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Interventions to Improve the Labour Market Situation of Adults with Physical and/or Sensory Disabilities in Low- and Middle-Income Countries: A Systematic Review

Janice Tripney, Alan Roulstone, Carol Vigurs, Nina Hogrebe, Elena Schmidt, Ruth Stewart



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Table of contents

EXECUTIVE SUMMARY	5
Background	5
Objectives	5
Selection Criteria	6
Search Strategy	6
Data Collection and Analysis	7
Results	7
Authors' Conclusions	9
1 INTRODUCTION	10
1.1 Rationale	10
1.2 Type of Intervention	14
2 OBJECTIVES OF THE REVIEW	18
3 METHODS	19
3.1 Title Registration and Review Protocol	19
3.2 Eligibility Criteria	19
3.3 Literature Search	25
3.4 Study Selection Process	26
3.5 Data Collection	27
3.6 Data Analysis	29
4 SEARCH RESULTS	30
4.1 Literature Search and Study Identification	30
5 DESCRIPTIVE FINDINGS	32
5.1 Study Characteristics	32
5.2 Intervention Characteristics	36
6 SYNTHESIS OF RESULTS	45
6.1 Introduction	45
6.2 What Does the Quantitative Evidence Say?	45
6.3 What do the Studies Report About Variability in Effects?	50
6.4 What Does the Qualitative Evidence Say?	51
7 CONCLUSIONS	53
7.1 Summary	53

7.2	Discussion and conclusions	56
7.3	Strengths and Limitations of this Review	58
7.4	Implications	59
8	ACKNOWLEDGMENTS	61
9	REFERENCES	62
9.1	Included Studies	62
9.2	Linked Reports	63
9.3	Companion Reports	63
9.4	Other References	63
10	APPENDIX I: ADDITIONAL TABLES	70
10.1	List of Abbreviations	70
10.2	World Bank List of Economies	71
10.3	General Bibliographic Databases Searched	72
10.4	Database Search Terms	73
10.5	Specialist Bibliographic Databases and Library Catalogues	87
10.6	Websites/Gateways	89
10.7	Organisations Contacted	91
10.8	Networks Contacted	93
10.9	Journals Handsearched	93
10.10	Risk of Bias Tool	94
10.11	Quality Assessment of Included Studies	95
10.12	Study Characteristics	98
10.13	Intervention Characteristics	108
10.14	Impact on Paid Employment	120
10.15	Impact on Self-employment	122
10.16	Impact on Income	123
10.17	Impact on Hours Worked	124
10.18	Impact on Motivation to Work	125
10.19	Impact on Professional Social Skills	126

Executive Summary

BACKGROUND

Disability is a development issue, with widespread poverty, inequality and violation of human rights. Recent estimates suggest that more than one billion people are living with some form of disability. Persons with disabilities are over-represented among the world's poor, and significant labour market disadvantage helps maintain the link between poverty and disability in many country contexts. The costs of disability are particularly acute in low- and middle-income countries (those with gross national income per capita of less than \$12,616), where up to 80% of people with disabilities of working age can be unemployed, around twice that for their counterparts in high-income countries. When people with disabilities do work, they generally do so for longer hours and lower incomes, have fewer chances of promotion, are more likely to work in the informal labour market, and are at greater risk of becoming unemployed for longer periods. The barriers faced by people with disabilities globally in accessing and sustaining paid work is a profound social challenge. There is now growing recognition of employment as a key factor in the process of empowerment and inclusion into society, and the role of interventions to improve labour market outcomes for disabled people is receiving increased international attention. It is therefore both vital and timely to increase understanding of the impacts of available programmes, in order to ensure that they are effective in delivering positive outcomes for people with disabilities and provide value for money. Although several reviews have attempted to summarise the existing research in this area, there are a number of substantive and methodological limitations to these reviews. Thus, there is a need to systematically examine the evidence base to provide an overview of the types of interventions being used to improve employment outcomes, to identify those that are effective and ineffective, and to identify areas in which more research needs to be conducted.

OBJECTIVES

- To describe the range and diversity of interventions available for addressing the low labour market participation of adults with physical and/or sensory disabilities in developing country contexts.
- To systematically identify, assess, and synthesise the evidence on the effects of

interventions on labour market outcomes for disabled adults in low- and middle-income countries. As part of this, to critically analyse the evidence along the causal chain framework, linking interventions with intermediate outcomes and final impacts, and document the level/strength of evidence on potential pathways of impact using the framework.

- To assess if effects are moderated by characteristics of the participants, interventions, and/or settings.
- To provide an explanation for the intervention effects by examining what participants in the included studies reported about why the interventions did, or did not, work for them.

SELECTION CRITERIA

To be included in the review, studies were required to meet several eligibility criteria. First, studies must have evaluated an intervention with the means to improve the labour market situation of adults with disabilities. Such interventions could take the form of a device, policy, programme, strategy, or other type of action. Second, studies must have investigated outcomes for adults aged 16-65 years with physical and/or sensory impairments associated with disability. Third, the study setting must have been a low-or middle-income country (LMIC). Fourth, studies must have utilised one of the following: (a) randomised experimental design, (b) rigorous quasi-experimental design that used robust methods for removing biases due to non-random assignment of treatment, or (c) quasi-experimental design that used less rigorous methods for constructing the counterfactual, including uncontrolled studies. Fifth, studies must have reported at least one quantitative employment-related outcome variable. Sixth, the date of publication or reporting of the study must have been within the period 1 January 1990 to 31 December 2013. Finally, no language or form of publication restrictions was applied.

SEARCH STRATEGY

A systematic and comprehensive search was used to locate both published and unpublished studies. Ten major bibliographic databases were electronically searched, along with 32 specialist databases and library catalogues, and 59 websites of relevant organisations. Six journals were manually searched and search engines used. The reference lists of previous reviews and included studies were examined, and forward citation checking exercises were conducted. Finally, information was requested from authors of included studies and other relevant stakeholders.

DATA COLLECTION AND ANALYSIS

Each study was subject to a rigorous process of data extraction and quality assessment, conducted independently by pairs of reviewers using a coding tool specifically designed for this review. Descriptive analysis was undertaken to examine and describe data related to the characteristics of the included studies and interventions. The findings from the included studies were combined descriptively using a narrative approach to synthesis.

RESULTS

The literature search yielded a total of 20,417 potentially relevant reports, 479 of which were retrieved for full-text screening. A total of 14 studies met the eligibility criteria. Publication dates of included studies ranged between 1992 and 2012, with six studies published in the four-year period 2010-2013.

Studies were conducted in nine different LMICs in Asia, Africa and Latin America: Bangladesh (three studies); Brazil (two studies); China (one study); India (four studies); Kenya (one study); Nigeria (one study); Philippines (one study); Vietnam (one study) and Zimbabwe (one study). The majority of studies examined outcomes for adults with physical impairments. There was variation in sample sizes. One study had a sample size greater than 500 participants, the sample size was between 251 and 500 in three studies, and the remaining ten studies had a sample size of less than 250.

Different methodologies were employed to construct the counterfactual and evaluate the impacts of the interventions. The majority were uncontrolled before-and-after studies. One quasi-experiment (ex-post) utilised propensity score matching techniques and one study applied logistic regression to pre-test/post-test data. The remaining studies used a non-equivalent groups design. All 14 studies were assessed as high risk of bias.

The 14 studies examined 15 different interventions grouped as follows: treatment & therapy (four interventions); assistive devices and accommodations (two interventions); occupational rehabilitation services (four interventions); financial services (one intervention); and community-based rehabilitation (four interventions). Thirteen were multi-component programmes. All 15 interventions were targeted at people with disabilities, with some designed for people with a specific impairment or diagnosis. Six interventions targeted persons with specific types of physical impairment, and a further two interventions were available to adults with any type of physical impairment. Three interventions were targeted at persons with visual impairments. Finally, four interventions were available to persons with any/multiple impairments. Non-governmental organisations (NGOs) were the most common source of funding. The main aim of eight interventions was to improve employment prospects for persons with disabilities. The other

interventions sought improvements in a wider range of outcomes. The interventions were designed and implemented on different scales, with the majority available over a large geographical area, such as one or more districts, provinces or regions. Information about duration of the interventions was often not reported, but typically they were available for periods of less than six months.

All 14 studies measured relevant labour market outcomes and assessed the following impacts: motivation to work (one study); professional social skills (one study); employment participation (12 studies); self-employment (two studies); income (four studies) and hours worked (one study). Five studies measured additional outcomes: health-related outcome (four studies); social outcomes (five studies); and empowerment-related outcome (one study). Several studies relied solely on self-reported outcome data. The majority of study reports did not provide clear information about the timing of outcome measurement. Only one study examined longer-term outcomes, evaluating impacts after two and four years of participants entering the programme.

In all 14 studies, the direction of effect was positive for the outcome variables measured. Five studies reported results of tests for statistical significance and indicated study findings were significant.

Effects on motivation to work. One study measured this outcome. It investigated two interventions for visually impaired students.

Effects on professional social skills. One study measured this outcome. It assessed a programme for persons with any type of physical impairment.

Effects on paid employment. Twelve studies measured this outcome. Of these, seven studies evaluated different types of support for persons with physical disabilities, with five designed for people with a specific diagnosis or impairment. One study investigated an intervention for the visually impaired. The remaining four studies in this category evaluated interventions that were open to individuals with any/multiple types of impairments.

Effects on self-employment. Two studies measured this outcome. Both studies evaluated interventions available to persons with any type of physical impairment.

Effects on income. Four studies measured this outcome. Of these, three studies evaluated interventions designed for persons with physical disabilities. The remaining study focused on an intervention for the visually impaired.

Effects on hours worked. One study measured this outcome. It evaluated a programme for persons with any type of physical impairment.

Seven of the 14 included studies explored variation in treatment effects. The variables considered were gender (three studies), participants' size of business (one study), impairment severity (one study), type of intervention (one study), and

duration of follow-up (two studies). Four of the seven studies tested whether results were statistically significant. Overall, these seven studies were not sufficiently similar to detect meaningful differences in outcomes.

Two studies investigating occupational rehabilitation services reported participants' observations, experiences and views about why the intervention they received had worked for them. The following factors were cited: general health & well-being; cooperation in the family/community; motivation; attitudes in the workplace; attitudes in the community; and appropriateness of the training.

Three studies reported participants' observations, experiences and views about why the intervention they received had not worked for them. Two examined occupational rehabilitation services and the other evaluated the provision of free wheelchairs. The following barriers to the success of the interventions were cited: discriminatory attitudes of prospective employers; attitudes of family members and/or wider community; health and well-being; physical inaccessibility (workplace and/or broader environment); lack of 'start-up' funds for self-employment; shortcomings of the training (i.e., mismatch between it and participant's skills, abilities and financial resources); lack of education and skills; and motivation.

AUTHORS' CONCLUSIONS

A key finding of this review is the overall scarcity of robust evidence, as indicated by the relatively few studies that met the inclusion criteria. Although the evidence in general showed positive results, we need to be wary of drawing strong inferences from the findings of this body of literature. Not only is the number of impact evaluations limited, but most used designs in which conclusively attributing causality is not possible.

Our assessment of the evidence does not allow us to develop practical suggestions on what interventions are likely to work, for whom, and when. Clearly, there is an urgent need for investment in high quality impact evaluations of interventions to support people with disabilities in accessing the labour market in low- and middle-income settings. To build the evidence base further, it is therefore important that many more of the interventions currently in existence in low- and middle-income countries are rigorously evaluated, and the results are reported and disseminated widely. The methodological inconsistencies and weaknesses of the current evidence base, and specific knowledge gaps, suggest a number of future research priorities.

1 Introduction

1.1 RATIONALE

1.1.1 The Problem

Disability is a key development issue. Recent estimates suggest that more than one billion people (or about 15% of the world's population) are living with some form of disability—80% of whom live in low- and middle-income countries (World Health Organization [WHO], 2011).¹ People with disabilities are over-represented among the world's poor, and many experience multiple deprivations at higher rates and in higher breadth, depth, and severity than people without disabilities (Mitra, Posarac, & Vick, 2013; Samman & Rodriguez-Takeuchi, 2013). The lack of access to paid work and/or wider economic activity is a significant social disadvantage and helps maintain the link between poverty and disability in many country contexts (Braitwaite & Mont, 2009; Haveman & Wolfe, 1990; Hoogeveen, 2005; Peiyun & Livermore, 2008; WHO, 2011; Zaidi & Burchardt, 2005). The Millennium Development Goals (MDGs) on eliminating poverty, launched by the United Nations in 2000, are unlikely to be achieved unless explicit and specific efforts are undertaken to support disabled people's participation in labour market activities (Department for International Development [DFID], 2000; Groce & Trani, 2009).

There is no single, universally accepted definition of disability and defining it remains complex and controversial. In this study, disability is understood following the International Classification of Functioning, Disability and Health (ICF) which was developed by the WHO in 2001 in a long process involving academics, clinicians, and—importantly—people with disabilities (WHO, 2001). Representing a workable compromise between medical and social models, the ICF understands disability as arising from the interaction of health conditions with contextual factors (both environmental and personal). Disability is thus viewed not as a static feature of an individual, but rather as a complex, multi-dimensional, and changing experience for the individual (Schneider & Hartley, 2006). An implication of the ICF

¹ Each year, the World Bank revises the classification of the world's economies based on estimates of gross national income (GNI) per capita for the previous year. For the fiscal year starting 1 July 2013, these are: low income (\$1,035 or less), middle income (\$1,036 to \$12,615).

model of disability is that by removing barriers, persons with health conditions can be enabled to function and participate.

In many countries data on the employment of people with disabilities are not systematically available. Yet, where data exist, individuals with disabilities are found to be disadvantaged in both accessing and sustaining work and other forms of economic activity. Employment participation rates for people with disabilities are below that of the overall population; and, when disabled people do work, they generally do so for longer hours and lower incomes, have fewer chances of promotion, are more likely to work in the informal labour market, and are at greater risk of becoming unemployed for longer periods (Coleridge, 2005; Contreras, Ruiz-Tagle, Garces, & Azocar, 2006; Houtenville, Stapleton, Weathers, & Burkhauser, 2009; Mete, 2008; Mitra, 2008; Mitra et al., 2013; Mitra & Sambamoorthi, 2006; Mizunoya & Mitra, 2012; Roulstone, 2012; Roulstone, Gradwell, Price, & Child, 2003). Using data from 27 countries, a recent study from the Organization for Economic Co-operation and Development (OECD) found that people with disabilities are half as likely to be in paid work as their non-disabled counterparts (44% compared with 75%) (OECD, 2010).

Across the globe, people with disabilities find it difficult overcoming barriers to the workplace. Although this is not simply an issue in certain countries or even continents, the costs of disability are particularly acute in LMICs, where up to 80% of people with disabilities of working age can be unemployed, around twice that for their counterparts in industrialised countries (Contreras et al., 2006; Groce, Kembhavi, Wirz, Lang, Trani, & Kett, 2011; Houtenville et al., 2009; International Disability Rights Monitor, 2004; Mete, 2008; Mitra, 2009; Mitra et al., 2013; OECD, 2010). Rates of employment vary widely from country to country, from lows of 30% in South Africa to highs of 92% in Malawi (Loeb & Eide, 2004; 2004; Mitra, 2008). In many developing countries, a significant proportion of people work in the informal economy, and so are further disadvantaged. In India, for example, 87% of people with disabilities who work are in the informal sector (Mitra & Sambamoorthi, 2006a). It is less clear, however, whether the wage gap between disabled and non-disabled persons is as marked in developing countries as it is in industrialised countries (Mitra & Sambamoorthi, 2006b; OECD, 2003; WHO, 2011). Recent studies in India, for example, have produced mixed results (Mitra & Sambamoorthi, 2008, 2009).

Not all people with disabilities are equally disadvantaged. In practice, the extent of the negative effect of disability on employment is likely to vary depending on a variety of factors (Goertz, van Lierop, Houkes, & Nijhuis, 2010; Ingstad & Reynolds-Whyte, 1995; Kidd, Sloane, & Ferko, 2000; Mitra et al., 2013; OECD, 2010; Sena-Martins, 2010; World Bank, 2009). These include personal factors such as age, sex, level of education, motivation to work, and lack of financial resources. Women with disabilities, for instance, are recognised to be multiply disadvantaged, experiencing exclusion on account of their gender and their disability. There is evidence that

disabled women tend to have less access to jobs, lower employment rates, and considerably lower earnings than male peers in similar jobs (Emmett, 2006; Mitra & Sambamoorthi, 2006; Mitra et al., 2013). Data for 51 countries from the World Health Survey, for example, show that employment rates are 19.6% for women with disability and 52.8% for men with disability (WHO, 2011). The links between disability and employment also vary considerably across impairment categories, severity and duration (WHO, 2011; World Blind Union, 2004). There is some evidence, for example, that individuals with mental health difficulties or intellectual impairments experience the lowest employment rates (Thorncroft, 2006) and those with more significant impairments are least likely to obtain work.

A range of environmental and personal factors can present barriers for persons with health conditions to function and participate in economic life. For example, the physical accessibility of local workplaces and transport facilities, available accommodations, and social attitudes can restrict participation in the labour market (Baldwin & Johnson, 2006; Bound & Burkhauser, 1999; Mitra & Sambamoorthi 2008). Lack of access to education and training or to financial resources can result in exclusion from the labour market, and social protection systems may create disincentives for people with disabilities to enter the labour market. There is also some evidence that people with disabilities seeking to access and sustain employment in competitive, tight labour markets are especially disadvantaged (Mitra, 2009). The policy context is relevant, too. The particular educational facilities, employment supports, health services, disability benefit systems, and other interventions that are available in a given context can influence whether, and to what extent, disability has employment consequences.

1.1.2 Why it is Important to do this Review

The barriers faced by people with disabilities globally in accessing and sustaining paid work is a profound social challenge. Many reasons are provided as to why these barriers exist and new policy visions are frequently offered up. Yet, efforts to promote development and poverty reduction have not always adequately included disability; for example, people with disabilities are not explicitly included in any of the MDG targets and indicators (WHO, 2011). Disability issues are, however, slowly being brought into the mainstream of development policy and practice, and over the past two decades there has been a noticeable change in the legal and policy responses of many governments and bilateral and multilateral donor agencies (DFID, 2000, 2007; Thomas, 2005). In 2002, for example, the World Bank embarked on mainstreaming disability into Bank operations and analysis (Mont, 2007). A major catalyst has been the Convention on the Rights of Persons with Disabilities (CRPD) adopted by the United Nations in 2006, which marked a significant advance in the recognition of the rights of disabled persons, including the right to work, on an equal basis with others (United Nations [UN], 2006). With increasing recognition of employment as a key factor in the process of empowerment and inclusion into society of people with disabilities, a shift to a broader framework

for action has occurred, and the role of interventions to improve labour market outcomes is receiving increased international attention (DFID, 2000; International Labour Organization [ILO], 2008; WHO, 2004). Nevertheless, translating policy commitments into better lives for people with disabilities remains a profound social challenge. Establishing a firm evidence base to support the implementation of the CRPD is therefore a priority. Building a clearer understanding of which measures are effective at improving employment outcomes, and under which circumstances, can provide such an evidence base for policy development and contribute to the development of practical suggestions for meeting this challenge.

The existence of a growing body of evidence on interventions to increase the labour market participation of people with disabilities is highlighted in a recent comprehensive review of the literature in this area (Waddell, Burton, & Kendall, 2008). Taking a broad definition of vocational rehabilitation, and focusing on the conditions that account for two-thirds of long-term sickness absence in developed countries—mild/moderate musculoskeletal, mental health, and cardio-respiratory conditions—the study reviews the data from a large number of scientific reports and literature reviews, covering a wide range of intervention strategies. While the authors conducted a systematic search, assessed the strength of the evidence, and included data in evidence tables, they did not report effect sizes or perform a meta-analysis, making it difficult to judge and compare the effectiveness of the interventions. Other systematic reviews are more limited in scope, focusing on (a) specific countries (e.g., Bamba, Whithead, & Hamilton, 2004; Clayton et al., 2011); (b) single aspects of disability/illness, such as autism (e.g., Westbrook et al., 2012), mental illness (e.g., Crowther, Marshall, Bond, & Huxley, 2001; Underwood, Thomas, Williams, & Thieba, 2006), multiple sclerosis (e.g., Khan, Ng, & Turner-Stokes, 2009), traumatic brain injury (e.g., Graham & West, 2012), low back pain (e.g., Tveito, Hysing, & Eriksen, 2004) or spinal cord injury (e.g., Lidal, Huynh, & Biering-Sørensen, 2007); or (c) particular intervention types, such as interventions based on an empowerment perspective (e.g., Varekamp, Verbeek, & Dijk, 2006), workplace disability management programmes (e.g., Gensby et al., 2012) or workplace-based return-to-work interventions (e.g., Franche et al., 2005). Some of these reviews use meta-analytic synthesis methods, but several are quite dated and none explicitly focus on programmes conducted in LMICs.

There are a small number of recently published reviews in this area that focus on developing countries. The literature on assistive technology in LMICs is examined in two non-systematic reviews (Andrysek, 2010; Borg, Lindstrom, & Larsson, 2011). Some evaluative activities were identified, none of which measured employment outcomes. Another recent LMIC-focused non-systematic review (Velema, Ebenso, & Fuzikawa, 2008) examines evidence for the effectiveness of community-based rehabilitation (CBR) programmes for people with disabilities on a range of outcomes, including employment. A descriptive overview of the literature is presented, with no pooling of data. A non-systematic literature review by Mitra and Sambamoorthi (2006a) focused on impact evaluations conducted in India of the

People with Disabilities (PWD) Act and government programmes designed to promote employment among people with disabilities. More recently, a protocol was submitted for a joint Campbell/Cochrane systematic review of CBR for people with physical and mental disabilities in LMICs (Iemmi et al., 2012). Data will be collected on a number of functional outcomes (including employment) for different types of interventions, and variation of effects for different subject populations will be examined.

In sum, whilst existing reviews provide some evidence about the effectiveness of programmes to support the inclusion of persons with disabilities in the labour market, a number of them are now quite dated and specific gaps in the evidence base remain. Taking into account current policymaker priorities, this suggests a need to comprehensively assess the full evidence base relating to low- and middle-income countries, using appropriate methods to evaluate the impact of a range of different intervention types supporting the employment of adults with physical and/or sensory disabilities.

1.2 TYPE OF INTERVENTION

1.2.1 The Intervention

The scope of this review is not limited to one type of intervention. Rather, it extends to any intervention likely to help adults with disabilities in LMICs enter, re-enter, or maintain employment. Such interventions may take the form of a device, policy, programme, strategy, or other type of action. For the purposes of this review, a typology of intervention types was developed prior to undertaking the review, with a view that we would refine it on the basis of the review findings, if appropriate. The broad groupings are presented in Table 1.1. The characteristics of eligible interventions are broad. They (i) encompass complex, specialised, multi-dimensional programmes that implement multiple strategies as well as much simpler interventions based on a single strategy; (ii) may be implemented in any setting, including the workplace, health care facility, home, or community; (iii) include both routine and structured/tailored interventions; (iv) can vary not only by type but also by intensity; (v) can be delivered at various stages of the employment process (pre-employment, transition to employment, and post-employment); and (vi) need not have the core objective of restoring capacity for work.

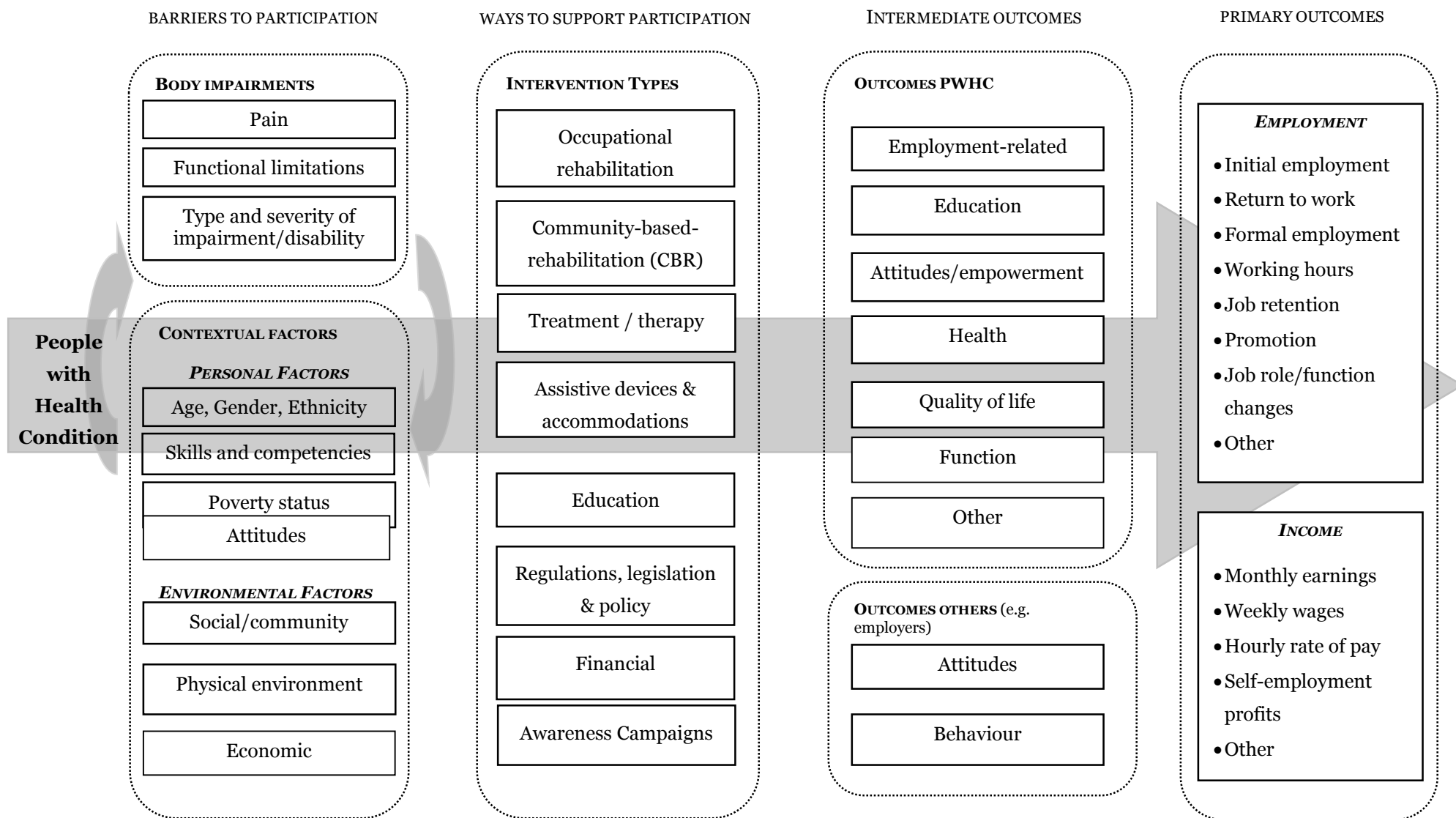
TABLE 1.1: INTERVENTION CATEGORIES

Category	Description (and examples)
Occupational rehabilitation	Multi-dimensional programmes encompassing multiple services designed to facilitate and support entry or re-entry to work. Likely to include assessments by medical professionals in addition to additional services such as vocational assessment and evaluation, career counselling, vocational training, and job accommodations and modifications.
Community-based-rehabilitation (CBR)	Multi-dimensional programmes comprised of activities aimed at strengthening the social capacities of the target group, through attempts to combine (i) physical rehabilitation through medical care with empowerment and (ii) social inclusion through the participation of both the individual with a disability and the community in the process of rehabilitation.
Treatment/therapy	Treatment, management, and/or care of a patient to alleviate or prevent a worsening of disease or disorder, or one or more of its symptoms or manifestations. Includes specific healthcare interventions (e.g., medication, surgery, and cognitive/behavioural therapies), broader healthcare management programmes, and psychosocial therapeutic approaches.
Assistive devices & accommodations	Devices and accommodations that target different types of accessibility issues: <ul style="list-style-type: none">• assistive devices refer to any appliance or tool designed, made, or adapted to increase, maintain, or improve the functional capabilities of people with disabilities (e.g., prosthetic limbs, talking calculators).• assistive accommodation refers to environmental access accommodations (physical and non-physical), both in the workplace itself and the wider environment (e.g., modifications to workplace bathrooms, flexible work schedules, tailored transport schemes).
Education	Skills development and training strategies, projects, and initiatives aimed at addressing educational deficits and developing human resources. Includes capacity-building in the following areas: professional/job-related skills; basic skills (e.g., literacy); transferrable/social skills (e.g., communication skills); functional skills (e.g., how to operate a Braille typewriter or wheelchair).
Regulations, legislation & policies	Initiatives aimed at enforcing behaviour change, such as reforms of labour market regulations, anti-discrimination legislation, labour market quotas, legislation supporting institutional capacity building of the education system for disabled people, affirmative action policies, and organisational policies.
Financial	Different forms of financial incentive, such as those to promote: <ul style="list-style-type: none">• financial inclusion (such as business training and micro-finance)• educational inclusion (such as financial vouchers to facilitate access to education and training)• employment inclusion (such as employer subsidies, tax breaks and sanctions)• participation in the intervention itself (such as stipends to cover costs of attending training workshops).
Awareness campaigns	Different approaches for changing perceptions of disability within the community, such as advertising/advocacy campaigns, employers' forums.

1.2.2 How the Intervention Might Work

Conceptual understanding of the causal pathways through which available interventions may influence the employment prospects of people with disabilities in developing country contexts is under-developed. It was necessary, therefore, to develop a logic model specifically for this review. Originating from the field of programme evaluation, logic models (also known as theoretical, conceptual, or impact models) are typically diagrams or flow charts that illustrate pathways between inputs, strategies, outputs, and short-term, intermediate and longer-term outcomes (Anderson et al., 2011; Joly et al., 2007). Designed to read from left to right, they provide a valuable road map that spells out how, and for whom, a programme is meant to produce the desired outcomes. We hypothesised that the types of interventions detailed in Table 1.1 affect a range of different labour market outcomes for people with disabilities through various mechanisms. The model shown in Figure 1.1 illustrates both intermediary factors through which the intervention may exert its impact, and additional personal and contextual factors that may modify or inhibit the desired effect.

Figure 1.1: Logic Model



2 Objectives of the Review

Review Objective 1. To describe the range and diversity of interventions available for improving the labour market situation of adults with physical and/or sensory disabilities in developing country contexts.

Review Objective 2. To systematically identify, assess, and synthesise the evidence on the effects of interventions on employment-related outcomes for disabled adults in low- and middle-income countries. As part of this, to critically analyse the evidence along the causal chain framework, linking interventions with intermediate outcomes and final impacts, and document the level/strength of evidence on potential pathways of impact using the framework.

Review Objective 3. To assess if effects are moderated by characteristics of the participants, interventions, and/or settings.

Review Objective 4. To provide an explanation for the intervention effects by examining what participants in the included studies reported about why the interventions did, or did not, work for them.

3 Methods

3.1 TITLE REGISTRATION AND REVIEW PROTOCOL

The title for this systematic review was published in The Campbell Collaboration Library of Systematic Reviews on March 1, 2013. The review protocol was published on November 1, 2013. Both the title registration and protocol are available at: <http://www.campbellcollaboration.org/library/php>.

3.2 ELIGIBILITY CRITERIA

A preliminary scoping exercise conducted by the authors and reviews in this area both suggested a scarcity of relevant research literature. Therefore, prior to conducting the review we made the decision of making the selection criteria intentionally broad. Studies were included in the systematic review if they met the following eligibility criteria.

3.2.1 Types of Participants

Study participant characteristics:

- *Geographical location*: Low- or middle-income country, as classified by the World Bank for the fiscal year 2013-2014, ending on June 30 2014 (see Table 9.2, Appendix I). The World Bank's country classifications are based on estimates of gross national income (GNI) per capita for the previous year. For the fiscal year starting 1 July 2013, these are: low income (\$1,035 or less), middle income (\$1,036 to \$12,615).
- *Age*: Working age adults, defined for this review as individuals aged 16-65 years.
- *Gender*: Male or female.
- *Impairment category*: Physical and/or sensory impairments (i.e., health conditions) associated with disability. See below for further details.
- *Employment status*: Study participants may be in paid work or out of work at time of service receipt. Studies that have included those in work at time of service receipt may be relevant to this review if, for example, they have examined changes in the number of hours worked as a result of programmes received.

Those out of work at time of service receipt may be employees on sick leave or unemployed individuals who are seeking (or otherwise eligible for) paid employment. Study samples made up solely of employed or non-employed individuals are eligible, as are those that contain a mix of both. See Section 2.2.3 for details of outcome measures.

- *Employment-related experience*: Any prior work experience, vocational skills or achievements, or level of education.

Widely used by researchers and policy makers when addressing disability issues in the global development literature, the ICF is adopted as the conceptual framework for this systematic review. Disability is therefore understood as an umbrella term embracing impairments, activity limitations, and participation restrictions (WHO, 2001). The term impairment implies specific problems in body functions and structures, often identified as symptoms or signs of health conditions (i.e., diseases, injuries, and disorders).² The following additional definitions and restrictions also apply.

Definitions. Physical impairment is defined as problems with the structure, development, or function of the bones, muscles, joints, and/or central nervous system. Physical characteristics may include paralysis; altered muscle tone (ranging from loss of muscle mass to uncontrolled muscle contraction); an unsteady gait; loss of, or inability to use, one or more limbs; difficulty with gross-motor skills (such as walking); and/or difficulty with fine-motor skills (such as writing). Sensory impairment is defined as full or partial loss of one or more senses (e.g., sight, hearing, smell, touch, taste, and/or spatial awareness), causing difficulty with communication, gross-motor skills, fine-motor skills, and/or access to information.

Eligible studies. The focus is on impairments that meet customary and/or statutory definitions of disability. These are usually long-standing, for example, lasting at least one year, and have a substantial impact on a person's ability to do normal daily activities, such as getting dressed. The impairment/health condition may be acquired or congenital. It may be acute, chronic, progressive, or intermittent, and may or may not need ongoing medical intervention.

- Studies of participants with the following types of health condition/physical impairments were eligible for the review: communicable diseases (e.g., leprosy); metabolism disorders (e.g., diabetes); respiratory conditions (e.g., asthma); neurological impairments (e.g., multiple sclerosis, epilepsy, those associated with brain injury); musculoskeletal conditions (e.g., arthritis, amputations); cardiovascular diseases; and body disfigurements (e.g., burn injuries).

² As such, the terms 'impairment' and 'health condition' are often used interchangeably (a practice adopted in this review).

- For sensory impairments, eligibility for the review was restricted to studies of the two most common types: visual impairment (full and partial loss of sight); hearing loss.

Where study participants were described as multiply disabled, the study was included if physical and/or sensory impairment was the primary diagnosis. Where study samples were comprised of people with different disabilities, we included the study if: (a) the majority of the sample was physically and/or sensory disabled; or (b) the authors reported disaggregated results according to type of disability.

Studies focused on work-related and non-work related health conditions were both eligible for inclusion in the review. Finally, eligibility for the review was extended to both primary studies that incorporated the ICF diagnostic framework in identifying and selecting its subjects and studies that did not use this framework.

Non-eligible studies. Studies focused solely on (i) people with mental health conditions and/or intellectual impairments, (ii) those with chronic illnesses that predominate in later life (e.g., chronic obstructive pulmonary disease (COPD), cancer, stroke, and renal disease), or (iii) HIV/AIDS were not eligible for this review, on the grounds that these groups have different rehabilitation needs.³ The review focuses on long-term disability, rather than persons with minor health problems, such as fractured bones or allergic rhinitis (hay fever). Therefore, evaluations of return-to-work (RTW) interventions for employees on short-term sick leave were outside the scope of this review.

3.2.2 Types of Interventions

The scope of this review extends to any intervention with the means to help adults with disabilities in LMICs gain or maintain employment. Such interventions may take the form of a device, policy, programme, strategy, or other type of action. Examples of relevant interventions were detailed in Section 1.2.

3.2.3 Types of Outcome Measures

To be eligible for this review, studies must have measured/reported at least one quantitative labour market outcome. Eligible outcomes include primary outcomes and intermediate outcomes.

Primary outcomes: People with disabilities in LMICs are often prevented from work, constrained in the type and amount of work that they do, and/or have difficulty sustaining work. As a consequence, they are predominantly employed in the informal sector, which is characterised by low pay. In consideration of this, the primary labour market outcomes of interest are those relating to the general

³ In the study protocol HIV/AIDS was included in our definition. However, we subsequently took the decision that this group have different rehabilitation needs, and therefore studies evaluating intervention to improve the labour market situation of persons living with HIV/AIDS are not included in this review.

constructs (a) employment participation (b) work productivity/performance, and (c) income.

For employment participation, examples of relevant indicators are: gaining initial employment; return-to-work (e.g., from non-employment, or from long-term sick leave); gaining formal employment (i.e., a 'better' job in that it has written contract, etc.); job retention; promotion (i.e., vertical job mobility); change in job role/function (i.e., horizontal job mobility).

For work productivity/performance, examples of relevant indicators are: number of weekly hours worked; number of days worked per month.

For income, examples of relevant indicators are: overall annual income; monthly earnings; weekly wages; average hourly rate of pay; and profits or income from self-employment.

Unless otherwise stated, employment refers to paid employment and self-employment. The following definitions of paid employment and self-employment apply to this review.

Paid employment: defined as jobs involving some form of contractual relationship between the individual worker and an employer over time for remuneration. Employment contracts may be explicit (written or oral) or implicit. Remuneration is typically in the form of wages and salaries, but people may also be paid by commission from sales, from piece-rates, bonuses, or in-kind payments such as food (ILO, 1993, para. 6). Those workers employed in the informal economy, over which there is little or no official control, are likely to be paid in cash. Within the definition of 'paid employment', the review includes both (a) competitive paid employment, broadly defined as jobs that are available on the open market and open to anyone who applies, and that offer payments and benefits that are comparable to industry/sector standards, and (b) jobs in an integrated work setting for individuals with disabilities who are working toward competitive employment with ongoing support services.

Self-employment: defined as jobs where 'the remuneration is directly dependent upon the profits (or the potential for profits) derived from the goods or services produced ... The incumbents make the operational decisions affecting the enterprise, or delegate such decisions while retaining responsibility for the welfare of the enterprise. In this context "enterprise" includes one-person operations' (ILO, 1993, para. 7). Self-employment may take place anywhere: in the worker's home, fields, or any public place. Within the definition of self-employment, the review includes hawking, vending, and other street entrepreneurial activities (such as rickshaw pulling), but excludes other forms of making a living, such as begging, foraging, and scavenging.

Intermediate outcomes: Intermediate outcomes reflect the pathways through which the primary outcomes may be influenced. Studies that measured an intermediate *job-related* outcome (i.e., where individuals are still in the process of preparing for, and gradually moving closer to, work) were eligible for inclusion in the review. Studies that only reported non-work-related intermediate outcomes were not eligible.

Work-related intermediate outcomes may include, but are not limited to: attitudes to work, job search skills, job-related self-efficacy/confidence, career management skills, work readiness, job applications, and job interviews.

Other (non-work related) outcomes may include, but are not limited to: educational outcomes (e.g., attainment and attendance), health outcomes (e.g., intensity/severity of pain), functional limitations (e.g., range of movement), health care resource utilisation, and quality of life.

If any of the included studies measured outcomes for employers or other relevant stakeholders (e.g., co-workers, supervisors), in addition to outcomes for people with disabilities, we collected this outcome data.

Notes: The focus of this review is on economically productive ‘work’; therefore, it is not concerned with unpaid productivity, such as voluntary work, internships, household work, and family responsibilities/caring. It is also important to note that participation in education and training (including job training) is not defined as an employment outcome in this review. This takes into consideration growing evidence that many people with disabilities, particularly the young, are trapped in a ‘revolving door’ of training and vocational preparation abstracted from any real job opportunities (Corrigan & McCracken, 2005).

3.2.4 Types of Study Designs

As the literature was expected to be scarce, eligibility was extended to (a) randomised experiments, (b) rigorous quasi-experimental designs (QEDs) that used some method for removing biases due to non-random assignment of treatment (e.g., regression adjustment, difference-in-differences estimation, instrumental variables regression, fixed effects regression, regression discontinuity, matching, or inverse-propensity-weighted estimation), and (c) QEDs those that used less credible methods for constructing the counterfactual (including those that rely exclusively on before-and-after comparisons).⁴

⁴ As there is no consistent terminology used for different types of designs used for evaluating the effects of interventions, and the labels in common use are interpreted in different ways, the main focus here is on describing the key differences between designs. It is recognised that not everyone classifies the less rigorous designs as quasi-experimental.

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

Experimental designs

- participants are randomly assigned to the treatment and control groups by the investigator, using a process of random allocation, such as a random number generation (randomised controlled trial);
- a non-random (including quasi-random) method of assignment to treatment and control groups has been used by the investigators, for example, allocation by date of birth or day of the week (non-randomised controlled trial);

Quasi-experimental designs

- decisions about which individuals receive the intervention and which serve as the controls are not in the hands of the investigator; instead, this is decided by the individuals themselves or by other circumstances (includes, for example, designs commonly referred to as controlled before-and-after studies and natural experiments)
- observations are made at multiple time points before and after an intervention in an attempt to detect whether the intervention has had an effect significantly greater than any underlying trend over time (time-series designs);
- participants in receipt of an intervention are compared with a group for whom data were collected earlier (historical control design);
- observations are made on a group of individuals before and after an intervention, with participants acting as their own controls (single-group pre-test post-test design).

Studies collecting data at baseline and endline, and those collecting only endline data, were eligible for inclusion in the review (conditional on meeting all other criteria). Individually-allocated and cluster-allocated studies were also both eligible. The review included studies that adjust for confounders at either the design or analysis stage (e.g., studies using propensity score matching or regression analysis) and studies that have made no attempt to account for differences between the groups. No restriction was placed on the timing of outcome measurements (i.e., duration of follow up).

Although they fail to protect against most threats to internal validity (Shadish, Cook, & Campbell, 2002), studies using historical control and single-group pre-test/post-test (SGPPT) designs were included in the review as prior reviews and our preliminary scoping exercise suggested a scarcity of randomised controlled trials (RCTs) and robust quasi-experimental designs in this area. This decision was made prior to conducting the review. The inclusion of studies using weaker designs can help provide a fuller picture of strategies that are being utilised in the field and to

determine if the research base adequately represents the range of programmes currently in operation.

3.2.5 Date, Language and Form of Publication

For this review, eligibility extended to studies published or reported within the period 1 January 1990 to 31 December 2013. Studies published in any language were eligible, provided they met all other criteria. Studies were included regardless of their publication type (i.e., we did not exclude specific forms of publication, such as unpublished working papers, theses or dissertations).

3.3 LITERATURE SEARCH

Review management software, EPPI-Reviewer 4, was used to manage the entire review process (Thomas, Brunton, & Graziosi, 2010).

A comprehensive search strategy was used to search the international research literature for qualifying published and unpublished studies. To reduce the omission of relevant studies, a wide range of sources was used, many of which had a specific focus on low- and middle-income countries. Both electronic and manual searching techniques were used. The search period was 1 January 1990 to 31 December 2013.

The review did not involve a specific search for studies providing qualitative evidence. To address Review Objective 4, which sought to provide an explanation for why the interventions that are included in the quantitative synthesis did or did not work, relevant qualitative data was identified and extracted from the quantitative studies themselves.

Bibliographic databases and library catalogues. Ten major commercial electronic bibliographic databases were searched (see Table 10.3, Appendix I). A tailored search query was developed for each database using controlled vocabulary and/or free-text terms. The search queries for the ASSIA, ERIC, IBSS, Medline, Sociological Abstracts and Social Services Abstracts databases are provided in Table 10.4 (Appendix I), with others available from the first author on request.

In addition, 32 specialist databases and library catalogues were searched (see Table 10.5, Appendix I). These included databases of existing and ongoing impact evaluations, regional databases (some of which provide multilingual coverage⁵), grey literature databases, and databases/libraries specialising in information on employment, disability, and/or international development.

Websites. Fifty-nine websites were manually searched, including those for relevant research institutions, government-related aid agencies, non-governmental

⁵ For example, our search includes the LILACS database, an underused source of trials that indexes journals mainly from Latin American and Caribbean.

organisations (NGOs), and development banks (see Table 10.6, Appendix I). A further 36 organisations were contacted directly (see Table 10.7, Appendix I).

Backward citation tracking. The bibliographic information contained within the reference lists of included studies and relevant reviews was scanned for studies that meet the eligibility criteria. The following reviews were searched (Franche et al., 2005; Khan et al., 2009; Varekamp et al., 2006; Velema et al., 2008; Waddell et al., 2008; Westbrook et al., 2012).

Forward citation tracking. Studies that have cited the included studies since their publication were checked for relevance. Citation tracking was performed through Web of Knowledge and Google Scholar. All the hits from each citation search were screened.

Personal contacts. Specialists in the field, including authors of included studies and relevant ongoing research, were contacted with a request for information about potentially relevant studies, named programmes or other interventions.

Networks. Requests for relevant literature were made by posting a bulletin board/listserv message to members of several networks (see Table 10.8, Appendix I). A specific request for assistance with the location of studies published in languages other than English was made.

Search engines. Keyword searches were conducted using Google to follow up on potentially relevant programmes that came to light during the course of the review. Organisations and programmes were identified via snowballing from excluded studies. Google Scholar was used to track citations of included studies (see above).

Conference proceedings, dissertations and theses. One specialist source for dissertations and theses was searched (ProQuest Dissertations & Theses: UK & Ireland). Most of the major bibliographic databases also index this type of publication (ERIC, for example, includes over 14,000 dissertations/theses published since 1990). As part of the Web of Science search a specific search for conference proceedings was undertaken (Table 10.3, Appendix I).

Journals. The online versions of the Table of Contents of several journals were manually examined (see Table 10.9, Appendix I). Information provided by publishers about journal focus and content suggested that these were the most relevant to search. Many of the articles published in ALTER are in French.

3.4 STUDY SELECTION PROCESS

Potentially relevant items identified through the electronic searches were automatically imported into EPPI-Reviewer. A piloting exercise based on a 10% sample of reports was undertaken to ensure consistency in the application of the selection criteria described in Section 3.2. After finalising the criteria and associated

guidance, each title and abstract was examined by a single reviewer for possible inclusion. Articles that did not meet the selection criteria were excluded. Reviewers were required to err on the side of caution, and where titles/abstracts did not contain sufficient information to determine inclusion or exclusion the full text copies were obtained. Bibliographic details of all potentially relevant studies identified through hand searching were entered manually into EPPI-Reviewer, and the full texts obtained. Two researchers independently read the full texts of all the articles retained after the first stage to further determine their suitability based on the specified criteria for inclusion. Any uncertainties and discrepancies were resolved by discussion, further review of the respective study reports and, where necessary, consultations with a third reviewer.

3.5 DATA COLLECTION

3.5.1 Criteria for Determination of Independent Findings

Efforts were made to identify all affiliations between studies/reports before coding commenced. Information on study sample sizes, intervention details, grant numbers, and so on were used to identify multiple reports from single studies. In cases where several different reports relating to a single study exist, reviewers classified the publication containing the most complete data set as the main report; when extracting data, the full set of relevant reports was used.

3.5.2 Data Extraction and Quality Appraisal

A coding tool was developed to capture study design characteristics, participant characteristics, intervention characteristics, outcome characteristics, data for effect size calculation (and/or other outcome data) and other substantive and descriptive study features.

Each study was appraised to determine its internal validity—that is, make sure that the study has been designed and conducted in such a way as to minimise the risk of bias, and that the outcomes are likely to be attributable to the intervention being assessed, rather than some other factor.

Included studies were coded on the following domains:

- Potential for selection bias/confounding due to non-random assignment, no adjustment for differences in baseline measurements, etc.
- Potential bias due to attrition, compliance or otherwise missing data.
- Potential for performance bias due to systematic differences in the care provided to participants (e.g., spill-over, non-intervention based differences in treatment, or other types of interference across intervention and non-intervention units).

- Potential bias due to systematic differences in outcomes assessment among groups being compared (detection bias).
- Selective outcome and analysis reporting based on systematic differences between reported and unreported findings.

For each of these domains, we coded the paper as ‘Yes’ if it addressed the issue, ‘No’ if it did not, ‘Unclear’ if it was unclear, and ‘Not relevant’ if the issue was not applicable for that particular study. For those domains with two parts (‘a’ and ‘b’), both parts had to be answered ‘Yes’ for the study to score ‘Yes’ overall for that domain. We then aggregated to an overall risk of bias as follows:

- Low Risk of Bias (bias, if present, is unlikely to alter the results of the research): ‘Yes’ for four or five categories.
- Medium Risk of Bias (a risk of bias that raises some doubts about the results): ‘Yes’ for three categories.
- High Risk of Bias (bias likely to seriously alter the results): ‘Yes’ for two or less categories.

The coding tool was pilot tested and modified as necessary. Members of the review team worked independently on a purposive sample of eligible studies, which were selected to test the tool on the full range of relevant study designs, before meeting to compare their decisions. Reviewers were retrained on any coding items that showed discrepancies during this process and the coding manual was adapted accordingly. This process was repeated until a very high level of consistency in reviewers’ application of the codes was achieved, at which point the tool was finalised. A draft version of the codebook for data collection is presented in the study protocol. The risk of bias section of the tool is detailed in Table 10.10 (Appendix I).

The EPPI-Reviewer software was used to collect data necessary for the description, analysis and quality appraisal of studies. All studies included in the review were independently evaluated by two reviewers who came together to compare their decisions. Any uncertainties and discrepancies were resolved by discussion, further review of the respective study reports and, where necessary, consultations with a third reviewer.

Data were collected for all labour market outcomes reported (both positive and negative), relevant sub-groups and where studies include multiple follow-up time periods. For the data analysis, where studies used several indicators for a particular outcome variable, our approach was to drop indicators. This involved selecting the indicator most similar to those used by other studies in that category and retaining only the data for that outcome indicator in the analysis. The reviewers attempted to contact the authors of study reports that were missing data that would allow the computation of effect sizes.

Efforts were made to identify all affiliations between studies/reports before coding commenced, using information on study sample sizes, intervention details, grant numbers, and so on. In cases where a single report described more than one study, each study was coded separately (i.e., as if they had been published separately).

3.6 DATA ANALYSIS

The method of synthesis used in this review reflects the nature of the included studies. Statistical meta-analysis was neither feasible nor appropriate. As shown in the next chapter, the reviewed body of literature is broad in terms of population and intervention characteristics. In addition, the majority of studies used a repeated measures design and presented data in the form of proportions or frequencies. Odds ratios (ORs) are the usual effect size metric for dichotomous variables, but ORs are typically used for independent group designs (Lipsey & Wilson, 2001); calculating odds ratio effect sizes was not appropriate for the single-group pre-test/post-test (SGPPT) design studies. Most of the included studies using independent groups did not report sufficient data to allow for effect size calculations.

On balance, it was felt that a narrative approach to data synthesis was the most appropriate method for this review. Narrative synthesis involves the arrangement of studies into relatively homogenous groups according to a standard format, with similarities and differences compared across studies (Barnett-Page & Thomas, 2009). We drew on the logic model framework detailed in Figure 1.1 and structured the findings according to outcome variable, with consideration also given to participant characteristics. For each outcome, the results are reported and analysed separately by impairment category (i.e., grouped according to the target population for each intervention). We have presenting the direction, magnitude and statistical significance of findings (as reported by the original investigators), together with information about the sample size and risk of bias. These should be considered when interpreting the findings. There was no statistical pooling of data, so we did not analyse the SGPPT studies separately from the more robust quasi-experiments (as specified in the protocol).

4 Search Results

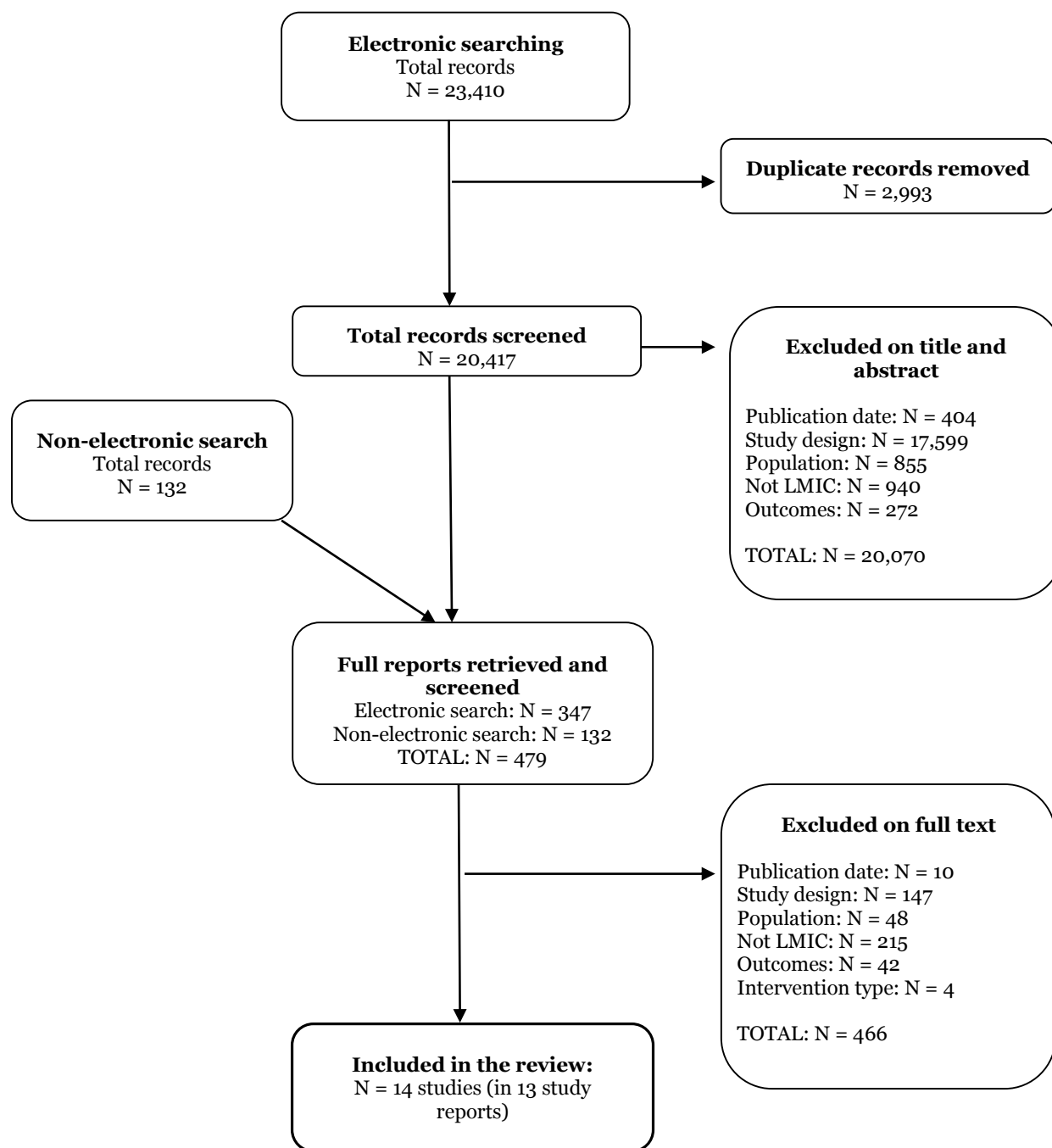
4.1 LITERATURE SEARCH AND STUDY IDENTIFICATION

Figure 4.1 details the search and study selection process. Initially, 23,410 citations were identified by electronically searching the major bibliographic databases. After removal of 2,993 duplicates, the remaining 20,417 items were manually screened against the eligibility criteria on title and abstract. This resulted in the exclusion of 20,070 studies, leaving 347 references as potentially relevant to the review. Searches of additional sources yielded a further 132 potentially relevant studies, and these were added to the 347 studies from the main electronic search. The full length reports of these 479 studies were identified and read independently by two researchers. Upon careful examination against the selection criteria, 466 study reports reviewed at this stage did not meet the eligibility requirements. The most common reason for excluding studies was that they were not located in a low- or middle-income country. Bibliographic details of the 466 excluded studies are available on request.

Fourteen studies (reported in thirteen papers) met all requirements and were selected for analysis. These are listed in Section 9.1. Six of the included studies were identified through electronic searches of the major bibliographic databases, and the remainder through other sources.

Two of the study reports excluded on date (both published in 2014) were identified as providing further follow-up data relating to a study already included in the review. These “linked reports” are listed in Section 9.2. Two additional excluded papers provide further information about interventions evaluated in the included studies. These as “companion reports” are listed in Section 9.3.

Figure 4.1: Flow of Literature Through the Review



5 Descriptive Findings

Fourteen studies met the criteria for inclusion in the synthesis. To fully explore the data, we conducted several types of analyses. This chapter presents a descriptive profile of the included studies. Section 5.1 details important study characteristics, such as publication, sample, and methodological characteristics. Section 5.2 describes the range and diversity of interventions evaluated in the included studies (Review Objective 1). In Chapter 6, we present the synthesis of study findings (Review Objective 2).

5.1 STUDY CHARACTERISTICS

In this section, we present key features of the included research. Tables 5.1, 5.2 and 5.3 summarise the substantive and methodological characteristics of the 14 included studies. Information on each separate study is provided in Table 10.12 (Appendix I).

Publication dates. Publication dates ranged between 1992 and 2012. Four (29%) of the 14 studies were published in the 1990s, four (29%) were published between 2000 and 2009, and six (43%) were published in the four-year period, 2010 to 2013.

Publication outlets. Thirteen studies were published in peer-reviewed academic journals. Eight articles were published in journals specific to persons with disabilities: *Asia Pacific Disability Rehabilitation Journal* (two articles); *Disability and Rehabilitation*; *Journal of Occupational Rehabilitation*; *Disability, CBR and Inclusive Development*; *Leprosy Review*; and the *British Journal of Visual Impairment*. Four articles were published in broader medical/healthcare journals: *PLOS ONE*; *Medical Science Monitor*; *Acta Fisiatr*; and *Psicologia: Reflexão e Crítica*. One article was published in the journal *Small Enterprise Development*. The remaining study was published as a technical report.

Funding. Funding for the studies came from a variety of sources, most commonly NGOs (five studies) and academic/research institutions (three studies). One study also received funding from a professional society. The reports for five studies did not have explicit funding statements.

Table 5.1: General characteristics of included studies

Publication dates	k	Study funding*	k
1990-1999	4	Government/ govt.-related agency	0
2000-2009	4	Donor country govt. agency	0
2010-2013	6	Development bank	0
		Non-governmental organisation	5
Form of publication		Academic/ research institution	3
Journal article	13	Professional association/ society	1
Technical report	1	Private company	0
Working paper	0	Employer	0
Conference paper	0	Not stated	6

*Response options not mutually exclusive

Geographical distribution. The studies were located in a limited range of LMICs: three low-income countries (five studies); four lower-middle income countries (six studies); and two upper-middle income countries (three studies).

Low-income countries

- **Bangladesh** (Hansen, Mahmud, & Bhuiyan, 2007; Momin, 2004; Nuri, Hoque, Akand, & Waldron, 2012);
- **Kenya** (Metts & Oleson, 1995);
- **Zimbabwe** (Lagerkvist, 1992a).

Lower-middle income countries

- **India** (Biggeri et al., 2012; Finger et al., 2012; Gershon & Srinivasan, 1992; Shore & Juillerat, 2012);
- **Nigeria** (Eniola & Adebisi, 2007);
- **Philippines** (Lagerkvist, 1992b);
- **Vietnam** (Shore & Juillerat, 2012).

Upper-middle income countries

- **Brazil** (Guarino, Chamlian, & Masiero, 2007; Pereira-Guizzo, Del Prette, & Del Prette, 2012);
- **China** (Tang, Yu, Luo, Liang, He, 2011).

Shore and Juillerat (2012) collected data from a total of three countries: India and Vietnam, both lower-middle income countries, and Chile, which was reclassified as a

high-income country in the fiscal year starting 1 July 2013. This is treated as one study in this review. One study report details the author's evaluation of two different programmes across two continents and is treated as two studies in this review.⁶

The majority of included studies were conducted in Asia: seven in South Asian countries (Bangladesh and India), and three in East Asia and the Pacific (China, Philippines and Vietnam). Three studies were undertaken in Sub-Saharan African countries (Kenya, Nigeria and Zimbabwe) and two were located in the Latin America and the Caribbean region (Brazil).

Sample. There was variation in sample sizes. One study had a sample size greater than 500 participants (Shore & Juillerat, 2012), the sample size was between 251 and 500 in three studies (Biggeri et al., 2012; Finger et al., 2012; Nuri et al., 2012), and the remaining ten studies had a sample size of less than 250. All studies designated the individual/household as the unit of analysis.

All impairment types were represented in the impact assessments, with the majority (eight studies) examining outcomes for people with physical impairments (Gershon & Srinivasan, 1992; Guarino et al., 2007; Hansen et al., 2007; Metts & Oleson, 1995; Momin, 2004; Pereira-Guizzo et al., 2012; Shore & Juillerat, 2012; Tang et al., 2011). Two impact assessments focused exclusively on people with sensory disabilities (Eniola & Adebisi, 2007; Finger et al., 2012). The study samples of the remaining four evaluations included participants with any/multiple types of disability, predominantly those with physical and sensory impairments (Biggeri et al., 2012; Lagerkvist, 1992a; Lagerkvist, 1992b; Nuri et al., 2012).

All 14 studies were conducted with adults aged 16 years and over, although one study report did not provide clear details of participants' ages. Four studies also included children in the sample population. One study focused exclusively on young adults (Eniola & Adebisi, 2007). A single study included males only (Tang et al., 2011); the remainder were mixed sex. In 12 of the 14 studies, at least some participants had previous work experience.

⁶ Zimbabwe (Lagerkvist, 1992a) and Philippines (Lagerkvist, 1992b)

Table 5.2: Sample characteristics

Sample size	k	Age*	k
1-250	10	0-15 years	4
251-500	3	16+ years	13
More than 500	1	Unclear/not stated	1

Impairment category	Previous work experience
Physical	All or some of the sample
Sensory	Unclear/not stated
Mixed samples	

Sex	Region
Male only	East-Asia and Pacific
Female only	Latin America and Caribbean
Mixed sex	South Asia
	Sub-Saharan Africa

*Response options not mutually exclusive

Evaluation design. The studies employed different methodologies for constructing the counterfactual and evaluating the impacts of the interventions. Five studies used a concurrent comparison group; however, with the exception of one study, none used statistical methods to adjust for potential selection bias and confounding. Of these five studies, two involved prospective allocation to groups (Eniola & Adebisi, 2007; Pereira-Guizzo et al., 2012), and three constructed the comparison group ex-post (Biggeri et al., 2012; Guarino et al., 2007; Momin, 2004). Propensity score matching techniques were used by Biggeri et al. (2012). The remaining nine studies used a single-group pre-test/post-test design. Of these, one study (Finger et al., 2012) used single difference regression estimation methods applied to pre-test/post-test data, and eight studies conducted simple before-and-after comparisons without employing statistical controls (Gershon & Srinivasan, 1992; Hansen et al., 2007; Lagerkvist, 1992a; Lagerkvist, 1992b; Metts & Oleson, 1995; Nuri et al., 2012; Shore & Juillerat, 2012; Tang et al., 2011).

Seven of the 14 included studies examined variability of treatment effects, e.g., across interventions and sub-groups (Biggeri et al., 2012; Eniola & Adebisi, 2007; Hansen et al., 2007; Metts & Oleson, 1995; Nuri et al., 2012; Pereira-Guizzo et al., 2012; Shore & Juillerat, 2012).

Outcomes. All included studies measured the impact on labour market outcomes and reported frequencies, proportions, and/or means. Twelve studies examined one or more primary outcomes: paid employment (12 studies); self-employment (two studies); income (four studies); hours worked (one study). The remaining two

studies did not measure any primary outcomes but measured intermediate economic outcomes that were of interest to the review: motivation to work (one study); and professional social skills (one study). Five of the 14 included studies also measured additional outcomes: health-related outcomes (four studies); social outcomes (five studies); and empowerment-related outcomes (one study). Several studies relied solely on self-reported outcome data.

Timing of outcome measurement varied between studies. Short-term outcomes were measured in five of the 14 included studies. One study examined longer-term outcomes, evaluating impacts on participants after two and four years of entering the programme. The remaining eight reports did not provide clear information about this aspect of the study.

Evaluators. Fully independent evaluators were rare. Most research teams contained at least one evaluator who was affiliated in some way to the organisation that designed/implemented the programme, with some more closely involved than others.

Table 5.3: Methodological characteristics

Study design	k	Outcome domains*	k
Experimental	0	Economic	14
Quasi-experimental	6	Social	5
Single-group, pre-test/post-test	8	Health	4
		Empowerment	1
		Education	0
Role of evaluator	Outcome measurement		
Independent	2	0 - 12 months	5
Not independent	12	Over 12 months	1
		Unclear/ not stated	8

*Response options not mutually exclusive

Risk of bias. The quality of reports was poor, with all 14 studies ranked as high risk of bias. Details are provided in Table 10.11 (Appendix I).

5.2 INTERVENTION CHARACTERISTICS

The 14 included studies covered 15 different interventions. One study report (Eniola & Adebisi, 2007) compared two interventions, as well investigating impacts for the sample as a whole. As noted above, Lagerkvist (1992) investigated two separate evaluations of programmes operating in different countries and is treated as two

studies in this review.⁷ Sections 5.2.1 to 5.2.5 describe the key features of the interventions, grouped according to intervention type and disability category. Table 5.4 summarises the intervention characteristics. Information on each separate intervention is provided in Table 10.13 (Appendix I).

Type. A limited range of intervention types was identified. The most common were multi-component programmes in the following categories: treatment/therapeutic, occupational rehabilitation and community-based rehabilitation. One study investigated the impacts of a multi-component financial service. The remaining two studies evaluated assistive devices (mobility aids).

Funding. Six interventions were funded by NGOs, one by a host country government agency, and one by a donor country agency. The source of funding for the remaining interventions was not disclosed, or not clearly reported.

Aims. The main aim of eight interventions was to improve labour market outcomes for people with disabilities. The other interventions sought to improve a wider range of outcomes. The different types of barriers to employment addressed by the interventions are detailed in Table 5.4. The majority aimed to address functional limitations and/or attitudes of family members or the wider community, usually alongside other factors constraining labour market participation.

Availability. The availability of the reviewed interventions varied. One intervention was available internationally (Shore & Juillerat, 2012) and another nationally (Tang et al., 2011). Nine were available over a large geographical area, such as one or more districts, provinces or regions (Biggeri et al., 2012; Finger et al., 2012; Gershon & Srinivasan, 1992; Hansen et al., 2007; Lagerkvist, 1992a; Lagerkvist, 1992b; Metts & Oleson, 1995; Momin, 2004; Nuri et al., 2012). Four were limited to one or two institutions (e.g., hospital or training facility) serving a local population (Eniola & Adebisi, 2007; Guarino et al., 2007; Pereira-Guizzo et al., 2012).

Target group (impairment category). All 15 interventions were specifically targeted at people with disabilities, although some stipulated additional criteria, such as participants having a certain level of income or education. Some were designed for people with a specific impairment or diagnosis. Six interventions targeted persons with specific types of physical impairment. Of these, one focused on occupational injuries (Tang et al., 2011), two were designed for people with spinal cord injuries (Hansen et al., 2007; Momin, 2004), two were for persons with specific mobility impairments (Guarino et al., 2007; Shore & Juillerat, 2012) and one was for leprosy patients (Gershon & Srinivasan, 1992). A further two interventions were available to adults with any type of physical impairment (Metts & Oleson, 1995; Pereira-Guizzo et al., 2012). Three interventions (evaluated in two studies) were

⁷ Biggeri et al. (2012) amalgamated data from two related programmes. Therefore, we treat this as a single intervention in this review.

targeted at persons with visual impairments (Eniola & Adebisi, 2007; Finger et al., 2012). Finally, four interventions were available to persons with any/multiple impairments (Biggeri et al., 2012; Lagerkvist, 1992a; Lagerkvist, 1992b; Nuri et al., 2012).

Duration. Two interventions were not time-limited as they involved providing participants with an assistive device (wheelchair or lower-limb prosthesis) which they retained. Those interventions that were time-limited were typically short in duration: five were less than six months, and one was nine months. In the case of one programme, the authors did not indicate the overall duration but outcomes were measured after two years and four years implementation. For the remaining seven interventions, the study reports did not give this information or it was not clearly reported.

Table 5.4: Intervention characteristics

Type of programme	n	Funding*	n
Treatment & therapy	4	Host country govt. agency	1
Assistive devices & accommodations	2	Donor country govt. agency	1
Education	0	Development bank	0
Occupational rehabilitation	4	Non-governmental organisation	6
Regulations & legislation	0	Academic/ research institution	0
Financial services	1	Employer	0
Community-based rehabilitation	4	Unclear/Not stated	7
Awareness raising campaign	0		

Labour market constraints*	Availability	n
Attitudes mismatch	International	1
Functional limitations	National	1
Inaccessible workplace	Regional	8
Inadequate transport	Local	4
Insufficient technical skills / mismatch	Unclear/Not stated	1
Insufficient skills (general/basic)		5
Insufficient entrepreneurial skills	Duration	3
Insufficient social skills	Not applicable	2
Lack of (access to) financial support/credit	1 day to 6 months	5
Lack of (access to) social capital/networks	7 months to 1 year	1
Lack of (access to) information	Unclear/Not stated	7
Lack of jobs		0
Over-supply of labour		0

Pain	1
Social/familial attitudes	7

*Response options are not mutually exclusive
n: number of interventions

5.2.1 Treatment/Therapeutic Interventions

Four treatment/therapeutic interventions were assessed in three of the included studies (see Table 5.5). One study was set in Brazil and evaluated a small-scale intervention for people with physical impairments (Pereira-Guizzo et al., 2012). The remaining three interventions in this category were designed for the visually impaired: two small-scale interventions in Nigeria (Eniola & Adebisi, 2007) and a regional programme operating in India (Finger et al., 2012).

Table 5.5: Treatment / therapeutic interventions

Study	Location	Intervention details [no.]	Target group (impairment category)	Overall duration (per cohort)
Eniola & Adebisi (2007)	Nigeria	Emotional intelligence techniques [1] (multi-component)	Visual impairments	6 weeks
		Goal setting techniques [2] (multi-component)		
Finger et al. (2012)	India	Cataract outreach programme [3] (multi-component)	Visual impairments	1 month
Pereira-Guizzo et al. (2012)	Brazil	Professional social skills programme [4] (multi-component)	Physical impairments (any/multiple)	8 weeks

Interventions targeted at people with physical impairments. One study evaluated a multi-component professional social skills programme for unemployed people with a range of physical disabilities.

Pereira-Guizzo et al. (2012) evaluated the Program for the Development of Social Skills for the Work Environment, which aimed to develop disabled people's work-related social skills and include them into the labour market. The intervention was delivered at institutions in two cities in the state of São Paulo, Brazil - the Municipal Bureau of social welfare and a philanthropic association. It was composed of 16 group sessions, carried out twice a week, lasting approximately 90 minutes each. The overall structure of the programme was based on the experiential method associated with cognitive-behavioural techniques. It appeared to have been designed by the authors of the study.

Interventions targeted at people with visual impairments. The two studies in this category evaluated three interventions. One study evaluated two different therapeutic techniques based on cognitive behavioural therapy (CBT)

principles, and the third study assessed the impact of a cataract outreach programme.

Eniola and Adebisi (2007) assessed the impact of two interventions (labelled as ‘emotional intelligence’ and ‘goal setting’ techniques) upon the motivation to work among visually impaired students attending the School for Handicapped Children, Ibadan and Osogbo, Nigeria. Both interventions were delivered over six weeks (two sessions per week) and entailed a number of components, including lectures, home assignments, and other activities. The authors of this pilot study appear to have designed the interventions, and do not clearly report how the two techniques differed.

Finger et al. (2012) examined the impact of a multi-component cataract outreach programme in South India. This regional programme was available in the rural area of Tamil Nadu state, and was operated by a community eyecare provider, Sankara Eye Care Services, Coimbatore. Patients underwent cataract surgery and received a one-month follow up at the outreach centre. Patients’ transport, surgery and inpatient hospital stays were provided free by the hospital as patients all fell under the poverty threshold. The study was embedded within routine services provided by Sankara Eye Care.

5.2.2 Assistive Devices & Accommodations

Two included studies evaluated assistive devices designed to improve general well-being (see Table 5.6). Both interventions were targeted at individuals with mobility impairments (Guarino et al., 2007; Shore & Juillerat, 2012).

Table 5.6: Assistive devices and accommodations

Study	Location	Intervention details [no.]	Target group (impairment category)	Overall duration (per cohort)
Guarino et al. (2007)	Brazil	Prosthesis [5]	Physical impairments (mobility)	N/A
Shore & Juillerat (2012)	India, Vietnam	Wheelchair [6]	Physical impairments (mobility)	N/A

Interventions targeted at people with physical impairments. Of the two evaluations in this category, one examined whether prostheses helped the employment prospects of lower-limb amputees, and the other investigated the impact of providing a simple wheelchair to persons with mobility impairments resulting primarily from stroke, muscular dystrophy or cerebral palsy.

The study by Guarino et al. (2007) assessed the benefits for lower-limb amputees of using a prosthesis. Patients attended a university-based rehabilitation centre, the Lar Escola Sao Francisco Rehabilitation Centre, Universidade Federal de São Paulo

(UNIFESP), in the city of São Paulo, Brazil. A charge was made for the prosthetics.

Shore and Juillerat (2012) evaluated the impact of wheelchairs distributed by an international NGO, the Free Wheelchair Mission (FWM). As of 2012, FWM has distributed over 600,000 wheelchairs in developing countries. Wheelchairs are provided free of charge to recipients, made possible through local and national fundraising efforts. The cost to produce, ship, assemble and deliver the chair to recipients was under US\$60 worldwide.

5.2.3 Occupational Rehabilitation

Four studies evaluated multi-component occupational rehabilitation programmes (see Table 5.7). Three of the four programmes in this category were managed by the Centre for the Rehabilitation of the Paralysed (CRP), an NGO that has operated in several regions of Bangladesh since 1979—the only organisation of its kind in the country (Hansen et al., 2007; Momin, 2004; Nuri et al., 2012). The remaining programme was a national initiative in China. Three programmes were targeted at people with physical disabilities, whereas the fourth programme was open to adults with any type of disability.

Table 5.7: Occupational rehabilitation services

Study	Location	Intervention details [no.]	Target group (impairment category)	Overall duration (per cohort)
Hansen et al. (2007)	Bangladesh	Multi-component [7]	Physical impairments (spinal cord injuries)	Unclear
Momin (2004)	Bangladesh	Multi-component [8]	Physical impairments (spinal cord injuries)	Not stated
Nuri et al. (2012)	Bangladesh	Multi-component [9]	Any/multiple impairments	1, 2, 3 or 4 months*
Tang et al. (2011)	China	Multi-component [10]	Physical impairments (work injuries)	9 months

*depending on trade selected

Interventions targeted at people with physical impairments. Of the three programmes in this category, two were designed specifically for those with spinal cord injuries (Hansen et al., 2007; Momin, 2004). The third intervention in this group was targeted at injured workers (Tang et al., 2011).

Hansen et al. (2007) evaluated a tailored work rehabilitation programme based in Savar, an area about 25km from Dhaka, Bangladesh. The initiative was delivered by CRP. It provides specialised services for people with spinal cord injuries, and aims at returning participants to their previous employment or a suitable alternative. The study focus is on a sample of those who completed the programme in the three-year period 2002-2005.

Momin (2004) evaluated another CRP run rehabilitation programme for people with spinal cord injuries. In this study, participants lived in the Dhaka, Narayangonj, Gazipur, Manikgonj, Munshigonj and Narshingdi districts of Bangladesh, and had received services between 1994 and 1999. Services focused on the person’s whole life. Vocational training was provided, support was extended once the person returned to the community, and families were encouraged to become active participants in the rehabilitation process

Tang et al. (2011) evaluated a multi-dimensional return-to-work (RTW) programme provided by the Guangdong Provincial Work Injury Rehabilitation Center, the first and leading institution of occupational rehabilitation in China. The demonstration centre is located in the southeast of the country and has offered training courses nationwide since 2004. It is available to persons with occupational injuries who are on long-term absence from work or short-term sick leave. It is based on a case management approach and includes both social and occupational rehabilitation as well as follow-up after return to work. Clients attend the centre for three months and then receive six months follow-up support.

Interventions targeted at people with any/multiple types of impairments. One study evaluated a multi-component occupational rehabilitation programme that was open to persons with any/multiple types of impairment.

Nuri et al. (2012) evaluated the effectiveness of the Madhab Memorial Vocational Training Institute (MMVTI) programme in Bangladesh, which is part of the Centre for the Rehabilitation of the Paralysed (CRP). Disabled participants were selected from five districts across central Bangladesh. Data was also collected from 10 non-disabled key informants (local leaders, employers, and project staff). This programme specialises in the occupational rehabilitation of persons with disabilities through specifically designed vocational training and job placements. Individuals are carefully matched to courses after a full assessment by a multidisciplinary team of doctors, social workers and other professionals.

5.2.4 Financial Services

One study evaluated the impact of a financial programme (see Table 5.8). It was available to adults with physical disabilities (Metts & Oleson, 1995).

Table 5.8: Financial services

Study	Location	Intervention details [no.]	Target group impairment category)	Overall duration (per cohort)
Metts & Oleson (1995)	Kenya	Disabled persons Loan Scheme (DPLS) [11] (multi-component)	Physical impairments (any/multiple)	Unclear

Interventions targeted at people with physical impairments. One study evaluated a multi-component business training and credit guarantee scheme established to facilitate informal sector self-employment for disabled micro-entrepreneurs.

Metts and Oleson (1995) evaluated the initial phase of the Disabled persons Loan Scheme, a multi-component programme funded by the United National Development Programme (UNDP). At the time of the study, it was available in 20 rural districts of Kenya. The typical loan recipient had an orthopaedic disability. Potential beneficiaries received basic business training and assistance with the process of apply for loans through Barclay’s Bank of Kenya. Clients were identified by Kenya’s Ministry of Culture and Social Services and selected by District Loan Review Committees. Business training and assistance with loan applications were provided by three sub-contracted NGOs, and beneficiaries received them for the duration of the loan repayment period. Loans were provided at market rates of interest and guaranteed by a credit guarantee fund deposited with the bank.

5.2.5 Community-Based Rehabilitation

Four studies evaluated the impact of four community-based rehabilitation (CBR) programmes (see Table 5.9). Three programmes were open to people with any/multiple types of impairment (Biggeri et al., 2012; Lagerkvist, 1992a; Lagerkvist, 1992b) and one was designed specifically for people with leprosy (Gershon & Srinivasan, 1992).

Table 5.9: Community-based rehabilitation

Study	Location	Intervention details [no.]	Target group impairment category)	Overall duration (per cohort)
Biggeri et al. (2012)	India	Multi-component [12]	Any/multiple impairments	Unclear
Lagerkvist (1992a)	Zimbabwe	Multi-component [14]	Any/multiple impairments	Not stated
Lagerkvist (1992b)	Philippines	Multi-component [13]	Any/multiple impairments	Not stated
Gershon & Srinivasan (1992)	India	Multi-component [15]	Physical (leprosy)	Not stated

Interventions targeted at people with any/multiple types of impairment. Three studies (reported in two papers) were included in this category.

In the study by Biggeri et al. (2012) approximately three-quarters of the sample were described as having a physical and/or sensory impairment. This study was

conducted in neighbouring districts in South Karnataka State, southern India. The authors indicated that the programme covered all five areas of the CRB matrix (health, education, livelihood, social and empowerment) and included activities such as home visits, health awareness, therapy services, referral services, aids/appliance support, and legal support. It was implemented through a participatory development approach with active participation of persons with disabilities at all levels.

In Zimbabwe, Lagerkvist (1992a) evaluated a CBR programme run by the Red Cross in two districts since 1985. Two rehabilitation assistants with 1-2 years medical education were responsible for assessment of clients, analysing a rehabilitation plan for each client, and training local coordinators and volunteers. Local coordinators were committee workers with some medical training, and responsible for 300-400 disabled persons in an area.

Lagerkvist (1992b) assessed the impact of a CBR programme that had operated in the Philippines since 1981. This programme had a different style of management to the one in Zimbabwe. It was managed and supervised from a rehabilitation centre and was based on local supervisors who were community workers recruited from the villages. Each one was expected to work one to two days a week with four to eight disabled persons. World Health Organization (WHO) training packages were used.

Interventions targeted at people with physical impairments. One study evaluated a CBR programme for people with leprosy in the Greater Madras area of India (Gershon & Srinivasan, 1992). Interest-free loans were offered to patients to help them start new trades or occupations. Social workers also helped organise job training and placement activities. The scheme also undertook the education of the children of patients.

6 Synthesis of Results

6.1 INTRODUCTION

The previous two chapters describe the search results and the main features of the included studies and interventions (Review Objective 1). In this chapter, we provide the results of the analysis to determine the overall effects of the reviewed interventions (Review Objective 2) including possible moderators of treatment effects (Review Objective 3). Finally, a synthesis of the qualitative evidence from these studies is presented (Review Objective 4).

6.2 WHAT DOES THE QUANTITATIVE EVIDENCE SAY?

The second (and primary) objective of the review is to systematically identify, appraise and synthesise evidence from impact evaluations to answer the following review question:

- *What are the effects of interventions on the labour market situation of adults with physical and sensory disabilities in low- and middle-income countries?*

Fourteen eligible studies with a range of designs were identified and are represented in this synthesis. Statistical meta-analysis was neither feasible nor appropriate. As shown in Chapter 5, the evidence base is heterogeneous, with the reviewed body of literature broad in terms of population and intervention characteristics. In addition, the majority of evaluation designs were unsuitable, and/or authors did not report sufficient data, for effect size calculations. A narrative approach was therefore taken for data synthesis.

Table 6.1: Intervention / outcome

	Interventions for persons with physical impairments	Interventions for persons with visual impairments	Interventions for persons with any type of impairment
Motivation to work		1 study	
Professional social skills	1 study		
Paid employment	7 studies	1 study	4 studies
Self-employment	2 studies		
Hours worked	1 study		

Income	3 studies	1 study
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In reviewing the available evidence, we drew on the logic model framework detailed in Figure 1.1 and report the findings of the review by outcome variable. The following sub-questions were used to structure the synthesis. In answering each question, the results are reported and analysed separately by impairment category (i.e., grouped according to the target population for each intervention). As all studies were judged to be of low quality, there was no scope to report and analyse results separately by risk of bias status.

- *What effects do interventions to support adults with disabilities have on motivation to work?*
- *What effects do interventions to support adults with disabilities have on professional social skills?*
- *What effects do interventions to support adults with disabilities have on paid employment?*
- *What effects do interventions to support adults with disabilities have on self-employment?*
- *What effects do interventions to support adults with disabilities have on income?*
- *What effects do interventions to support adults with disabilities have on the number of hours worked?*

6.2.1 What effects do interventions to support adults with disabilities have on motivation to work?

One study addressed this sub-question (see Table 10.18, Appendix I). It focused on persons with visual impairments. The direction of effect was positive and statistically significant.

Visual impairments. In the pilot study by Eniola & Adebisi (2007) two therapeutic programmes for visually impaired students in Nigeria were evaluated using a pre- and post-test experimental group design, with a total sample size of 32 (16 in each group). The group means suggest that the emotional intelligence intervention may have had a more positive impact than the goal setting intervention (mean change scores 12.2 and 2.9 respectively). However, a significant interaction was not found. Across the whole sample, a statistically significant increase in the level of motivation post-intervention compared pre-intervention was observed (mean change score 6.5; $F=7.98$; $df=1,28$; $p<0.05$).

6.2.2 What effects do interventions to support adults with disabilities have on professional social skills?

One study addressed this sub-question (see Table 10.19, Appendix I). It examined an intervention for people with physical impairments. The direction of effect was positive and statistically significant.

Physical impairments. Pereira-Guizzo et al. (2012) used a multi-probe design to evaluate a therapeutic skills development programme in Brazil. The sample consisted of 16 people with physical disabilities, forming two intervention groups who received the programme at different intervals. Three different indicators of professional skills were assessed: “facing a job interview”; “offering a colleague some help”; and “dealing with a superior’s fair criticism”. For Group 1, the programme had a significant impact on all three measures at the two-month follow-up ($p=0.001$, $p=0.032$, and $p=0.030$, respectively). Similar benefits from participation in the programme were also observed in Group 2.

6.2.3 What effects do interventions to support adults with disabilities have on paid employment?

Twelve studies examining 12 different interventions addressed this sub-question (see Table 10.14, Appendix I). Different measures of paid employment were used, ranging from engagement in any type of income-generating activity to formal employment. Baseline samples ranged in size from 1 to 620. Seven studies evaluated interventions designed for persons with physical disabilities and one focused on an intervention for the visually impaired. An additional four studies evaluated interventions that were open to individuals with any/multiple impairments. The direction of effect in all 12 studies was positive. Three study reports (Biggeri et al., 2012; Finger et al., 2012; Shore & Juillerat, 2012) presented results of tests for statistical significance and indicated study findings were significant.

Physical impairments. Of the seven studies in this category, two used a non-equivalent groups pre-test/post-test design. Both found better outcomes for the treatment group compared to the comparison group. The Brazilian study by Guarino et al. (2007) reported results for a group of lower limb amputees who received a prosthesis and those who did not. The majority (98%) of the total sample was working at baseline. At follow-up, rates of employment had decreased to 16% for the treatment group, compared to 0% for the comparison group. Momin (2004) compared outcomes for persons receiving specialised occupational rehabilitation services in Bangladesh with a group in receipt of general hospital care. Although little change was observed overall, the treatment group had a slightly better outcome; their engagement in paid employment was 6% at both baseline and follow-up. In contrast, the rate for the comparison group decreased from 9% to 6%. The remaining five studies in this category were conducted in Bangladesh, Kenya, Vietnam, India (two studies) and China, and investigated occupational rehabilitation services (Hansen et al., 2007; Tang et al., 2012), a community-based rehabilitation

programme (Gershon & Srinivasan, 1992), the Disabled persons Loan Scheme (Metts & Oleson, 1995) and wheelchair provision (Shore & Juillerat, 2012). All five studies used a single-group pre-test/post-test design, and found that paid employment rates were higher in the follow-up period.

Visual impairments. The one study in this category (Finger et al., 2012) was located in India and used single difference regression estimation methods applied to pre-test/post-test data. The authors reported that, at one year, more of the participants were engaged in income generating activities (44% to 77%, $p < 0.001$) and participants who had successful cataract surgery were more likely to be engaged in income earning activities one year after surgery (OR 3.28; 95% CI 1.40–7.82; $p = 0.006$).

Any type of impairment. Three of the four impact assessments in this category investigated community-based rehabilitation (CBR) programmes. One CBR study was conducted in India and involved a cross-sectional propensity score analysis (Biggeri et al., 2012). It demonstrated a small but significant effect on employment after two years (2002–2004) implementation, for those previously unemployed (ATT=0.05, SD=0.014, $t=3.714$). The remaining two CBR studies (Lagerkvist, 1992a; Lagerkvist, 1992b) utilised a single-group pre-test/post-test design. Both evaluations (Philippines and Zimbabwe) found that paid employment rates were higher in the follow-up period. The final study in this group (Nuri et al., 2012) examined an occupational rehabilitation programme in Bangladesh. It also found increased employment over the course of the study.

6.2.4 What effects do interventions to support adults with disabilities have on self-employment?

Two studies addressed this sub-question (see Table 10.15, Appendix I). Both evaluated interventions for persons with physical impairments. The direction of effect in both studies was positive. Neither study reported results of tests for statistical significance.

Physical impairments. The Kenyan study by Metts & Oleson (1995) utilised a single group pre-test/post-test design. It found that five of the 55 recipients of loans from the Disabled persons Loan Scheme started new businesses as the result of participating in the programme. Momin (2004) used a non-equivalent groups, pre-test/post-test design, with a total sample size of 64, to compare an occupational rehabilitation programme in Bangladesh with general hospital care. The rate of self-employment for the treatment group rose from 12% to 19% over the study period; in contrast, it decreased from 19% to 12% for the comparison group.

6.2.5 What effects do interventions to support adults with disabilities have on income?

Four studies addressed this sub-question (see Table 10.16, Appendix I); all utilised a single group pre-test/post-test design. Of these, one study (Finger et al., 2012) used logistic regression. Baseline samples ranged in size from 55 to 620. Three studies evaluated interventions for persons with physical disabilities and one focused on an intervention for the visually impaired. The direction of effect in all four studies was positive. Two studies (Finger et al., 2012; Shore & Juillerat, 2012) reported results of tests for statistical significance and indicated study findings were significant.

Physical impairments. Shore & Juillerat (2012) assessed the impact of providing free wheelchairs. At 12 months, the proportion of the total sample (across three different countries) reporting adequate income had increased from 42% to 52% ($\chi^2=19.741$, $p=0.000$). The authors also indicate that this change was driven mainly by large changes in India where those with adequate income increased from 12.6% to 23.4%. Metts & Oleson (1995) examined the impact of the Disabled persons Loan Scheme on net business income. The authors found that, on average, net monthly income increased by 58.3% (from 2035 to 3222 Kenyan Shillings per month). In their evaluation of a community-based rehabilitation programme for leprosy patients in India, Gershon & Srinivasan (1992) measured the average monthly income of patients before and after rehabilitation. They found that the percentage of those earning less than 200 Indian Rs. per month fell from 67% to 23%.

Visual impairments. Finger et al. (2012) assessed the impact of a cataract outreach service on household income. At one year, the proportion of the study sample reporting a monthly income of 0-1000 Indian Rupees (Rs.) decreased from 49% to 20% ($p<0.001$). Participants who had successful cataract surgery were significantly more likely to report a higher monthly household income one year after cataract surgery. For example, compared to the highest income category (>3000 Rs./month), participants were about five times less likely to report a monthly household income of 0-1000 Rs. (OR 0.22, 95% CI 0.08-0.62; $p = 0.004$).

6.2.6 What effects do interventions to support adults with disabilities have on number of hours worked?

One study addressed this sub-question (see Table 10.17 Appendix I). It evaluated an intervention for persons with physical impairments. The direction of effect was positive. The study did not report results of tests for statistical significance.

Physical impairments. Metts and Oleson (1995) used a single-group pre-test/post-test design to examine the Disabled persons Loan Scheme in Kenya. Based on a sample size of 55, the authors found an increase in the number of monthly hours worked by employees in the businesses owned by programme beneficiaries from 660 to 1700 hours.

6.3 WHAT DO THE STUDIES REPORT ABOUT VARIABILITY IN EFFECTS?

A further objective of this review was to examine variability of treatment effects, e.g., across interventions, settings and sub-groups (Review Objective 3). Seven of the 14 included studies provided relevant data (Biggeri et al., 2012; Eniola & Adebisi, 2007; Hansen et al., 2007; Metts & Oleson, 1995; Nuri et al., 2012; Pereira-Guizzo et al., 2012; Shore & Juillerat, 2012). The variables considered were gender, participants' size of business, impairment severity, type of intervention, and duration of follow-up. Overall, these seven studies were not sufficiently similar to detect meaningful differences in outcomes.

Three studies considered the influence of participants' gender on treatment effects. In their evaluation of an occupational rehabilitation programme in Bangladesh, Nuri et al. (2012) found that the proportion of participants who secured some form of employment was higher for females (71%) than for males (53%). In contrast, the group means in the study by Eniola and Adebisi (2007) of two therapeutic programmes in Nigeria suggest that the increase in employment was driven by males, although the authors noted that the difference was not statistically significant. As part of their assessment of the Disabled Persons Loan Scheme (DPLS) in Kenya, Metts & Oleson (1995) examined the influence of gender on net income and reported that women appeared to benefit more than men (74% increase for women compared with 33% for men), though men had higher net incomes than women, both before and after the loans.

One study examined whether participants' size of business made a difference (Metts & Oleson, 1995). The authors observed that the impacts of the DPLS on net income varied with participants' size of the business, with the smallest businesses (those earning less than 1000 Kenyan Shillings per month before the loan) experiencing the largest gains.

One study examined the influence of impairment severity. Hansen et al. (2007), in their study of occupational rehabilitation services in Bangladesh, found some evidence that wheelchair users may find re-employment more challenging compared to those who only depend on crutches ($p < 0.028$, $\chi^2 = 4.847$, $df = 1$).

One study considered whether type of intervention was important (Eniola & Adebisi, 2007). Two different types of therapeutic techniques were compared, with the pre-test/post-test group means suggesting that Emotional Intelligence had a more positive impact than Goal Setting (mean score increase of 10.2 compared with 2.9). However, a significant interaction was not found.

Two studies measured the effects of duration of follow-up. Biggeri et al. (2012) evaluated a CBR programme in India and found it had a small but significant effect on employment after two years implementation ($ATT = 0.05$, $SD = 0.014$, $t = 3.714$),

whereas the four-year effect on the same variable was around 16% (ATT=0.164, SD=0.035, t=4.638). In their study of the Program for the Development of Social Skills for the Work Environment in Brazil, Pereira-Guizzo et al. (2012) measured three different indicators of professional social skills several times over an eight-month period. In the follow-up assessments, both intervention groups maintained the improvements that were obtained through the programme (no data reported).

6.4 WHAT DOES THE QUALITATIVE EVIDENCE SAY?

Where available, qualitative data relating to people's observations, experiences and views about why the interventions they received did, or did not, work for them was drawn from the studies in an attempt to provide an explanation for the observed effects (Review Objective 4).

Three of the 14 included studies collected qualitative data to try to understand more fully why programmes achieve or fail to achieve an impact on labour market outcomes. The interventions in these studies were either targeted at individuals with physical impairments (Hansen et al. 2007; Shore & Juillerat, 2012) or open to those with any type of impairment (Nuri et al., 2012).

6.4.1 What were participants' observations, experiences and views about why the intervention they received had worked for them?

Two studies answered this question (Hansen et al., 2007; Nuri et al., 2012). Both examined occupational rehabilitations programmes managed by the same NGO in Bangladesh. The following factors were cited:

- General health & well-being (one study)
- Cooperation in the family/community (one study)
- Motivation (one study)
- Attitudes in the workplace (one study)
- Attitudes in the community (one study)
- Appropriateness of the training (one study)

6.4.2 What were participants' observations, experiences and views about why the intervention they received had not worked for them?

Three studies answered this question (Hansen et al. 2007; Nuri et al., 2012; Shore & Juillerat, 2012). Two studies examined occupational rehabilitations programmes in Bangladesh and one study evaluated the impact of providing manual wheelchairs to persons with mobility impairments in India and Vietnam. The following barriers to the success of the interventions were cited:

- Discriminatory attitudes of prospective employers (one study)
- Attitudes of family members and/or wider community (two studies)

- Health and well-being (one study)
- Physical inaccessibility (workplace and/or broader environment) (two studies)
- Lack of 'start-up' funds for self-employment (one study)
- Shortcomings of the training (i.e., mismatch between it and participant's skills, abilities and financial resources) (one study)
- Lack of education and skills (one study)
- Motivation (one study)

7 Conclusions

7.1 SUMMARY

In the past, the lack of data on people with disabilities living in LMICs has contributed to the invisibility of disability as a development priority. This is beginning to be addressed. While the Millennium Development Goals (MDGs) did not specifically mention disability, it is increasingly being recognised that the new post-MDG development agenda will be impossible to achieve without inclusion of people with disabilities. This systematic review examined the current evidence on the effectiveness of different interventions to improve the labour market participation of adults with disabilities in LMICs. The review scope covered a wide range of intervention strategies, populations, settings and evaluation designs. This allowed us to draw on a broader range of evidence.

Research in this area has received very little attention. Despite an extensive search, only 14 eligible impact evaluations published across the 20-year period 1992-2012 were identified. Not only is the total number of studies low, but there are also multiple sources of heterogeneity and specific knowledge gaps. As it was neither possible nor appropriate to conduct meta-analysis, we could not use statistical methods to detect programme effects and so we do not have a pooled estimate of effect. Results were examined narratively. The key findings are summarised below and are discussed further in section 7.2.

Geographical distribution. Studies were conducted in a limited range of LMICs (five countries in Asia, three in Africa and one in Latin America).

Impairment categories. Populations with all impairment types were represented in the impact assessments, although most were focused on persons with physical disabilities. People with sensory disabilities were substantially under-represented in the review; of particular note was the lack of any impact evaluations measuring outcomes specifically for people with hearing impairments. Many of the included studies investigated an intervention for people with a specific impairment or diagnosis.

Interventions. There are specific knowledge gaps. For example, the review found no evidence for interventions which focus on employers and none were targeted

solely at persons with hearing impairments. Many of the interventions were delivered for a short time-span and were relatively small-scale.

Outcome measures. The most commonly measured outcome was engagement in paid employment.

Study design. The type of evaluation design was quasi-experimental design with concurrent comparison group (five studies) or single-group pre-test/post-test (nine studies). Two studies used statistical methods to adjust for potentially confounding effects. Sample sizes ranged from one to over 500.

Risk of bias. Few studies addressed potential sources of bias and all were rated low quality overall.

Synthesis of results. In all 14 studies the direction of effect was positive for the outcome variables measured.

Effects on motivation to work. One study measured this outcome, and the direction of effect was positive and statistically significant.

- Eniola & Adebisi (2007) investigated two motivation skills interventions - emotional intelligence (EI) and goal setting (GS) therapeutic techniques - for visually impaired students in Nigeria.

Effects on professional social skills. One study measured this outcome, and the direction of effect was positive and statistically significant.

- Pereira-Guizzo et al. (2012) assessed the impact of the Program for the Development of Social Skills for the Work Environment on persons with any type of physical impairment in Brazil.

Effects on paid employment. Twelve studies measured this outcome, and the direction of effect was positive in all 12 studies. Three study reports presented results of tests for statistical significance and indicated study findings were significant.

- Seven studies evaluated different types of support for persons with physical disabilities, with five of the seven interventions designed for people with a specific impairment. These included provision of prostheses to lower limb amputees in Brazil (Guarino et al., 2007); manual wheelchair provision for persons with limited mobility in India and Vietnam (Shore & Juillerat, 2012); an occupational rehabilitation programme for spinal cord patients in Bangladesh (Hansen et al., 2007); a community-based rehabilitation programme for people affected by leprosy in India (Gershon & Srinivasan, 1992); and an occupational rehabilitation programme for persons with work injuries in China (Tang et al., 2011). Two programmes were available to persons with any type of physical impairment: the Disabled Persons Loan Scheme in Kenya (Metts & Oleson,

1995) and an occupational rehabilitation programme in Bangladesh (Momin, 2004).

- One study (Finger et al., 2012) focused on an intervention for the visually impaired. It evaluated a cataract outreach programme in India.
- Four studies (reported in three papers) evaluated four interventions that were open to individuals with any/multiple types of impairments. These included community-based rehabilitation programmes in India (Biggeri et al., 2012), Zimbabwe (Lagerkvist, 1992) and the Philippines (Lagerkvist, 1992), and an occupational rehabilitation programme in Bangladesh (Nuri et al., 2012).

Effects on self-employment. Two studies measured this outcome, and the direction of effect in both studies was positive. Neither study reported results of tests for statistical significance.

- Both studies evaluated interventions open to persons with any type of physical impairment. These included the Disabled Persons Loan Scheme in Kenya (Metts & Oleson, 1995) and an occupational rehabilitation programme in Bangladesh (Momin, 2004).

Effects on income. Four studies measured this outcome, and the direction of effect in all four studies was positive. Two study reports presented results of tests for statistical significance and indicated study findings were significant.

- Three studies evaluated interventions designed for persons with physical disabilities. Of these, two were for people with a specific impairment: a community-based rehabilitation programme (CBR) for people affected by leprosy in India (Gershon & Srinivasan, 1992) and manual wheelchair provision in India and Vietnam Chile (Shore & Juillerat, 2012). One programme was available to persons with any type of physical impairment: the Disabled Persons Loan Scheme in Kenya (Metts & Oleson, 1995).
- One study (Finger et al., 2012) focused on an intervention for the visually impaired. It evaluated a cataract outreach programme in India.

Effects on hours worked. One study measured this outcome, and the direction of effect was positive. The study did not report results of tests for statistical significance.

- Metts and Oleson (1995) evaluated the Disabled Persons Loan Scheme for persons in Kenya with any type of physical impairment.

Other findings. Seven of the 14 included studies explored variation in treatment effects. The variables considered were gender, participants' size of business, impairment severity, type of intervention, and duration of follow-up. Overall, these seven studies were not sufficiently similar to detect meaningful differences in

outcomes. Three of the 14 included studies collected qualitative data to try to understand why programmes achieve, or fail to achieve, an impact on labour market outcomes. However, none provided sufficiently rich descriptions of participants' experiences.

7.2 DISCUSSION AND CONCLUSIONS

Many existing international development reviews contain only a small number of studies (Waddington et al., 2012), and our preliminary searches suggested this was likely to be the case for the area in which we were working. Therefore, to avoid an empty, or near-empty, review we did two things. First, we set the quality threshold bar low a priori and included uncontrolled before-and-after studies. Second, the review was intentionally broad in scope, involving a range of different intervention strategies, populations and geographical settings. Rather than set the question around a discrete intervention, any intervention with the potential to help adults with disabilities in the labour market was eligible for inclusion in the review. The review scope also extended to two of the main impairment categories, physical and sensory, and all LMICs as currently defined by the World Bank. Yet, despite the broad review scope, and an extensive search for published and unpublished studies, only 14 eligible impact evaluations were identified. Furthermore, they were conducted in a limited range of LMICs. Only five countries in Asia, three in Africa and one in Latin America were represented: three were low-income economies (Bangladesh, Kenya, Zimbabwe), four were lower-middle income (India, Nigeria, Philippines, Vietnam), and two were upper-middle income (Brazil, China). We are not aware of any on-going primary studies.

Populations with all impairment types were represented in the impact assessments, although most were focused on persons with physical impairments. Some groups of disabled people were under-represented in the review. No impact evaluations of intervention designed specifically for persons with hearing impairments were identified. Disabled women are particularly disadvantaged in the labour market, experiencing exclusion on account of both their gender and their disability. However, no interventions specifically targeted at women were identified. Also important is the distinction between those who are disabled during childhood and those who are disabled later in life, after entering work, since they face very different labour market issues (Baldwin & Johnson, 2001). The first group may face discrimination in education and upon entry to work, whereas the second group can be affected by discrimination when returning to work after illness. One included study investigated a programme aimed at returning injured workers to employment, but none of the other interventions we reviewed took timing of disability onset into consideration.

While over recent decades there has been a paradigm shift in the way disability rights are treated, with policy-makers now focusing on how to make society more inclusive of people with disabilities, this is not reflected in the review. First, the

interventions we found are predominantly individual-focused, with only the CBR programmes attempting to tackle the environment that leads to the disadvantage that people with disabilities experience. Second, we did not identify any disability inclusive mainstream policy, programmes or services, which may suggest that NGOs and other funders are not yet supporting this approach to disability inclusion in LMICs and/or such efforts have yet to be subject to impact assessment. Also, existing impact evaluations are skewed towards certain types of interventions, while evaluation of other types has lagged. Therefore, they cannot be generalised to the population of programmes in existence. As of April 2011, 99 of the 147 signatories had ratified the Convention on the Rights of Persons with Disabilities, and many LMICs now have anti-discrimination and other disability-specific laws. In spite of this, the review identified no evaluations of regulations, legislation or policy frameworks. According to the WHO, CBR is currently implemented in over 90 countries throughout the world to address the needs of people with disabilities and their family members. Yet, despite 'livelihood' being one of the five strands in the systematic framework developed by the WHO for organising and analysing CBR activities, only four impact evaluations have measured employment outcomes over a twenty-year period. Although CBR often involves a component of raising public awareness of disability issues, no separate impact evaluations of awareness campaigns were identified. Our review reaffirms the findings of Borg et al. (2011) that the scarce literature on assistive devices and technology is dominated by product-oriented research on leg prostheses and manual wheelchairs. There is a particular lack of evidence on interventions to increase hearing or vision capacities, including hearing aids, visual aids, and specialised computer software and hardware. Further gaps in the evidence base include impact assessments of accommodations in the workplace, such as installation of ramps or flexible working practices, and financial grants and microfinance programmes.

There are numerous methodological inconsistencies and weaknesses in the current evidence base. On the whole, the designs and size of the included studies are inadequate for determining causal effects. Few studies addressed potential sources of bias, and even basic tests of statistical significance were often not reported. The majority based their conclusions on before-and-after assessments. Several studies used self-report data with only a few verifying retrospective information in records. Most of the studies were relatively small-scale. Where impact assessments were carried out on a sample of programme beneficiaries, convenience sampling was often used.

Our assessment shows that the current evidence base to support programmes aiming at increased participation of people with disabilities in the labour market is scarce. There is some limited evidence to suggest that therapeutic interventions, such as cataract surgery, and occupational rehabilitation programmes can be effective in increasing rates of employment, self-employment and higher income for people with disabilities. Likewise, the use of assistive devices, such as prostheses and manual wheelchairs may lead to higher chances of work (re)entry and higher

income. Therapeutic techniques and social skills programmes may increase disabled people's motivation to work and improve their professional social skills. Community-based rehabilitation programmes may improve employment participation, while disabled people's loan schemes may positively affect employment, self-employment, working hours and incomes. However, while consistency in the direction of effects provides some evidence of an improvement in labour market outcomes, this needs to be treated with extreme caution. The overall paucity of research in this area, together with specific gaps and methodological limitations, mean that drawing strong inferences from the findings of this body of literature is not recommended.

A further objective was to explore the extent to which there are important differences in the results of these studies, and likely explanatory factors for such differences. Ideally we want to be able to discuss the effectiveness of an intervention within specific target groups, defined by age, gender, type and severity of impairment and so forth. In addition, we set out to explore participants' observations, experiences and views about why the intervention they received had or had not worked for them. However, as our review of the literature identified only a limited number of low quality studies addressing these questions, this limited any meaningful synthesis of study findings.

This is an area of study where rigorous impact evaluation does not exist, and even those using less credible methodologies are scarce. Our findings support earlier claims about the dearth of literature examining the impacts of labour market supports for people with disabilities in LMICs (Andrysek, 2010; Borg et al., 2011; Iemmi et al., 2012; Mitra & Sambamoorthi, 2006; Velema et al., 2008). Where improvements in outcomes were observed in individual studies it was extremely difficult to assess the extent to which these were directly attributable to the interventions. We cannot say with any certainty whether persons with disabilities can improve their labour market situation as a result of the interventions reviewed, nor who is most likely to benefit and who will not. The overall conclusion of the review is that the existing body of evidence about the impact of labour markets supports for people with disabilities is inconclusive.

7.3 STRENGTHS AND LIMITATIONS OF THIS REVIEW

A major strength of this study is its application of systematic review principles to improve upon prior work. The involvement of representatives from Sightsavers at all stages of the review process was invaluable for ensuring the relevance of the review. A major limitation is the scarcity of high quality research evidence to inform decision-making in this area.

This systematic review had additional limitations, as indeed any broad review of complex interventions is likely to have. Although steps were taken to minimise publication and study selection bias, there may be studies missing from the review.

First, although eligibility was not limited to studies written in English, language bias was not fully avoided, as the literature search involved searching only a limited range of non-English language databases and we did not include search terms in other languages. Second, the very broad scope of this review may have resulted in missing studies. Broadening review scope has advantages in allowing policymakers to select the most effective intervention relative to their context, and enabling generalisability to be assessed across a wider range of contexts, study populations and behaviours (Shadish et al., 2002; Waddington et al., 2012). However, broad reviews place demands on, and may even compromise, the search process. In this review, we did not set the question around a single type of intervention, nor impairment category, and so a large number of terms was required for the search query. Particular problems arose over the term ‘disabled’ and the diverse nature of health conditions leading to disability. It was challenging employing broad search terms because the number of references returned became unmanageable. The searches were both time-consuming and cumbersome to manage, and eventually it was necessary to request support from ProQuest staff as the searches timed out before they were fully executed. Despite our best efforts, it is possible that, due to the review’s broad scope, the full coverage of relevant search terms were not identified and/or used, leading to missed studies.

7.4 IMPLICATIONS

The overarching aim of this review was to provide an evidence base for policy development. Given the limitations of the existing evidence base, however, drawing out the implications for policy-makers and other stakeholders is challenging. The available evidence comes from a small number of studies implemented in a few settings, at a small scale, over a relatively short period of time and from evaluations using methods open to a high degree of bias. Based on this evidence we cannot definitively conclude what interventions are likely to work, for whom, and where. There is an urgent need for investment in high quality impact evaluations of interventions to support participation of people with disabilities in the labour market in low- and middle-income countries.

The overall paucity of research in this area, together with specific gaps and methodological limitations, affirm the need for strengthening the evidence base. There is an urgent need to invest in research which rigorously evaluates a broader range of interventions, in particular specific legislations and policies, a spectrum of educational and skills development programmes, and employer sensitisation and awareness raising campaigns. There is a need for studies from a broader range of countries and settings and targeting different sub-groups of people with disabilities, in particular adults with hearing impairments. Reviews of the effectiveness of interventions are available for high-income countries and more analytical work is needed to examine both the extent to which these interventions are transferrable to LMICs and the characteristics of the labour markets that determine the differences

between high-income countries and LMICs. There is a need to develop scales to measure the effects that are appropriate for LMICs and for longer-term outcome measurements. Future analyses should include issues of impairment type and severity, otherwise they risk under-estimating the complexity of factors involved. Acting on these suggestions will require the various stakeholders, including national governments, academic institutions, development donors, and implementing NGOs, taking a critical look at the opportunities and barriers affecting research production and dissemination in this area.

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10 Appendix I: Additional Tables

10.1 LIST OF ABBREVIATIONS

AIDS	acquired immunodeficiency syndrome
ASSIA	Applied Social Sciences Index and Abstracts
CBR	community-based rehabilitation
COPD	chronic obstructive pulmonary disease
CRPD	Convention on the Rights of Persons with Disabilities
DFID	Department for International Development
ESRC	Economic and Social Research Council
ERIC	Education Resources Information Centre
GLADNET	Global Applied Disability Research and Information Network on Employment and Training
HIV	human immunodeficiency virus
IBSS	International Bibliography of the Social Sciences
ICF	International Classification of Functioning, Disability and Health
ILO	International Labour Organization
LMIC	Low- and middle-income country
MDG	Millennium Development Goal
OECD	Organisation for Economic Cooperation and Development
RTW	return-to-work
UN	United Nations
UNDP	United Nations Development Programme
WHO	World Health Organization

10.2 WORLD BANK LIST OF ECONOMIES

	Low-income economies	Lower-middle income economies	Upper-middle income economies
Europe and Central Asia	Kyrgyz Republic, Tajikistan	Armenia, Georgia, Kosovo, Moldova, Ukraine, Uzbekistan	Albania, Azerbaijan, Belarus, Bosnia and Herzegovina, Bulgaria, Hungary, Kazakhstan, Macedonia FYR, Montenegro, Romania, Serbia, Turkey, Turkmenistan
South Asia	Afghanistan, Bangladesh, Nepal	Bhutan, India, Pakistan, Sri Lanka	Maldives
Middle East and North Africa		Djibouti, Egypt, Morocco, Syrian Arab Republic, West Bank and Gaza, Yemen	Algeria, Iran, Iraq, Jordan, Lebanon, Libya, Tunisia
East Asia and Pacific	Cambodia, Democratic Republic of Korea, Myanmar	Indonesia, Kiribati, Lao PDR, Micronesia, Mongolia, Papua New Guinea, Philippines, Samoa, Solomon Islands, Timor-Leste, Vanuatu, Vietnam	American Samoa, China, Fiji, Malaysia, Marshall Islands, Palau, Thailand, Tonga, Tuvalu
Sub Saharan Africa	Benin, Burkina Faso, Burundi, Central African Republic, Chad, Comoros, Democratic Republic of Congo, Eritrea, Ethiopia, The Gambia, Guinea, Guinea-Bissau, Kenya, Liberia, Madagascar, Malawi, Mali, Mozambique, Niger, Rwanda, Sierra Leone, Somalia, South Sudan, Tanzania, Togo, Uganda, Zimbabwe	Cameroon, Cape Verde, Republic of Congo, Côte d'Ivoire (Ivory Coast), Ghana, Lesotho, Mauritania, Nigeria, São Tomé and Príncipe, Senegal, Sudan, Swaziland, Zambia	Angola, Botswana, Gabon, Mauritius, Namibia, Seychelles, South Africa
Latin America and Caribbean	Haiti	Bolivia, El Salvador, Guatemala, Guyana, Honduras, Nicaragua, Paraguay	Argentina, Belize, Brazil, Colombia, Costa Rica, Cuba, Dominica, Dominican Republic, Ecuador, Grenada, Jamaica, Mexico, Panama, Peru, St. Lucia, St. Vincent and the Grenadines, Suriname, Venezuela

Fiscal year 2013-2014, ending on June 30 2014

<http://data.worldbank.org/about/country-classifications/country-and-lending-groups>

10.3 GENERAL BIBLIOGRAPHIC DATABASES SEARCHED

Databases	Platform
ASSIA (Applied Social Sciences Index and Abstracts)	ProQuest
Business Source Premier	EBSCO
Econlit	EBSCO
ERIC (Education Resources Information Centre)	ProQuest
IBSS (International Bibliography of the Social Sciences)	ProQuest
Medline	ProQuest
PsycINFO	EBSCO
Web of Science (core collection): <ul style="list-style-type: none">• Science Citation Index Expanded• Social Sciences Citation Index• Arts and Humanities Citation Index• Conference Proceedings Citation Index (Science)• Conference Proceedings Citation Index (Social Science and Humanities)	Web of Knowledge (WoK)
Social Services Abstracts	ProQuest
Sociological Abstracts	ProQuest

10.4 DATABASE SEARCH TERMS

ASSIA (PROQUEST)

CONCEPT: POPULATION (DISABILITY)

1. SU.EXACT.EXPLODE("Disabled young women" OR "Disabled middle aged women" OR "Disabled women" OR "Disabled men" OR "Multiply disabled women" OR "Low income disabled people" OR "Multiply disabled people" OR "Disabled young people" OR "Sensory impaired young people" OR "Disabled young adults" OR "Visually impaired people" OR "Visually impaired young people" OR "Back injured people" OR "Blind people" OR "Blind-Deaf people" OR "Deaf people" OR "Disfigured people" OR "Facially disfigured people" OR "Hearing impaired people" OR "Housebound people" OR "Amputees" OR "Blindness" OR "Eye diseases" OR "Eye injuries" OR "River blindness" OR "Visual impairment" OR "Deafness" OR "Occupational deafness" OR "Hearing impairment" OR "Occupational hearing impairment" OR "Functional impairment" OR "Impairment" OR "Sensory impairment" OR "Limb deficiencies" OR "Amputation" OR "Chronic back pain" OR "Long term back pain" OR "Chronic pain" OR "Industrial injuries" OR "Injuries" OR "Chronic sickness" OR "Long term sickness" OR "Physical sickness")
2. TI,AB(deafness OR blindness OR asthma* OR epilep* OR "cerebral pals*" OR "spina bifida" OR "muscular dystroph*" OR arthriti* OR spondylitis OR musculoskeletal OR "musculo-skeletal" OR "muscular abnormalit*" OR "skeletal abnormalit*" OR "limb abnormalit*" OR "brain injur*" OR "head injur*" OR "burn injur*" OR amputee* OR amputat* OR clubfoot OR polio* OR paraplegi* OR paralyz* OR paralyz* OR hemiplegi* OR diabet* OR leprosy OR "HIV" OR "AIDS" OR "multiple sclerosis" OR disfigurement* OR respiratory OR cardiac OR orthopaedic* OR orthopedic* OR osteo* OR cardio*)
3. TI,AB(sensory OR visual* OR vision OR eye* OR sight) NEAR/3
SU,TI,AB(impair* OR defic* OR disab* OR handicap* OR loss* OR disorder*)
4. TI,AB(hearing OR acoustic OR ear OR ears) NEAR/3 SU,TI,AB(impair* OR defic* OR disab* OR handicap* OR loss* OR disorder*)
5. TI,AB(physical*) NEAR/3 SU,TI,AB(disab* OR impair* OR disorder* OR defic* OR handicap*)
6. TI,AB(disab* OR handicap* OR deaf* OR blind*) NEAR/3 SU,TI,AB(adult* OR person* OR people OR student* OR individual* OR women OR woman OR men OR man OR youth* OR worker*)

CONCEPT: INTERVENTIONS

7. SU,TI,AB("hearing therapy" OR "speech therapy" OR "occupational therapy" OR "physical therapy" OR "exercise therapy" OR "health program*" OR "community health" OR "medical service*" OR "health promotion" OR "occupational health" OR "assistive technolog*" OR "sensory aid*" OR "self-help device*" OR "sensory training" OR "technology education" OR "technical education" OR "vocational education" OR "post-secondary education" OR "postsecondary education" OR "special education" OR "business education" OR "job training" OR "inservice training" OR "in-service training" OR "supported employment" OR "employment service*")
8. SU,TI,AB("employment support*" OR "vocational rehabilitation" OR "occupational rehabilitation" OR "work* rehabilitation" OR "vocational

guidance" OR "training support*" OR legislation OR "financial polic*" OR "educational polic*" OR "financial support*" OR grant* OR "educational voucher*" OR "community service*" OR "community program*" OR advocacy OR intervention* OR "assistive device*" OR "cash transfer*" OR "micro finance" OR "micro credit" OR loan* OR "awareness campaign*" OR "awareness raising*" OR transport* OR "community based rehabilitation" OR "CBR" OR "entrepreneur* training" OR "self help group*" OR "self-help group*" OR "empowerment group*" OR "workplace adjustment*" OR "workplace accommodation*" OR "disease management" OR apprenticeship*)

CONCEPT: COUNTRY

9. SU.EXACT(EXPLODE("Former communist countries")) OR SU.EXACT("Least developed countries") OR SU.EXACT("Developing countries") OR SU.EXACT("Caribbean countries") OR SU.EXACT("Low income countries") OR SU.EXACT("Former socialist countries") OR SU.EXACT("Socialist countries" OR "Newly industrialized nations"))

10. TI,AB(Africa OR Asia OR Caribbean OR "West Indies" OR "South America" OR "Latin America" OR "Central America" or Afghanistan OR Albania OR Algeria OR Angola OR Antigua OR Barbuda OR Argentina OR Armenia OR Aruba OR Azerbaijan OR Bahrain OR Bangladesh OR Barbados OR Benin OR Byelarus OR Byelorussian OR Belarus OR Belorussian OR Belorussia OR Belize OR Bhutan OR Bolivia OR Bosnia OR Herzegovina OR Hercegovina OR Botswana OR Brasil OR Brazil OR Bulgaria OR "Burkina Faso" OR "Burkina Fasso" OR "Upper Volta" OR Burundi OR Urundi OR Cambodia OR "Khmer Republic" OR Kampuchea OR Cameroon OR Camerons OR Cameron OR Camerons OR "Cape Verde" OR "Central African Republic" OR Chad OR Chile OR China OR Colombia OR Comoros OR "Comoro Islands" OR Comores OR Mayotte OR Congo OR Zaire OR "Costa Rica" OR "Cote d'Ivoire" OR "Ivory Coast" OR Croatia OR Cuba OR Cyprus OR Czechoslovakia OR "Czech Republic" OR Slovakia OR "Slovak Republic" OR Djibouti OR "French Somaliland" OR Dominica OR "Dominican Republic" OR "East Timor" OR "East Timur" OR "Timor Leste" OR Ecuador OR Egypt OR "United Arab Republic" OR "El Salvador" OR Eritrea OR Estonia OR Ethiopia OR Fiji OR Gabon OR "Gabonese Republic" OR Gambia OR Gaza OR Georgia OR Ghana OR "Gold Coast" OR Greece OR Grenada OR Guatemala OR Guinea OR Guam OR Guiana OR Guyana OR Haiti OR Honduras OR Hungary OR India OR Maldives OR Indonesia OR Iran OR Iraq OR Jamaica OR Jordan OR Kazakhstan OR Kazakh OR Kenya OR Kiribati OR Korea OR Kosovo OR Kyrgyzstan OR Kirghizia OR "Kyrgyz Republic" OR Kirghiz OR Kirgizstan OR "Lao PDR" OR Laos OR Latvia OR Lebanon OR Lesotho OR Basutoland OR Liberia OR Libya OR Lithuania OR Macedonia OR Madagascar OR "Malagasy Republic" OR Malaysia OR Malaya OR Malay OR Sabah OR Sarawak OR Malawi OR Nyasaland OR Mali OR Malta OR "Marshall Islands" OR Mauritania OR Mauritius OR "Agalega Islands" OR Mexico OR Micronesia OR "Middle East" OR Moldova OR Moldovia OR Mongolia OR Montenegro OR Morocco OR Ifni OR Mozambique OR Myanmar OR Myanma OR Burma OR Namibia OR Nepal OR "Netherlands Antilles" OR "New Caledonia" OR Nicaragua OR Niger OR Nigeria OR "Northern Mariana Islands" OR Oman OR Muscat OR Pakistan OR Palau OR Palestine OR Panama OR Paraguay OR Peru OR Philippines OR Philipines OR Phillipines OR Phillippines OR Poland OR Portugal OR "Puerto Rico" OR Romania OR Rumania OR Roumania OR Russia OR Russian OR Rwanda OR Ruanda OR "Saint Kitts" OR "St Kitts" OR Nevis OR "Saint Lucia" OR "St Lucia" OR "Saint Vincent" OR "St Vincent" OR Grenadines OR Samoa OR "Samoan Islands" OR "Navigator Island" OR "Navigator Islands" OR "Sao Tome" OR "Saudi Arabia" OR Senegal OR Serbia OR Montenegro OR Seychelles OR "Sierra Leone" OR Slovenia OR "Sri Lanka" OR Ceylon OR "Solomon Islands" OR Somalia OR

Sudan OR Suriname OR Surinam OR Swaziland OR Syria OR Tajikistan OR Tadjhikistan OR Tadjikistan OR Tadjhik OR Tanzania OR Thailand OR Togo OR "Togolese Republic" OR Tonga OR Trinidad OR Tobago OR Tunisia OR Turkey OR Turkmenistan OR Turkmen OR Uganda OR Ukraine OR Uruguay OR "USSR" OR "Soviet Union" OR "Union of Soviet Socialist Republics" OR Uzbekistan OR Uzbek OR Vanuatu OR "New Hebrides" OR Venezuela OR Vietnam OR "Viet Nam" OR "West Bank" OR Yemen OR Yugoslavia OR Zambia OR Zimbabwe OR Rhodesia OR "LMIC" OR "LMICs" OR "third world" OR "transitional country" OR "transitional countries")

11. TI,AB(developing OR "less* developed" OR "least developed" OR "under developed" OR underdeveloped OR "middle income" OR "low* income" OR underserved OR "under served" OR deprived OR poor*) NEAR/2 SU,TI,AB(country OR countries OR nation OR nations OR world OR economy OR economies)
12. TI,AB(low*) NEAR/2 SU,TI,AB("gross domestic" OR "gross national" OR "GDP" OR "GNP")
13. #1 OR #2 OR #3 OR #4 OR #5 OR #6
14. #7 OR #8
15. #9 OR #10 OR #11 OR #12
16. #13 AND #14 AND #15

ERIC (PROQUEST)

CONCEPT: POPULATION (DISABILITY)

1. SU.EXACT.EXPLODE("Visually Impaired Mobility") OR SU.EXACT.EXPLODE("Visual Impairments") OR SU.EXACT.EXPLODE(Blindness) OR SU.EXACT.EXPLODE("Hearing Impairments") OR SU.EXACT.EXPLODE("Deaf Blind") OR SU.EXACT.EXPLODE(Deafness) OR SU.EXACT.EXPLODE("Partial Hearing") OR SU.EXACT.EXPLODE("Speech Impairments") OR SU.EXACT.EXPLODE("Articulation Impairments") OR SU.EXACT.EXPLODE("Voice Disorders") OR SU.EXACT.EXPLODE("Communication Disorders") OR SU.EXACT.EXPLODE(Aphasia) OR SU.EXACT.EXPLODE("Physical Disabilities") OR SU.EXACT.EXPLODE("Physical Mobility") OR SU.EXACT.EXPLODE("Chronic Illness") OR SU.EXACT.EXPLODE(Injuries) OR SU.EXACT.EXPLODE("Congenital Impairments") OR SU.EXACT.EXPLODE ("Neurological Impairments") OR SU.EXACT.EXPLODE("Occupational Diseases") OR SU.EXACT.EXPLODE("Communicable Diseases") OR SU.EXACT.EXPLODE("Acquired Immunodeficiency Syndrome (AIDS)") OR SU.EXACT.EXPLODE(Epilepsy) OR SU.EXACT.EXPLODE("Cerebral Palsy") OR SU.EXACT.EXPLODE(Diabetes) OR SU.EXACT.EXPLODE("Head Injuries") OR SU.EXACT.EXPLODE(Autism) OR SU.EXACT.EXPLODE("Multiple Disabilities") OR SU.EXACT.EXPLODE("Mild Disabilities") OR SU.EXACT.EXPLODE("Special Health Problems") OR SU.EXACT.EXPLODE("Health Conditions")
2. TI,AB(deafness OR blindness OR asthma* OR epilep* OR "cerebral pals*" OR "spina bifida" OR "muscular dystroph*" OR arthriti* OR spondylitis OR

musculoskeletal OR "musculo-skeletal" OR "muscular abnormalit*" OR "skeletal abnormalit*" OR "limb abnormalit*" OR "brain injur*" OR "head injur*" OR "burn injur*" OR amputee* OR amputat* OR clubfoot OR polio* OR paraplegi* OR paralys* OR paralyz* OR hemiplegi* OR diabet* OR leprosy OR "HIV" OR "AIDS" OR "multiple sclerosis" OR disfigurement* OR respiratory OR cardiac OR orthopaedic* OR orthopedic* OR osteo* OR cardio*)

3. TI,AB(sensory OR visual* OR vision OR eye* OR sight) NEAR/3 SU, TI, AB(impair* OR defic* OR disab* OR handicap* OR loss* OR disorder*)
4. TI, AB(hearing OR acoustic OR ear OR ears) NEAR/3 SU, TI, AB(impair* OR defic* OR disab* OR handicap* OR loss* OR disorder*)
5. TI, AB(physical*) NEAR/3 SU, TI, AB(disab* OR impair* OR disorder* OR defic* OR handicap*)
6. TI, AB(disab* OR handicap* OR deaf* OR blind*) NEAR/3 SU, TI, AB(adult* OR person* OR people OR student* or individual* OR women OR woman OR men OR man OR youth* OR worker*)

CONCEPT: INTERVENTIONS

7. SU.EXACT.EXPLODE("Hearing Therapy" OR "Health Programs" OR "Physical Therapy" OR "Community Health Services" OR "Medical Services" OR "Speech Therapy" OR "Health Promotion" OR "Access to Health Care" OR "Health Services" OR "Occupational Therapy" OR "Assistive Technology" OR "Sensory Aids" OR "Sensory Training" OR "Technology Education" OR "Technical Education" OR "Trade and Industrial Education" OR "Adult Vocational Education" OR "Off the Job Training" OR "Postsecondary Education" OR "Vocational Education" OR "Job Training" OR "On the Job Training" OR "Supported Employment" OR "Employment Services" OR "Outplacement Services (Employment)" OR "Vocational Rehabilitation" OR "Legislation" OR "Financial Policy" OR "Laws" OR "Educational Policy" OR "Business Education" OR "Financial Support" OR "Grants" OR "Educational Vouchers" OR "Community Services" OR "Community Based Instruction (Disabilities)" OR "Community Programs" OR "Advocacy" OR "Intervention" OR "Program Evaluation" OR "Program Effectiveness")
8. SU, TI, AB("assistive device*" OR "cash transfer*" OR "micro finance" OR "micro credit" OR "micro loan*" OR "awareness campaign*" OR "awareness raising*" OR transport* OR "community based rehabilitation" OR "CBR" OR "entrepreneurial training" OR "self help group*" OR "self-help group*" OR "empowerment group*" OR "workplace adjustment*" OR "workplace accommodation*" OR "disease management" OR apprenticeship*)

CONCEPT: COUNTRY

9. SU.EXACT.EXPLODE("Developing Nations")
10. TI, AB(Africa OR Asia OR Caribbean OR "West Indies" OR "South America" OR "Latin America" OR "Central America" or Afghanistan OR Albania OR Algeria OR Angola OR Antigua OR Barbuda OR Argentina OR Armenia OR Aruba OR Azerbaijan OR Bahrain OR Bangladesh OR Barbados OR Benin OR Byelarus OR Byelorussian OR Belarus OR Belorussian OR Belorussia OR Belize OR Bhutan OR Bolivia OR Bosnia OR Herzegovina OR Hercegovina OR Botswana OR Brasil OR Brazil OR Bulgaria OR "Burkina Faso" OR "Burkina Fasso" OR "Upper Volta" OR Burundi OR Urundi OR Cambodia OR "Khmer Republic" OR Kampuchea OR Cameroon OR Cameroons OR Cameron OR Camerons OR "Cape Verde" OR "Central African Republic" OR Chad OR Chile OR China OR

Colombia OR Comoros OR "Comoro Islands" OR Comores OR Mayotte OR Congo OR Zaire OR "Costa Rica" OR "Cote d'Ivoire" OR "Ivory Coast" OR Croatia OR Cuba OR Cyprus OR Czechoslovakia OR "Czech Republic" OR Slovakia OR "Slovak Republic" OR Djibouti OR "French Somaliland" OR Dominica OR "Dominican Republic" OR "East Timor" OR "East Timur" OR "Timor Leste" OR Ecuador OR Egypt OR "United Arab Republic" OR "El Salvador" OR Eritrea OR Estonia OR Ethiopia OR Fiji OR Gabon OR "Gabonese Republic" OR Gambia OR Gaza OR Georgia OR Ghana OR "Gold Coast" OR Greece OR Grenada OR Guatemala OR Guinea OR Guam OR Guiana OR Guyana OR Haiti OR Honduras OR Hungary OR India OR Maldives OR Indonesia OR Iran OR Iraq OR Jamaica OR Jordan OR Kazakhstan OR Kazakh OR Kenya OR Kiribati OR Korea OR Kosovo OR Kyrgyzstan OR Kirghizia OR "Kyrgyz Republic" OR Kirghiz OR Kirgizstan OR "Lao PDR" OR Laos OR Latvia OR Lebanon OR Lesotho OR Basutoland OR Liberia OR Libya OR Lithuania OR Macedonia OR Madagascar OR "Malagasy Republic" OR Malaysia OR Malaya OR Malay OR Sabah OR Sarawak OR Malawi OR Nyasaland OR Mali OR Malta OR "Marshall Islands" OR Mauritania OR Mauritius OR "Agalega Islands" OR Mexico OR Micronesia OR "Middle East" OR Moldova OR Moldovia OR Mongolia OR Montenegro OR Morocco OR Ifni OR Mozambique OR Myanmar OR Myanma OR Burma OR Namibia OR Nepal OR "Netherlands Antilles" OR "New Caledonia" OR Nicaragua OR Niger OR Nigeria OR "Northern Mariana Islands" OR Oman OR Muscat OR Pakistan OR Palau OR Palestine OR Panama OR Paraguay OR Peru OR Philippines OR Philipines OR Phillipines OR Phillippines OR Poland OR Portugal OR "Puerto Rico" OR Romania OR Rumania OR Roumania OR Russia OR Russian OR Rwanda OR Ruanda OR "Saint Kitts" OR "St Kitts" OR Nevis OR "Saint Lucia" OR "St Lucia" OR "Saint Vincent" OR "St Vincent" OR Grenadines OR Samoa OR "Samoan Islands" OR "Navigator Island" OR "Navigator Islands" OR "Sao Tome" OR "Saudi Arabia" OR Senegal OR Serbia OR Montenegro OR Seychelles OR "Sierra Leone" OR Slovenia OR "Sri Lanka" OR Ceylon OR "Solomon Islands" OR Somalia OR Sudan OR Suriname OR Surinam OR Swaziland OR Syria OR Tajikistan OR Tadzhiistan OR Tadjikistan OR Tadjhik OR Tanzania OR Thailand OR Togo OR "Togolese Republic" OR Tonga OR Trinidad OR Tobago OR Tunisia OR Turkey OR Turkmenistan OR Turkmen OR Uganda OR Ukraine OR Uruguay OR "USSR" OR "Soviet Union" OR "Union of Soviet Socialist Republics" OR Uzbekistan OR Uzbek OR Vanuatu OR "New Hebrides" OR Venezuela OR Vietnam OR "Viet Nam" OR "West Bank" OR Yemen OR Yugoslavia OR Zambia OR Zimbabwe OR Rhodesia OR "LMIC" OR "LMICs" OR "third world" OR "transitional country" OR "transitional countries")

11. TI,AB(developing OR "less* developed" OR "least developed" OR "under developed" OR underdeveloped OR "middle income" OR "low* income" OR underserved OR "under served" OR deprived OR poor*) NEAR/2
SU, TI,AB(country OR countries OR nation OR nations OR world OR economy OR economies)
12. TI,AB(low*) NEAR/2 SU, TI,AB("gross domestic" OR "gross national" OR "GDP" OR "GNP")
13. #1 OR #2 OR #3 OR #4 OR #5 OR #6
14. #7 OR #8
15. #9 OR #10 OR #11 OR #12
16. #13 AND #14 AND #15

IBSS (PROQUEST)

CONCEPT: POPULATION (DISABILITY)

1. SU.EXACT.EXPLODE("disabled persons" OR "disabled workers" OR "physically disabled" OR blindness OR deafness OR injuries OR illness)
2. TI,AB(deafness OR blindness)
3. TI,AB(sensory OR visual* OR vision OR eye* OR sight) NEAR/2 TI,AB(impair* OR defec* OR disab* OR handicap* OR loss* OR disorder*)
4. TI,AB(hearing) NEAR/2 TI,AB(impair* OR defec* OR disab* OR handicap* OR loss* OR disorder*)
5. TI,AB(physical* OR mobility) NEAR/2 TI,AB(disab* OR impair* OR disorder* OR defec* OR handicap*)
6. TI,AB(disab* OR handicap* OR deaf* OR blind*) NEAR/2 TI,AB(adult* OR person* OR people OR student* or individual* OR women OR woman OR men OR man OR youth* OR worker*)

CONCEPT: INTERVENTIONS

7. SU,TI,AB("hearing therapy" OR "speech therapy" OR "occupational therapy" OR "physical therapy" OR "exercise therapy" OR "health program*" OR "community health" OR "medical service*" OR "health promotion" OR "occupational health" OR "assistive technolog*" OR "sensory aid*" OR "self-help device*" OR "sensory training" OR "technology education" OR "technical education" OR "vocational education" OR "post-secondary education" OR "postsecondary education" OR "special education" OR "business education" OR "job training" OR "inservice training" OR "in-service training" OR "supported employment" OR "employment service*")
8. SU,TI,AB("employment support*" OR "vocational rehabilitation" OR "occupational rehabilitation" OR "work* rehabilitation" OR "vocational guidance" OR "training support*" OR legislation OR "financial polic*" OR "educational polic*" OR "financial support*" OR grant* OR "educational voucher*" OR "community service*" OR "community program*" OR advocacy OR intervention* OR "assistive device*" OR "cash transfer*" OR "micro finance" OR "micro credit" OR loan* OR "awareness campaign*" OR "awareness raising*" OR transport* OR "community based rehabilitation" OR "CBR" OR "entrepreneur* training" OR "self help group*" OR "self-help group*" OR "empowerment group*" OR "workplace adjustment*" OR "workplace accommodation*" OR "disease management" OR apprenticeship*)

CONCEPT: COUNTRY

9. SU.EXACT.EXPLODE("developing countries" OR "less developed countries" or "Newly industrializing countries")
10. TI,AB(Africa OR Asia OR Caribbean OR "West Indies" OR "South America" OR "Latin America" OR "Central America" or Afghanistan OR Albania OR Algeria OR Angola OR Antigua OR Barbuda OR Argentina OR Armenia OR Aruba OR Azerbaijan OR Bahrain OR Bangladesh OR Barbados OR Benin OR Byelarus OR Byelorussian OR Belarus OR Belorussian OR Belorussia OR Belize OR Bhutan OR Bolivia OR Bosnia OR Herzegovina OR Hercegovina OR Botswana OR Brasil OR Brazil OR Bulgaria OR "Burkina Faso" OR "Burkina Fasso" OR "Upper

Volta" OR Burundi OR Urundi OR Cambodia OR "Khmer Republic" OR Kampuchea OR Cameroon OR Cameroons OR Cameron OR Camerons OR "Cape Verde" OR "Central African Republic" OR Chad OR Chile OR China OR Colombia OR Comoros)

11. TI,AB("Comoro Islands" OR Comores OR Mayotte OR Congo OR Zaire OR "Costa Rica" OR "Cote d'Ivoire" OR "Ivory Coast" OR Croatia OR Cuba OR Cyprus OR Czechoslovakia OR "Czech Republic" OR Slovakia OR "Slovak Republic" OR Djibouti OR "French Somaliland" OR Dominica OR "Dominican Republic" OR "East Timor" OR "East Timur" OR "Timor Leste" OR Ecuador OR Egypt OR "United Arab Republic" OR "El Salvador" OR Eritrea OR Estonia OR Ethiopia OR Fiji OR Gabon OR "Gabonese Republic" OR Gambia OR Gaza OR Georgia OR Ghana OR "Gold Coast" OR Greece OR Grenada OR Guatemala OR Guinea OR Guam OR Guiana OR Guyana OR Haiti OR Honduras)
12. TI,AB(Hungary OR India OR Maldives OR Indonesia OR Iran OR Iraq OR Jamaica OR Jordan OR Kazakhstan OR Kazakh OR Kenya OR Kiribati OR Korea OR Kosovo OR Kyrgyzstan OR Kirghizia OR "Kyrgyz Republic" OR Kirghiz OR Kirgizstan OR "Lao PDR" OR Laos OR Latvia OR Lebanon OR Lesotho OR Basutoland OR Liberia OR Libya OR Lithuania OR Macedonia OR Madagascar)
13. TI,AB("Malagasy Republic" OR Malaysia OR Malaya OR Malay OR Sabah OR Sarawak OR Malawi OR Nyasaland OR Mali OR Malta OR "Marshall Islands" OR Mauritania OR Mauritius OR "Agalega Islands" OR Mexico OR Micronesia OR "Middle East" OR Moldova OR Moldovia OR Mongolia OR Montenegro OR Morocco OR Ifni OR Mozambique OR Myanmar OR Myanma OR Burma OR Namibia OR Nepal OR "Netherlands Antilles" OR "New Caledonia" OR Nicaragua OR Niger OR Nigeria OR "Northern Mariana Islands" OR Oman OR Muscat OR Pakistan OR Palau OR Palestine OR Panama OR Paraguay OR Peru OR Philippines OR Philipines OR Phillipines OR Phillippines OR Poland OR Portugal OR "Puerto Rico" OR Romania OR Rumania OR Roumania OR Russia OR Russian OR Rwanda OR Ruanda OR "Saint Kitts" OR "St Kitts" OR Nevis OR "Saint Lucia")
14. TI,AB("St Lucia" OR "Saint Vincent" OR "St Vincent" OR Grenadines OR Samoa OR "Samoan Islands" OR "Navigator Island" OR "Navigator Islands" OR "Sao Tome" OR "Saudi Arabia" OR Senegal OR Serbia OR Montenegro OR Seychelles OR "Sierra Leone" OR Slovenia OR "Sri Lanka" OR Ceylon OR "Solomon Islands" OR Somalia OR Sudan OR Suriname OR Surinam OR Swaziland OR Syria OR Tajikistan OR Tadzhikistan OR Tadjikistan OR Tadjhik OR Tanzania OR Thailand OR Togo OR "Togolese Republic" OR Tonga OR Trinidad OR Tobago OR Tunisia OR Turkey OR Turkmenistan OR Turkmen OR Uganda OR Ukraine OR Uruguay OR "USSR" OR "Soviet Union" OR "Union of Soviet Socialist Republics" OR Uzbekistan OR Uzbek OR Vanuatu OR "New Hebrides" OR Venezuela OR Vietnam OR "Viet Nam" OR "West Bank" OR Yemen OR Yugoslavia OR Zambia OR Zimbabwe OR Rhodesia OR "LMIC" OR "LMICs" OR "third world" OR "transitional country" OR "transitional countries")
15. TI,AB(developing OR "less* developed" OR "least developed" OR "under developed" OR underdeveloped OR "middle income" OR "low* income") NEAR/2 TI,AB(country OR countries OR nation OR nations OR world OR economy OR economies)
16. TI,AB(low*) NEAR/2 TI,AB("gross domestic" OR "gross national" OR "GDP" OR "GNP")
17. #1 OR #2 OR #3 OR #4 OR #5 OR #6

18. #7 OR #8

19. #9 OR #10 OR #11 OR #12 OR #13 OR 14 OR #15 OR #16

20. #17 AND #18 AND #19

MEDLINE (PROQUEST)

CONCEPT: POPULATION (DISABILITY)

1. MESH.EXACT.EXPLODE("Hearing Impaired Persons") OR
MESH.EXACT.EXPLODE("Visually Impaired Persons") OR
MESH.EXACT.EXPLODE("Amputees") OR MESH.EXACT.EXPLODE("Hearing
Loss") OR MESH.EXACT.EXPLODE("Hearing Disorders") OR
MESH.EXACT.EXPLODE("Deaf-Blind Disorders") OR
MESH.EXACT.EXPLODE("Vision Disorders") OR
MESH.EXACT.EXPLODE("Blindness") OR
MESH.EXACT.EXPLODE("Deafness") OR MESH.EXACT.EXPLODE("chronic
disease")
2. TI,AB(physical* OR mobility) NEAR/2 TI,AB(disab* OR impair* OR disorder*
OR defic* OR handicap*)
3. TI,AB(disab* OR handicap* OR deaf* OR blind*) NEAR/2 TI,AB(adult* OR
person* OR people OR student* or individual* OR women OR woman OR men
OR man or youth* OR worker*)

CONCEPT: INTERVENTIONS

4. MESH.EXACT.EXPLODE("Exercise Therapy") OR
MESH.EXACT.EXPLODE("Community Health Services") OR
MESH.EXACT.EXPLODE("Speech Therapy") OR
MESH.EXACT.EXPLODE("Health Promotion") OR
MESH.EXACT.EXPLODE("Occupational Therapy") OR
MESH.EXACT.EXPLODE("Occupational Health Services") OR
MESH.EXACT.EXPLODE("Sensory Art Therapies") OR
MESH.EXACT.EXPLODE("Sensory Aids") OR MESH.EXACT.EXPLODE("Self-
Help Devices") OR MESH.EXACT.EXPLODE("Communication Aids for
Disabled") OR MESH.EXACT.EXPLODE("Wheelchairs") OR
MESH.EXACT.EXPLODE("Competency-Based Education") OR
MESH.EXACT.EXPLODE("Education, Special") OR
MESH.EXACT.EXPLODE("Education of Visually Disabled") OR
MESH.EXACT.EXPLODE("Education of Hearing Disabled") OR
MESH.EXACT.EXPLODE("Employment, Supported") OR
MESH.EXACT.EXPLODE("Vocational Education") OR
MESH.EXACT.EXPLODE("Vocational Guidance") OR
MESH.EXACT.EXPLODE("Rehabilitation, Vocational") OR
MESH.EXACT.EXPLODE("Inservice Training") OR
MESH.EXACT.EXPLODE("Legislation") OR
MESH.EXACT.EXPLODE("Financial Support") OR
MESH.EXACT.EXPLODE("Financing, Organized") OR
MESH.EXACT.EXPLODE("Training Support") OR
MESH.EXACT.EXPLODE("Self-Help Groups") OR
MESH.EXACT.EXPLODE("Disease Management") OR
MESH.EXACT.EXPLODE("Intervention Studies") OR
MESH.EXACT.EXPLODE("Comparative Effectiveness Research")

5. TI,AB("assistive device*" OR "cash transfer*" OR "micro finance" OR "micro credit" OR "micro loan*" OR "awareness campaign*" OR "awareness raising*" OR transport* OR "community based rehabilitation" OR "CBR" OR "entrepreneurial training" OR "empowerment group*" OR "workplace adjustment*" OR "workplace accommodation*" OR apprenticeship*)

CONCEPT: COUNTRY

6. MESH.EXACT.EXPLODE("Developing Countries")
7. TI,AB(Africa OR Asia OR Caribbean OR "West Indies" OR "South America" OR "Latin America" OR "Central America" or Afghanistan OR Albania OR Algeria OR Angola OR Antigua OR Barbuda OR Argentina OR Armenia OR Aruba OR Azerbaijan OR Bahrain OR Bangladesh OR Barbados OR Benin OR Byelarus OR Byelorussian OR Belarus OR Belorussian OR Belorussia OR Belize OR Bhutan OR Bolivia OR Bosnia OR Herzegovina OR Hercegovina OR Botswana OR Brasil OR Brazil OR Bulgaria OR "Burkina Faso" OR "Burkina Fasso" OR "Upper Volta" OR Burundi OR Urundi OR Cambodia OR "Khmer Republic" OR Kampuchea OR Cameroon OR Camerouns OR Cameron OR Camerons OR "Cape Verde" OR "Central African Republic" OR Chad OR Chile OR China OR Colombia OR Comoros OR "Comoro Islands" OR Comores OR Mayotte OR Congo OR Zaire OR "Costa Rica" OR "Cote d'Ivoire" OR "Ivory Coast" OR Croatia OR Cuba OR Cyprus OR Czechoslovakia OR "Czech Republic" OR Slovakia OR "Slovak Republic" OR Djibouti OR "French Somaliland" OR Dominica OR "Dominican Republic" OR "East Timor" OR "East Timur" OR "Timor Leste" OR Ecuador OR Egypt OR "United Arab Republic" OR "El Salvador" OR Eritrea OR Estonia OR Ethiopia OR Fiji OR Gabon OR "Gabonese Republic" OR Gambia OR Gaza OR Georgia OR Ghana OR "Gold Coast" OR Greece OR Grenada OR Guatemala)
8. TI,AB(Guinea OR Guam OR Guiana OR Guyana OR Haiti OR Honduras OR Hungary OR India OR Maldives OR Indonesia OR Iran OR Iraq OR Jamaica OR Jordan OR Kazakhstan OR Kazakh OR Kenya OR Kiribati OR Korea OR Kosovo OR Kyrgyzstan OR Kirghizia OR "Kyrgyz Republic" OR Kirghiz OR Kirgizstan OR "Lao PDR" OR Laos OR Latvia OR Lebanon OR Lesotho OR Basutoland OR Liberia OR Libya OR Lithuania OR Macedonia OR Madagascar OR "Malagasy Republic" OR Malaysia OR Malaya OR Malay OR Sabah OR Sarawak OR Malawi OR Nyasaland OR Mali OR Malta OR "Marshall Islands" OR Mauritania OR Mauritius)
9. TI,AB("Agalega Islands" OR Mexico OR Micronesia OR "Middle East" OR Moldova OR Moldovia OR Mongolia OR Montenegro OR Morocco OR Ifni OR Mozambique OR Myanmar OR Myanma OR Burma OR Namibia OR Nepal OR "Netherlands Antilles" OR "New Caledonia" OR Nicaragua OR Niger OR Nigeria OR "Northern Mariana Islands" OR Oman OR Muscat OR Pakistan OR Palau OR Palestine OR Panama OR Paraguay OR Peru OR Philippines OR Philipines OR Phillipines OR Poland OR Portugal OR "Puerto Rico" OR Romania OR Rumania OR Roumania)
10. TI,AB(Russia OR Russian OR Rwanda OR Ruanda OR "Saint Kitts" OR "St Kitts" OR Nevis OR "Saint Lucia" OR "St Lucia" OR "Saint Vincent" OR "St Vincent" OR Grenadines OR Samoa OR "Samoan Islands" OR "Navigator Island" OR "Navigator Islands" OR "Sao Tome" OR "Saudi Arabia" OR Senegal OR Serbia OR Montenegro OR Seychelles OR "Sierra Leone" OR Slovenia OR "Sri Lanka" OR Ceylon OR "Solomon Islands" OR Somalia OR Sudan OR Suriname OR Surinam OR Swaziland OR Syria OR Tajikistan OR Tadzhhikistan OR Tadjikistan OR Tadzhhik OR Tanzania OR Thailand OR Togo OR "Togolese Republic" OR Tonga OR Trinidad OR Tobago OR Tunisia OR Turkey OR Turkmenistan OR Turkmen OR Uganda OR Ukraine OR Uruguay OR "USSR" OR "Soviet Union")

OR "Union of Soviet Socialist Republics" OR Uzbekistan OR Uzbek OR Vanuatu
OR "New Hebrides" OR Venezuela OR Vietnam OR "Viet Nam" OR "West Bank"
OR Yemen OR Yugoslavia OR Zambia OR Zimbabwe OR Rhodesia OR "LMIC"
OR "LMICs" OR "third world" OR "transitional country" OR "transitional
countries")

11. TI,AB(developing OR "less* developed" OR "least developed" OR "under
developed" OR underdeveloped OR "middle income" OR "low* income" OR
underserved OR "under served" OR deprived OR poor*) NEAR/2 TI,AB(country
OR countries OR nation OR nations OR world OR economy OR economies)
12. TI,AB(low*) NEAR/2 TI,AB("gross domestic" OR "gross national" OR "GDP" OR
"GNP")
13. #1 OR #2 OR #3
14. #4 OR #5
15. #6 OR #7 OR #8 OR #9 OR #10 OR #11 OR #12
16. #13 AND #14 AND #15

SOCIOLOGICAL ABSTRACTS (PROQUEST)

CONCEPT: POPULATION (DISABILITY)

1. SU.EXACT.EXPLODE("Physically Handicapped" OR "Physical Abnormalities"
OR "Disability recipients" OR "Congenitally handicapped" OR "Chronic illness"
OR deaf OR blind)
2. TI,AB(deafness OR blindness OR asthma* OR epilep* OR "cerebral pals*" OR
"spina bifida" OR "muscular dystroph*" OR arthriti* OR spondylitis OR
musculoskeletal OR "musculo-skeletal" OR "muscular abnormalit*" OR "skeletal
abnormalit*" OR "limb abnormalit*" OR "brain injur*" OR "head injur*" OR
"burn injur*" OR amputee* OR amputat* OR clubfoot OR polio* OR paraplegi*
OR paralyz* OR paralyz* OR hemiplegi* OR diabet* OR leprosy OR "HIV" OR
"AIDS" OR "multiple sclerosis" OR disfigurement* OR respiratory OR cardiac
OR orthopaedic* OR orthopedic* OR osteo* OR cardio*)
3. TI,AB(sensory OR visual* OR vision OR eye* OR sight) NEAR/3
SU,TI,AB(impair* OR defic* OR disab* OR handicap* OR loss* OR disorder*)
4. TI,AB(hearing OR acoustic OR ear OR ears) NEAR/3 SU,TI,AB(impair* OR
defic* OR disab* OR handicap* OR loss* OR disorder*)
5. TI,AB(physical*) NEAR/3 SU,TI,AB(disab* OR impair* OR disorder* OR defic*
OR handicap*)
6. TI,AB(disab* OR handicap* OR deaf* OR blind*) NEAR/3 SU,TI,AB(adult* OR
person* OR people OR student* or individual* OR women OR woman OR men
OR man OR youth* OR worker*)

CONCEPT: INTERVENTIONS

7. SU,TI,AB("hearing therapy" OR "speech therapy" OR "occupational therapy" OR
"physical therapy" OR "exercise therapy" OR "health program*" OR "community
health" OR "medical service*" OR "health promotion" OR "occupational health"

OR "assistive technolog*" OR "sensory aid*" OR "self-help device*" OR "sensory training" OR "technology education" OR "technical education" OR "vocational education" OR "post-secondary education" OR "postsecondary education" OR "special education" OR "business education" OR "job training" OR "inservice training" OR "in-service training" OR "supported employment" OR "employment service*")

8. SU, TI, AB("employment support*" OR "vocational rehabilitation" OR "occupational rehabilitation" OR "work* rehabilitation" OR "vocational guidance" OR "training support*" OR legislation OR "financial polic*" OR "educational polic*" OR "financial support*" OR grant* OR "educational voucher*" OR "community service*" OR "community program*" OR advocacy OR intervention* OR "assistive device*" OR "cash transfer*" OR "micro finance" OR "micro credit" OR loan* OR "awareness campaign*" OR "awareness raising*" OR transport* OR "community based rehabilitation" OR "CBR" OR "entrepreneur* training" OR "self help group*" OR "self-help group*" OR "empowerment group*" OR "workplace adjustment*" OR "workplace accommodation*" OR "disease management" OR apprenticeship*)

CONCEPT: COUNTRY

9. SU.EXACT.EXPLODE("Developing Countries")
10. TI, AB(Africa OR Asia OR Caribbean OR "West Indies" OR "South America" OR "Latin America" OR "Central America" OR Afghanistan OR Albania OR Algeria OR Angola OR Antigua OR Barbuda OR Argentina OR Armenia OR Aruba OR Azerbaijan OR Bahrain OR Bangladesh OR Barbados OR Benin OR Byelarus OR Byelorussian OR Belarus OR Belorussian OR Belorussia OR Belize OR Bhutan OR Bolivia OR Bosnia OR Herzegovina OR Hercegovina OR Botswana OR Brasil OR Brazil OR Bulgaria OR "Burkina Faso" OR "Burkina Fasso" OR "Upper Volta" OR Burundi OR Urundi OR Cambodia OR "Khmer Republic" OR Kampuchea OR Cameroon OR Cameroons OR Cameron OR Camerons OR "Cape Verde" OR "Central African Republic" OR Chad OR Chile OR China OR Colombia OR Comoros OR "Comoro Islands" OR Comores OR Mayotte OR Congo OR Zaire OR "Costa Rica" OR "Cote d'Ivoire" OR "Ivory Coast" OR Croatia OR Cuba OR Cyprus OR Czechoslovakia OR "Czech Republic" OR Slovakia OR "Slovak Republic" OR Djibouti OR "French Somaliland" OR Dominica OR "Dominican Republic" OR "East Timor" OR "East Timur" OR "Timor Leste" OR Ecuador OR Egypt OR "United Arab Republic" OR "El Salvador" OR Eritrea OR Estonia OR Ethiopia OR Fiji OR Gabon OR "Gabonese Republic" OR Gambia OR Gaza OR Georgia OR Ghana OR "Gold Coast" OR Greece OR Grenada OR Guatemala OR Guinea OR Guam OR Guiana OR Guyana OR Haiti OR Honduras OR Hungary OR India OR Maldives OR Indonesia OR Iran OR Iraq OR Jamaica OR Jordan OR Kazakhstan OR Kazakh OR Kenya OR Kiribati OR Korea OR Kosovo OR Kyrgyzstan OR Kirghizia OR "Kyrgyz Republic" OR Kirghiz OR Kirgizstan OR "Lao PDR" OR Laos OR Latvia OR Lebanon OR Lesotho OR Basutoland OR Liberia OR Libya OR Lithuania OR Macedonia OR Madagascar OR "Malagasy Republic" OR Malaysia OR Malaya OR Malay OR Sabah OR Sarawak OR Malawi OR Nyasaland OR Mali OR Malta OR "Marshall Islands" OR Mauritania OR Mauritius OR "Agalega Islands" OR Mexico OR Micronesia OR "Middle East" OR Moldova OR Moldovia OR Mongolia OR Montenegro OR Morocco OR Ifni OR Mozambique OR Myanmar OR Myanma OR Burma OR Namibia OR Nepal OR "Netherlands Antilles" OR "New Caledonia" OR Nicaragua OR Niger OR Nigeria OR "Northern Mariana Islands" OR Oman OR Muscat OR Pakistan OR Palau OR Palestine OR Panama OR Paraguay OR Peru OR Philippines OR Philipines OR Phillipines OR Phillippines OR Poland OR Portugal OR "Puerto Rico" OR Romania OR Rumania OR Roumania OR Russia OR Russian OR Rwanda OR Ruanda OR

"Saint Kitts" OR "St Kitts" OR Nevis OR "Saint Lucia" OR "St Lucia" OR "Saint Vincent" OR "St Vincent" OR Grenadines OR Samoa OR "Samoa Islands" OR "Navigator Island" OR "Navigator Islands" OR "Sao Tome" OR "Saudi Arabia" OR Senegal OR Serbia OR Montenegro OR Seychelles OR "Sierra Leone" OR Slovenia OR "Sri Lanka" OR Ceylon OR "Solomon Islands" OR Somalia OR Sudan OR Suriname OR Surinam OR Swaziland OR Syria OR Tajikistan OR Tadjhikistan OR Tadjikistan OR Tadjhik OR Tanzania OR Thailand OR Togo OR "Togolese Republic" OR Tonga OR Trinidad OR Tobago OR Tunisia OR Turkey OR Turkmenistan OR Turkmen OR Uganda OR Ukraine OR Uruguay OR "USSR" OR "Soviet Union" OR "Union of Soviet Socialist Republics" OR Uzbekistan OR Uzbek OR Vanuatu OR "New Hebrides" OR Venezuela OR Vietnam OR "Viet Nam" OR "West Bank" OR Yemen OR Yugoslavia OR Zambia OR Zimbabwe OR Rhodesia OR "LMIC" OR "LMICs" OR "third world" OR "transitional country" OR "transitional countries")

11. TI,AB(developing OR "less* developed" OR "least developed" OR "under developed" OR underdeveloped OR "middle income" OR "low* income" OR underserved OR "under served" OR deprived OR poor*) NEAR/2
SU, TI, AB(country OR countries OR nation OR nations OR world OR economy OR economies)
12. TI, AB(low*) NEAR/2 SU, TI, AB("gross domestic" OR "gross national" OR "GDP" OR "GNP")
13. #1 OR #2 OR #3 OR #4 OR #5 OR #6
14. #7 OR #8
15. #9 OR #10 OR #11 OR #12
16. #13 AND #14 AND #15

SOCIAL SERVICES ABSTRACTS (PROQUEST)

CONCEPT: POPULATION (DISABILITY)

1. SU.EXACT.EXPLODE("Physically Handicapped" OR "Physical Abnormalities" OR "Disability recipients" OR "Congenitally handicapped" OR "Chronic illness" OR deaf OR blind)
2. TI, AB(deafness OR blindness OR asthma* OR epilep* OR "cerebral pals*" OR "spina bifida" OR "muscular dystroph*" OR arthriti* OR spondylitis OR musculoskeletal OR "musculo-skeletal" OR "muscular abnormalit*" OR "skeletal abnormalit*" OR "limb abnormalit*" OR "brain injur*" OR "head injur*" OR "burn injur*" OR amputee* OR amputat* OR clubfoot OR polio* OR paraplegi* OR paralys* OR paralyz* OR hemiplegi* OR diabet* OR leprosy OR "HIV" OR "AIDS" OR "multiple sclerosis" OR disfigurement* OR respiratory OR cardiac OR orthopaedic* OR orthopedic* OR osteo* OR cardio*)
3. TI, AB(sensory OR visual* OR vision OR eye* OR sight) NEAR/3
SU, TI, AB(impair* OR defic* OR disab* OR handicap* OR loss* OR disorder*)
4. TI, AB(hearing OR acoustic OR ear OR ears) NEAR/3 SU, TI, AB(impair* OR defic* OR disab* OR handicap* OR loss* OR disorder*)
5. TI, AB(physical*) NEAR/3 SU, TI, AB(disab* OR impair* OR disorder* OR defic* OR handicap*)

6. TI,AB(disab* OR handicap* OR deaf* OR blind*) NEAR/3 SU,TI,AB(adult* OR person* OR people OR student* or individual* OR women OR woman OR men OR man OR youth* OR worker*)

CONCEPT: INTERVENTIONS

7. SU,TI,AB("hearing therapy" OR "speech therapy" OR "occupational therapy" OR "physical therapy" OR "exercise therapy" OR "health program*" OR "community health" OR "medical service*" OR "health promotion" OR "occupational health" OR "assistive technolog*" OR "sensory aid*" OR "self-help device*" OR "sensory training" OR "technology education" OR "technical education" OR "vocational education" OR "post-secondary education" OR "postsecondary education" OR "special education" OR "business education" OR "job training" OR "inservice training" OR "in-service training" OR "supported employment" OR "employment service*")
8. SU,TI,AB("employment support*" OR "vocational rehabilitation" OR "occupational rehabilitation" OR "work* rehabilitation" OR "vocational guidance" OR "training support*" OR legislation OR "financial polic*" OR "educational polic*" OR "financial support*" OR grant* OR "educational voucher*" OR "community service*" OR "community program*" OR advocacy OR intervention* OR "assistive device*" OR "cash transfer*" OR "micro finance" OR "micro credit" OR loan* OR "awareness campaign*" OR "awareness raising*" OR transport* OR "community based rehabilitation" OR "CBR" OR "entrepreneur* training" OR "self help group*" OR "self-help group*" OR "empowerment group*" OR "workplace adjustment*" OR "workplace accommodation*" OR "disease management" OR apprenticeship*)

CONCEPT: COUNTRY

9. SU.EXACT.EXPLODE("Developing Countries")
10. TI,AB(Africa OR Asia OR Caribbean OR "West Indies" OR "South America" OR "Latin America" OR "Central America" or Afghanistan OR Albania OR Algeria OR Angola OR Antigua OR Barbuda OR Argentina OR Armenia OR Aruba OR Azerbaijan OR Bahrain OR Bangladesh OR Barbados OR Benin OR Byelarus OR Byelorussian OR Belarus OR Belorussian OR Belorussia OR Belize OR Bhutan OR Bolivia OR Bosnia OR Herzegovina OR Hercegovina OR Botswana OR Brasil OR Brazil OR Bulgaria OR "Burkina Faso" OR "Burkina Fasso" OR "Upper Volta" OR Burundi OR Urundi OR Cambodia OR "Khmer Republic" OR Kampuchea OR Cameroon OR Cameroons OR Cameron OR Camerons OR "Cape Verde" OR "Central African Republic" OR Chad OR Chile OR China OR Colombia OR Comoros OR "Comoro Islands" OR Comores OR Mayotte OR Congo OR Zaire OR "Costa Rica" OR "Cote d'Ivoire" OR "Ivory Coast" OR Croatia OR Cuba OR Cyprus OR Czechoslovakia OR "Czech Republic" OR Slovakia OR "Slovak Republic" OR Djibouti OR "French Somaliland" OR Dominica OR "Dominican Republic" OR "East Timor" OR "East Timur" OR "Timor Leste" OR Ecuador OR Egypt OR "United Arab Republic" OR "El Salvador" OR Eritrea OR Estonia OR Ethiopia OR Fiji OR Gabon OR "Gabonese Republic" OR Gambia OR Gaza OR Georgia OR Ghana OR "Gold Coast" OR Greece OR Grenada OR Guatemala OR Guinea OR Guam OR Guiana OR Guyana OR Haiti OR Honduras OR Hungary OR India OR Maldives OR Indonesia OR Iran OR Iraq OR Jamaica OR Jordan OR Kazakhstan OR Kazakh OR Kenya OR Kiribati OR Korea OR Kosovo OR Kyrgyzstan OR Kirghizia OR "Kyrgyz Republic" OR Kirghiz OR Kirgizstan OR "Lao PDR" OR Laos OR Latvia OR Lebanon OR Lesotho OR Basutoland OR Liberia OR Libya OR Lithuania OR Macedonia OR Madagascar OR "Malagasy Republic" OR Malaysia OR Malaya OR Malay OR Sabah OR Sarawak OR Malawi OR Nyasaland OR Mali OR Malta

OR "Marshall Islands" OR Mauritania OR Mauritius OR "Agalega Islands" OR Mexico OR Micronesia OR "Middle East" OR Moldova OR Moldavia OR Mongolia OR Montenegro OR Morocco OR Ifni OR Mozambique OR Myanmar OR Myanma OR Burma OR Namibia OR Nepal OR "Netherlands Antilles" OR "New Caledonia" OR Nicaragua OR Niger OR Nigeria OR "Northern Mariana Islands" OR Oman OR Muscat OR Pakistan OR Palau OR Palestine OR Panama OR Paraguay OR Peru OR Philippines OR Philipines OR Phillipines OR Phillippines OR Poland OR Portugal OR "Puerto Rico" OR Romania OR Rumania OR Roumania OR Russia OR Russian OR Rwanda OR Ruanda OR "Saint Kitts" OR "St Kitts" OR Nevis OR "Saint Lucia" OR "St Lucia" OR "Saint Vincent" OR "St Vincent" OR Grenadines OR Samoa OR "Samoan Islands" OR "Navigator Island" OR "Navigator Islands" OR "Sao Tome" OR "Saudi Arabia" OR Senegal OR Serbia OR Montenegro OR Seychelles OR "Sierra Leone" OR Slovenia OR "Sri Lanka" OR Ceylon OR "Solomon Islands" OR Somalia OR Sudan OR Suriname OR Surinam OR Swaziland OR Syria OR Tajikistan OR Tadzihikistan OR Tadjikistan OR Tadzhihik OR Tanzania OR Thailand OR Togo OR "Togolese Republic" OR Tonga OR Trinidad OR Tobago OR Tunisia OR Turkey OR Turkmenistan OR Turkmen OR Uganda OR Ukraine OR Uruguay OR "USSR" OR "Soviet Union" OR "Union of Soviet Socialist Republics" OR Uzbekistan OR Uzbek OR Vanuatu OR "New Hebrides" OR Venezuela OR Vietnam OR "Viet Nam" OR "West Bank" OR Yemen OR Yugoslavia OR Zambia OR Zimbabwe OR Rhodesia OR "LMIC" OR "LMICs" OR "third world" OR "transitional country" OR "transitional countries")

11. TI,AB(developing OR "less* developed" OR "least developed" OR "under developed" OR underdeveloped OR "middle income" OR "low* income" OR underserved OR "under served" OR deprived OR poor*) NEAR/2
SU,TI,AB(country OR countries OR nation OR nations OR world OR economy OR economies)
12. TI,AB(low*) NEAR/2 SU,TI,AB("gross domestic" OR "gross national" OR "GDP" OR "GNP")
13. #1 OR #2 OR #3 OR #4 OR #5 OR #6
14. #7 OR #8
15. #9 OR #10 OR #11 OR #12
16. #13 AND #14 AND #15

10.5 SPECIALIST BIBLIOGRAPHIC DATABASES AND LIBRARY CATALOGUES

Specialist databases	Link
3ie RIEPS (Register of Impact Evaluation Published Studies)	http://www.3ieimpact.org/en/evidence/impact-evaluations/
Abdul Latif Jameel Poverty Action Lab (J-PAL)	http://www.povertyactionlab.org/
AfricaBib: Africana Periodical Literature Bibliographic Database	www.africabib.org/africa.html
African Journals OnLine (AJOL)	www.ajol.info/
Bangladesh Journals Online (BanglaJOL)	www.banglajol.info/
Bioline International	www.bioline.org.br/
British Library for Development Studies (BLDS)	http://blds.ids.ac.uk/
Center for International Rehabilitation Research Information and Exchange (CIRRIE) Database of International Rehabilitation Research	http://cirrie.buffalo.edu/database/
Cochrane Library	http://onlinelibrary.wiley.com/cochranelibrary/search/
Department for International Development (DFID) Research for Development (R4D) database	http://r4d.dfid.gov.uk/
Global Applied Disability Research and Information Network on Employment and Training (GLADNET)	http://digitalcommons.ilr.cornell.edu/gladnetcollect/
Hrcak	http://hrcak.srce.hr/index.php
IDEAS RePEc (<i>Research Papers in Economics</i>) database	http://ideas.repec.org/
International Foundation of Applied Disability Research (FIRAH)	http://www.firah.org/centre-ressources/en/base-documentaire.html
International Labour Organization (ILO) Library	http://labordoc.ilo.org/
Innovations for Poverty Action (IPA)	http://www.poverty-action.org/work/publications
JOLIS library catalogue - International Monetary Fund, World Bank and International Finance Corporation	http://jolis.worldbankimflib.org/e-nljolis.htm
Nepal Journals OnLine (NepJOL)	www.nepjol.info/
OECD iLibrary	http://www.oecd-ilibrary.org/
OpenGrey	www.opengrey.eu/
Philippines Journals OnLine (PhilJOL)	www.philjol.info/philjol/index.php
REHABDATA (NARIC/NIDRR)	http://www.naric.com/?q=REHABDATA
Scientific and Technical Egyptian Bibliographic Database (STEB)	www.sti.sci.eg/enstinetdatabases.htm

Social Science Research Network (SSRN) eLibrary Database	http://papers.ssrn.com/sol3/DisplayAbstractSearch.cfm
Source (International Online Resource Centre on Disability and Inclusion)	http://asksource.ids.ac.uk/bibliographic.htm
UNESCO-UNEVOC Online Library (International Centre for Technical and Vocational Education and Training)	http://www.unevoc.unesco.org/go.php?q=UNEVOC+Publications&lang=en&unevoc=0&akt=&q=&id=&st=adv
VET-Bib European Centre for the development of vocational training (CEDEFOP)	http://libserver.cedefop.europa.eu/F?RN=100966697
VOCEDplus (National Centre for Vocational Education Research)	www.voced.edu.au/
WHO Global Health Library <ul style="list-style-type: none"> • Regional Indexes AIM (AFRO), LILACS (AMRO/PAHO), IMEMR (EMRO), IMSEAR (SEARO), WPRIM (WPRO) • Global Index Regional Indexes, WHOLIS (KMS), SciELO 	http://www.globalhealthlibrary.net/php/index.php
World Bank <i>Development Impact Evaluation</i> (DIME) Initiative	http://web.worldbank.org/WBSITE/EXTERNAL/EXTDEC/EXTDEV/EXTDEVI/0,,contentMDK:21553788~pagePK:64168445~piPK:64168309~theSitePK:3998212,00.html
World Bank Independent Evaluation Group (IEG)	http://ieq.worldbank.org/
Youth Employment Inventory	http://www.youth-employment-inventory.org/

10.6 WEBSITES/GATEWAYS

Websites	Links
AbleData	http://www.abledata.com/abledata.cfm?pageid=160164&ksectionid=160164
African Development Bank (AfDB)	http://www.afdb.org/en/
African Studies Centre, University of Lieden	http://www.ascleiden.nl/
African Population and Health Research Centre (APHRC)	http://www.aphrc.org/
Agence Française de Développement (AFD)	http://www.afd.fr/lang/en/home
Amici di Raoul Follereau (AIFO)	http://www.aifo.it/english/index.html
Asian Development Bank (ABD)	http://www.adb.org/
Atlas Alliance	http://www.atlas-alliansen.no/index.asp?id=26033
Australian Disability and Development Consortium (ADDC)	http://www.addc.org.au/
Australian Agency for International Development (AusAID)	http://www.usaid.gov.au/Pages/Publications-and-Research.aspx
Canadian International Development Agency (CIDA)	http://search-recherche.gc.ca/rGs/s_r?st=s&num=10&st1rt=0&langs=eng&cdn=cida
Caribbean Development Bank (CDB)	http://www.caribank.org/publications-and-resources
CBM	http://www.cbmuk.org.uk/
Centre for Disability and Rehabilitation Studies (Kwame Nkrumah University of Science & Technology, Ghana)	http://www.knust.edu.gh/pages/index.php?siteid=knust
Centre for Eye Research (Australia)	http://www.cera.org.au/home
Centre for Global Health, Trinity College Dublin (Ireland)	http://www.global-health.tcd.ie/
Centre for Rehabilitation Studies, Stellenbosch University (South Africa)	http://sun025.sun.ac.za/portal/page/portal/Health_Sciences/English/Departments/Interdisciplinary_Health_Sciences/CENTRE_OF_REHABILITATION_STUDIES/General
Disability Archive UK	http://www.leeds.ac.uk/disability-studies/archiveuk/
Disability Aid Abroad	http://disabilityaidabroad.net/
Disability INformation Resources (DINF)	http://www.dinf.ne.jp/doc/english/index_e.html
Economic Commission for Latin America and the Caribbean (ECLAC/CEPAL)	http://www.cepal.org/default.asp?idioma=IN
Eldis	http://www.eldis.org/
European Training Foundation	http://www.etf.europa.eu/
Handicap International	http://www.handicap-international.org.uk/
Helen Keller International	http://www.hki.org/
Independent Living Institute	http://www.independentliving.org/library.html

Institute for Cultural Affairs	http://www.ica-uk.org.uk/
Institute for Fiscal Studies (IFS)	http://www.ifs.org.uk
Institute of Development Studies (IDS)	http://www.ids.ac.uk
Institute of Southeast Asian Studies (ISEAS) (Singapore)	http://www.iseas.edu.sg/
ILO/Cinterfor Library and Information and Documentation Service (Inter-American Centre for Knowledge Development in Vocational Training)	http://www.oitcinterfor.org/en
Institute for the Study of Labor (IZA) Discussion Papers and Research Reports	http://www.iza.org/en/webcontent/publications/index
Inter-American Development Bank	http://www.iadb.org
Inter-American Development Bank Office of Evaluation and Oversight	http://www.iadb.org/en/office-of-evaluation-and-oversight/
International Centre for Eye Health (London School of Hygiene & Tropical Medicine)	https://www.iceh.org.uk/display/WEB/Home
International Centre for the Advancement of Community Based Rehabilitation (ICACBR: Queen's University, Canada)	http://www.queensu.ca/icacbr/projects.html
International Disability and Development Consortium (IDDC)	http://www.iddcconsortium.net/
Irish Aid	http://www.dci.gov.ie/news-publications/publications/
Islamic Relief Worldwide	http://www.islamic-relief.com/Default.aspx?deplD=1
Japan International Cooperation Agency (JICA)	http://www.jica.go.jp/english/
Kilimanjaro Centre for Community Ophthalmology (KCCO) (South Africa)	http://www.kcco.net/
Leonard Cheshire Disability International	http://www.lcint.org/
Leonard Cheshire Disability & Inclusive Development Centre (UCL)	http://www.ucl.ac.uk/lc-ccr/
Leprosy Information Services	http://www.leprosy-information.org
National Bureau of Economic Research	http://www.nber.org/
Norwegian Agency for Development Cooperation (NORAD)	http://www.norad.no/en/tools-and-publications
Overseas Development Institute (ODI)	http://www.odi.org.uk/
SciDev Net (Science and Development Network)	www.scidev.net/en/
Sightsavers	http://www.sightsavers.org/
Swedish International Development Cooperation Agency (SIDA)	http://www.sida.se/english/
Swiss Agency for Development and Cooperation (SDC)	http://www.sdc.admin.ch/en/Home/Documentation
UNESCO-UNEVOC Publications (International Centre for Technical and Vocational Education and Training)	http://www.unevoc.unesco.org/go.php?q=page_unevoc_publications

United Nations Development Programme (UNDP)	http://www.undp.org/undp/en/home.html
United States Agency for International Development (USAID)	http://www.usaid.gov/
University of Calabar (Nigeria)	http://unical.nucdb.edu.ng/portal/Default.aspx
University of Nairobi (Kenya)	http://www.uonbi.ac.ke/
Visual Impairment Centre for Teaching and Research (VICTAR)	http://www.birmingham.ac.uk/research/activity/education/victar/index.aspx
World Bank	http://www.worldbank.org/disability http://www.worldbank.org/labor http://www.worldbank.org/AIDS
World Jewish Relief	http://www.wjr.org.uk/

10.7 ORGANISATIONS CONTACTED

Organisation	Link
African Development Bank	http://www.afdb.org/en/
Asociación Iniciativas y Estudios Sociales (AIES)	http://www.asoc-ies.org/
Bangladesh Protibandhi Kallyan Somity (BPKS)	http://www.bpkssbd.org/
Blind Education and Rehabilitation Development Organization (BERDO)	http://www.berdo-bd.org/
Blind People's Association (India)	http://www.bpaindia.org/
Bombay Leprosy Project	http://www.bombayleprosy.org/index.htm
Canadian Centre on Disability Studies	http://disabilitystudies.ca/
Centro de Vida Independente de Maringá	http://www.cvi-maringa.org.br/
Community Inclusion Through Technology, International (CITTI Project)	http://www.cittiproject.org/
Community Based Rehabilitation Resources	http://cbrresources.org/
Deaf and Blind Society of Turkmenistan	http://www.untuk.org/content/view/27/
DeafBlind International	http://deafblindinternational.org/homepage.html
Disabled people South Africa	http://www.dpsa.org.za/
Disability Aid Abroad	http://disabilityaidabroad.net/
Doctors with Africa	http://www.cuamm.org/en/index.php
European Centre of Disabled persons Integration	http://www.ecin.pl/
Handicap International	http://www.handicap-international.org.uk/
Health for Everyone, Bulgaria	http://zdrave-za-vsichki.com/index.php?lang=en
Information centre for persons with disability	http://www.ic-lotos.org/
International Centre for the Advancement of Community Based Rehabilitation (ICACBR)	http://www.queensu.ca/icacbr/index.html
International Disability and Development Consortium (IDDC)	http://www.iddcconsortium.net/joomla/

Leonard Cheshire Disability	http://www.lcdisability.org/
Mision Milagro	www.misionmilagro.gob.ve
Motivation Belize Association	http://www.independentliving.org/donet/739_motivation_belize_association.html
PROEMDIS: Program for Professional Rehabilitation (Cuba)	http://phhp.ufl.edu/
Regional Society of Disabled people "Perspektiva"	http://perspektiva-inva.ru/
Renewed Hope Foundation of the Disabled people	http://www.independentliving.org/donet/787_renewed_hope_foundation_of_the_disabled_people.html
Rural Development Group of the British Department for International Development (India)	http://www.uea.ac.uk/
Saraki Foundation	http://infosurhoy.com/cocoon/saii/xhtml/en_GB/features/saii/features/society/2013/01/29/feature-01
Social Assistance and Rehabilitation for the Physically Vulnerable (SARPV)	http://www.sarpv.org/index
UNDP Office (Turkmenistan)	http://www.undptkm.org/index.php?option=com_content&task=view&id=1339
World Accessibility	http://www.worldaccessibility.com/
World Institute on Disability	http://www.wid.org/
World Jewish Relief	http://www.wjr.org.uk/
Youth Empowerment and Employment Programme	http://www.undp.org
YOUTH with Disabilities Development Forum (YDDF)	http://www.independentliving.org/donet/683_youth_with_disabilities_development_forum.html

10.8 NETWORKS CONTACTED

Network	Link
GLADNET (Global Applied Disability Research and Information Network on Employment and Training)	http://www.gladnet.org/mail.cfm?pageID=7
ILO Global Business and Disability Network	http://www.businessanddisability.org/
Latin American Network of Non-Governmental Organizations of Persons with Disabilities and their Families (RIADIS)	http://www.riadis.org/en
National Network for the Rights of Persons with Disabilities (Red por los derechos de las personas con discapacidad - REDI)	http://www.redi.org.ar /

10.9 JOURNALS HANDSEARCHED

Journal	Dates
International Journal of Disability Management	2006-2013
ALTER - European Journal of Disability Research	2007-2013
International Journal of Disability, Community & Rehabilitation	2002-2013
International Journal of Disability, Development and Education	1990-2013
Review of Disability Studies: An International Journal	2004-2013
Work: A Journal of Prevention, Assessment and Rehabilitation	1999-2013

10.10 RISK OF BIAS TOOL

Domain	Question
[1] Selection bias/ confounding	Does the design or analysis control/account for important confounding and modifying variables?
[2] Attrition bias	Were missing and/or incomplete data (overall or differential non-response, dropout, loss to follow-up, or exclusion of participants) handled appropriately?
[3] Performance bias	(a) If relevant, was knowledge of the allocation to groups adequately prevented (i.e., blinding of participants and the personnel delivering the intervention)?
	(b) If relevant, were the groups treated equally in all other respects (i.e., were there differences between groups in exposure to factors other than the interventions of interest)?
[4] Detection bias	(a) If relevant, were the outcome assessors blinded to the intervention/exposure status of participants (and/or other key factors)?
	(b) Were outcomes assessed using valid and reliable measures, and implemented consistently across all study participants?
[5] Reporting bias	(a) Are all pre-specified outcomes reported?
	(b) If relevant, were ancillary/ subsidiary/ adjusted analyses pre-specified by the researchers?

10.11 QUALITY ASSESSMENT OF INCLUDED STUDIES

Study details	Domain 1	Domain 2	Domain 3		Domain 4		Domain 5		Overall risk of bias
			a	b	a	b	a	b	
Biggeri et al. (2012)	Unclear <i>Propensity-score matching techniques used, but matching done on endline data.</i>	No <i>>10% missing/incomplete data, and not adequately controlled for</i>	Not relevant (ex-post allocation)	Yes <i>As far as can tell from limited information reported.</i>	No	No <i>Self-report data only</i>	Yes	Yes	High
Eniola and Adebisi (2007)	Unclear <i>Authors report use of a pre-test, post-test experimental design but allocation methods not reported and baseline group comparability not reported.</i>	Yes <i>No missing/incomplete data</i>	No <i>Researcher delivered the two interventions. Participants aware.</i>	Yes <i>As far as can tell from limited information reported.</i>	No <i>Researcher delivered the two interventions and measured outcomes.</i>	Unclear <i>Authors refer to instrument developed by Salami (2000), but no further details provided.</i>	Yes	Yes	High
Finger et al. (2012)	Unclear <i>Logistic regression applied to pre-test/post-test data</i>	Yes <i>Baseline characteristics of patients lost to follow up were not significantly different</i>	Not relevant (SGPPT design)	Not relevant	Not relevant	No <i>Self-report data only (economic outcomes)</i>	Yes	Unclear <i>Results reported in Tables 3 and 4 appear to be exploratory</i>	High
Guarino et al. (2007)	No <i>Non-equivalent groups/ no statistical controls</i>	Yes <i><10% missing/incomplete data (7 deaths, 9%)</i>	Not relevant (ex-post allocation)	Unclear	Not relevant	No <i>Self-report data only</i>	Yes	Not relevant	High
Hansen et al. (2007)	No <i>Uncontrolled study (SGPPT design)</i>	Yes <i>No missing/incomplete data</i>	Not relevant (SGPPT design)	Not relevant	Not relevant	No <i>Self-report data only</i>	Yes	Unclear	High

									For examination 'by severity of disability'
Lagerkvist (1992a)	No <i>Uncontrolled study (SGPPT design)</i>	Yes <i>No missing/ incomplete data</i>	Not relevant (SGPPT design)	Not relevant	Not relevant	Unclear <i>Self-reported data, but checked with programme records</i>	Unclear <i>Data for women not fully reported</i>	Not relevant	High
Lagerkvist (1992b)	No <i>Uncontrolled study (SGPPT design)</i>	Yes <i>No missing/ incomplete data</i>	Not relevant (SGPPT design)	Not relevant	Not relevant	Unclear <i>Self-reported data, but checked with programme records</i>	Unclear <i>Data for women not fully reported</i>	Not relevant	High
Metts and Oleson (1995)	No <i>Uncontrolled study (SGPPT design)</i>	Yes <i>No missing/ incomplete data</i>	Not relevant (SGPPT design)	Not relevant	Not relevant	No <i>Self-report data only</i>	Yes	Not relevant	High
Momin (2004)	No <i>Non-equivalent groups/ no statistical controls</i>	Yes <i>No missing/ incomplete data</i>	Not relevant (ex- post allocation)	Unclear	No	No <i>Self-report data only</i>	Yes	Not relevant	High
Nuri et al. (2012)	No <i>Uncontrolled study (SGPPT design)</i>	Yes <i>No missing/ incomplete data</i>	Not relevant (SGPPT design)	Not relevant	Not relevant	Unclear <i>Self-reported data but it was cross-checked during interviews with other key personnel</i>	Yes	Yes	High
Pereira- Guizzo et al. (2012)	No <i>Multi-probe design with two intervention groups No statistical controls</i>	Yes <i>No missing/ incomplete data</i>	No <i>Researcher delivered intervention to</i>	Yes <i>As far as can tell from limited</i>	No <i>Researcher administered the instrument</i>	No <i>Video recorded observations of</i>	Yes	Not relevant	High

			<i>both groups; unclear if participants knew which group they were in</i>	<i>information reported.</i>		<i>structured situations</i>			
Shore and Juillerat (2012)	No <i>Uncontrolled study (SGPPT design)</i>	No <i>Attrition 15%, and not adequately accounted for</i>	Not relevant <i>(SGPPT design)</i>	Not relevant	Not relevant	No <i>Self-report data only</i>	Yes	Not relevant	High
Tang et al. (2011)	No <i>Uncontrolled study (SGPPT design / single case study)</i>	Yes <i>No missing/incomplete data</i>	Not relevant <i>(SGPPT design)</i>	Not relevant	Not relevant	Yes <i>For formal contract of employment</i>	Unclear	Not relevant	High

10.12 STUDY CHARACTERISTICS

Study / study funding	Design / outcomes	Sample	Further information
<p>Biggeri et al. (2012) <i>Impact of CBR: Community-based rehabilitation programme in Mandya district (Karnataka, India)</i>. Italian Association Amici di Raoul Follereau (AIFO)</p> <p>This study evaluates intervention no.12.</p> <p>Study funding:</p> <ul style="list-style-type: none"> Italian Association Amici di Raoul Follereau (AIFO) (Italy) Sasakawa Memorial Health Foundation (SMHF) (Japan) Foundation of Applied Disability Research (FIRAH) (France) Deutsche Lepra Und Tuberkulosehilfen (DAHW) (Germany) <p>Period covered by this evaluation: Initial year: 2002? Last year: 2009 (year of survey)</p> <p>This research is part of a Joint Plan of Work between the Disability and Rehabilitation team of World Health Organisation (WHO/DAR) and the AIFO. The research study is referred to as the S-PARK/CBR initiative.</p>	<p>Design: Quasi-experiment (ex post), using propensity score matching techniques</p> <p>Study compared two groups, those who received the intervention and a comparison group who did not. A random sample household survey conducted in 2009 was used to collect data. Groups were constructed ex-post and propensity score matching (PSM) techniques (nearest neighbor and kernel) used to control for confounding variables. Data on previous years were obtained through retrospective questions on life trajectories. Participants were asked to recollect answers for the period before CBR started (i.e., 2002, 2004, and 2006). The programme did not have a common starting date for each village, so some of the villages covered by the programme were considered as “control” villages before joining the programme.</p> <p>Outcome measures: The outcome variables analysed are related to four (out of the five) CBR matrix components:</p> <ol style="list-style-type: none"> Livelihood (2 variables analysed: paid employment; receipt of pension or allowance) Health (various indicators) Social (various indicators) Empowerment and immaterial aspects (various indicators) <p>Outcome measurement timing: After 2 and 4 years have elapsed since the programme started in the selected village (although not all persons with disabilities in the same village joined the CBR at the same moment).</p>	<p>Geographical location: India (lower-middle income country)</p> <p>Number of study participants: Data were collected from a total of 2,531 persons; however, for the PSM analyses, the sample size was as follows: Two-year (2002-2004) impact evaluation: intervention group, n=262; control group, n=61 Four-year (2002-2006) impact evaluation: intervention group, n=112; control group, n=109</p> <p>Age: Mean age across all 4 groups is 34 years (based on total sample of 2,531 persons)</p> <p>Sex: Mixed: approximately 40% females in each of the groups; the difference in sex ratio between CBR participants and control groups is not significant, p=0.11 (based on total sample of 2,531 persons)</p> <p>Disability: Physical, sensory, mental, intellectual (approximately three-quarters are described as having a physical and/or sensory impairment). For all outcomes the focus is on people with any type of disability at the time of joining the programme.</p>	<p>Both CBR participants and members of the control group belong to poor households.</p> <p>The covariates used for the estimation of the propensity score in the models are: age, gender, household size, type of disability, level of disability, caste, and level of wealth.</p> <p>The control areas were neighboring sub-districts and were supposed to be areas where there are no CBR activities. However, in one control area (Jayapura hubli in Mysore), it was found that Sightsavers International had started a CBR programme for persons with vision disabilities. Numbers involved were limited (n=20) and were dropped from the analysis.</p> <p>Authors also analyse the effects of CBR programmes on other stakeholders, such as caregivers (descriptive statistics only).</p>

<p>Eniola and Adebisi (2007) Emotional Intelligence and Goal Setting-An Investigation into Interventions to Increase Motivation to Work among Visually Impaired Students in Nigeria. <i>British Journal of Visual Impairment</i>. 25(3): 249-253.</p>	<p>Design: Quasi-experimental (ex-ante) Described as pre- and post-test experimental design, but assignment methods not reported</p> <p>Authors report findings for the sample/intervention as a whole, and for both treatment groups individually.</p>	<p>Geographical location: Nigeria (lower-middle income country)</p>	<p>Reviewers infer that none of the participants are in paid employment as they were students and the intervention was focused on developing motivation to work. No details about previous work experience are reported.</p>
<p>This study evaluates intervention no. 2.</p>	<p>One group received an intervention the authors labeled 'emotional intelligence techniques' and the other group received an alternative intervention called 'goal setting techniques'. Two data collection points, one before the intervention and one afterwards.</p>	<p>Number of study participants: Whole sample: n=32 (16 in each group)</p>	
<p>Study funding: Not stated</p>	<p>Comparability of groups: Unclear</p>	<p>Age: Young adults (inferred)</p>	
<p>Period covered by this evaluation: Unclear - paper states that the instrument used for this study was developed in 2000; the paper was published in 2007.</p>	<p>Outcome measures: 1. Motivation to work</p>	<p>Sex: Total: males n=14; females n=18. Emotional intelligence techniques group: total n=16; males n=7; females n=9). Goal setting techniques group: total n=16; males n=7; females n=9)</p>	
	<p>Outcome measurement timing: After 6 weeks receipt of the intervention</p>	<p>Disability: Sensory (visual impairments)</p>	
<p>Finger et al. (2012) The Impact of Successful Cataract Surgery on Quality of Life, Household Income and Social Status in South India. PLOS ONE. 7(8AR e44268).</p>	<p>Design: Single-group pre-test/post-test design (with some analyses using regression estimation methods)</p> <p>There were two data collection points. A repeat survey and health assessment were used to collect data. Simple pre- and post-test data comparisons were made. In addition, logistic regression models controlled for age, gender, education, and household size.</p>	<p>Geographical location: India (lower-middle income country)</p>	<p>A total of 128 (43.5%) participants were working at baseline. No further details about previous work experience of the sample are reported.</p>
<p>This study evaluates intervention no. 3.</p>	<p>Outcome measures: 1. Monthly household income 2. Employment (engagement in income-generating activities) 3. Number of working household members</p>	<p>Number of study participants: A sample size calculation was undertaken, on the basis of which 313 individuals were recruited at baseline. Of these, 19 (6%) patients were lost to follow up and a further 21 (7%) participants who underwent second eye cataract surgery during follow up were excluded from all but the descriptive analyses. The analysis is conducted with 294 participants.</p>	<p>Under half of all participants (n=125; 42.5%) had no schooling at baseline; 54 (18.4%) participants had more than 5 years schooling.</p>
<p>Study funding:</p> <ul style="list-style-type: none"> • German Research Foundation • Indian Academy of Science • German Ophthalmological Society 		<p>Age: From 40 years, mean age 60 years (+-8)</p>	
<p>Period covered by this evaluation:</p>			

<p>Initial year: 2009 Last year: 2010</p>	<p>4. Social status (marital status is used as a proxy measure in the study) 5. Vision-related quality of life (mobility, activity limitation, and psychosocial impact) 6. Visual acuity (i.e., acuteness or clearness of vision) Working is defined in this study as being involved in activities which directly or indirectly generate income.</p>	<p>Sex: 54% males, 46% females Disability: Sensory (visual impairments, including blindness)</p>
<p>Outcome measurement timing: 12 months after treatment ended</p>		
<p>Gershon and Srinivasan (1992) Community-based rehabilitation: an evaluation study. <i>Leprosy Review</i>, 63: 51-59.</p>	<p>Design: Single-group pre-test/post-test The rehabilitation patients were the primary source of data and the social and follow-up workers were the secondary source. The files, records and books maintained in the office were the documentary source. Patients were interviewed in their homes or places of work.</p>	<p>Geographical location: India (lower-middle income country) Number of study participants: Total sample 78 leprosy patients Age: 46 participants (59%) aged 21-40 years Sex: mixed (61 males, 17 females) Disability: Physical (leprosy)</p>
<p>This study evaluates intervention no. 15.</p>	<p>Outcome measures: 1. Employment 2. Income 3. Housing</p>	<p>56 participants (72%) were married; 21 participants (35%) had primary school education; 3 participants (4%) had university education; 19 participants (24%) were illiterate</p>
<p>Study funding: German Leprosy Relief Association (implicit)</p>	<p>Outcome measurement timing: Unclear</p>	
<p>Period covered by this evaluation: Unclear (1974-1983?)</p>		
<p>Guarino et al. (2007) Return to work in lower limb amputees. <i>Acta Fisiatrica</i>, 14(2): 100-103.</p>	<p>Design: Quasi-experiment (ex post) Study compares outcomes for two groups, those who used a lower-limb prosthesis provided by the rehabilitation centre and those who did not. Pre-post change in outcome for the treatment group compared with pre-post change for comparison group.</p>	<p>Geographical location: Brazil (upper-middle income country) Number of study participants: Total sample 78 patients (50 in treatment group and 28 in comparison group) Regarding the level of schooling: 6.4% (5) were illiterate; 44.9% (35) had not finished Elementary School; 20.5% (16) had finished Elementary School; 2.5% (2) had not finished High School; 10.2% (8) had finished High School; 11.5% (9) had finished College and 3.8% (3) did not provide this information.</p>
<p>This study evaluates intervention no. 5.</p>		
<p>Study funding: Not stated</p>		

<p>Period covered by this evaluation: Initial year: 1999 Last year: 2007</p>	<p>Baseline data were obtained from the medical files of new cases of lower limb amputation treated between 1999 and 2005. The post-intervention interview was carried out by telephone between December 2006 and January 2007.</p>	<p>Age: mean age 46.3 years at the time of the amputation (range: 19 to 70 years)</p>	<p>One individual was unemployed at the time of the amputation (i.e., before the intervention). The remainder were in employment.</p>
	<p>Outcome measures: 4. Employment</p>	<p>Sex: mixed (61 men and 17 women)</p>	
	<p>Outcome measurement timing: Unclear (length of time between the pre- and post-intervention outcome measurements ranged from 1 to 8 years)</p>	<p>Disability: Physical (loss of lower limb)</p>	
		<p>Authors observed 50% of transfemoral amputations, 34.6% of transtibial amputations and 7.7% of partial foot amputations. Bilateral amputations, at different levels, occurred in 7.7% of the cases. Vascular etiology was responsible for 62.8% (49) of the amputations; trauma occurred in 28.2% of the cases (22); infection affected 6.4% (5) of the patients and tumors 1.3% (1); 1 patient was amputated due to a different reason (1.3%). The period between the amputation and the time of the study varied from 1 to 23 years, with a mean of 6.4 years.</p>	
<p>Hansen et al. (2007) Vocational reintegration of people with spinal cord lesion in Bangladesh – an observational study based on a vocational training project at CRP. <i>Asia Pacific Disability Rehabilitation Journal</i>, 18(1): 63-75.</p>	<p>Design: Single-group pre-test/post-test</p> <p>Participants underwent an initial assessment to identify who had the greatest potential for successfully completing the rehabilitation process. Those who were not in employment were given the opportunity to enrol in the programme (other criteria also used). Following the intervention, data were collected through interviews carried out in the respondents' homes.</p>	<p>Geographical location: Bangladesh (low-income country)</p>	<p>None of the people with disabilities receiving the intervention were in paid employment at the start, but all had work experience.</p>
<p>This study evaluates intervention no. 7.</p>		<p>Number of study participants: Of the 109 individuals who completed the programme, 46 participants were chosen conveniently to form the basis of an evaluation report completed at the end of the three-year programme. The participants were selected on the basis of their proximity in relation to the data collectors, to reduce time spent on transportation between the intervention site and the participants, and to facilitate communication.</p>	<p>Most participants had little or no formal education, and were from poorer homes in rural environments. They would typically receive some level of care from a close relative.</p>
<p>Study funding: Unclear (possibly the NGO, Centre for the Rehabilitation of the Paralysed)</p>	<p>Outcome measures: 1. Employment</p>		
<p>Period covered by this evaluation:</p>	<p>Outcome measurement timing: Unclear (the interviews were conducted at the end of the three-year programme, but the</p>		

<p>Initial year: 2002 Last year: 2005/6</p>	<p>length of time between the end of training and the date of the interview is unknown)</p>	<p>Carers, often wives, were also interviewed (no further details).</p>	
		<p>Age: Disabled individuals aged 15-50 years, with a disproportionately large number of very young adults (no further details)</p>	
		<p>Sex: Mixed (40 disabled males; 6 disabled females)</p>	
		<p>Disability: Physical (spinal cord injury)</p>	
<p>Lagerkvist (1992a) Community-based rehabilitation - outcome for the disabled in the Philippines and Zimbabwe. Disability and rehabilitation. 14(1): 44-50.</p>	<p>Design: Single-group pre-test/post-test</p> <p>This study was conducted after participants had received the programme. Data relating to the period before the start of the programme was collected during the post-programme interviews and checked against the records of the programme. See opposite for information on how sample was drawn.</p>	<p>Geographical location: Zimbabwe (low-income country)</p> <p>Number of study participants: Zimbabwe: 100</p> <p>Age: Range 5-70 years (majority adults)</p> <p>Sex: Mixed (53% male; 47% female)</p> <p>Disability: Various (predominant type was mobility impairments)</p>	<p>Severity of disability before receipt of the programme: Zimbabwe: mild (23%); moderate (43%); severe (34%).</p> <p>This study sample was matched with the one from the Philippines (see next row in table). Study samples were matched for sex, age, living area, and type of disability were drawn from the disabled clients in the two programmes. Criteria for selection included that subjects should be at least four years old when the programme started or be entered into the programme at least six months before the evaluation. No further details.</p>
<p>This study evaluates intervention no. 14.</p>	<p>Outcome measures:</p> <ul style="list-style-type: none"> • Paid employment (full- or part-time job) <p>Outcome measurement timing: Unclear (after at least 6 months duration of the programme)</p>	<p>Geographical location: Philippines (lower-middle income country)</p>	<p>Severity of disability before receipt of the programme: Philippines: mild (23%); moderate (39%); severe (38%)</p>
<p>Study funding:</p> <ul style="list-style-type: none"> • Not stated 	<p>Period covered by this evaluation: Unclear (article was published in 1992, but no information provided on dates of data collection).</p>	<p>Number of study participants: Philippines: 106</p>	<p>This study sample was matched with the one from Zimbabwe (see previous row in</p>
<p>Lagerkvist (1992b) Community-based rehabilitation - outcome for the disabled in the Philippines and Zimbabwe. Disability and rehabilitation. 14(1): 44-50.</p>	<p>Design: Single-group pre-test/post-test</p> <p>This study was conducted after participants had received the programme. Data relating to the period before the start of the programme was collected during the post-programme</p>		

<p>This study evaluates intervention no. 13.</p> <p>Study funding:</p> <ul style="list-style-type: none"> Not stated <p>Period covered by this evaluation: Unclear (article was published in 1992, but no information provided on dates of data collection).</p>	<p>interviews and checked against the records of the programme. See opposite for information on how sample was drawn.</p> <p>Outcome measures:</p> <ul style="list-style-type: none"> Paid employment (full- or part-time job) <p>Outcome measurement timing: Unclear (after at least 6 months duration of the programme)</p>	<p>Age: Range 5-83 years (majority adults)</p> <p>Sex: Mixed (53% male; 47% female)</p> <p>Disability: Various (predominant type was mobility impairments)</p>	<p>table). Study samples were matched for sex, age, living area, and type of disability were drawn from the disabled clients in the two programmes. Criteria for selection included that subjects should be at least four years old when the programme started or be entered into the programme at least six months before the evaluation. No further details.</p>
<p>Metts and Oleson (1995) Assisting disabled entrepreneurs in Kenya: implications for developed countries. <i>Small Enterprise Development</i>. 6(4): 23-33.</p> <p>This study evaluates intervention no. 11.</p> <p>Study funding: International Labour Organisation</p> <p>Period covered by this evaluation: Unclear - paper published in 1995</p>	<p>Design: Single-group pre-test/post-test</p> <p>A survey administered at some point after people had received their loans was used to collect both pre- and post-intervention data. Structured interviews were also used to collect data from selected loan recipients, business advisers, and bank personnel.</p> <p>Outcome measures:</p> <ol style="list-style-type: none"> Paid employment (number of workers employed in businesses owned by loan recipients; number of businesses which employed persons other than the recipients themselves) Self-employment (number of businesses owned by loan recipients) Income (net monthly business income) Monthly hours worked (by employees in businesses owned by loan recipients) Other monetary outcomes (gross sales; total assets) Other (sense of self-reliance; self-confidence; status in the community) <p>Outcome measurement timing: Not stated</p>	<p>Geographical location: Kenya (low-income country)</p> <p>Number of study participants: 55 loan recipients (a stratified sample of those who had received loans during the initial phase of the programme, n=237)</p> <p>The study sample is a subset of the intervention beneficiaries who were successful in getting a bank loan. The authors did not collect or analyse data from those individuals who had received the business training but had their loan application rejected.</p> <p>Age: Unclear - typical loan recipient is in their mid-30s (no further details)</p> <p>Sex: Approximately 60% males, 40% females</p> <p>Disability: Physical (few details are reported, but authors state that a typical participant had an orthopaedic disability, present from birth or early childhood)</p>	<p>Unclear if those who did not have their own business at start of the DPLS had previous paid- or self-employment experience.</p> <p>The typical loan recipient had completed the eighth standard (in school) and had some formal training related to the business for which he/she received the loan. Before receiving the loans, businesses were impaired by insufficient business capital.</p> <p>Before receiving the loans, the typical loan recipient was self-employed, in either general retail, tailoring, or leatherworking/shoemaking.</p>

<p>Momin (2004) Impact of services for people with spinal cord lesion on economic participation. <i>Asia Pacific Disability Rehabilitation Journal</i>. 15(2): 53-67.</p> <p>This study evaluates intervention no. 8.</p> <p>Study funding:</p> <ul style="list-style-type: none"> • CRP (implicit) <p>Period covered by this evaluation: Participants had all received services between 1994 and 1999. Not stated when the data were collected.</p>	<p>Design: Quasi-experiment (ex-post)</p> <p>Study compares outcomes for two groups, those who received the services offered by the Centre for the Rehabilitation of the Paralysed (CRP) and a comparison group receiving general hospital care. Pre-post change in outcomes for the treatment group compared with pre-post change for comparison group. Baseline differences between groups observed (but statistical significance not reported). No statistical controls.</p> <p>Outcome measures:</p> <ul style="list-style-type: none"> • Paid employment • Self-employment <p>Outcome measurement timing: Not stated</p>	<p>Geographical location: Bangladesh (low-income country)</p> <p>Number of study participants: 64 in total. 48 were involved as participants for the face-to-face interviews: of which, 24 benefited from the CRP programme and were selected through stratified random sampling and 24 were from general hospitals (comparison condition) selected through quota sampling. In addition, 16 participants were involved in focus group sessions.</p> <p>Age: 10-59 years (mean age of the CRP group was 31 years, while that of general hospital respondents was 33 years)</p> <p>Sex: Mixed (50% male, 50% female)</p> <p>Disability: Physical (spinal cord injuries)</p>	<p>The approach to this study was participatory, using principles of emancipatory research. Data were generated through semi-structured face-to-face interviews on three occasions. In addition, background information on participants was elicited at the outset from structured interviews. Some participants were interviewed in focus group sessions.</p> <p>A team of eight 'research associates' conducted the research constituting the non-disabled author of the paper, four people with spinal cord injuries (two from CRP and two from general hospitals), two CRP staff, and one non-disabled person who was selected from the community.</p>
<p>Nuri et al. (2012) Impact assessment of a vocational training programme for persons with disabilities in Bangladesh. <i>Disability, CBR and Inclusive Development</i>, 23(3), 76-89.</p> <p>This study evaluates intervention no. 9.</p> <p>Study funding:</p> <ul style="list-style-type: none"> • Manusher Jonno Foundation <p>Period covered by this evaluation: Initial year: 1999</p>	<p>Design: Single-group pre-test/post-test</p> <p>Data collection mainly followed a qualitative approach to get a deeper understanding of the programme's impact on participants' lives, but quantitative data were also collected. A questionnaire was used to guide interviews and focus group discussions.</p> <p>Outcome measures:</p> <ol style="list-style-type: none"> 1. Employment (formal and self) <p>None of the following are included in the synthesis. Other outcomes reported, but with no baseline data for comparison:</p>	<p>Geographical location: Bangladesh (low-income country)</p> <p>Number of study participants: 261 people with disabilities</p> <p>Data was also collected from 10 non-disabled key informants (local leaders, employers, and project staff).</p> <p>Age: Not stated</p> <p>Sex: Mixed (61% male)</p>	<p>Disabilities had occurred at different times in the participants' lives (e.g., accident, injury, disease or congenital).</p> <p>Married (50%); single (47%); other (2%).</p> <p>Illiterate (8%); primary education (23%); secondary education or above (59%); higher education (10%).</p> <p>None of the potential beneficiaries were in employment before receiving the intervention.</p>

Last year: 2009?

- Motivation to find work (self-reported)
 - Psychological well-being (self-reported)
- For the subgroup of participants who secured employment after training, data on the following outcomes were collected:
- Motivation to participate in civic society
 - Awareness of disability rights
 - Awareness of government and NGO support
 - Perceived impact of employment on livelihood/ income
 - Perceived quality-of-life
 - Perceived social acceptance
 - Perceived self-esteem

Disability: Physical and sensory (mainly impairments resulting from a variety of physiological conditions, cosmetic disfigurements, spinal cord dysfunctions, musculoskeletal losses, and various types of chronic diseases)

Outcome measurement timing: Not stated

Pereira-Guizzo et al. (2012) Evaluation of a Professional Social Skills Program for Unemployed People with Physical Disability. *Psicologia-Reflexao E Critica*. 25(2): 265-74.

This study evaluates intervention no. 4.

Study funding:

- State-funded University institution: Fundação de Amparo à Pesquisa do Estado de São Paulo / Foundation for the Support of Research (FAPESP)

Period covered by this evaluation: Unclear - approved by Ethics Committee in 2006; paper published in 2012

Design: Quasi-experiment (ex-ante)

A multi-probe design was used. Both groups received the intervention, with receipt of the intervention and data collection staggered. With Group 1 (G1) the intervention occurred immediately after the baseline evaluation, while with Group 2 (G2) the intervention occurred later on, after a second evaluation.

Comparability of groups: The authors report that there were no significant age differences between the two groups ($t=1.451$; $p=.169$) and that the groups were also comparable in regards to their socioeconomic levels ($t=-1.322$; $p=.208$). No further t-test results are reported. Most of the participants of each group were females with complete high school educations. In G1, all 8 of the participants had already had professional experience, whereas in G2 only 6 of the 8 participants had previously worked.

Outcome measures:

Geographical location: Brazil (upper-middle income country)

Number of study participants:

Two treatment groups:
Group 1: 8 participants
Group 2: 8 participants

Age:

Group 1: 18-27 years (3 participants); 28-36 years (5 participants)
Group 2: 18-27 years (5 participants); 28-36 years (3 participants)

Sex:

Group 1: female (5 participants); male (3 participants)
Group 2: female (6 participants); male (2 participants)

Method of selection and group allocation not reported. Participants in Group 1 were from one institution and those from Group 2 were from a different institution in another nearby city.

None of the 16 participants were in work at the start of the study.

Authors report that among the causes or consequences of the physical disabilities, the following were identified: head injury with long lasting effects to the upper and lower parts of the body (hemiparesis); cerebral paralysis, affecting both motor coordination and locomotion; idiopathic and hereditary neuropathy with motor sequelae; traumatic amputation of fingers; amputation of both legs; diffuse cerebral injury with the fractures of the femur, leg,

	<ol style="list-style-type: none"> 1. Social skills (professional) 2. Social skills (general) <p>Outcome measurement timing: Each group was evaluated four times. Outcome data were collected on either two or three occasions following receipt of the intervention. For Group 1, the intervention occurred right after the first evaluation. In both groups, there was a two-month intervals between evaluations of the dependent variables.</p>	<p>Disability: physical (see opposite)</p>	<p>shoulder and arm; scoliosis and osteoporosis; shortness of the leg; hemiparesis; muscular dystrophy; spinal cord injury (paraplegia).</p>
<p>Shore and Juillerat (2012) The impact of a low cost wheelchair on the quality of life of the disabled in the developing world. <i>Medical Science Monitor: International Medical Journal of Experimental and Clinical Research</i>, 18(9): CR533-42.</p> <p>This study evaluates intervention no. 6.</p> <p>Study funding:</p> <ul style="list-style-type: none"> • Departmental sources (Azusa Pacific University) <p>Period covered by this evaluation: Unclear - paper published in 2012</p>	<p>Design: Single-group pre-test/post-test</p> <p>Participants were surveyed at the time they received their chair and again after 12 months of use.</p> <p>Outcome measures:</p> <ol style="list-style-type: none"> 1. Employment 2. Income 3. Other measures of functional independence (various indicators based on the ICF, including mobility, self-care, community engagement) 4. Physical and emotional health (various indicators) <p>Outcome measurement timing: After 12 months receipt of the intervention</p> <p>Means and standard deviations from each variable were examined by country to verify that the statistical patterns of the whole were representative of the individual countries.</p> <p>Although the intent of the study design was to evaluate change using paired data from baseline to 12 months, subject numbers were not consistently recorded in the field and therefore independent samples t-tests were used to test for group differences using a significance level of $p < 0.05$ for all analyses.</p>	<p>Geographical location: India and Vietnam (lower-middle income countries) and Chile (high-income country)</p> <p>Number of study participants: Initial survey, $n=620$; follow up survey, $n=519$. Final participants for the initial survey included 204 from Vietnam, 206 from India, and 210 from Chile. After attrition, final participants included 189 from Vietnam, 201 from India, and 129 from Chile. In Chile, 53% of attrition was due to death, 16% from worsening health with inability to use the chair, 16% could not be located, and 9.5% believed the chair did not meet their transportation needs. One chair had been stolen and one had been sold. Of the participants who dropped out of the study in Vietnam and India, 80% were due to death; the other 20% could not be located.</p> <p>Age: Age of the recipients ranged from 4 to 102 with an average of 54 years.</p> <p>Sex: At baseline: males (57.1%); females (42.9%).</p>	<p>These three countries were chosen because their sample represented both rural and urban populations in varying parts of the world.</p> <p>Of recipients, 35.9% were educated beyond grade eight, and 3.4% beyond grade 12. Thirty percent reported that they were unable to read or write, even at the basic level. The majority of the sample (60.7%) lived in a rural setting.</p> <p>Before receiving a wheelchair for mobility, 47.8% of recipients were carried or crawled, 38.6% walked with a cane or crutch, and 9.7% were bedridden. Seventy eight percent had not owned a wheelchair before, largely due to lack of money (69.5%).</p> <p>The authors reported that "At the 12-month survey, subjects were asked about any factors other than the wheelchair which might have influenced the change in their function or mobility. Three people</p>

		<p>Disability: physical The most common medical diagnoses which necessitated use of a wheelchair were stroke (in Vietnam, 40%) or muscular dystrophy (in Chile, 21.8%, and in India, 21.6%). Of all recipients, 41% had their diagnosis for at least 10 years.</p>	<p>reported receiving rehabilitation training, and 1 reported increased access to medical care. Thus for these 4/519 subjects, other factors may have contributed to the positive changes in health and function.” (p.CB540)</p>
<p>Tang et al. (2011) Case management after long-term absence from work in China: A case report. <i>Journal of Occupational Rehabilitation</i>, 21:S55–S61.</p> <p>This study evaluates intervention no. 10.</p> <p>Study funding: Not stated</p> <p>Period covered by this evaluation: Initial year: 2004 Last year: 2005</p>	<p>Design: Single-group pre-test/post-test</p> <p>Single-case design, with outcome measurements taken before and after intervention.</p> <p>Outcome measures:</p> <ol style="list-style-type: none"> 1. Employment (formal) <p>The authors mention data having been collected on the following outcomes, and refer generally to improvements, but quantitative data not reported.</p> <ul style="list-style-type: none"> • Perception of impact: (on work status) • Employee satisfaction with the employment gained • Social skills (self-image, communication) • Functional capacity (related to body movements and work motivation) • Fear avoidance beliefs (related to body activities and work performance activities) • Employer satisfaction with the client’s employment <p>Outcome measurement timing:</p> <ul style="list-style-type: none"> • After 1 month of programme participation • 6 months after programme completion 	<p>Geographical location: China (upper-middle income country)</p> <p>Number of study participants: 1</p> <p>Age: 30 years old (inferred)</p> <p>Sex: Male</p> <p>Disability: Physical (burns injuries) The study participant had major work-related burns injuries that reduced standing endurance and restricted range of movements in upper and lower limbs.</p>	<p>The study participant was unemployed at the start of the intervention. Prior to his injury he had been in employment, and was the main breadwinner. He had been out of work for 9 years before participating in the programme. His case worked indicated that he was a person with a clear mind, motivation, communication skills and a high self-efficacy for return to work.</p>

10.13 INTERVENTION CHARACTERISTICS

<p>Intervention nos.1 & 2: evaluated by Eniola and Adebiji (2007)</p>	<p>Type of programme: <u>Treatment & therapy</u></p> <p>Eniola and Adebiji (2007) evaluated two related interventions, both of which were based on therapeutic techniques:</p> <ul style="list-style-type: none"> Intervention 1: emotional intelligence techniques Intervention 2: goal setting techniques 	<p>Intervention funded by: Not stated</p>	<p>Target groups:</p> <ul style="list-style-type: none"> Students with disabilities (visual impairments)
<p>Formal name: Not stated</p>	<p>Aim: To enhance motivation to work among visually impaired students</p>	<p>Intervention developed by: Authors (reviewers' inference)</p>	<p>Compliance: Authors report that students were randomly selected but there is no information on informed consent (by students or their parents).</p>
<p>Country & availability:</p> <ul style="list-style-type: none"> Nigeria (lower-middle income country) Study participants were drawn from two schools in two Nigerian states, Ibadan and Osogbo (not stated whether schools were located in rural or urban areas). Although unclear, it is likely that the intervention was only available to these study participants. 	<p>Components:</p> <p>Both interventions were multi-component and consisted of:</p> <ul style="list-style-type: none"> <u>Lectures</u> (including discussion and demonstration) <u>Homework assignments</u> <u>Other activities</u> (no further details) 	<p>Role of study funder (in the intervention): Not stated</p>	<p>Intervention setting: Conference hall, Civil Service Commission of each of the Nigerian states (Ibadan and Osogbo)</p>
<p>Dates of operation: Unclear - the reviewers have inferred that the authors developed the intervention, and it is not reported whether or not it continued beyond this piece of research.</p>	<p>Labour market constraints addressed:</p> <ul style="list-style-type: none"> Attitudes mismatch 	<p>Role of evaluators (in the intervention): Not independent (reviewers inferred that the authors developed the intervention, and it is reported in the paper that they delivered it)</p>	<p>Delivered by: Authors</p> <p>Overall duration (per cohort): 6 weeks</p> <p>Intensity: Twice a week</p> <p>Dosage (hours per week): Not stated</p>
<p>Intervention no.3: evaluated by Finger et al. (2012).</p>	<p>Type of programme: <u>Treatment & therapy</u></p> <p>Cataract outreach programme</p>	<p>Intervention funded by: Unclear – possibly the German Ophthalmological Society, the</p>	<p>Target groups:</p> <ul style="list-style-type: none"> People with disabilities (visual impairments) People within a certain age range (over 40 years)

<p>Formal name: Not stated</p> <p>Country & availability:</p> <ul style="list-style-type: none"> India (lower-middle income country) Regional (Tamil Nadu state, rural areas only) <p>Dates of operation: Not stated</p> <p>Labour market constraints addressed:</p> <ul style="list-style-type: none"> Functional limitations Lack of (access to) financial support/ credit 	<p>Components: This study evaluates a multi-component intervention:</p> <ul style="list-style-type: none"> <u>Surgery</u> (cataract surgery) <u>Outreach</u> (medical follow-up assessment at outreach clinic by community eye health workers) <u>Financial incentive to participate in the programme</u> (transport, surgery, inpatient hospital stays, and medical follow up were all provided free of charge, as poverty was recognised as being a barrier to access) 	<p>German Research Foundation and the Indian Academy of Science.</p> <p>Intervention developed by: The cataract outreach programme was operated by a community eyecare provider, Sankara Eye Care Services, Coimbatore. The study was embedded within routine services provided by Sankara.</p> <p>Role of study funder (in the intervention): Independent (authors report that the study funders had no role in study design, data collection and analysis, decision to publish, or preparation of the manuscript)</p> <p>Role of evaluators (in the intervention): Not independent (one author is affiliated to Sankara, the organisation operating the programme)</p>	<ul style="list-style-type: none"> People who had not had cataract surgery before <p>Compliance: Voluntary</p> <p>Intervention setting: Hospital</p> <p>Delivered by: Reported that the cataract outreach programme was operated by a community eyecare provider, Sankara Eye Care Services, Coimbatore, and that the study was embedded within routine services provided by Sankara.</p> <p>Overall duration (per cohort): 1 month (the programme included a follow-up medical assessment one month after the surgery)</p> <p>Intensity: Not applicable</p> <p>Dosage (hours per week): Not applicable</p>
<p>Intervention no.4: evaluated by Pereira-Guizzo et al. (2012)</p> <p>Formal name: Program for the Development of Social Skills for the Work Environment</p> <p>Country & availability:</p> <ul style="list-style-type: none"> Brazil (upper-middle income country) Study participants were drawn from two urban institutions (one in a city 	<p>Type of programme: <u>Education & training</u></p> <p>Program for the Development of Social Skills for the Work Environment</p> <p>Aim: To develop work-related social skills (both overcoming different kinds of social skills deficits, as well as maximizing the repertoire of social behaviours)</p> <p>Components:</p>	<p>Intervention funded by: Unclear – the authors report that financial support came from Fundação de Amparo à Pesquisa do Estado de São Paulo – Foundation for the Support of Research (FAPESP). This is likely to refer to the funding of the PhD thesis, but the intervention was probably developed specifically for the thesis.</p> <p>Intervention developed by: Unclear whether the lead author developed the</p>	<p>Target groups:</p> <ul style="list-style-type: none"> People with disabilities (physical impairments; unemployed and seeking work) <p>The authors also report that eligibility for the intervention was limited to individuals who were willing to participate in the research.</p> <p>Compliance: Voluntary (implicit)</p> <p>Intervention setting: Mixed/ multiple sites: institutions that supported people with disabilities but that did not carry out training programmes aimed at inserting them into</p>

<p>in the state of São Paulo with approximately 500,000 inhabitants; the other located in another city nearby, with approximately 50,000 inhabitants). Unclear whether the intervention was only available to these study participants.</p> <p>Dates of operation: Unclear - the programme was developed by the first author as part of a thesis, and it is not reported whether or not it continued beyond this piece of research.</p>	<p>This study evaluates a multi-component intervention:</p> <ul style="list-style-type: none"> • <u>Psychosocial/psychological therapy</u> (the overall structure of the programme was based on the experiential method associated with cognitive-behavioural techniques, such as behaviour rehearsal, positive reinforcement and video feedback) • <u>Arts-based activities</u> (e.g., drama, storybook reading) • <u>Group discussion/support</u> • <u>Homework assignments</u> 	<p>intervention as part her of doctoral thesis or the training institutions did.</p> <p>Role of study funder (in the intervention): Not stated</p> <p>Role of evaluators (in the intervention): Not independent (stated that the first author delivered the intervention, and she may also have developed the intervention)</p>	<p>the labour market. Institution A was bound to the Municipal Bureau of social welfare; Institution B was a philanthropic association. NB: These are the settings of the study; assumed that training was also delivered there.</p> <p>Delivered by: Researcher (first author)</p> <p>Overall duration (per cohort): 8 weeks</p> <p>Intensity: Twice a week</p> <p>Dosage (hours per week): Each session lasted approximately 90 minutes (total 3 hours per week)</p>
<p>Labour market constraints addressed:</p> <ul style="list-style-type: none"> • Attitudes mismatch • Insufficient social skills 	<p>Type of programme: <u>Assistive devices and accommodations</u></p>	<p>Intervention funded by: Unclear – possibly UNIFESP (see below)</p>	<p>Target groups:</p> <ul style="list-style-type: none"> • People with disabilities (lower-limb amputee patients)
<p>Formal name: Not applicable</p> <p>Country & availability:</p> <ul style="list-style-type: none"> • Brazil (upper-middle income country) • Available at one institution: Lar Escola Sao Francisco Rehabilitation Centre, Universidade Federal de Sao Paulo (UNIFESP), in the city of Sao Paulo 	<p>Lower limb prostheses</p> <p>The prosthesis are not provided free of charge. The authors report: “Those who do not use prostheses report problems with prosthesis adaptation and comfort and few reported lack of financial funds to acquire it” (p. 102). No other details about the intervention are provided.</p> <p>Components: This study evaluates a simple intervention consisting of a single service/ activity:</p>	<p>Intervention developed by: Lar Escola Sao Francisco Rehabilitation Centre, UNIFESP</p> <p>Role of study funder (in the intervention): Unclear, as no details about source of funding provided</p> <p>Role of evaluators (in the intervention): Not independent (all 3 authors affiliated to the university where the rehabilitation centre is located)</p>	<p>Compliance: Voluntary</p> <p>Intervention setting: Assumed that the university-based rehabilitation centre (Lar Escola Sao Francisco Rehabilitation Centre) provided the prostheses</p> <p>Delivered by: Heathcare professionals (implicit)</p> <p>Overall duration (per cohort): Not applicable</p> <p>Intensity: Not applicable</p>

<p>Dates of operation: Unclear, presumed ongoing</p> <p>Labour market constraints addressed:</p> <ul style="list-style-type: none"> Functional limitations 	<ul style="list-style-type: none"> <u>Assistive device (general daily living)</u> 	<p>Dosage (hours per week): Not applicable</p>
<p>Intervention no.6: evaluated by Shore and Juillerat (2012)</p> <p>Formal name: Unclear - the wheelchair is a product of the Free Wheelchair Mission (FWM), and organisation which donates wheelchairs to the disabled in developing countries.</p> <p>Country & availability:</p> <ul style="list-style-type: none"> This study evaluated wheelchair provision in India and Vietnam (lower-middle income countries) and Chile (reclassified as high-income country in July 2013) Available internationally; as of 2012, FWM has distributed over 600,000 wheelchairs in developing countries <p>Dates of operation: not stated</p> <p>Labour market constraints addressed:</p> <ul style="list-style-type: none"> Functional limitations 	<p>Type of programme: <u>Assistive devices and accommodations</u></p> <p>Semi-rigid depot style wheelchair (free of charge to the recipient)</p> <p>Components: This study evaluates a simple intervention consisting of a single service/ activity:</p> <ul style="list-style-type: none"> <u>Assistive device (general daily living)</u> <p>Authors describe the intervention as follows: "It is a depot style chair with a semi-rigid seat and back, 8 inch natural rubber castors in the front, and 24 inch pneumatic tires in the back. It is distributed with a 2 inch covered polyurathane foam cushion, an air pump, patch kit, and, if needed, a 5 strap adjustable harness. It weighs 35 pounds. Wheelchairs are provided free of charge to recipients, made possible through local and national fundraising efforts. There was no interaction between individual donors and recipients in this study. The cost to produce, ship, assemble, and deliver the chair to recipients was \$59.20 worldwide." (p.CR535)</p>	<p>Intervention funded by: Free Wheelchair Mission (FWM)</p> <p>Intervention developed by: FWM</p> <p>Role of study funder (in the intervention): Independent (as far as can tell from information provided)</p> <p>Role of evaluators (in the intervention): Not independent (e.g., local affiliates of FWM collected the survey data)</p> <p>Target groups:</p> <ul style="list-style-type: none"> People with disabilities (mobility limitations) <p>Compliance: Voluntary</p> <p>Intervention setting: Not applicable</p> <p>Delivered by: FWM (implicit)</p> <p>Overall duration (per cohort): Not applicable</p> <p>Intensity: Not applicable</p> <p>Dosage (hours per week): Not applicable</p>

<p>Intervention no.7: evaluated by Hansen et al. (2007)</p>	<p>Type of programme: <u>Occupational rehabilitation</u></p> <p>Work rehabilitation programme (tailored to some degree to the needs of individual participants)</p>	<p>Intervention funded by: United States Department of Labor</p>	<p>Target groups:</p> <ul style="list-style-type: none"> • People with disabilities (spinal cord injuries; unemployed)
<p>Formal name: Not stated</p>	<p>Aim: To enable participants to return to their previous employment or a suitable alternative</p>	<p>Intervention developed by: Centre for the Rehabilitation of the Paralysed (CRP) (implicit)</p>	<p>Compliance: Voluntary</p>
<p>Country & availability:</p> <ul style="list-style-type: none"> • Bangladesh (low-income country) • Programme is based in Savar, which is about 25km from Dhaka, the capital city (not clear whether Savar is a rural or urban area). Implicit that intervention is available in this area only. 	<p>Components:</p> <p>This study evaluates a multi-component intervention:</p> <ul style="list-style-type: none"> • <u>Assessment by professional</u> • <u>Physiotherapy</u> (physical conditioning to build strength, endurance and motor function) • <u>Employment preparation training</u> (vocational training involving various elements, such as simulated work practice) 	<p>Role of study funder (in the intervention):</p> <p>Unclear (CRP is probably the study funder, but this is not explicitly stated)</p>	<p>Intervention setting: CRP (occupational therapy department)</p>
<p>Dates of operation: Unclear (probably 2002 – 2005)</p>	<ul style="list-style-type: none"> • <u>Occupational health and safety training</u> • <u>Work placement</u> (either on site at CRP, or in nearby workplaces) • <u>One-to-one support</u> (continuing support in the community, entailing follow-up visits at the participants' new worksites) • <u>Other</u> (simulated work practice through a strategy of graded activities) 	<p>Role of evaluators (in the intervention):</p> <p>Not independent (two authors are affiliated to CRP)</p>	<p>Delivered by: Not stated</p>
<p>Labour market constraints addressed:</p> <ul style="list-style-type: none"> • Functional limitations • Social attitudes • Inaccessible workplace 			<p>Overall duration (per cohort): Not stated</p>
			<p>Intensity: Not stated</p>
			<p>Dosage (hours per week): Not stated</p>
<p>Intervention no.8: evaluated by Momin (2004)</p>	<p>Type of programme: <u>Occupational rehabilitation</u></p> <p>Rehabilitation programme providing specialised services for people with spinal cord lesion. The focus of the Centre for the Rehabilitation of the</p>	<p>Intervention funded by: NGO - the Centre for the Rehabilitation of the Paralysed (CRP) (implicit)</p>	<p>Target groups:</p> <ul style="list-style-type: none"> • People with disabilities (spinal cord injuries)
<p>Formal name: Not stated</p>		<p>Intervention developed by: CRP (implicit)</p>	<p>Compliance: Voluntary</p>
<p>Country & availability:</p>			<p>Intervention setting: CRP</p>

- Bangladesh (low-income country)
- Authors report that participants were selected from six districts of Bangladesh (Dhaka, Narayangonj, Gazipur, Manikgonj, Munshigonj and Narsingdi). Implicit that intervention is available in these areas only.

Dates of operation: Unclear (authors only report that this study focused on people receiving the intervention between 1994 and 1999)

Labour market constraints addressed:

- Functional limitations
- Insufficient skills
- Social attitudes
- Lack of (access to) financial support/ credit

Paralysed (CRP) is on the whole person rather than treating the person's impairment alone.

Aim: To enable participants to return to their previous employment or a suitable alternative

Components:
This study evaluates a multi-component intervention:

- Psychosocial/psychological therapy/counselling (therapeutic support and health education)
- Assistive devices (daily living) (mobility aids)
- Employment preparation training (vocational training)
- Loans/access to credit (micro-credit support)
- Other

Role of study funder (in the intervention):
Unclear (CRP is probably the study funder, but this is not explicitly stated)

Role of evaluators (in the intervention):
Not independent (the author is based at CRP)

Delivered by: Not stated

Overall duration (per cohort): Not stated

Intensity: Not stated

Dosage (hours per week): Not stated

Intervention no.9: evaluated by Nuri et al. (2012)

Formal name: Madhab Memorial Vocational Training Institute (MMVTI) programme

Country & availability:

- Bangladesh (low-income country)
- Authors report that participants were selected from five different districts

Type of programme: Occupational rehabilitation

Vocational training programme

Components:

This study evaluates a multi-component intervention:

- Assessment by professional (doctors, therapists, social workers, counsellors, and other professionals)

Intervention funded by: Madhab Memorial Vocational Training Institute (MMVTI), which is part of the NGO Centre for the Rehabilitation of the Paralysed (CRP) (implicit)

Intervention developed by: MMVTI (implicit)

Role of study funder (in the intervention):
Not independent (lead author is affiliated to CRP)

Target groups:

- People with disabilities (unemployed)
- There is some suggestion in the paper that an additional entry requirement was that beneficiaries had to have a certain level of education (possibly more than primary education). However, the fact that at least 8% of the sample was illiterate suggests otherwise (see Table 1, p. 78).

Compliance: Not stated

Intervention setting: Not stated

<p>across Bangladesh. Implicit that intervention is available in these areas only.</p>	<ul style="list-style-type: none"> • <u>Technical training</u> (specifically designed vocational training) • <u>Work placement</u> 	<p>Role of evaluators (in the intervention): Not independent (lead author is affiliated to CRP)</p>	<p>Delivered by: For the training course as a whole, this information is not reported. But the initial assessment was carried out by a multidisciplinary team of doctors, therapists, social workers, counsellors, and other professionals.</p>
<p>Dates of operation: Unclear (authors only report that this study focused on people receiving the intervention between 1999 and 2009)</p>	<p>Individuals are carefully matched to courses after a full assessment of training needs and suitability, carried out by a multidisciplinary team who take into consideration the trainee's physical and financial condition, education, family support, interests, mobility aids, home environment and individual needs.</p>	<p>Overall duration (per cohort): 1, 2, 3 or 4 months (depending on which trade the trainee was being trained for)</p>	<p>Intensity: Not stated</p>
<p>Labour market constraints addressed:</p> <ul style="list-style-type: none"> • Technical skills mismatch • Insufficient entrepreneurial skills 	<p>Although the multi-disciplinary team helped the participants choose their vocational training courses, the final choice was always left up to the individual. This study focuses on the five courses that were favoured by participants (computing, electronics, garment operation, shop management, sewing-machine operation) but other courses were also available.</p>	<p>Dosage (hours per week): Not stated</p>	
<p>Intervention no.10: evaluated by Tang et al. (2011)</p>	<p>Type of programme: <u>Occupational rehabilitation</u></p>	<p>Intervention funded by: Chinese government or government-related agency (implicit)</p>	<p>Target groups:</p> <ul style="list-style-type: none"> • People with disabilities (injured workers)
<p>Formal name: no</p>	<p>Return-to-Work (RTW) scheme for injured workers: available to persons with different severities of injury, both those on long-term as well as short-term sick leave</p>	<p>Intervention developed by: Guangdong Provincial Work Injury Rehabilitation Center (reviewers' inference)</p>	<p>Compliance: Voluntary</p>
<p>Country & availability:</p> <ul style="list-style-type: none"> • China (upper-middle income country) • Regional (Guangdong province) 	<p>Components: This study evaluates a multi-component intervention:</p>	<p>Role of study funder (in the intervention): Not stated</p>	<p>Intervention setting: Hospital (Guangdong Provincial Work Injury Rehabilitation Center)</p>
<p>Dates of operation: The paper indicates that Guangdong Provincial Work Injury Rehabilitation</p>	<ul style="list-style-type: none"> • Assessment by professional • Psychotherapy/ counseling (<i>RTW motivational analysis and reinforcement</i>) 	<p>Role of evaluators (in the intervention): Not independent (first author is based at the</p>	<p>Delivered by: Case managers</p> <p>Overall duration (per cohort): 3 month programme, plus additional support over following 6 months</p>

Center is a demonstration center, which has offered training courses on occupational rehabilitation (i.e., training in case management etc.) nationwide since 2004. Assumed to be ongoing.

Labour market constraints addressed:

- Pain
- Functional limitations
- Technical skills mismatch
- Attitudes mismatch
- Insufficient social skills
- Inaccessible workplace
- Lack of (access to) information

- Close links with the workplace/ employer
- Family involvement
- Group discussion/support (*disability adjustment group therapy, RTW social support groups*)
- Social skills training (*communication training*)
- Occupational health & safety training
- Ergonomic training
- Technical training (*incl. basic computer training*)
- Employment preparation training
- Work accommodation (non-physical)
- Job/ workplace matching
- Work placement
- One-to-one support /advice
- Information
- Other (simulated workplace training)

rehabilitation centre, and was involved in the development of intervention and possibly had a role in its delivery)

Intensity:

Twice a week the participant attended the Disability Adjustment Group Therapy. Once a week the participant attended the Return to Work Support Group.

Dosage (hours per week): Not stated

Intervention no.11: evaluated by Metts and Oleson (1995)

Formal name: Disabled persons Loan Scheme (DPLS)

Country & availability:

- Kenya (low-income country)
- Regional (20 rural districts)

Dates of operation: 1987 until at least 1995 (the study publication date)

Type of programme: Financial

Loan scheme (also known as business training and credit guarantee scheme)

Components:

- This study evaluates a multi-component intervention:
- Entrepreneurial skills training (business training and counseling, including assistance with the loan application)
 - Loans / access to credit

Intervention funded by: United Nations Development Programme (UNDP)

Intervention developed by:

- Government of Kenya (Ministry of Culture and Social Services)
- International Labour Organisation (ILO)
- Barclays Bank, Kenya

Role of study funder (in the intervention): Not independent (ILO funded the study and administered the intervention)

Target groups:

- People with disabilities
- An additional eligibility criterion was a lack of business working capital.

Compliance: Voluntary

Intervention setting: Information about the setting of the business training and counselling received by beneficiaries is not provided. Reviewers assume that loans were provided at a branch of Barclays Bank, Kenya.

<p>Labour market constraints addressed</p> <ul style="list-style-type: none"> • Insufficient entrepreneurial skills • Lack of access to financial credit (lack of working capital) • Social / familial attitudes (attitudes of banks, with regards lending money to people with disabilities) 	<ul style="list-style-type: none"> • <u>Other</u> (bank loans underwritten by the loan scheme as an incentive for the bank to participate in the scheme) <p>Summary: Clients were given assistance with the process of applying for loans through Barclay's Bank of Kenya. The loan applications were evaluated by the bank using all of the bank's standard criteria, with the exception of those criteria related to collateral or security. Loans at commercial rates of interest, and guaranteed by a credit guarantee fund deposited with the bank, were then to be extended to those clients whom the bank found to be qualified. Clients receiving loans were then provided with follow-up business training and counselling for the duration of the loan repayment period.</p>	<p>Role of evaluators (in the intervention): Not independent (the first author is a consultant at ILO)</p>	<p>Delivered by: Business training and counselling was provided by sub-contracted NGOs, but no further details are provided. Loans were provided by Barclays Bank, Kenya.</p> <p>Overall duration (per cohort): Unclear (typical recipient repaid loan within 2 years)</p> <p>Intensity: Not stated (i.e., frequency of business training and counselling)</p> <p>Dosage (hours per week): Not stated (i.e., dosage of business training and counselling)</p>
<p>Intervention no.12: evaluated by Biggeri et al. (2012)</p> <p>Formal name: Two CBR projects: (1) 'Mandya CBR Project' managed by Maria Olivia Bonaldo (MOB) (2) 'Malavalli CBR Project' managed by Sri Raman Maharishi Academy for the Blind (SRMAB)</p> <p>Country & availability:</p> <ul style="list-style-type: none"> • India (lower-middle income country) 	<p>Type of programme: <u>Community-based rehabilitation (CBR)</u></p> <p>Components: This study evaluates a multi-component intervention (covering all five different areas of the CBR Matrix):</p> <ul style="list-style-type: none"> • <u>Assessment by professional</u> • <u>Assistive devices (daily living)</u> • <u>Loans/ access to credit</u> • <u>One-to-one support & advice</u> (home visits) • <u>Employment advice & counselling</u> • <u>Employment preparation training</u> 	<p>Intervention funded by: Italian Association Amici di Raoul Follereau (AIFO)</p> <p>Intervention developed by: In Mandya District AIFO has been collaborating with two partners, Maria Olivia Bonaldo (MOB) and Sri Raman Maharishi Academy for the Blind (SRMAB). The two CBR projects are managed by these two NGOs. MOB is a faith-based NGO.</p> <p>Role of study funder (in the intervention): Not independent (AIFO provided financial support to the study and the CBR projects)</p>	<p>Target groups:</p> <ul style="list-style-type: none"> • People with disabilities (any type) <p>Compliance: Voluntary</p> <p>Intervention setting: Mixed/ multiple sites</p> <p>Delivered by: Trained CBR workers supported by a CBR supervisor and a project coordinator</p> <p>Overall duration (per cohort): Unclear (but study evaluates programme after two years and after four years)</p> <p>Intensity: Not stated</p>

- Available in villages in Mandya district in South Karnataka State, southern India

Dates of operation: 1997 – ongoing?

Labour market constraints addressed:

- Functional limitations
- Insufficient basic skills
- Technical skills mismatch
- Insufficient entrepreneurial skills
- Insufficient social skills
- Lack of (access to) financial support/credit
- Lack of (access to) social capital/networks
- Social attitudes
- Lack of (access to) information

- Other training (educating family members)
- Family involvement
- Psychosocial/ psychological therapy
- Physiotherapy
- Information
- Awareness raising
- Other (various forms of support, advice and referrals)

Both CBR programmes adopted similar methodologies of working through trained CBR workers supported by a CBR supervisor at sub-district levels and a project coordinator, based on strategies of mainstreaming, participation and inclusion. They work with the active involvement and collaboration of persons with disabilities, their families and their local communities through SHG. Each CBR worker looks after 15-25 villages.

Role of evaluators (in the intervention): Not independent (at least one author affiliated to AIFO)

Dosage (hours per week): Not stated

Intervention no.13: evaluated by Lagerkvist (1992b)

Formal name: Not stated

Country & availability:

- Philippines (lower-middle income country)
- 53 villages (no further details)

Dates of operation: Since 1981 (not known if ongoing)

Type of programme: Community-based rehabilitation

This programme is based on local supervisors recruited from the village (who were community workers). They are guided by staff from the rehabilitation centre.

Potential beneficiaries of the programme are identified by the local supervisors via house-to-house surveys. The supervisors assess them or

Intervention funded by: Not stated

Intervention developed by: Not stated

Role of study funder (in the intervention): Independent

Role of evaluators (in the intervention): Independent

Target groups:

- People with disabilities (various)

Compliance: Voluntary (implicit)

Intervention setting: Home (implicit)

Delivered by: Author reports that the programme is managed and supervised by a rehabilitation centre (no further details).

Overall duration (per cohort): Not stated



<p>Labour market constraints addressed:</p> <ul style="list-style-type: none">• Functional limitations• Insufficient skills• Insufficient social skills• Social attitudes• Lack of (access to) information	<p>refer them to the rehabilitation centre for assessment.</p> <p>Components: This study evaluates a multi-component intervention:</p> <ul style="list-style-type: none">• <u>Assessment by professional</u>• <u>Other</u> <p>The local supervisors receive a few weeks of medical training based on the WHO Manual. Each local supervisor is expected to work for 1-2 days a week with 4-8 disabled persons. Training packages from the WHO Manual are used. Initially, they are employed on a voluntary basis, but after 1 year they are upgraded.</p>		<p>Intensity: 1-2 days per week</p> <p>Dosage (hours per week): Not stated</p>
<p>Intervention no.14: evaluated by Lagerkvist (1992a)</p> <p>Formal name: Not stated</p> <p>Country & availability:</p> <ul style="list-style-type: none">• Zimbabwe (low-income country)• Two districts (no further details) <p>Dates of operation: Since 1985 (not known if ongoing)</p> <p>Labour market constraints addressed:</p> <ul style="list-style-type: none">• Insufficient skills• Insufficient social skills• Social attitudes	<p>Type of programme: <u>Community-based rehabilitation</u></p> <p>Two rehabilitation assistants with 1-2 years medical education are responsible for assessment of clients, analysing a rehabilitation plan for each clients, keeping records and referring clients when necessary, and training local coordinators and volunteers. The local coordinator is a community worker with several months of medical training, responsible for 300-400 disabled persons in their area. Their role includes identifying a trainee in the family and a volunteer to assist the family and following up on training.</p>	<p>Intervention funded by: Unclear (possibly the Zimbabwe Red Cross)</p> <p>Intervention developed by: Unclear (possibly the Zimbabwe Red Cross)</p> <p>Role of study funder (in the intervention): Independent</p> <p>Role of evaluators (in the intervention): Independent</p>	<p>Target groups:</p> <ul style="list-style-type: none">• People with disabilities (various) <p>Compliance: Voluntary (implicit)</p> <p>Intervention setting: Home/ community</p> <p>Delivered by: Zimbabwe Red Cross workers</p> <p>Overall duration (per cohort): Not stated</p> <p>Intensity: Not stated</p> <p>Dosage (hours per week): Not stated</p>

- Lack of (access to) information

Components:

This study evaluates a multi-component intervention:

- Assessment by professional
- Training
- Other

Programme beneficiaries are identified via house-to-house surveys.

Intervention no.15: evaluated by Gershon and Srinivasan (1992)

Type of programme: Community-based rehabilitation

Intervention funded by: German Leprosy Relief Association

Target groups:

- People with disabilities (leprosy)

Formal name: This pilot programme was a component of the Greater Madras Leprosy Treatment and Health Education Scheme (GRE-MALTES)

Particular emphasis on provision of interest-free loans to help start new trades or occupations

Intervention developed by: German Leprosy Relief Association

Compliance: Voluntary (implicit)

Country & availability:

- India (lower-middle income country)
- City of Madras

Components:

This study evaluates a multi-component intervention:

- Assessment by professional
- Loans/ access to credit
- Employment preparation training
- Placements

Role of study funder (in the intervention): Not independent

Intervention setting: Home and/or community, including job training centres

Delivered by: Social workers (qualified) were involved

Dates of operation: Unclear (study focuses on 1974-1983)

Role of evaluators (in the intervention): Not independent

Overall duration (per cohort): Not stated

Labour market constraints addressed:

- Insufficient skills
- Lack of access to financial credit
- **Social / familial attitudes**

Intensity: Not stated

Dosage (hours per week): Not stated

10.14 IMPACT ON PAID EMPLOYMENT

Study	Intervention category / Target group	Indicator / Timing of outcome measurement	Sample size	Results
Biggeri et al. (2012)	Community-based rehabilitation Any/multiple impairments	Effect on paid employment ¹ After 2 years of programme implementation	Post: 323 (TG 262; CG 61)	ATT=0.05, SD=0.014, t=3.714
		Effect on paid employment ¹ After 4 years of programme implementation	Post: 221 (TG 112; CG 109)	ATT=0.164, SD=0.035, t=4.638
Finger et al. (2012)	Treatment & therapy Visual impairments	Proportion in paid employment ³ 12 months after treatment ended	Pre: 294 Post: 294	Pre: 43.5% Post: 76.5%
		Likelihood of being in paid employment ³ 12 months after treatment ended	Unclear	OR 3.28; 95% CI 1.40-7.82; p=0.006
Gershon and Srinivasan (1992)	Community-based rehabilitation Physical impairments (leprosy)	Proportion in paid employment Unclear	Pre: 78 Post: 78	Pre: 64.1% Post: 100%
Guarino et al. (2007)	Assistive devices & accommodations Physical impairments (lower limb amputations)	Proportion in paid employment Unclear	Pre: 78 (TG: 50; CG: 28) Post: 78 (TG: 50; CG: 28)	TG: pre: 98%; post: 16% CG: pre: 98%; post: 0%
Hansen et al. (2007)	Occupational rehabilitation Physical impairments (spinal cord injuries)	Proportion in paid employment Unclear	Pre: 46 Post: 46	Pre: 0% Post: 50%
Lagerkvist (1992b)	Community-based rehabilitation Any/multiple impairments	Proportion in paid employment Unclear (after at least 6 months duration of the programme)	Philippines (male adults only) Pre: 23 Post: 23	Pre: 0% Post: 61%

Lagerkvist (1992a)	Community-based rehabilitation Any/multiple impairments	Proportion in paid employment <i>Unclear (after at least 6 months duration of the programme)</i>	Zimbabwe (male adults only) Pre: 26 Post: 26	Pre: 0% Post: 50%
Metts and Oleson (1995)	Financial Physical impairments (any/multiple)	Number of workers employed (by businesses owned by loan recipients) <i>Not stated</i>	Pre: 55 Post: 55	Pre: n=22 Post: n=41
Momim (2004)	Occupational rehabilitation Physical impairments (spinal cord injuries)	Proportion in paid employment <i>Not stated</i>	Pre: 64 (TG: 32; CG: 32) Post: 64 (TG: 32; CG: 32)	Pre: TG 6%, CG 9% Post: TG 6%, CG 6%
Nuri et al. (2012)	Occupational rehabilitation Any/multiple impairments	Proportion in paid employment (formal or self-) <i>Not stated</i>	Pre: 261 Post: 261	Pre: 0% Post: 60%
Shore and Juillerat (2012)	Assistive devices & accommodations Physical impairments (mobility limitations)	Proportion in paid employment <i>After 12 months receipt of the intervention</i>	Whole sample Pre: 620 Post: 519 <hr/> Indian sample only Pre: 206 Post: 201	Pre: 3% Post: 8% $\chi^2=18.549, p=0.000$ <hr/> Pre: 7% Post: 18.4%
Tang et al. (2011)	Occupational rehabilitation Physical impairments (work injuries)	Proportion in paid employment (formal) <i>6 months after programme completion</i>	Pre: 1 Post: 1	Pre: 0% Post: 100%

Notes: ATT: average treatment effect on the treated; SD: standard deviation; TG: treatment group; CG: control/comparison group

1: Effect on finding a job for those previously unemployed

2: Proportion in self-employment, formal employment, informal or part-time employment

3: Employment defined as involvement in income generating activities

4: Any income-generating activity in the past week

5: Includes zero labour supply for patients who were deceased or lost to follow-up

10.15 IMPACT ON SELF-EMPLOYMENT

Study	Intervention category / Target group	Indicator / Timing of outcome measurement	Sample size	Results
Metts and Oleson (1995)	Financial <i>Physical impairments</i> (any/multiple)	Number of businesses owned (by loan recipients) <i>Not stated</i>	Pre: 55 Post: 55	Pre: n=55 Post: n=60
Momim (2004)	Occupational rehabilitation <i>Physical impairments</i> (<i>spinal cord injuries</i>)	Proportion in self-employment and/or business <i>Not stated</i>	Pre: 64 (TG: 32; CG: 32) Post: 64 (TG: 32; CG: 32)	Pre: TG 12%, CG 19% Post: TG 19%, CG 12%

Notes

TG: treatment group; CG: control/comparison group

10.16 IMPACT ON INCOME

Study	Intervention category / Target group	Indicator / Timing of outcome measurement	Sample size	Data
Finger et al. (2012)	Treatment & therapy <i>Visual impairments</i>	Proportion reporting monthly household income of < 1000 Indian Rupees <i>12 months after treatment ended</i>	Pre: 294 Post: 294	Pre: 48.7% Post: 20.1%
		Likelihood of reporting a higher monthly household income ¹ <i>12 months after treatment ended</i>	Unclear	<1000 Rs. (OR 0.22, 95% CI 0.08–0.62; p = 0.004) >1000-3000 Rs. (OR 0.05, 95% CI <0.01-0.64; p=0.021).
Gershon and Srinivasan (1992)	Community-based rehabilitation <i>Physical impairments (leprosy)</i>	Proportion reporting monthly income <200 Indian Rupees <i>Unclear</i>	Pre: 78 Post: 78	Pre: 66.68% Post: 23.07%
Metts and Oleson (1995)	Financial <i>Physical impairments (any/multiple)</i>	Net monthly business income (in Kenyan Shilling) / <i>Not stated</i>	Pre: 55 Post: 55	Pre: 2035 Post: 3222
Shore and Juillerat (2012)	Assistive devices & accommodations <i>Physical impairments (mobility limitations)</i>	Proportion reporting adequate income – whole sample <i>After 12 months receipt of the intervention</i>	Pre: 620 Post: 519	Pre: 43% Post: 53% $\chi^2=19.741$, p=0.000
		Proportion reporting adequate income – India only <i>After 12 months receipt of the intervention</i>	Pre: 206 Post: 201	Pre: 12.6% Post: 23.4%

Notes

OR=odds ratio

CI-confidence interval

1: Reference group is the highest income category (>3000 Rs./month)

10.17 IMPACT ON HOURS WORKED

Study	Intervention category / Target group	Indicator / Timing of outcome measurement	Sample size	Results
Metts and Oleson (1995)	Financial <i>Physical impairments</i> (any/multiple)	Number of monthly hours worked (by employees in businesses owned by loan recipients) <i>Not stated</i>	Pre: 55 Post: 55	Pre: n=660 Post: n=1700

Notes

1: Includes zero labour supply for patients who were deceased or lost to follow-up

10.18 IMPACT ON MOTIVATION TO WORK

Study	Intervention category / Target group	Indicator / Timing of outcome measurement	Sample size	Results
Eniola and Adebisi (2007)	Treatment & therapy Visual impairments	Motivation ¹ After 6 weeks receipt of the intervention	TG1 (group receiving EI): Pre: n=16 Post: n=16	Pre: 7.7 (2.3) ² Post: 17.9 (3.19) (mean change score 12.2)
			TG2 (group receiving GS): Pre: n=16 Post: n=16	Pre: 11.1 (0.81) Post: 14.0 (0.61) (mean change score 2.9)
			Total sample (TG1 & TG2): Pre: n=32 Post: n=32	Pre: 9.4 (0.52) Post: 15.9 (1.86) (mean change score 6.5; F=7.98; df=1,28; p<0.05)

Notes

1: Measured on the work value inventory

2: Mean scores are reported first followed by standard deviations in parenthesis.

TG: treatment group

EI: Emotional Intelligence intervention

GS: Goal Setting intervention

10.19 IMPACT ON PROFESSIONAL SOCIAL SKILLS

Study	Intervention category / Target group	Indicator / Timing of outcome measurement	Sample size	Results
Pereira-Guizzo et al. (2012)	Treatment & therapy <i>Physical impairments (any/multiple)</i>	'Facing a job interview' score (0-24) ¹ <i>2 months after programme receipt</i>	Pre: n=8 Post: n=8	U=2.0; z=-3.3; p= 0.001
		'Offering a colleague some help' score (0-12) <i>2 months after programme receipt</i>	Pre: n=8 Post: n=8	U=13.0; z=-2.1; p=0.032
		'Dealing with a superior's fair criticism' score (0-16) <i>2 months after programme receipt</i>	Pre: n=8 Post: n=8	U=12.0; z=-2.2; p=0.030

Notes

1: Data reported for Group 1. Authors also report that Group 2 benefitted from the programme, and that in further follow-up assessments both groups maintained the improvements that were obtained through the programme.