported having any employment (p<0.0001) and those who reported having an “adequate” income (p<0.0001). Exact figures are not given overall, but the authors stated that these improvements were driven mainly by large changes in India where employment reportedly rose from 7.0% to 18.4% following use of the wheelchair, and those with adequate income increased from 12.6% to 23.4%. The reasons given for continued unemployment included inaccessible buildings and an inability to use the wheelchair with public transportation. Disaggregation of results by gender was not reported. Confidence in the study findings was judged to be low, since this study did not use a randomised design and did not include a control group. |
| 8. Zhang and colleagues (2017)30 assessed the effectiveness of an integrated supported employment programme for people with schizophrenia in Mainland China. * Study design: RCT
* Country: China
* Setting: Mental health facility
* Participants: 162 participants with schizophrenia aged 18 years and above
* Impairment type: Mental health (schizophrenia)
* Percentage female: 58%
* Humanitarian setting: No
* Intervention: Individual placement and support (IPS, n=54), Integrated supported employment (ISE, n=54).
* Control: Traditional vocational rehabilitation (TVR, n=54).
* Follow-up: 15 months
* Outcome measure: Employment Outcome Checklist, employment status, and job tenure.
* Cost-effectiveness considered: No

The authors reported that there were significantly higher employment rate and longer job tenure found in the ISE group (63.0%, 29.56 weeks) compared with the IPS group (50.0%, 25.47 weeks) and TVR group (33.3%, 9.91 weeks).The average number of unwanted job terminations was lower in the ISE group (1.94) than the IPS group (2.44). The ISE group also attained the most positive psychological outcomes. The authors concluded that work-related social skills training embedded in ISE with generalization strategies can enhance vocational and non-vocational outcomes for people with schizophrenia in Mainland China. Gender disaggregation was not undertaken. Confidence in the study findings was judged to be low because attrition was not reported. |

### Summary of studies reporting self-employment and/or wage employment-related outcomes

Overall, eight studies were included that measured outcomes related to wage employment or self-employment. The studies were conducted in Africa (Ethiopia, Kenya) and Asia (Bangladesh, India, China) and one was multi-country (India, Chile, Vietnam). None of the studies were conducted in a humanitarian setting. In terms of **impairment type/disability**, five of the studies focused on people with physical impairments, and the remainder on people with intellectual impairment (n=1), mental health condition (n=1) or multiple impairment types (n=1). A broad variety of **interventions** were tested, including vocational training (n=3)24 25 28, integrated supported employment programme (n=1)30, community based rehabilitation (n=1)26, facility based specialist services (n=1)27, and provision of assistive technology (wheelchairs, n=2)21 29. Overall, positive **study outcomes** were observed, using a broad range of outcomes, although the **study quality** was low, with the exception of one study, where it was moderate21.

**There were no areas of strong evidence** given the limited evidence in this category, in terms of number of studies and quality, their focus, the outcomes reported and the impairment/disability type considered. However, there was promising evidence that interventions are effective at improving employment inclusion for people with physical impairments.

**Evidence gaps:** Wide-ranging evidence gaps are evident, as the few studies were divided across a broad range of interventions. Furthermore, studies were not comparable due to the use of inconsistent study outcomes, which were rarely holistic (e.g. focusing on employment inclusion, rather than quality of satisfaction). Most of the studies focused on people with physical impairments and so data were lacking for people with other impairment types. Few of the studies had disaggregated impact outcomes by gender, and evidence for humanitarian contexts, of cost-effectiveness, or effect on reducing stigma were lacking or absent. High quality studies were lacking.

### Financial services

No eligible studies identified.

### Social Protection

The study by Mauro and colleagues (2014)26, described above, considered the effectiveness of community-based rehabilitation programmes for people with disabilities in India in terms of paid job/work, but also using receipt of pension and allowances as outcomes. In intervention areas where CBR was implemented, there were improvements in access to pensions and allowances, compared to control areas (increase 29.7% and 12.3%, respectively, after 7 years). As already described, findings were not disaggregated by gender and confidence in the study result was low, because it did not use a randomised design and could not demonstrate balance of characteristics of the two groups at baseline.

### Summary of studies reporting social protection-related outcomes

Only one study was included that measured outcomes related to social protection. It was undertaken in India, including people with a range of **impairment type/disability**. The intervention was a CBR programme, and a positive **study** outcome was observed, although the **study quality** was low.

**There were no areas of strong evidence** given that only one study was identified.

**Evidence gaps:** Wide-ranging evidence gaps are evident, as only one study was included in this category, and it was of low quality.

### Quality overview of individual studies

|  |
| --- |
| **Table 3 Study quality assessed against critical appraisal criteria** |
| Study | Design | Sample | Attrition | Disability | Outcome | Balance | Overall |
| Eniola (2007) |   |   |   |   |   |   |   |
| Grider (2014) |   |   |   |   |   |   |   |
| Hansen (2007) |  |  |  |  |  |  |  |
| Makanya (2014) |  |  |  |  |  |  |  |
| Mauro (2014) |  |  |  |  |  |  |  |
| Momin (2004) |  |  |  |  |  |  |  |
| Nuri (2012) |   |   |   |   |   |   |   |
| Pereira (2012) |   |   |   |   |   |   |   |
| Shore (2012) |   |   |   |   |   |   |   |
| Zhang (2017) |  |  |  |  |  |  |  |

Table 3 shows the studies by our six quality assessment criteria. Overall there is low confidence in study findings for all but one of the studies, and medium confidence in the remaining one. That is, the literature overall is not of sufficient quality to base firm findings.

Each of study design, sample size, attrition and balance are generally scored low for the majority of studies. Disability and outcome measurement do better in individual studies. But, as noted above, the diversity of measures makes assessing the body of evidence difficult.

# Discussion

## Overview of key results and evidence gaps

**Table 4. Summary of the evidence from the individual studies in the REA**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| Target | Skills development | Waged or self-employment | Financial Services | Social Protection |
| Number of individual studies included | 2 | 8 | 0 | 1 |
| Impairment type | Vision (1)Physical (1) | Physical (5)Intellectual (1)Mental health (1)Multiple (1) | - | Multiple (1) |
| Outcomes | Motivation to work (1) Professional social skills (1) | Income (2)Participation in waged or self-employment (8)Time spent working (1) | - | Pensions and allowances (1) |
| Evidence of impact | Yes (2) | Yes (8) | - | Yes (1) |
| Study quality | Low (2) | Low (7)Moderate (1) | - | Low (1) |
| Gender analyses conducted | Yes (1)No (1) | Yes (2)No (6) | - | No (1) |
| Humanitarian setting | None | None | - | None  |
| Cost-effectiveness analysis | None | None | - | None  |
| Areas of strong evidence | None | Modest evidence for effectiveness of interventions at improving waged and/or self-employment among people with physical impairments | Data absent | None |
| Level of evidence | Insufficient | Promising (for people with physical impairments) | Absent | Insufficient |

The evidence base on which interventions are effective at improving livelihood outcomes for people with disabilities is severely limited, both in quantity and in quality. Only ten eligible studies were identified, reflecting the neglect of people with disabilities in impact evaluations. There are nearly 5,000 primary studies of the effectiveness of development interventions in the 3ie database, so the 60 odd studies in the disability EGM are not much more than 1 per cent of all studies. This is despite people with disabilities being 15 per cent of the world’s population, disproportionately represented amongst the disadvantaged, and purported to be priority beneficiaries of the programmes of agencies such as DFID, and a focus of the research they support. Even the evaluation of a programme for which people with disabilities were a primary target group neglected to disaggregate the study findings so the effectiveness for this sub-group could be assessed.35 The lack of literature overall means that there are important data gaps. Data is entirely absent for the effectiveness of interventions that aim to improve access to financial services for people with disabilities, only one intervention study reported outcomes in relation to social protection, and just two that assessed outcomes related to skills development relevant to livelihood. Eight studies were available for employment (waged or self-) outcomes, and these studies reported positive outcomes of the interventions assessed. Yet here too there are constraints in the available literature. Five of the eight studies focused on people with physical impairments, so evidence for people with other impairment types is sparse. Overall, only one of the studies was deemed to be of moderate quality21, and the others were judged to have a high risk of bias. Publication bias is therefore an important concern across the body of evidence, given that the studies were often small and low quality, yet found positive outcomes of interventions. More and better quality studies are needed to identify what works to improve livelihood outcomes for people with disabilities, including a broader range of impairment types.

A broad range of interventions were assessed, including vocational or skills training (n=5)22-25 28, integrated supported employment programme (n=1)30, community based rehabilitation (n=1)26, facility based specialist services (n=1)27, and provision of assistive technology (wheelchairs, n=2)21 29. It is positive that different approaches have been tested to improve livelihood outcomes, but the combination of little data and many intervention types makes it difficult to draw conclusions as to which approaches should be recommended. The majority of these interventions were “individual-level”. Moreover, even the individual-level programmes focussed mostly on skills development, and not on improving social capital of individuals. This is a crucial gap, since social capital and the networks, connections, interactions and relationships people have to support their prosperity and well-being are critically important to their productive outcomes.

Only one intervention operated at the “programme-level”, which was the intervention by Zhang and colleagues (2017)30 to compare the effectiveness of an integrated supported employment programme, individual placement and support and traditional vocational rehabilitation for people with schizophrenia in Mainland China. They found that the Integrated Supported Employment Programme was the most effective at improving employment rate and job tenure, and also produced the most positive psychological outcomes. No eligible studies were identified that assessed the effectiveness of interventions that operated at the systems-level, such as the implementation of quotas, or establishment of tax incentives to employers. The evidence gap for programme and systems-level interventions is important, particularly since many countries are already implementing these approaches, yet without evidence for what works.6 Furthermore, Hansen et al (2007)24 showed that although an individual-level work rehabilitation programme improved employment outcomes, it could not secure employment for all people enrolled, due to programme and systems level issues like inaccessible work environments, physical limitations and unhelpful attitudes of colleagues and employers. Similarly, the Shore study29 showed that there was continued unemployment for some after provision of a wheelchair due to inaccessible buildings and an inability to use the wheelchair with public transportation. Interventions that address programme and system-level outcomes are needed, including those that address social norms and strengthening the political economy to support the inclusion of people with disabilities in livelihood interventions.

Another major gap is that only one study included social protection related outcomes, despite the fact that many LMICs are implementing disability-inclusive social protection programmes,36 and inclusion in social protection is a key strategy highlighted within DFID’s new disability strategy, which will run from 2018 to 2023.37 Data were absent on interventions that improved access to financial services, although these are important for helping to lift people out of poverty. Studies are needed that attempt to improve inclusion in social protection and financial service programmes, and to assess interventions that operate at the level of programme or system.

Studies were more consistent in the use of outcomes, with the majority focusing on inclusion in employment. However, this measure does not consider important aspects of employment, such as whether work is full- or part-time, people are doing the work that they choose or are satisfied with their work, and work in safe and accessible facilities. Only one study considered whether income was adequate.29 The lack of these holistic measures can result in an overly positive conclusion about intervention effectiveness. For instance, Makanya et al.25 showed that training improved employment inclusion for people with disabilities, yet five out of seven respondents reported that they would prefer to have other jobs to the one they had. Another important gap is that none of the studies assessed reductions in perceived stigmatizing attitudes as outcomes or interventions, despite the fact that negative attitudes may be a barrier to employment.24 New and more comprehensive tools are therefore needed to holistically assess livelihood outcomes for people with disabilities, including a focus on quality, attitudes and satisfaction. The Washington Group is collaborating with the ILO to develop a labour force module which can help to fill this gap, as it will focus on barriers people with disabilities face in the labour market and their needs/use of workplace accommodations, and attitudes at the labour market. Greater consistency is needed in the livelihood outcomes measured in studies, and these should focus beyond employment inclusion alone, but also consider quality, satisfaction and attitudes.

Disability is an extremely heterogeneous category, including people with a broad range of impairment types, who will face different challenges and facilitators to livelihood inclusion. 9 of the 10 studies included in the REA focused on people with a single impairment type, so that it was not possible to compare the effectiveness of the intervention for people with different impairments. Among these 9, 6 focused on people with physical impairments, and one each for people with visual or intellectual impairments or mental health conditions. The exception was the study by Mauro and colleagues (2014),26 which considered the effectiveness of a CBR programme for people with disabilities in India, and included people with physical, visual, hearing and speech, or intellectual impairments. However, this study did not disaggregate outcomes by impairment type, likely because of small numbers. Another important source of heterogeneity among people with disabilities results from gender. All studies reported the proportion of people included who were female, but just three disaggregated the results by gender. Eniola and Adebiyi (2007)22 showed that males and females appeared to benefit equally from an intervention to increase motivation to work among visually impaired students in Nigeria. Makanya *et al*. (2014)25 reported that after an intervention to promote community integration of young adults with intellectual disabilities in Kiambu County, Kenya, 7 out of 7 men and 2 out of 3 women with disabilities were employed. Nuri and colleagues (2012)28 demonstrated that a higher proportion of female (71%) than male participants (53%) were employed after receiving a vocational training programme on (re)entry of persons with disabilities into employment in a project in Bangladesh. Clear evidence on whether there is a gender difference in the effectiveness of livelihood interventions is therefore lacking. Finally, none of the studies were undertaken in a humanitarian setting, representing a further important gap in knowledge. Studies are needed that assess the impact of interventions for a broader range of impairment types, for both males and females, in humanitarian contexts, and allow disaggregation of effect.

## Consideration of findings against broader literature

The systematic reviews identified through our search strategy were not included in the REA. This is because the reviews only included studies from high-income settings or did not identify any eligible studies (or not from LMICs),9 16 17 31 32 or they included only eligible primary studies already identified for the REA.15 However, overall the findings from these reviews reinforced the key messages from the REA.

First, evidence on the effectiveness of interventions to improve livelihood outcomes for people with disabilities is sparse, particularly for LMICs. Previous reviews have been conducted around this topic, but have mostly only identified studies from high income settings. Gensby et al identified 13 studies that considered workplace-based disability management programs for promoting return-to-work, 8 from USA and 5 from Canada.17 Jetha and colleagues restricted their review to work-focused interventions that promote the labour market transition of young adults with chronic disabling health conditions to high income countries, and only identified 10 eligible studies of moderate-high quality.38 Briand and colleagues reviewed the data on return-to-work interventions for people with musculoskeletal conditions, and identified just 11 studies, all from high income settings.31 Westbrook and colleagues reviewed the literature on pre-graduation transition services for persons with autism spectrum disorders. They identified 7 studies – 5 from USA and 2 from UK.16 More data were found by Fleming and colleagues, who undertook a systematic review of individualised funding interventions to improve health and social care outcomes for people with a disability.32 They identified 73 studies, but only studies conducted in Europe, the US, Canada and Australia, and most of the included studies would not have met our eligibility criteria (e.g. qualitative studies). Other reviews focusing specifically on LMICs also highlighted the lack of data available. Tripney et al assessed the effectiveness of interventions to improve the labour market situation of adults with physical and/or sensory disabilities in LMICs, and identified 14 eligible studies.15 However several of these were excluded from our review because they were published before 2000 and therefore not deemed to be sufficiently current. Iemmi et al considered the effectiveness of CBR for people with disabilities in LMICs, but interventions to improve livelihood outcomes that operate through CBR were not identified.39 Banks et al undertook a systematic review of social protection and identified no eligible studies assessing impact. 9

It is also clear from the above description that these reviews focused on different types of interventions and/or people with different impairment types, making comparison challenging, as was the case for our REA. Similarly, existing reviews have also failed to assess more comprehensive outcomes, and most reviews focused on employment participation.17 40 For instance, Jethra et al only identified studies that focused on employment preparation (n=10) and/or work entry (n=9), and none which addressed at-work issues or career advancement.38

Another finding, consistent with the REA, is that most reviews reported positive impacts in terms of livelihood outcomes. Tripney et al concluded that there were generally positive impacts of interventions to improve the labour market situation of adults with physical and/or sensory disabilities in LMICs.15 Fleming et al also showed a positive impact of individualised funding in the lives of people with disabilities.32 Jethra’s review concluded that there was strong evidence that tailored supported employment interventions have a positive impact on preparation and entry into competitive employment, and moderate evidence that they improved preparation and entry into competitive employment for young adults with mental health conditions.38 However, these conclusions must be made with caution, as the reviews generally agreed that the relevant literature is generally of poor quality, again, consistent with the REA. For instance – the review by Banks et al found that only one third of studies included in the review had a low risk of bias.9 Iemmi and Tripney, among others, also highlighted concerns about the quality of included studies.15 39 Poor data quality combined with consistent reports of positive findings makes publication bias an important consideration.

## Strengths and limitations of Rapid Evidence Assessment

Strengths and limitations of the Rapid Evidence Assessment need to be taken into account when interpreting the validity of the findings.

In terms of strengths, the eligible studies were identified through a comprehensive Evidence Gap Map that searched for data across 20 databases and sector-specific websites and screened more than 46,000 titles for inclusion.20 Data extraction and coding and quality assessment were undertaken by experienced researchers, using standardised protocols, with double scoring. The Evidence Gap Map and REA were conducted jointly by experts in systematic review (Campbell) and disability (ICED), further improving the credibility of the findings. This process built upon their experience in conducting two previous REAs, based within the Evidence Gap Map.18 19

In terms of limitations, a broad definition was used of disability, including specific health conditions or impairment types, in anticipation that the data would be sparse. As a consequence comparability of findings is difficult. There was a lack of consistency in intervention type and outcome measures used, and so meta-analysis was not possible and even narrative synthesis of findings was challenging. The REA was by definition rapid, and so some eligible studies may have been missed. Eligible studies were restricted to those published after 2000 and published in English. Furthermore, searching the “grey” literature is challenging, and consequently some eligible studies may have been missed. Our restricted eligibility criteria, requiring that individual studies were intervention studies and conducted in an LMIC, meant that some potentially informative studies were excluded. This included non-intervention studies conducted in LMICs (e.g. a comparison of livelihood opportunities between people with and without disabilities in India and Cameroon)41 or high quality interventions from high income settings (e.g. a number of relevant studies included in the review of individualised funding interventions for people with a disability).32 The quality of the data was broadly poor, limiting the confidence in inferences made from the study findings and raising the possibility of publication bias. However, a relatively strict criteria was applied for evaluating confidence, and so certain studies were deemed to be low quality although they fulfilled most criteria. For instance, the study by Zhang was judged to have a high risk of bias through not reporting on attrition, although it fulfilled the remaining criteria.30

## Implications of Rapid Evidence Assessment

### Policy and Practice

Countries need to ensure that policies are in place to support the provision of quality livelihood opportunities for people with disabilities, given that this is a focus of both the UN Convention on the Rights of Persons with Disabilities, and the Sustainable Development Goals. For instance:

* SDG Goal 8 (Target 8.5 By 2030, achieve full and productive employment and decent work for all women and men, including for young people and persons with disabilities, and equal pay for work of equal value)
* SDG Goal 1 (e.g. Target 1.3 Implement nationally appropriate social protection systems and measures for all, including floors, and by 2030 achieve substantial coverage of the poor and the vulnerable).
* UNCRPD article 27 – Work and Employment (the right to the opportunity to gain a living by work freely chosen or accepted in a labour market and work environment that is open, inclusive and accessible to persons with disabilities).
* UNCRPD article 28 – Adequate standard of living and social protection (the right of persons with disabilities to an adequate standard of living for themselves and their families, including adequate food, clothing and housing, and to the continuous improvement of living conditions).

Furthermore, there is obviously a strong economic rationale for the inclusion of people with disabilities in livelihood opportunities.5

A supportive policy framework, while important, is insufficient to secure the inclusion of people with disabilities in livelihood opportunities. There must also be monitoring to assess the level of exclusion of people with disabilities from livelihood opportunities, in particular employment, and the implementation of incentives and/or deterrents to ensure that targets are met. Ensuring inclusion of people with disabilities in livelihood opportunities will require funding, and so budget commitments must be made by governments, perhaps in particular for the promotion of inclusive employment and disability-inclusive social protection.

There should also be monitoring of livelihood inclusion of people with and without disabilities to assess whether additional efforts are required. Opportunities for collecting relevant data are within existing surveys, such as the Labour Force Surveys and/or Living Standard Measurement Surveys. The census can also give relevant information, though more limited in scope. Data portals, such as the one produced by Leonard Cheshire (https://www.disabilitydataportal.com/), which compare employment data between people with and without disabilities across different settings are also valuable resources and should be promoted. All these efforts rely on the collection of disability data within surveys and censuses, ideally using the Washington Group questions where possible, in order to promote consistency. Data on employment inclusion alone is insufficient, and the forthcoming ILO-Washington Group module on labour force and disability may help to provide more relevant and holistic information.

The REA shows evidence that interventions can be effective at improving employment inclusion of people with disabilities, with most evidence focussing on people with physical impairments. Efforts should therefore continue to promote employment inclusion of people with disabilities. Data on the effectiveness of social protection programmes for people with disabilities is limited, despite their widespread use.36 Existing studies show that many social protection programmes will, however, fail to address the needs of people with disabilities as they are low in monetary value, and do not provide strong linked benefits to other services required by people with disabilities. The likelihood therefore is that many social protection programmes will not have an important impact for people with disabilities and so their scope needs to be improved, as well as practical issues around determining eligibility and making applications.42 43 However, beyond that, no implications for policy or practice can be identified from the REA, as the evidence base was limited in scope, weak in quality and did not include cost-effectiveness analyses. This finding points to the need for implementing agencies to use the interventions they fund as vehicles for research on the effectiveness of these interventions.

### Research

Given their share of the global population, and their disproportionate share amongst the disadvantaged, there is substantial under-investment in research of the effectiveness of interventions to improve the welfare of people with disabilities. Livelihood interventions are no exception.

The types of interventions that are likely to be effective at improving livelihood opportunities for people with disabilities include those that operate at the systems- programme and/or individual level and that address the broad range of livelihood opportunities (skills development, waged employment, financial services, social protection). However, the majority of available studies focus improving employment outcomes for people with physical impairments through individual-level programmes (e.g. vocational training) and do not address social capital. Moreover, there are concerns about the quality of existing evidence. Consequently, the evidence base is extremely weak with respect to what works to improve livelihood outcomes for people with disabilities in LMICs and more and better-quality studies are needed.

These studies must include people with a broader range of impairment types, and from different settings, including humanitarian settings, and disaggregate results by gender. Studies are needed to evaluate the full spectrum of interventions – perhaps with a particular focus on social protection, as this is a key strategy for reducing poverty among people with disabilities which is widely used and a focus of the new DFID strategy, but for which data is lacking. Given that disability is heterogeneous (e.g. by impairment type, age and gender), these studies should be sufficiently large to disaggregate data to assess whether impacts vary by sub-groups. In-depth qualitative studies will complement quantitative data to help elucidate how interventions work for different groups, and how challenges or facilitators vary.

A broader range of livelihood outcomes should be measured, beyond employment inclusion alone. These outcomes should include broader measures, important in people’s lives, such as the quality of inclusion (e.g. whether job is high status), retention, satisfaction with employment, adequacy of income (whether from employment of social protection), and the experience of negative attitudes. It is likely that new tools will need to be developed to measure these constructs, and once validated, they should be applied consistently across studies to allow comparison of results. Crucially, cross-country studies and those that compare the cost-effectiveness of different interventions, to inform policy and practice.

## Conclusions and recommendations

Inclusion of people with disabilities in livelihood opportunities, so that they can meet their basic needs, is an important right, as well as a development need. Better evidence is needed on what works before specific approaches or programmes can be recommended, although there was promising evidence that interventions can be effective at improving employment inclusion among people with physical impairments.

## Recommendations:

1. Despite talk of inclusivity, commissioning of impact evaluations has disproportionately neglected people with disabilities. To rectify this situation, intervention studies need to be funded and undertaken, using best-in-class methods, to provide evidence on What Works to improve livelihood outcomes for people with disabilities, focusing on the full range of impairment types, and taking a broad view of livelihood beyond employment alone (e.g. including social protection).
2. Interventions which include people with disabilities as an important target group should report disaggregated results for that sub-population. Relevant programmes should evaluate whether they are effective for improving livelihood outcomes for people with disabilities, beyond employment status alone.
3. Monitoring systems should be implemented that allow disaggregation by disability/impairment types (e.g. using the Washington Group measures), to assess the inclusion of people with disabilities in livelihood activities and whether parity is achieved with people without disabilities.
4. Policies and programmes should continue to support the provision of livelihood opportunities that are inclusive of people with disabilities, and these should be evidenced-based (where possible), more systematic and at a larger scale.
5. Capacity to undertake impact evaluations must be strengthened, including by improving competence of civil society organizations and disabled people’s organizations who implement livelihood programmes to rigorously evaluate effectiveness.

# References

1. Saran A, White H, Kuper H. Effectiveness of interventions for people with disabilities in low- and middle-income countries: an evidence and gap map. *Campbell Collaboration* 2018

2. WHO. World Report on Disability. Geneva: World Health Organisation 2011.

3. UN. Convention on the rights of persons with disabilities. New York: United Nations, 2006.

4. Banks LM, Kuper H, Polack S. Poverty and disability in low- and middle-income countries: A systematic review. *PLoS One* 2017;12(12):e0189996. doi: 10.1371/journal.pone.0189996 [published Online First: 2017/12/22]

5. Banks LM, Polack S. The Economic Costs of Exclusion and Gains of Inclusion of People with Disabilities. London: International Centre for Evidence in Disability, 2014.

6. UNDESA. UN Flagship Report on Disability and Development: UNDESA, 2018.

7. WHO. Community-based rehabilitation guidelines. Geneva: WHO, 2010.

8. ILO. Labour market inclusion of people with disabilities. Geneva: IOL, 2018.

9. Banks LM, Mearkle R, Mactaggart I, et al. Disability and social protection programmes in low- and middle-income countries: a systematic review. . *Oxford Development Studies* 2017

10. Cramm JM, Finkenflugel H. Exclusion of disabled people from microcredit in Africa and Asia: A literature study. *Asia Pacific Disability Rehabilitation Journal* 2008;19(2):15-33.

11. Chambers R, Conway G. Sustainable Rural Livelihoods: Practical Concepts for the 21st Century., 1991.

12. UNenable. Employment of persons with disabilities, 2007.

13. UN. Sustainable Development Goals 2015 [Available from: <http://www.un.org/sustainabledevelopment/sustainable-development-goals/> accessed 7/12 2017.

14. Wapling L. Inclusive education and children with disabilities: Quality education for all in low and middle income countries: CBM, 2016.

15. Tripney J, Roulstone A, Hogrebe N, et al. Interventions to improve the labour market situation of adults with physical and/or sensory disabilities in low- and middle-income countries. *Campbell Systematic Reviews* 2015;11

16. Westbrook JD, Fong CJ, Nye C, et al. Pre-graduation transition services for person with autism spectrum disorders: effects on employment outcomes. *Campbell Systematic Reviews* 2013;9(11)

17. Gensby U, Lund T, Kowalski K, et al. Workplace-based disability management programs for promoting return-to-work. *Campbell Systematic Reviews* 2012;8

18. White H, Saran A, Polack S, et al. Rapid Evidence Assessment (REA) of What Works to Improve Social Inclusion and Empowerment for People with Disabilities in Low- and Middle-Income Countries. London: DFID, 2018.

19. Kuper H, Saran A, White H. Rapid Evidence Assessment (REA) of What Works to Improve Educational Outcomes for People with Disabilities in Low- and Middle-Income Countries. London: DFID, 2018.

20. White H, Saran A, Kuper H. Evidence and Gap Map of studies assessing the effectiveness of interventions for people with disabilities. New Delhi and London: Campbell Collaboration and International Centre for Evidence and Disability, 2018.

21. Grider J, Wydick B. Wheels of fortune: the economic impacts of wheelchair provision in Ethiopia. *Journal of Development Effectiveness* 2016;8(1):44-66.

22. Eniola MS, Adebiyi K. Emotional intelligence and goal setting—an investigation into interventions to increase motivation to work among visually impaired students in Nigeria. *British Journal of Visual Impairment* 2007;25(3):249-53.

23. Pereira-Guizzo C, Del Prette A, Del Prette Z. Evaluation of a professional social skills program for unemployed people with physical disability. . *Psicologia: Reflexão e Crítica* 2012;25(2):265-74.

24. Hansen CH, Mahmud I, Bhuiyan AJ. Vocational reintegration of people with spinal cord lesion in Bangladesh: an observational study based on a vocational training project at CRP. *Asia Pacific Disability Rehabilitation Journal* 2007;18(1):63-75.

25. Makanya M, Runo M, Wawire V. Effectiveness of Transitional and Follow-Up Programmes to Community Integration of Young Adults wih Intellectual Disabilities (YAWID) in Kiambu County, Kenya. *Journal of the American Academy of Special Education Professionals* 2014:87-106.

26. Mauro V, Biggeri M, Deepak S, et al. The effectiveness of community-based rehabilitation programmes: an impact evaluation of a quasi-randomised trial. *J Epidemiol Community Health* 2014;68(11):1102-8. doi: 10.1136/jech-2013-203728 [published Online First: 2014/09/07]

27. Momin A. Impact of services for people with spinal cord lesions on economic participation. *Asia Pacific Disability Rehabilitation Journal* 2004;15(2):53-67.

28. Nuri M, Hoque M, Akand M, et al. Impact assessment of a vocational training programme for persons with disabilities in Bangladesh. *Disability and CBR & Inclusive Development* 2012;23(3):76-89.

29. Shore S, Juillerat S. The impact of a low cost wheelchair on the quality of life of the disabled in the developing world. *Med Sci Monit* 2012;18(9):CR533-42. [published Online First: 2012/09/01]

30. Zhang GF, Tsui CM, Lu AJB, et al. Integrated Supported Employment for People With Schizophrenia in Mainland China: A Randomized Controlled Trial. *Am J Occup Ther* 2017;71(6):7106165020p1-20p8. doi: 10.5014/ajot.2017.024802 [published Online First: 2017/11/15]

31. Briand C, Durand MJ, St-Arnaud L, et al. How well do return-to-work interventions for musculoskeletal conditions address the multicausality of work disability? *J Occup Rehabil* 2008;18(2):207-17. doi: 10.1007/s10926-008-9128-1 [published Online First: 2008/04/09]

32. Fleming P, Furlong M, McGilloway S, et al. Individualised funding interventions to improve health and social care outcomes for people with a disability. . *Campbell Collaboration* 2019;15

33. Velema JP, Ebenso B, Fuzikawa PL. Evidence for the effectiveness of rehabilitation-in-the-community programmes. *Lepr Rev* 2008;79(1):65-82. [published Online First: 2008/06/11]

34. Ilavarasan PV, Kar AK, Aswani R. Employment Outcomes of Skills Training in South Asian Countries: An Evidence Summary. London, UK: Department for International Development, 2017.

35. Berhane G, Devereux S, Hoddinott J, et al. Evaluation of the Social Cash Transfer Pilot Programme, Tigray Region, Ethiopia’, IFPRI, IDS and Cornell. Brighton: IDS, 2015.

36. Walsham M, Kuper H, Banks LM, et al. Social protection for people with disabilities in Africa and Asia: a review of programmes for low- and middle-income countries. . *Oxford Development Studies* 2018:1-16.

37. DFID. DFID’s Disability Inclusion Strategy 2018 to 2023. London: DFID, 2018.

38. Jetha A, Shaw R, Sinden AR, et al. Work-focused interventions that promote the labour market transition of young adults with chronic disabling health conditions: a systematic review. *Occup Environ Med* 2019;76(3):189-98. doi: 10.1136/oemed-2018-105454 [published Online First: 2019/01/13]

39. Iemmi V, Gibson L, Blanchet K, et al. Community-based rehabilitation for people with disabilities in low- and middle-income countries. *Campbell Systematic Reviews* 2015;11

40. Alexander L, Cooper L, Mitchell D, et al. Effectiveness of vocational rehabilitation on work participation in adults with musculoskeletal disorders: an umbrella review protocol. 2017

41. Mactaggart I, Banks LM, Kuper H, et al. Livelihood opportunities amongst adults with and without disabilities in Cameroon and India: A case control study. *PLoS One* 2018;13(4):e0194105. doi: 10.1371/journal.pone.0194105 [published Online First: 2018/04/10]

42. Banks LM, Walsham M, Neupane S, et al. Access to social protection among people with disabilities: Mixed methods research from Tanahun, Nepal. . *European Journal of Development Research* 2019

43. Banks LM, Walsham M, Minh HV, et al. Access to social protection among people with disabilities: Evidence from Viet Nam. . *International Social Security Review* 2019;72:59-82.

# List of Abbreviations

CBR - Community Based Rehabilitation

CEDIL - Centre for Excellence for Development Impact and Learning

ICED - International Centre for Evidence in Disability

IPS - Individual Placement and Support

ISE - Integrated Supported Employment

LMIC - Low and Middle Income Country

OR - Odds ratio

PSM - Propensity Score Mapping

RCT - Randomised Controlled Trial

RDD - Regression Discontinuity Design

REA - Rapid Evidence Assessment

TVR - Traditional Vocational Rehabilitation

UNCRPD - United Nations Convention on the Rights of Persons with Disabilities

WHO - World Health Organization

WWC - What Works Clearinghouse

1. 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. [↑](#footnote-ref-1)
2. Thanks also to Hugh Waddington (3ie and Campbell IDCG) for suggestions used in developing the tool. [↑](#footnote-ref-2)
3. See table 1 https://homvee.acf.hhs.gov/HomVEE-Attrition-White\_Paper-7-2015.pdf. [↑](#footnote-ref-3)