

## REVIEWS

---

# A 10-Year Literature Review of the Impact of Community Based Rehabilitation

Bob Bowers<sup>1\*</sup>, Pim Kuipers<sup>1</sup>, Pat Dorsett<sup>1</sup>

1. School of Human Services and Social Work, Menzies Health Institute Queensland, Griffith University, Australia

### ABSTRACT

*A thematic literature review of the impact of CommunityBased Rehabilitation (CBR) in low to middle-income countries was conducted. The review covered the period from 2002 to 2012, and the CBR Matrix was utilised to provide structure for the evidence. Seven studies that investigated the impact of CBR interventions in developing countries were included. A modified harvest plot was used to summarise the strength and nature of evidence provided in relation to the CBR Matrix. Quantitative studies tended to focus on the Health domain, while qualitative studies generally focussed on the Social and Empowerment domains. No evidence of CBR impact was found in the Education domain, and very little evidence was found pertaining to Livelihood. Overall, the evidence base related to the impact of CBR remains limited, both in terms of quantity and robustness of design.*

### INTRODUCTION

The Community Based Rehabilitation (CBR) approach was formalised by the World Health Organisation (WHO) in the late 1970s as “a strategy to improve access to rehabilitation services for people with disabilities in low-income and middle-income countries” (World Health Organisation, 2010). In 2004, a joint position paper defined CBR as “a strategy within general community development for the rehabilitation, equalisation of opportunities and social inclusion of all people with disabilities” (ILO, UNESCO & WHO, 2004). Over time CBR has evolved into a multi-sectoral strategy encompassing services within Health, Education, Livelihood, and Social development sectors (World Health Organisation, 2010).

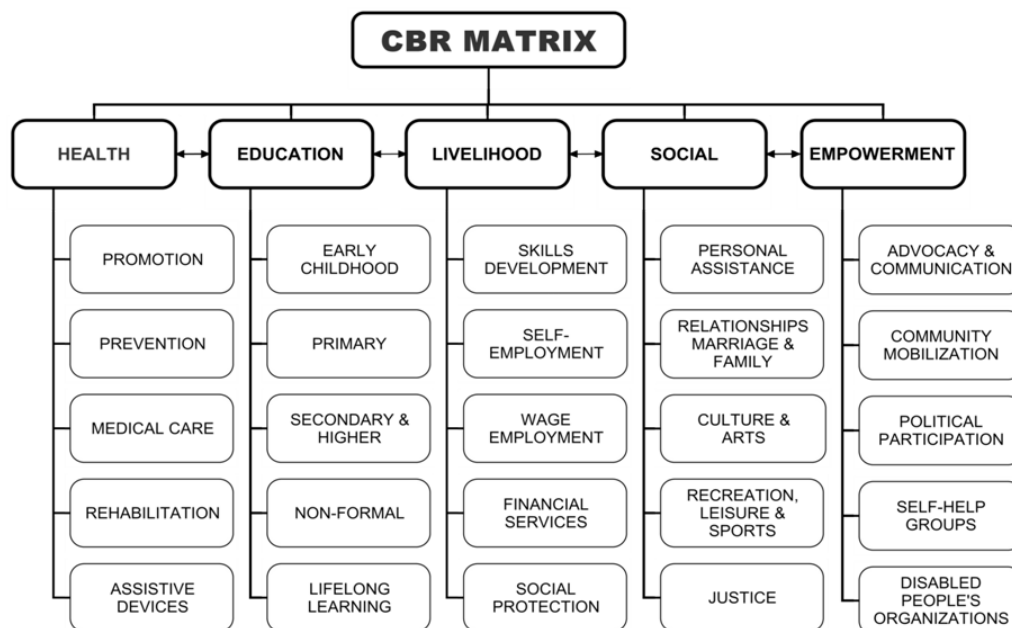
CBR encompasses many strategies which are often unique to a particular country, region or service provider (World Health Organisation, 2003). This flexibility

---

\* **Corresponding Author:** Bob Bowers, School of Human Services and Social Work, Menzies Health Institute Queensland, Griffith University, Australia. Email:rehabwork@gmail.com

makes CBR adaptable to local needs, but hinders comparison across interventions (Mitchell, 1999). The CBR Matrix (World Health Organisation, 2008) provides a way to depict the diversity of strategies, and to understand and compare CBR interventions (see Figure 1).

**Figure 1: The WHO CBR Matrix**



Reproduced with the permission of the publisher, from World Health Organisation (2008)

The CBR Matrix consists of 5 key components (column headings), each having 5 elements (rows). CBR's multi-sectoral approach is reflected in the fact that the first 4 components – Health, Education, Livelihood, and Social - relate to key development sectors. Empowerment, the final component, addresses sustainable access to development sectors for people with disabilities and their families. The elements under each key component describe the range of options that could be implemented, although it is not expected that any particular CBR project will implement every element of the Matrix (World Health Organisation, 2010).

### Prior Literature Reviews

Over the past 15 years, several literature reviews have been conducted to document the impact of CBR. Four of these chose a relatively broad disability

focus, spanning wide age ranges and disability types. Mitchell's review (1999) was the first extensive published literature review of CBR. Subsequent reviews by Finkenflugel (2005) and Velema (2008) covered the same body of literature in a more systematic way. Each of the reviews focussed on CBR to some extent, but applied different key search terms in order to answer their respective questions, which were related but not directly comparable. Table 1 compares the differences in the foci and findings of 4 literature reviews. Finkenflugel et al (2005) looked at the literature focussed on CBR, and identified 10 of those sources as intervention studies. Velema et al (2008) extended the search by including additional sources from "grey literature". Patel et al (2013) examined rehabilitation services in developing countries, and categorised 5 out of 24 sources as "CBR".

**Table 1: Summary of Previous Literature Reviews**

Main Author	Published	Years Covered	Country Focus	Focus	Sources
Mitchell	1999	1982-1997	Any	Research published on CBR	Unknown
Finkenflugel	2005	1978-2002	Any	CBR (CBR Intervention studies)	128 (10)
Velema	2008	1987-2007	Developing	Impact of rehabilitation in the community	29
Patel	2013	1988-2010	Low and middle-income	Quality of evidence for impact of rehabilitation services	24

The above reviewers all noted that the quantity and quality of existing research was limited. Finkenflugel et al (2005) suggested caution in generalising the results, while Velema et al (2008) noted, *"There is a need to invest in the generation of quality evidence about the outcome and impact of rehabilitation-in-the-community programmes to ensure its continued support"*. In the light of this, the current review will build on these previous literature reviews, with the primary purpose of updating and refining existing knowledge about the impact of CBR on the lives of people with disabilities in low and medium Human Development Index (HDI) countries.

In areas closely related to CBR, other reviewers have noted that the *"quality of evidence that does exist is 'very low' in terms of widely accepted hierarchies of evidence"* (Robertson et al, 2012). Other authors have concluded that *"there have*

*been few studies assessing the impact of rehabilitative services using research designs that allow attribution of changes in client-centred outcomes to interventions” (Patel et al, 2013).*

A common understanding of the term “impact” is vital in determining what is known about the impact of CBR initiatives. Measurement of the impact of an intervention is commonly referred to as an “impact evaluation”. While the term impact evaluation often refers to the long-term effects of a development intervention, the World Bank and others use the term to refer to attribution of impact, or the difference in an indicator with and without the intervention (White, 2010). Attribution is “proved” by the presence of a counterfactual, which is similar to a control group in experimental research, i.e., the demonstration of what would have happened without the intervention, not simply by the presence of change (Savedoff et al, 2006).

The current review utilised a modified “harvest plot” to assist in visualising the relative quantity and quality of evidence in each component of the CBR Matrix. A harvest plot can be used to synthesise the weight of evidence in a range of interventions (Ogilvie et al, 2008). As the interventions were very different, it is not directly comparable, but does provide an overview of the current state of published evidence. Given the variety of interventions and approaches used in CBR, it is problematic to claim that evidence of impact in one context may necessarily be relevant in another setting.

## **METHOD**

Searches of Pubmed, CINAHL, Psychinfo, Web of Science, and Source were conducted during May and June of 2012, to locate relevant literature. The database Source is an international resource of freely accessible information managed by Handicap International and includes numerous organisational reports and project evaluations; however, the 37 references found through this database were not peer reviewed.

The search terms included “community based rehabilitation”, “impact”, and “effect” in various combinations. The searches were limited to English language and the publications’ dates from 2002 to 2012, extending the work of previous reviews (Mitchell, 1999; Finkenflügel, 2004; Finkenflugel et al, 2005; Velema et al, 2008). Further sources were identified through “snowballing”, hand-searching the reference lists of the above articles, and through the resources and professional networks of the authors.

For purposes of this review, “community based rehabilitation” was defined as any combination of a broad number of activities or interventions that can be included in the CBR Matrix and are targeted at the rights, needs, or inclusion of people with disabilities. Any report which self-identified itself as CBR was included in this review, except those that only described institution-based interventions. Likewise, if a project did not self-identify as CBR, it was not included.

The Human Development Index (HDI) ranking from 2011 was used as the basis for the country ranking (Klugman & Macmillan, 2011). The HDI takes into consideration life expectancy, mean and expected years of schooling, and gross national income, to assign each country a human development categorisation of ‘very high’, ‘high’, ‘medium’, or ‘low’.

To reflect impact, only those articles that demonstrated criteria of impact evaluation were included in the review. That is, only those studies were included which (a) assessed change over time, or (b) assessed change retrospectively, or (c) included a control group or reference group.

Inclusion criteria included English language studies published between 2002 and 2012. Studies which measured some form of impact from the perspective of people with disability, with change being measured over time, or against a control or comparison group, were included. Studies were excluded if they were conducted in countries categorised as ‘very high’ or ‘high’ HDI in 2011 (Klugman & Macmillan, 2011), or if they were hospital or institution-centred interventions. The assessment of interventions is based on what was described in the document. Following the criteria adopted by Velema (2008), interventions related to malnutrition, mental illness, cancer and substance abuse were excluded. Articles discussing the outcomes of staff training programmes, or relying extensively on expert opinion rather than the opinions of beneficiaries themselves, were not included because they did not measure impact at the point of desired change. Finally, single case studies were also excluded.

The database search was carried out by the primary author, and the results of all searches were imported into Endnote X5. Titles and abstracts were scanned against exclusion criteria and tagged according to the relevant criteria. Full texts of articles not excluded were downloaded and read. Included reports were categorised according to the type of intervention, research methodologies, and an assessment of the robustness of the quantitative evidence offered, or the degree of confidence of the qualitative evidence offered.

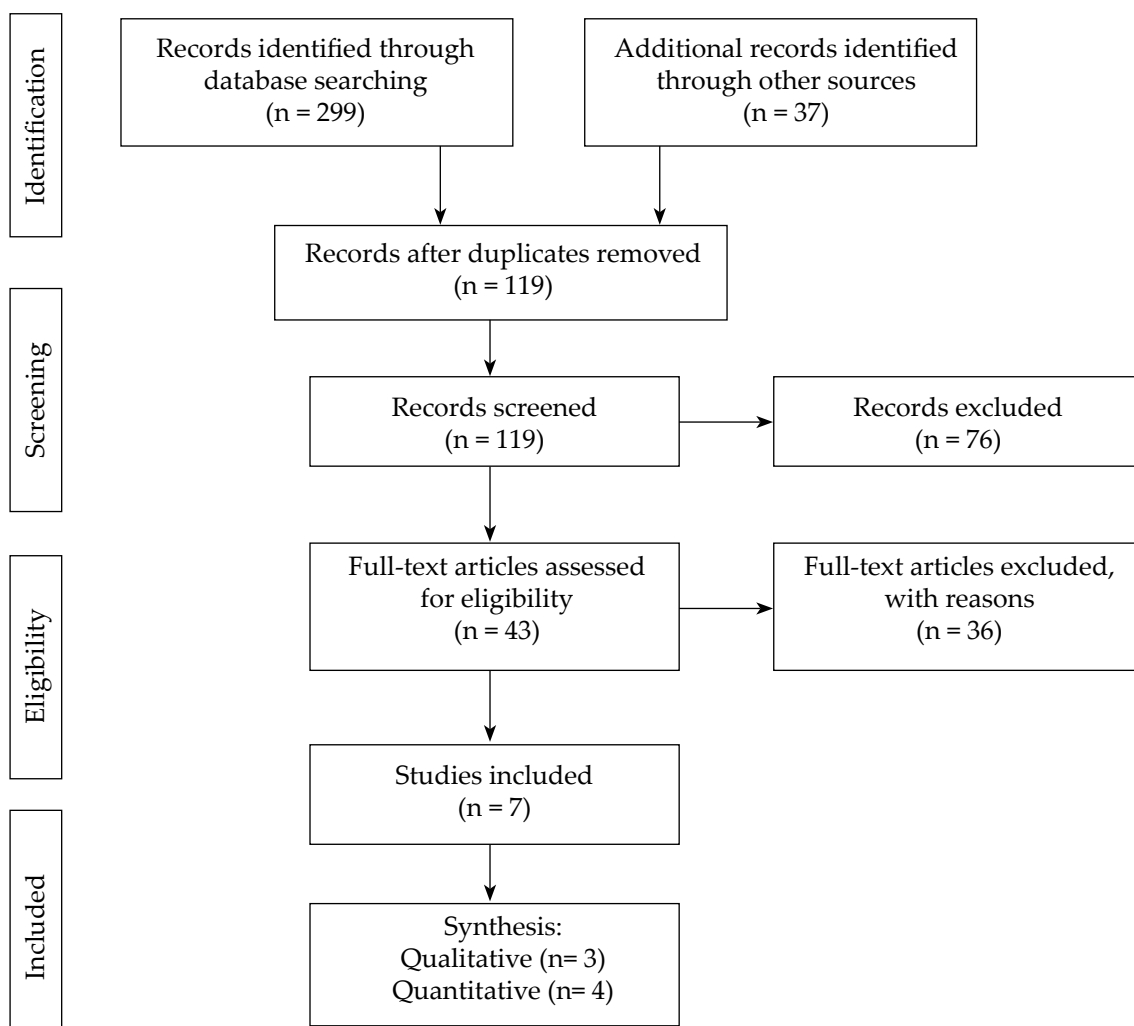
## RESULTS

The search yielded 336 sources, of which 329 were excluded as duplicates or with the application of the defined exclusion criteria (see Figure 2). The 7 remaining studies met the criteria for inclusion (Grut et al, 2004; Eide, 2006; Chappell & Johannsmeier, 2009; Yu et al, 2009; Bekker, 2011; Gulati et al, 2011; Biggeri et al, 2012).

### Types of Interventions

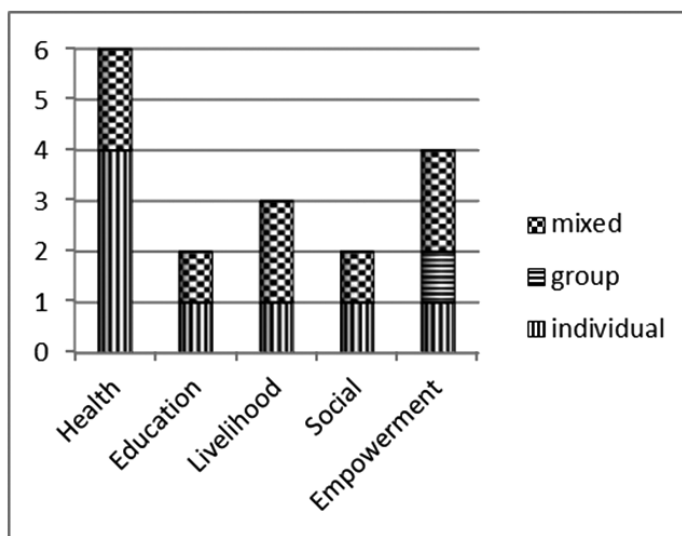
The interventions delivered by each project were assessed according to the

**Figure 2: Prisma Flow Diagram (Moher et al. 2014) of Literature Search Results**



description provided, and were categorised into the 5 components of the CBR Matrix: Health, Education, Livelihood, Social, and Empowerment (World Health Organisation, 2008); (see Figure 3). Assigning project activities to Matrix components was somewhat subjective since intervention descriptions varied and did not always correspond directly with the elements of a particular component. Some projects fell under multiple categories. As illustrated in Figure 3, the most common interventions came under the Health component, with individual approaches favoured over group approaches. Several projects addressed health issues exclusively (Eide, 2006; Yu et al, 2009; Bekker, 2011). Fewer interventions were noted in Social and Education domains.

**Figure 3: CBR Activities According to the 5 key Components of the CBR Matrix**



### Research Methodologies

The studies took differing research approaches in attempting to determine the impact of the various CBR interventions. Four studies took a predominantly quantitative approach (Eide, 2006; Yu et al, 2009; Bekker, 2011; Biggeri et al, 2012), while three studies took a predominantly qualitative approach (Grut et al, 2004; Chappell & Johannsmeier, 2009; Gulati et al, 2011). Several studies had a mix of methodologies (Grut et al, 2004; Eide, 2006), though the results and analysis were generally weighted towards one approach.

## Quantitative Evidence

Figure 4 illustrates the distribution of results in various aspects of the CBR Matrix, and gives a simple indication of the robustness of the quantitative studies and, therefore, of the findings. The criteria to assess each study related to whether the study in question used pre- and/or post-measures, used a form of control group, and the degree of significance of the findings.

**Figure 4: Robustness of Quantitative Evidence based on the CBR Matrix**

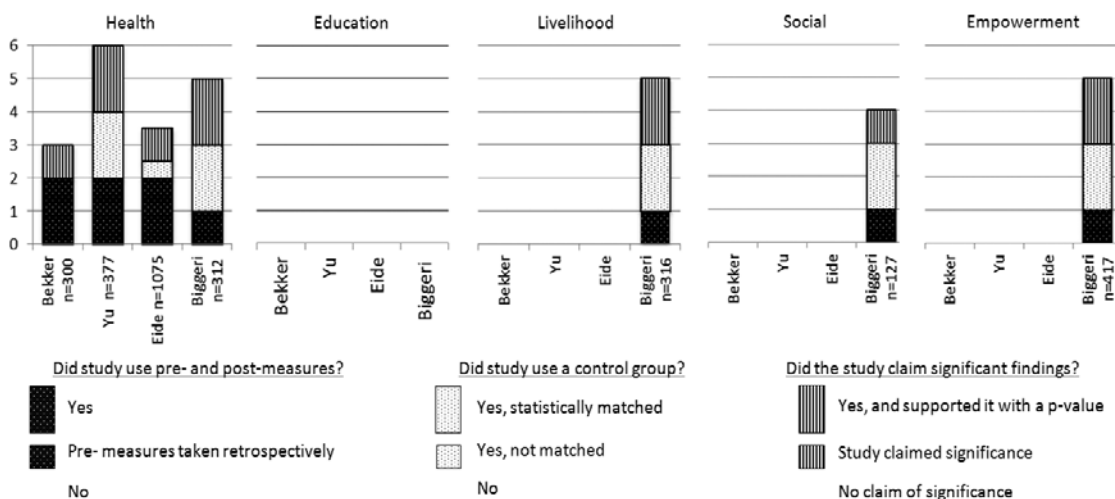


Figure 4 also illustrates the number of studies providing evidence for each component of the CBR Matrix. The Health component is clearly the most researched, with 4 studies offering evidence. There is a gap in demonstrating the impact of CBR in the Education component as it is difficult to prove whether the family might have found a way to continue the child's education without the intervention of a CBR project. The remaining evidence in the areas of Livelihood, Social and Empowerment is provided by only 1 study (Biggeri et al, 2012).

## Qualitative Evidence

Three sources used predominantly qualitative methods to evaluate the impact of CBR (Grut et al, 2004; Chappell & Johannsmeier, 2009; Gulati et al, 2011). The assessment of qualitative evidence requires criteria and processes that differ from those used in the review of quantitative studies.



In the current review, suggestions from Mays (2000) and a qualitative research checklist (Critical Appraisal Skills Programme - CASP, 2010) were used to inform criteria to assess confidence. The selected criteria were not intended to be definitive or conclusive, but to highlight differences that may affect the degree of confidence in the findings. The criteria are based on the study descriptions, the confidence in the analysis and the data collection descriptions.

Figure 5 shows that the only evidence of qualitative impact in the Health component of the CBR Matrix is provided by Chappell & Johannsmeier (2009). No impact was reported in qualitative studies pertaining to the Education or Livelihood aspects of the CBR Matrix. The Social component of the Matrix was addressed by all 3 qualitative studies. Evidence of the impact of CBR in the area of Empowerment was provided by Chappell & Johannsmeier (2009) and Gulati et al (2011), who reported that the CBR groups allowed participants to develop enhanced peer support.

**Figure 5: Indication of the Confidence in the Findings of Qualitative Evidence based on the CBR Matrix**

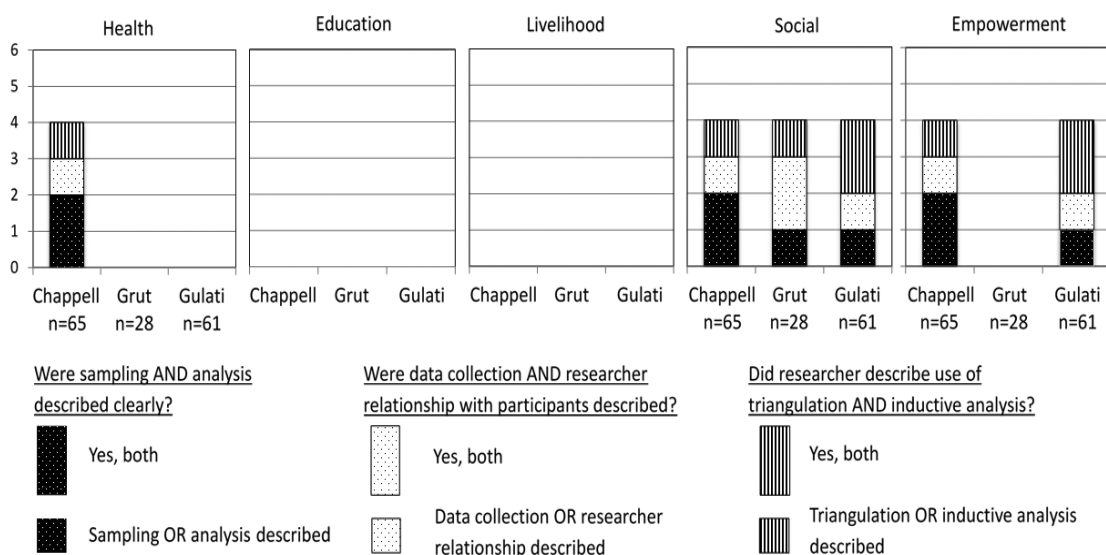


Table 2 summarises the key impacts identified by each of the studies that were identified in this review. The summary statements provide indicators of the kind of evidence offered.

**Table 2: Qualitative and Quantitative Evidence offered for each Component of the CBR Matrix**

Matrix Heading	Quantitative	Qualitative
Health	<ul style="list-style-type: none"> <li>• Adults who received institutional rehabilitation following a stroke continued to have greater neurological gains when receiving individual community based rehabilitation than without CBR (<math>p &lt; 0.01</math>) (Yu et al., 2009).</li> <li>• Children with disabilities who received individual rehabilitation improved their developmental quotient (Bekker, 2011).</li> <li>• Children improved their functional abilities and caregivers/staff attributed the change to CBR (Eide, 2006).</li> <li>• People who were in the CBR programme reported greater access to assistive devices after 2 or 4 years (<math>p &lt; 0.5</math>) (Biggeri et al, 2012).</li> </ul>	<ul style="list-style-type: none"> <li>• People with disabilities reported that the Community Rehabilitation Facilitators (CRFs) gave individual assistance which helped them with ADLs and increased mobility (Chappell &amp; Johannsmeier, 2009).</li> </ul>
Education		
Livelihood	<ul style="list-style-type: none"> <li>• People in the CBR programme reported more access to government pensions after 4 years (<math>p &lt; 0.001</math>) (Biggeri et al, 2012).</li> <li>• People in the CBR programme for 4 years reported increased employment (<math>p &lt; 0.001</math>) (Biggeri et al, 2012).</li> </ul>	
Social	<ul style="list-style-type: none"> <li>• People involved in CBR projects reported they could express their views and participate in decisions more than the control groups after 4 years (Biggeri et al, 2012).</li> <li>• People involved in CBR projects for 4 years reported they felt respected in the community (Biggeri et al, 2012).</li> <li>• People involved in CBR projects for 4 years reported they felt more respected by their families (Biggeri et al, 2012).</li> </ul>	<ul style="list-style-type: none"> <li>• Family relationships were strengthened by giving skills/confidence to caregivers, as well as changing their perceptions of the person (Chappell &amp; Johannsmeier, 2009).</li> <li>• Social acceptance was increased by changing community perception and assisting with greater physical accessibility of public buildings, which increased social integration (Chappell &amp; Johannsmeier, 2009).</li> </ul>

		<ul style="list-style-type: none"> <li>• Adolescents expressed that working in a group, especially a group where there is active group participation and ongoing meaningful activities was very empowering (Gulati, Paterson, Medves, &amp; Luce-Kapler, 2011).</li> <li>• The CBR programme has changed attitudes towards people with disabilities, allowing increased inclusion in family and community (Grut, Hjort, &amp; Eide, 2004).</li> </ul>
Empowerment	<ul style="list-style-type: none"> <li>• People involved in CBR projects reported they felt more able to express their views and participate in community decisions (<math>p &lt; 0.1</math>) (Biggeri et al, 2012).</li> </ul>	<ul style="list-style-type: none"> <li>• The groups that were formed by the CRFs allowed the participants to find and enjoy peer support (Chappell &amp; Johannsmeier, 2009).</li> <li>• The CRFs increased the self-esteem and self-confidence of people with disability through their counselling/ support (Chappell &amp; Johannsmeier, 2009).</li> <li>• People with disabilities were more accepted in the community (Gulati et al, 2011).</li> </ul>

## DISCUSSION

As reflected in Table 2, and Figures 4 and 5, the component of the CBR Matrix with the most evidence was Health; indeed, all of the quantitative studies provided evidence in the area of Health. This may reflect the development of many standardised measures within the rehabilitation field, allowing for constructs to be more easily quantified. However, it is also possible that the focus on health may be an ongoing reflection of the biomedical roots of CBR (Miles, 1996; Thomas & Thomas, 1999).

Across the quantitative studies, the best evidence of attributable impact was provided by the focussed review of the outcomes of CBR after a stroke (Yu et al, 2009). Evidence was also offered in the studies which looked at childhood interventions, though both studies had issues which would preclude a confident statement of attribution (Eide, 2006; Bekker, 2011). The reporting and findings of these childhood disability studies is similar to that reported by Lagerkvist (1992), showing the percentage of children demonstrating improvement in functional skills but not discussing significance.

In contrast, no evidence for impact in Education was found in the current review. Velema et al (2008) reported 4 sources that commented on the positive influence of education programmes in 7 countries. These conclusions were presented in terms of the percentage of children who had been helped to attend school. However, in the absence of a control or comparison group, it is difficult to assess whether the children would have found another way to attend school, or if the families were participating in the project because they valued education.

The remaining quantitative evidence is offered by Biggeri et al (2012). While this important study contributes greatly to the development of CBR evidence, much of that evidence is based on responses to a single question, with a retrospectively determined baseline. For example, the evidence in the Social domain is based on the person's response to the question - "Does your family consider your views in taking decisions?" The individual was then asked to determine what the answer to the same question would have been 2, 4 and 6 years earlier. As the only quantitative evidence offered, it is a constructive starting point, but a multi-year retrospective baseline has potential limitations in accuracy due to bias and recall difficulties. While these findings are important, if the field of CBR is to establish a sound evidence base, there is a need for more prospective studies.

Qualitative research methods appear to be useful in assessing aspects of the Social and Empowerment domains, as all of the qualitative research studies contributed evidence in those areas. The qualitative studies are informative and elucidate issues in a different way than the quantitative studies; however, it is much more difficult for such studies to demonstrate attribution of impact. It is clear from a detailed reading of all studies that many participants in CBR value the interventions provided, and attribute positive changes to CBR. Possibly the most telling statement of value on the side of the participants is their choice in continuing to invest time and limited resources in CBR activities.

However, valuing something is not the same as demonstrating attribution of impact. This reflects a key aspect of the dilemma of CBR. While participants and families may not ask for quantifiable evidence of impact as a criterion for their engagement, there is a strong desire for such evidence from management, donors, and academics.

CBR is a complex, multi-sectoral approach. As a result, it is difficult to assess many of the interventions in a manner that allows attribution of impact. Added to the complexity of assessing impact, there is often a shortage of resources and an understandable desire to put those resources into meeting community needs, so aspects of rigour of research are at times overlooked. There may also be a lack of adequate tools to measure potential change. Similar to previous literature reviews (Mitchell, 1999; Finkenflugel et al, 2005; Velema et al, 2008; Patel et al, 2013; Robertson et al, 2012), this review found that the available evidence for CBR is scant in quantity and characterised by methodological limitations that compromise the strength of evidence. In the 10-year period covered in this review, only 7 articles were found which addressed the impact of CBR on people with disabilities and their families.

There is an ongoing need for quality research with some kind of control group or counterfactual, in order to demonstrate the impact of CBR implementation. Due to the variety of CBR interventions, a clear description of the intervention is necessary in all published reports. Finally, there is a need to identify standardised tools to collect meaningful pictures of the before and after situation. In order to develop these tools, trials maybe necessary to demonstrate their effectiveness in measuring change, and the results shared with the participants to ensure their agreement. These tools could provide the additional benefit of helping with the routine monitoring of CBR activities.

### **Strengths and Limitations**

This review set out to find and assess the available evidence by looking at the attributable impact of CBR. There is not much evidence published on the impact of CBR, therefore the number of studies reviewed was relatively limited. Moreover, of the 7 sources referenced in this review, 3 were not drawn from peer-reviewed journals. In some cases the findings of this grey literature, while meeting criteria for inclusion, still seems based on subjective understandings of outcome, with few or no objective measures.

Methodologically, this review was largely conducted by the first author, under supervision and in consultation with the second and third authors. While this provided consistency of approach, to reduce the risk of bias it may have been preferable for 2 reviewers to assess literature, determine inclusion, and rate quality.

## CONCLUSION

This literature review of the impact of CBR has provided a constructive update of previous reviews (Mitchell, 1999; Finkenflugel et al, 2005; Velema et al, 2008; Patel et al, 2013). The CBR Matrix is used as the common frame of reference to assess the number of studies, and the nature and relative strength of qualitative and quantitative evidence offered by the available literature. The modified harvest plot used here may assist in future reviews of evidence as a way of visualising the relative quantity and attributes of the studies reviewed. Some quantitative evidence was identified pertaining to the Health domain, and some qualitative evidence was identified from studies focussing on the Social and Empowerment domains. Although there is a growing body of evidence in CBR, there is an ongoing need to strengthen CBR evidence in general, but particularly in the Education and Livelihood domains.

## REFERENCES

- Bekker G (2011). Measuring the effectiveness of community based rehabilitation services in children with developmental delays in the Dominican Republic. Available at: [http://us.internationalchildcare.org/sites/internationalchildcare.org/files/attachments/trudy\\_article.pdf](http://us.internationalchildcare.org/sites/internationalchildcare.org/files/attachments/trudy_article.pdf).
- Biggeri M, Deepak S, Mauro V, Trani J-F, Kumar J, Ramasamy P, Bakhshi P, Giriappa R(2012). Impact of CBR: impact of community-based rehabilitation programme in Karnataka India, Bologna, Italy: Italian Association Amici di Raoul Follereau (AIFO). Available at: [http://www.aifo.it/english/proj/research/sparkcbr/attachments/MandyaCBR\\_phase01\\_research\\_light\\_version.pdf](http://www.aifo.it/english/proj/research/sparkcbr/attachments/MandyaCBR_phase01_research_light_version.pdf).
- Chappell P, Johannsmeier C (2009). The impact of community based rehabilitation as implemented by community rehabilitation facilitators on people with disabilities, their families and communities within South Africa. *Disabil Rehabil*; 31(1): 7–13. <http://dx.doi.org/10.1080/09638280802280429> PMID:19194807
- Critical Appraisal Skills Programme – CASP (2010). Making sense of evidence about clinical effectiveness: 10 questions to help you make sense of qualitative research. Critical Appraisal Skills Programme (CASP). Available at: [http://www.casp-uk.net/wp-content/uploads/2011/11/CASP\\_Qualitative\\_Appraisal\\_Checklist\\_14oct10.pdf](http://www.casp-uk.net/wp-content/uploads/2011/11/CASP_Qualitative_Appraisal_Checklist_14oct10.pdf).

Eide AH (2006). Impact of community-based rehabilitation programmes: The case of Palestine. *Scandinavian Journal of Disability Research*; 8(4): 199–210. <http://dx.doi.org/10.1080/15017410500466750>

Finkenflügel H (2004). Empowered to differ: stakeholders' influences in community-based rehabilitation. Rotterdam: Vrije Universiteit. Available at: [www.enablement.nl/pdf/empoweredtodiffer.pdf](http://www.enablement.nl/pdf/empoweredtodiffer.pdf).

Finkenflugel H, Wolffers I, Huijsman R(2005). The evidence base for community-based rehabilitation: a literature review. *Int J Rehabil Res*; 28(3): 187–201. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/16046912>. <http://dx.doi.org/10.1097/00004356-200509000-00001> PMID:16046912

Grut L, Hjort P, Eide A (2004). More of the same and try something new. Evaluation of the CBR programme in Eritrea, SINTEF. Available at: <http://www.afri-can.org/CBRInformationinMatrix/EMPOWERMENT/EvaluationofCBRinEritrea.pdf>.

Gulati S, Paterson M, Medves J, Luce-Kapler R (2011). Adolescent group empowerment: group-centred occupations to empower adolescents with disabilities in the urban slums of North India. *Occupational Therapy International*; 18(2): 67–84. <http://dx.doi.org/10.1002/oti.294> PMID:20690125

International Labour Organisation, United Nations Educational, Scientific and Cultural Organisation, & World Health Organisation (2004). CBR: a strategy for rehabilitation, equalisation of opportunities, poverty reduction and social inclusion of people with disabilities: joint position paper. International Labour Organisation, United Nations Educational, Scientific and Cultural Organisation, World Health Organisation. Available at: <http://www.ncbi.nlm.nih.gov/pubmed/11034985>.

Klugman J, Macmillan P (2011). Human Development Report 2011. Sustainability and Equity: A better future for all. Available at: <http://hdr.undp.org/en/reports/global/hdr2011/download/>

Lagerkvist B (1992). Community-based rehabilitation - outcome for the disabled in the Philippines and Zimbabwe. *Disability and rehabilitation*; 14(1): 44–50. <http://dx.doi.org/10.3109/09638289209166427> PMID:1586761

Mays N, Pope C (2000). Qualitative research in health care: assessing quality in qualitative research. *BMJ: British Medical Journal*; 320(January): 50–52. <http://dx.doi.org/10.1136/bmj.320.7226.50> PMID:10617534 PMCid:PMC1117321

Miles S (1996). Engaging with the disability rights movement: the experience of community-based rehabilitation in southern Africa. *Disability & Society*; 11(4): 501–518. Available at: <http://search.proquest.com/libraryproxy.griffith.edu.au/docview/61569285?accountid=14543>. <http://dx.doi.org/10.1080/09687599627561>

Mitchell R (1999). The research base of community-based rehabilitation. *Disabil Rehabil*; 21(10-11): 459–468. Available at: <http://informahealthcare.com/doi/abs/10.1080/096382899297251>. <http://dx.doi.org/10.1080/096382899297369> <http://dx.doi.org/10.1080/096382899297251> PMID:10579666

Moher D, Liberati A, Tetzlaff J, Altman DG, The PRISMA Group (2009). Preferred reporting items for systematic reviews and meta-analyses: the PRISMA Statement. *PLoS Med* 6(6): e1000097. doi:10.1371/journal.pmed1000097

Ogilvie D, Fayer D, Petticrew M, Sowden A, Thomas S, Whitehead M, Worthy G (2008). The harvest plot: a method for synthesising evidence about the differential effects of interventions. *BMC medical research methodology*; 8(1): 8. <http://dx.doi.org/10.1186/1471-2288-8-8> PMID:18298827 PMCID:PMC2270283

Patel S, Alavi Y, Lindfield R, Kuper H (2013). The impact of rehabilitative services in the lives of adults and children with disabilities, in low-income and middle-income countries: an assessment of the quality of the evidence. *Disability and Rehabilitation*; 35(9): 703–712. Available at: <http://dx.doi.org/10.3109/09638288.2012.705949>. <http://dx.doi.org/10.3109/09638288.2012.705949>

Robertson J, Emerson E, Hatton C, Yasamy M (2012). Efficacy of community-based rehabilitation for children with or at significant risk of intellectual disabilities in low and middle-income countries: a review. *J Appl Res Intellect Disabil*; 25(2): 143–154. <http://dx.doi.org/10.1111/j.1468-3148.2011.00679.x> <http://dx.doi.org/10.1111/j.1468-3148.2011.00679.x>

Savedoff W, Levine R, Birdsall N (2006). *When will we ever learn? Improving lives through impact evaluation*, Washington, D.C.: Centre for Global Development. Available at: <papers2://publication/uuid/990BEF9C-47A1-4E4D-8C39-2617EE36716F>. PMID:17175735

Thomas M, Thomas MJ (1999). A discussion on the shifts and changes in community based rehabilitation in the last decade. *Neurorehabilitation and neural repair*; 13(3): 185–189. <http://dx.doi.org/10.1177/154596839901300308>

Velema JP, Ebenso B, Fuzikawa PL (2008). Evidence for the effectiveness of rehabilitation-in-the-community programmes. *Leprosy review*; 79(1): 65–82. Available at: <http://www.leprosy-review.org.uk/>. PMID:18540238

White H (2010). A contribution to current debates in impact evaluation. *Evaluation*; 16(2): 153–164. <http://dx.doi.org/10.1177/1356389010361562>

World Health Organisation (2003). *International consultation to review community-based rehabilitation (CBR)*. Helsinki: WHO Document Production Services. Available at: [http://whqlibdoc.who.int/hq/2003/who\\_dar\\_03.2.pdf](http://whqlibdoc.who.int/hq/2003/who_dar_03.2.pdf).

World Health Organisation (2008). *Community based rehabilitation (CBR) Matrix (7/2/2014)*. Available at: [http://www.who.int/disabilities/cbr/cbr\\_matrix\\_11.10.pdf](http://www.who.int/disabilities/cbr/cbr_matrix_11.10.pdf).

World Health Organisation (2010). *CBR Guidelines: introductory booklet C*. Khasnabis & K. Heinicke Motsch, eds., Malta: World Health Organisation. Available at: <http://www.who.int/disabilities/cbr/guidelines/en/index.html>.

Yu JJ, Hu YS, Wu Y, Chen WH, Zhu YL, Cui X, Lu WB, Qi Q, Qu PY, Shen XH (2009). The effects of community-based rehabilitation on stroke patients in China: a single-blind, randomised controlled multicentre trial. *Clinical rehabilitation*; 23(5): 408–417. <http://dx.doi.org/10.1177/0269215508091870> PMID:19349340