ORIGINAL RESEARCH

An Evaluative Study of Services Provided in Community-Based Rehabilitation Centres in Jordan

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ABSTRACT

Purpose: *This research study aimed to investigate the effectiveness of the services provided by CBR programmes in Jordan.*

Method: *This was a mixed- methods investigation. A survey was carried out with 47 participants (stakeholders and volunteers) from four CBR centres in Jordan. It comprised 18 questions that collected both qualitative and quantitative data with both closed- and open-ended questions. The quantitative data were analysed using SPSS Version 22.0. Qualitative data were analysed through thematic content analysis and open coding to identify emergent themes.*

Results: *40.4% of the participants evaluated the effectiveness of CBR services as low. This mainly stemmed from the lack of efforts to increase the local community's knowledge about CBR, disability and the role of CBR programmes towards people with disabilities.*

Conclusions: *A proposal was offered concerning the priorities of CBR programmes in Jordan. Efforts need to be directed at promoting livelihood and empowerment components in order to actualise the principles of CBR, mainly by promoting multispectral collaboration as a way of operation.*

Implications: *This study was inclusive of all types of disability. Barriers to the effectiveness of services may stem from accessibility issues to the families of persons with disabilities (hard to reach) or from CBR services themselves (hard to access). The culturally specific evaluative tool in this study was of "good" specificity and sensitivity, this evaluative instrument can be transferrable to measure the impact of CBR programmes in other settings.*

Key words: *Community-based rehabilitation (CBR), CBR centres, CBR Matrix, evaluative study, Jordan, mixed-methods, people with disabilities, rehabilitation services*

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INTRODUCTION

People with disabilities constitute 15% of the world's population and are considered to be among the poorest and most marginalised members of several communities (World Health Organisation and World Bank, 2011). In 1978, the WHO initiated community-based rehabilitation (CBR) as a strategy to decrease poverty and the burden of disability in countries with low economic resources (ILO, UNESCO, WHO, 2004a; WHO, UNESCO, ILO, IDDC, 2010). CBR is defined as an inclusive community development strategy aimed at empowering persons with disabilities and maximising and equalising their opportunities in the realms of health, education, livelihood, social inclusion, and community participation (ILO, UNESCO, WHO, 2004a, 2004b; WHO, UNESCO, ILO, IDDC, 2010).

The evidence for CBR effectiveness is fragmented and unsubstantiated (Boyce and Ballantyne, 2000; Finkenflugel et al, 2005; Grandisson et al, 2014a; Grandisson et al, 2016a). This does not mean that CBR does not foster positive change. There are around 8361 people who benefitted from the CBR programmes in Jordan, and yet there are about 25,000 people in Jordan who require rehabilitative services offered by the CBR programmes (Higher Council for Affairs of Persons with Disabilities-HCD, 2017). However, efforts need to be directed towards carrying out rigorous and controlled studies to provide evidence concerning the effectiveness of CBR services. For example, the HCD in Jordan reported several challenges for the provision of CBR programmes, such as limitation in human and economic resources, and the limited role of media in relation to actualising the principle of inclusion (HCD, 2017). Yet, there is absence of a systematic form of evaluation of such challenges and outcomes of CBR programmes (Boyce and Ballantyne, 2000; Grandisson et al, 2014a). Not only does this impede the development of new programmes but it also threatens the existence and the sustainability of the current CBR programmes (Boyce and Ballantyne, 2000; Byford et al, 2003; Grandisson et al, 2014a; Mauro et al, 2014).

The CBR guidelines developed by the WHO (WHO, UNESCO, ILO, IDDC, 2010) offer very limited emphasis on the evaluation of CBR programmes (Grandisson et al, 2016b). Other available guidelines for evaluation, such as those developed by the WHO and the International Disability and Development Consortium - IDDC (1996) and those developed by Zhao and Kwok (1999), are obsolete, not comprehensive, as well as based on the subjective inferences of a limited number of experts involved in the field (Grandisson et al, 2016b).

There is a concurrent lack of consensus and some controversy concerning the methods and procedure whereby the CBR evaluation should be conducted (Grandisson et al, 2016a). This has resulted in a division on the basis of studies used in the evaluation of CBR programmes. For example, Lukersmith et al (2013) proposed some key principles that should be considered when selecting a tool, while Adeoye et al (2011) developed a tool in Uganda for evaluating CBR services and suggested that it could be transferred to help in developing similar but locally relevant tools for each culture and community. Grandisson et al (2014a, 2014b) emphasised the need for a consensus on a framework and approach in the development of tools for the evaluation of the effectiveness of CBR programmes.

Evaluation does not appear to be a common practice in the field of CBR (Grandisson et al, 2014a; Mauro et al, 2014). Evaluating CBR programmes rigorously is challenging because of large variations between programmes and the large variety of frameworks used to report findings (Cornielje et al, 2008; Grandisson et al, 2014b; Lukersmith et al, 2013; Thomas, 2011; WHO, UNESCO, ILO, IDDC, 2010). There is lack of consensus concerning the constituents of best practices in CBR evaluation, and the way programme evaluation and evaluative research should be conducted (Grandisson et al, 2014a). Furthermore, evidence on the standards or provisions of the most effective CBR programmes remains scarce and weak (Finkenflugel et al, 2005; Grandisson et al, 2014a, 2016a, 2016b).

Though terminologies such as 'developing' and 'redeveloped' should not be used anymore according to the World Bank (2016), when discussing the importance of CBR it is unavoidable to refer to Jordan as a developing country with low economic resources. From 1995 until 2016, there were only two papers about CBR in Jordan. The first was by Abbas (1995) who found a lack of potential CBR services to reach all persons with disabilities in the Mafraq district and who called for national efforts to be directed at maximising the effectiveness of CBR services in this district. This study is outdated and does not show a clear methodological procedure to conduct such an evaluative study and arrive at such a conclusion. Another paper conducted by AlHeresh et al (2013) was mainly theoretical and focused on exploring the concepts of occupational justice and occupational deprivation to justify the need for Occupational Therapy (OT) services. Studies to address the reality of CBR in Jordan are scarce, and there are no studies directed at evaluating the effectiveness of CBR programmes in the country.

The effective evaluation of CBR programmes should be participatory in the sense that those who are most concerned by these services (persons with disabilities

and their families) are involved in the evaluation process (Grandisson et al, 2014a, 2016a, 2016b). The evaluation process should be based on a shared framework that demonstrates the criteria of the evaluation and facilitates communication of the results and outcomes through a set of unified terms (Adeoye et al, 2011; Grandisson et al. (2016b).

It is customary in the literature to use qualitative research methodologies to investigate the reality of CBR practice. There is also stress on combining these with quantitative measures when carrying out research, so as to increase the rigour of the outcomes and reliability of the research (Grandisson et al, 2014a, 2016a, 2016b). Byford et al. (2003) conducted a study in Papua New Guinea that aimed at designing a method for evaluating the needs of the local community prior to the establishment of a CBR programme and for evaluating the effectiveness of the CBR services after its establishment. It was found that a survey incorporating both qualitative and quantitative questions was more sensitive than any other method previously used to achieve this.

Objective

The current research study aimed to investigate the effectiveness of the services of CBR centres in Jordan, as perceived by the volunteers and the participants of CBR services (persons with disabilities and their families). In addition, this study employed both qualitative and quantitative research methodologies as the triangulation of both types of research methodologies increases the credibility of the findings (Seale et al, 2007).

METHOD

Study Design

A survey approach was used, with both qualitative and quantitative (open-ended) questions included. Questions were aimed at identifying the level of knowledge of CBR and to explore perspectives regarding the effectiveness of services offered by CBR centres, as well as the suggestions and barriers towards the provision of effective services.

Study Participants

The CBR programme in Jordan is mainly managed by the Ministry of Social Development, and the United Nations Relief and Works Agency (UNRWA). The

implementation process is carried out by trained community CBR volunteers/ workers supported by a supervisor and a project coordinator. There are 10 major community-based rehabilitation (CBR) centres in Jordan, but only 4 of them were targeted in this study because the researchers found them easy to reach. The convenience sample comprising adult participants (≥ 18 years) were approached directly after obtaining the consent of the manager of each CBR centre. The participants were volunteers or people with disabilities. In case the person with disability was a child, the parents were asked to participate as they were the main beneficiaries of the services offered by the CBR centres.

The study sample consisted of 47 participants - 20 were volunteers and 27 were parents of children with disabilities. The demographic details are summarised in Table1.

Table 1: Demographics of Participants

	Volunteers (n=20)	**Persons with Disabilities /their Families (n=27)**	**TOTAL (n=47)**
Age Range	19-50 yrs	20-42 yrs	19-50 yrs
Age (μ±SDyrs)	(29.11±10.51)	(31.37±6.40)	(30.43±6.40)
Educational Level			
Primary & Preparatory	2 (10%)	9 (33.33%)	11 (23.4%)
Secondary & Diploma	11 (55%)	16 (59.26%)	27 (57.45%)
BSc	7 (35%)	2 (7.41%)	9 (19.15%)
Gender male n, (%)	1 (5%)	2 (7.41%)	3 (6.38%)
Gender female n, (%)	19 (95 %)	25 (92.59%)	44 (93.61%)

Note: (μ±SD) (Mean±Standard Deviation), age in Years (yrs)

Data Collection

The survey consisted of 18 questions, of which 10 were quantitative in nature and the other 8 were qualitative. The questions were aimed at evaluating the effectiveness of services as perceived by persons with disabilities and the volunteers in the CBR centres. The 10 quantitative questions were mainly under two sections: the first was "Knowledge of CBR" and the other was "Perception of Services of the CBR Centre". The quantitative questions were aimed at exploring

several points: the participants' perceptions and the local community's level of knowledge of CBR, disability, and the role towards persons with disabilities; perceptions of the level of knowledge and training of volunteers; the accessibility of persons with disabilities and their turnout to use CBR services; the type of services provided; the type of activities that the CBR centres organise in the local community; and the overall level of satisfaction with the CBR services.

The 8 qualitative questions were aimed at identifying the barriers related to the provision of quality services by the CBR centres; the barriers in using services by persons with disabilities; the sort of services that were lacking; and suggestions for developing the existing services. Table 2 gives some examples of the quantitative and qualitative questions used in the survey and the topics that were investigated.

Table 2: Main Topics in the Survey and Examples of Questions Included

	Topics	**Examples of Questions**
Quantitative part	Perception and knowledge of CBR	Q1. How do you rate your knowledge of the notion of CBR? ☐Weak ☐ Fair ☐ Excellent
	Evaluation of services offered by the centre	Q6. What are the types of services offered by the CBR centre?
		☐ Rehabilitative directly provided for persons with disabilities
		☐ Vocational directly provided for persons with disabilities
		☐ Educational directed to increase the awareness of members of local community regarding disabilities, persons with disabilities, and their rights
		☐ Educational directed to teach the families of persons with disabilities concerning the care of disability in homes
Qualitative part	Barriers towards provision of quality of services	Q11. What are the types of barriers for the provision of quality services by the CBR centre?
	Suggestions to improve services	Q16. What are the sorts of services that are currently not offered by the CBR centre but you wish to be provided in the future?

Analysis of quantitative data

Among the 10 quantitative questions, 5 were under the sub-topic "Knowledge of CBR" and the other 5 were under the sub-topic "Evaluation of Services." Participants were asked to answer according to a Likert scale of Poor, Good, or High, and each of these answers was given a score of 1, 2, or 3 respectively. Only question 6 which included four possible responses concerning the type of services offered by the CBR centre (see Table 2) was treated differently, so the score was from 1- 4 depending on the number of ticked answers. If one form of service was tick marked, it meant that this was the only service provided by the setting, so a score of 1 was given accordingly; however, if the four types of services were offered, then this response was scored as 4. The score for the Knowledge category ranged between 5 and15, the Evaluation of Services scores ranged between 5 and16, and the quantitative questions ranged between 10 and 31.

The quantitative data were analysed using SPSS Version 22.0 (IBM Corporation New York, 2016). A Multivariate Analysis of Variance (MANOVA) was employed to compare the scores of persons with disabilities and those of the volunteers; any difference might indicate a gap in the perception of volunteers regarding what the CBR centre was offering and what the persons with disabilities perceived that they received. The total sum of scores was used to identify the overall effectiveness of the CBR services in increasing awareness and the integration of persons with disabilities within society as perceived by participants.

Sensitivity and Specificity

The receiver operating characteristic (ROC) curve analysis of the SPSS software was used to identify the sensitivity and specificity of questions asked in the quantitative part of the survey (Hajian-Tilaki, 2013). The ROC curve revealed that the area under the curve (AUC) for the five questions listed under the topic "Knowledge of CBR" was AUC= 0.833, which indicated a good specificity and sensitivity of the questions to the actual perception of knowledge of CBR. For questions under the topic "Evaluation of services", the ROC curve revealed an AUC=0.801, which indicated a good specificity and sensitivity of the questions to the level of satisfaction about services provided. For all 10 questions, the ROC revealed an AUC=0.846, which indicated a good specificity and sensitivity of the questions to the perception of the effectiveness of the CBR centre (Dendumrongsup et al, 2014).

Analysis of Qualitative Data

The qualitative data were analysed using the thematic content analysis approach. Data were tabulated into a thematic chart and were organised against a set of themes (Ritchie and Lewis, 2007). Shared quotes among participants were listed under the same column that resembled a specific theme. Then, from each quote the interrelations and interpretations of the researcher were made and listed next to each participant's quote to guarantee the transparency of interpretations (Darawsheh, 2014). Table 3 is an excerpt from the thematic chart, to show how qualitative data were organised into thematic charts and the way that interpretations were derived from direct quotes of participants.

Table 3: Thematic Chart in Thematic Content Analysis

Identifier	Theme 1: Suggestions to improve the services provided			
	1.1 Workshops	1.2 Media	1.3 Vocational rehabilitation	1.4 Activities to promote inclusion
P1	*"There is a need to conduct workshops at schools about disability and the meaning of CBR"*-Conducting workshops at schools	*"Using social media to announce about the activities and services of the CBR centre"*- Using the media to increase awareness about CBR services	*There is a need to train persons with disabilities on skills required for job pursuit"*- Vocational rehabilitation	-
P2	*"There is a need to conduct workshops for the local community to raise awareness about the types* of disabilities"- Conducting workshops about disability	*"Using the TV commercials to raise awareness about* disabilities"- Deploying media to raise awareness about disability	-	*"Encouraging families of persons with disabilities to participate is* social activities"- Integration

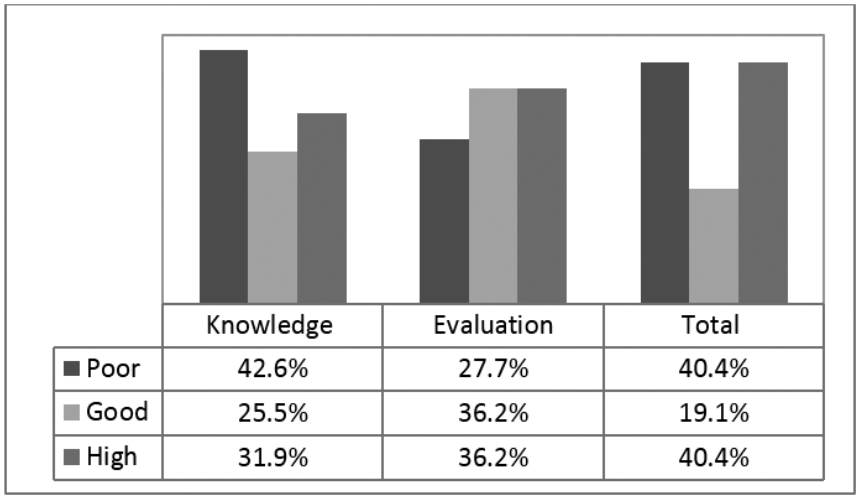
Ethical approval was granted by the Deanship of Scientific Research at the University of Jordan (UoJ). Information about the study was given to potential participants. They were encouraged to ask questions and told that filling out the survey form indicated their consent to participate.

RESULTS

The Multivariate Analysis was used to identify significant differences between the scores of the sections under 'Knowledge', 'Evaluation', and the total scores. The independent variables were the site of the CBR centres, the group (volunteers versus persons with disabilities), and the levels of education (divided into three levels as shown in Table 1). The MANOVA revealed insignificant results as the P values for the latter independent variables were p= 0.157, p=0.781, and p=0.549, respectively, which meant that none of the independent variables had a significant effect on the scores of the 'Knowledge' and 'Evaluation of Services' sections, and the total scores of overall perception of effectiveness of services.

As shown in Figure 1, 42.6% of the participants perceived that they had poor knowledge about CBR. This was higher than the percentage of participants (27.7%) who gave a poor evaluation for the CBR services. This might have indicated that the overall poor perception of the effectiveness of CBR centres (40.4% of participants) was mainly due to the ineffective role played by the CBR centres in raising knowledge and awareness about concepts of CBR and disability. Thus, there may be a need for the CBR centres in Jordan to develop activities to increase the knowledge about CBR and issues related to disability and the rights of persons with disabilities.

Figure 1: Scores of Participants on the Quantitative Questions

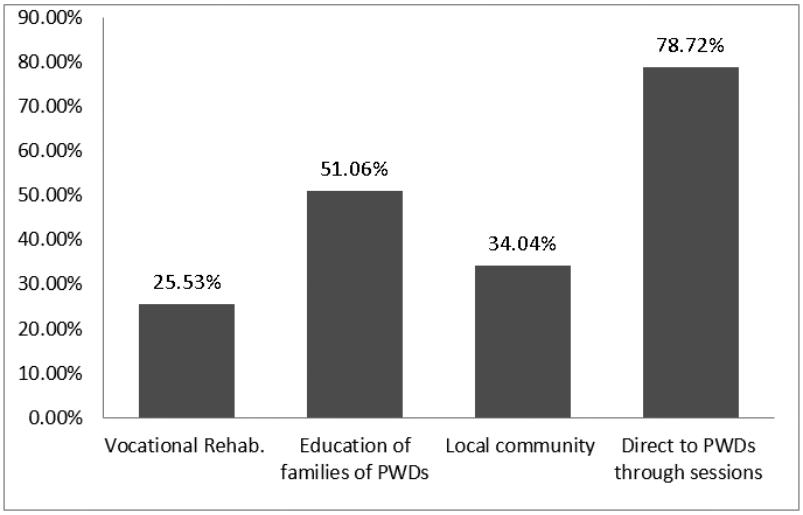


	Knowledge	Evaluation	Total
Poor	42.6%	27.7%	40.4%
Good	25.5%	36.2%	19.1%
High	31.9%	36.2%	40.4%

Main Services Provided by CBR Centres

The CBR centres were mainly focused on providing direct services to persons with disabilities through therapeutic sessions delivered by volunteers. Next, services were directed at educating and training the families of persons with disabilities on the provision of care. Less effort went into increasing awareness about disability and the rights of persons with disabilities in the community, and vocational rehabilitation was the least type of service that was provided (Figure 2).

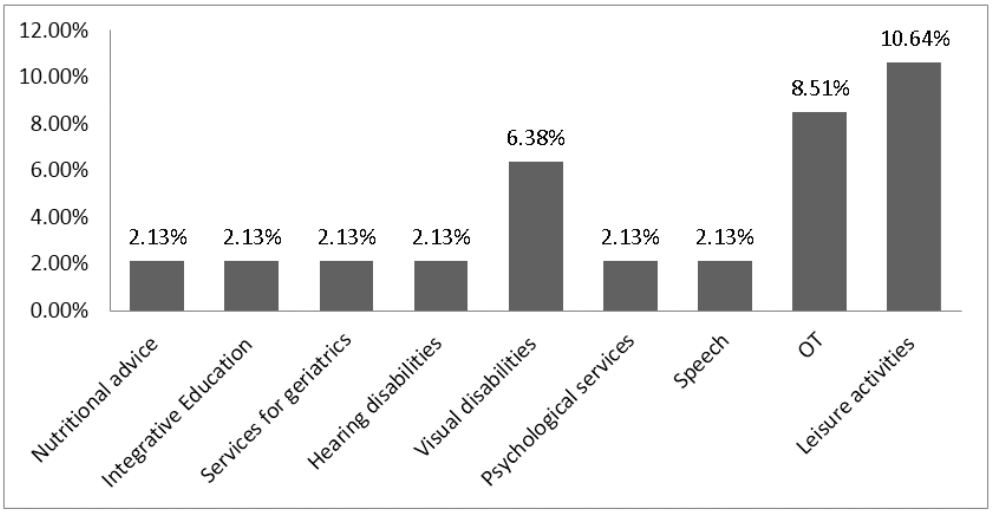
Figure 2: Services Provided by the CBR Centres



Services Lacking in the CBR Centres

Some participants (10.46%, n=10) reported the lack of leisure activities such as trips, camping, and parties, which could serve as a way of facilitating integration and inclusion. Occupational therapy services in some centres were also reported to be lacking, such as training on activities of daily living, i.e., eating. Speech services, psychological support for persons with disabilities and their families, and specialised nutritional advice were also lacking, according to some respondents. Some centres did not include services for people with visual and hearing disabilities, and others did not offer services for geriatrics. Educational services provided in some centres were a segregated form of education that did not follow the curriculum used for teaching in public schools. Figure 3 summarises the services lacking in some CBR centres in Jordan.

Figure 3: Services Lacking in some CBR Centres

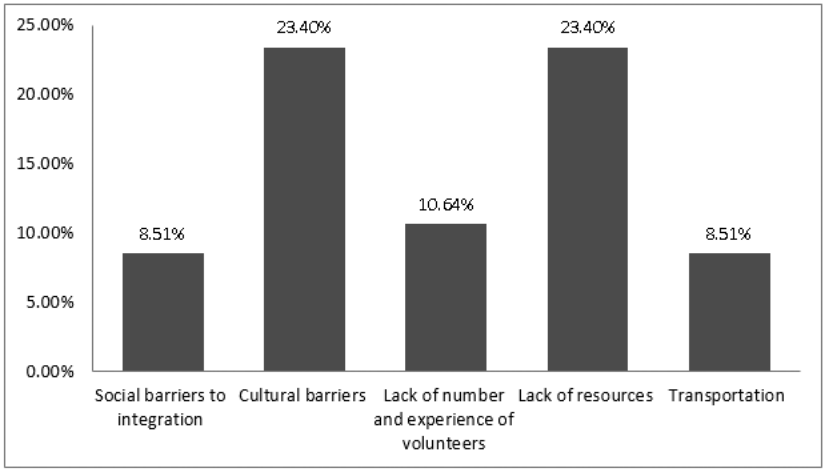


Barriers Related to the Provision of Effective Services

Lack of financial resources was one of two main barriers for the provision of effective services. Participants reported that there was a scarcity of tools and equipment used for assessment and evaluation which affected the quality of services provided. The other barrier was cultural and attitudinal associated with negative beliefs and perceptions where a disability was perceived as a state of lacking in productivity, worthlessness/uselessness, and shameful. Negative cultural beliefs and attitudinal barriers may be caused by a lack of knowledge and awareness about disability. This might lead persons with disabilities to avoid the use of services and undermine the efforts of the CBR centres to raise awareness and knowledge about disability and persons with disabilities.

Another barrier was the lack of human resources and professional involvement in the services provided by the CBR centres, especially the lack of knowledge and training among volunteers who are the first people that persons with disabilities encounter in the provision of direct services. Participants also reported that there were societal barriers associated with the absence of equal opportunities in education and employment. These undermined the inclusion of persons with disabilities in mainstream life. Transportation was yet another barrier for persons with disabilities to access CBR services. Figure 4 summarises the main barriers to the effectiveness of CBR services according to the respondents.

Figure 4: Barriers Related to Provision of Services in the CBR Centres

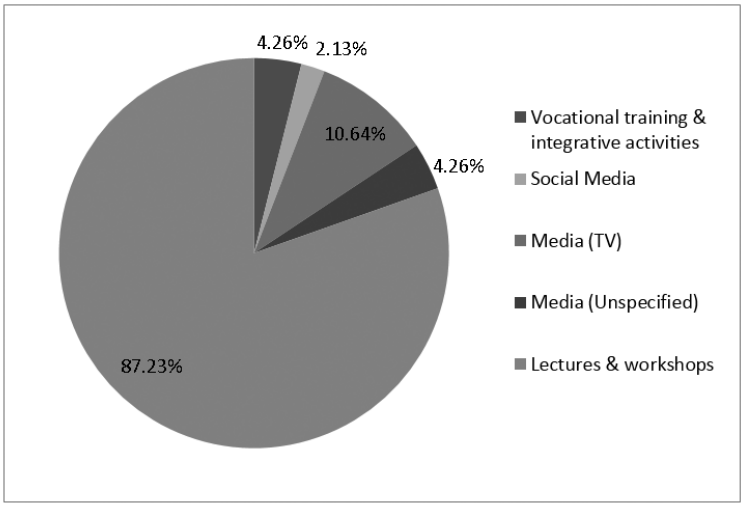


Suggestions to Improve Services

Participants (4.26%) reported that there was a need for CBR services to be directed at training persons with disabilities to acquire the necessary vocational skills. This was emphasised, alongside the organisation of leisure activities for persons with disabilities, as a way to achieve inclusion in the community (Figure 5).

Participants mainly focused on three ways to increase the knowledge of CBR: namely, activities to facilitate integration, the use of media, and conducting lectures and workshops. The majority of participants (81%, n=41) focused on the need to conduct lectures and workshops about CBR, disability, the rights of persons with disabilities, and methods for provision of care. They stated that these activities should be conducted not only at CBR centres but also at community facilities, especially in schools. Participants (12.77%, n=6) identified media as an effective way to promote knowledge and awareness about CBR. A few participants (2.13%, n=1) focused on the employment of social media while others (10.64%, n=5) reported that TV commercials, in particular, would be effective in promoting knowledge of CBR and disability.

Figure 5: Suggestions to Increase Knowledge of CBR



DISCUSSION

The CBR Matrix has been recommended as the reference framework for the evaluation of CBR effectiveness (Grandisson et al, 2016b; ILO, UNESCO, WHO, 2004b; WHO, UNESCO, ILO, IDDC, 2010). It consists of five components: health, education, work, empowerment, and social participation (Grandisson et al, 2016b; ILO, UNESCO, WHO, 2004b; WHO, UNESCO, ILO, IDDC, 2010). Based on the results of the current investigation, the author had created a proposal concerning the priorities that CBR programmes need to focus on in Jordan as related to the components of the CBR Matrix (ILO, UNESCO, WHO, 2004b), the principles of CBR (WHO, UNESCO, ILO, IDDC, 2010), and the way of operating the programme (Grandisson et al, 2016b).

The author suggests that the current priorities of CBR programmes in Jordan mainly need to be directed at promoting the livelihood and empowerment of persons with disabilities, in order to actualise the main three principles of CBR (participation, inclusion, and autonomy). This can largely be done by promoting multispectral collaboration as a way of operation. This is not to say that other components of the CBR Matrix or other methods of operation should not receive attention, but rather that this could be a starting point (Table 4).

Table 4: A proposal concerning the Priorities of CBR Programmes in Jordan using the CBR Principles, CBR Matrix, and Methods of Operation

Component	Sub-component/sector	Principles	How programme operates
Health	Assistive device	For all components:	For all components:
Livelihood	Skills development Self-employment Financial services	Participation Inclusion Autonomy	Multisectoral collaboration Empowerment
Social	Recreation, leisure, and sports Justice		
Empowerment	Advocacy and communication Community mobilisation		

The current study showed that services were mainly directed at the provision of a direct form of care to persons with disabilities at the CBR centres, as reported by 78.72% of participants. Participants who were persons with disabilities, their families, and volunteers in the CBR centres reported to have poor knowledge about CBR, disability, the rights of persons with disabilities, and the role of the community towards them. Services were mainly directed at educating persons with disabilities and their families about methods of providing care (51.06%). There were limited services directed towards increasing the knowledge and awareness of CBR, disability, and the rights of persons with disabilities among the local community, and at organising activities to increase inclusion. This conclusion is in accordance with the literature that shows that professionals often address only local and individual environmental factors to deliver services, and by that probably neglect systems and societies, thereby limiting equality and restricting inclusion (Layton and Steel, 2015). Efforts need to be directed at the creation of inclusive communities, rather than narrowing the vision of CBR to be focused on individuals or governmental regulations. Professionals are encouraged to perceive and coordinate action on environmental barriers based on the standpoint of persons with disabilities, and address aspects of

the environment which influence CBR effectiveness and outcomes (Layton and Steel, 2015).Therefore, there is a need to target the media in order to increase the knowledge and awareness of CBR and disability and the rights of persons with disabilities, as reported by 17.03% of participants. Also, there is a need, as reported by 87.23% of participants, for CBR centres in Jordan to organise activities in public facilities, such as schools, to increase the knowledge and awareness of disability and to maximise integration and inclusion of persons with disabilities.

Vocational services were the least provided services, as reported by 25.53% of participants. Also, 4.26% of participants expressed the necessity to prioritise vocational rehabilitation programmes in order to increase the effectiveness of services. The promotion of autonomy of persons with disabilities is one of the main objectives of CBR and has a deep impact on the self-esteem and relational capacities of persons with disabilities (Mauro et al, 2014). It has been shown in literature that this can be accomplished by facilitating work opportunities that not only foster autonomy but also promote social inclusion of persons with disabilities (Layton and Steel, 2015; Zaidi and Burchardt, 2005).This also contributes towards counteracting cultural barriers manifested by stigma and negative attitudes towards persons with disabilities, and actualises empowerment in line with the principles of CBR towards inclusion and the human rights framework (Deepak et al, 2014; Grandisson et al, 2014a; Lang et al, 2011; Mauro et al, 2014). Thus, CBR programmes in Jordan need to focus on promoting access to employment (Mauro et al, 2014).

The literature acknowledges that people tend to spontaneously experience inclusion in mainstream activities when they live in environments that provide and support access to cultural, economic, and social occupations (Baum, 2008; Layton and Steel, 2015). Persons with disabilities and their families are less likely to use services when faced with an increased number of barriers (Maharaj et al, 2014).Barriers to the benefits and effectiveness of CBR services stem mainly from two sources: CBR services, and persons with disabilities and their families. Hard-to-reach families who are members of the community are eligible for CBR services but do not usually benefit from the services available or are difficult to be identified by the workers at the CBR centres (Cortis, 2012). Conversely, services can be hard to access, indicating that there are other characteristics dissociating persons with disabilities and their families which can constrain service use (Barrett, 2008; Boag-Munroe and Evangelou, 2012; Coe et al, 2008; Phoenix and Rosenbaum, 2014; Winkworth et al, 2010). Findings of this research resonate with

findings of Phoenix and Rosenbaum (2014), where transportation was one of the main barriers to access services as reported by 23.4% of respondents and was one of the organisational barriers to effective CBR services.

Among other barriers in the provision of effective CBR services was lack of resources (Emerson and Hatton, 2007; Petrenchik, 2008; Phoenix and Rosenbaum, 2014). Several persons with disabilities and their families live in poverty, and participants in this study pointed out the lack of resources provided by and for the CBR centres, i.e., the lack of tools and equipment available for assessment and treatment, and the lack of assistive devices. Assistive devices are critical for removing barriers in the environment and maximising the productivity, inclusion, and mainstreaming of persons with disabilities in their communities (Mauro et al, 2014; Sen, 2009; WHO, UNESCO, ILO, IDDC, 2010).

Participants (10.64%) pointed to the inadequate number of professionals and workers involved in the CBR centres. Also, they suggested that the volunteers need further training in the provision of care and need to acquire knowledge about issues that can benefit persons with disabilities and their families (Mauro et al, 2014; Zaidi and Burchardt , 2005). CBR workers need more training and knowledge about how to influence the legal and administrative system to promote information and inclusion of CBR participants in public services (education, rehabilitation, and health) as well as defend their rights (i.e., to free transportation) and protect them against prejudice (Mauro et al, 2014; Zaidi and Burchardt , 2005).

Inequality of access to services and social exclusion compromise the health and well-being of persons with disabilities and their families, and turn into a barrier to the delivery of effective services (Cushing, 2003; Valentine, 2001). The current investigation revealed that not all members of the community were able to benefit from the CBR services, especially those with visual and hearing disabilities and older people, as reported by 6.38%, 2.13%, and 2.31%, respectively. The cultural barriers associated with negative labels and beliefs about disability and persons with disabilities had led to isolation and exclusion, and had been one of the main barriers to effective CBR services, as reported by 23.4% of respondents. Also, social barriers were evident in the lack of equal opportunities for work and integrative education, as reported by 8.51% of participants.

There is a need for the development of a care pathway for hard-to-reach families that is characterised by making alternative choices for the provision of care.

A systematic approach is required that begins with identifying persons with disabilities and their families who are most likely unable or unwilling to benefit from services and need to be adopted by the workers and volunteers in the CBR centre (Phoenix and Rosenbaum, 2014). It is crucial that the perspectives of those engaged in CBR services are explored in identifying alternative choices for the effective provision of services (Phoenix and Rosenbaum, 2014). CBR services in Jordan need to be expanded, but not necessarily with the establishment of new centres, especially with a lack of resources (Conklin et al, 2013; Russell et al, 2010; Waring et al, 2013). However, options such as mobile CBR clinics or increasing referrals and multi-sectoral collaboration and liaisons between CBR centres themselves and other community resources(i.e., medical centres or hospitals) can facilitate the outreach of CBR services to all who need them (Conklin et al, 2013; Russell et al, 2010; Waring et al, 2013).

CONCLUSION

This research study has shown that the local community and persons with disabilities lack knowledge about disability and the rights of persons with disabilities. There are barriers to effective services, some associated with families of persons with disabilities (hard-to-reach) and others associated with the CBR services (hard-to-access).

The evaluation of CBR programmes is a challenging procedure. The design of evaluative tools that were culturally specific (Grandisson et al, 2014a) and addressed the various cultural backgrounds and educational levels of stakeholders while adhering to the evaluative measures set by the CBR Matrix (ILO,UNESCO, WHO, 2004b) and the CBR principles (WHO, UNESCO, ILO, IDDC, 2010) was challenging. The interpretation of the results with the lack of resources provided for CBR centres, especially in a country like Jordan that lacks economic resources, was compelling.

Implications

Sound evaluations of CBR programmes should be based on the evaluation of the degree of participation and empowerment of persons with disabilities, and should contribute to adding evidence for the effectiveness of CBR (Grandisson et al, 2016b).This was the first study in Jordan that aimed at exploring the effectiveness of CBR services. It was an evaluative study that combined mixed methods of investigation. The level of knowledge of CBR, disability, and rights of persons

with disabilities were addressed as a measure to evaluate the effectiveness of the services provided by CBR centres. This study was inclusive of all types of disability and provided an example of an evaluative instrument with a statistically "good" specificity and sensitivity which can be transferrable to measure the impact of CBR programmes in other settings. Also, it provided a proposal concerning the priorities of CBR programmes in order to maximise their effectiveness.

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