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Original Paper

Implementation Research in Community Based Rehabilitation

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Abstract

Implementation research (IR) is a non-traditional methodology of research that enables the examination of application of multiple interventions within the complexities of the real-world, and the generation of solutions for emergent needs, especially in countries of low-moderate income. Community-based rehabilitation (CBR) is an evolving field of practice that lacks research traditions. Evidence guiding the practice of healthcare professionals in CBR and supporting its implementation is fragmented. A review of the literature was conducted to identify research studies pertinent to the employment of IR in CBR. This paper demonstrates that the principles of IR resonate with the principles of inclusion, equality, empowerment and partnership of CBR. It also posits that IR can serve as a research tradition to underpin and guide the conduction of research studies in CBR, and to provide the necessary evidence to support its accountability.

Keywords

healthcare, people with disabilities (PWDs), quality of life, qualitative research, sociocultural contexts

1. Introduction

The concurrent quests of research are complex in nature, and cannot be addressed by conventional methods of research such as randomized controlled trials (Peters, Adam, Alonge, Agyepong, & Tran, 2013). In the real clinical world, and especially in countries of low-moderate income, healthcare needs can transform into crises (Peters et al., 2013; Theobald et al., 2018). Time becomes a luxury and research studies are warranted not only to promote the quality of healthcare services, but also to save lives (Peters et al., 2013; Theobald et al., 2018). The need to test multiple interventions also becomes

ineluctable, especially within the complexities of the real-world and the need for instant and practical solutions to be generated (Padian et al., 2011; World Health Organization [WHO], 2011, 2014). Thus, neat traditions of research based on scientific approaches seem almost impossible and impractical within such contexts and circumstances (Velema et al., 2010; Peters et al., 2013). Here comes implementation research (IR) to address contemporary intricate contextual factors and research needs, which requires testing the feasibility of multiple interventions within complex real-life conditions.

1.1 Research in Community-Based Rehabilitation (CBR)

CBR has gained the recognition of the WHO and governmental and non-governmental organisations due to its inclusive participation of all members and parties of a community, especially in countries of low-middle income (Darawsheh, 2017; Velema et al., 2010; WHO, United Nations Educational, Scientific and Cultural Organisation [UNESCO], International Labour Organisation [ILO], & International Disability and Development Consortium [IDDC], 2010). The literature shows that CBR aims at promoting the quality of life and healthcare services for all people, including people with disabilities (PWDs) (Darawsheh, 2017; Finkenflügel, Wolffers, & Huijsman, 2005; Velema et al., 2010; Mason, Weber, Atasoy, Sabariego, & Cieza, 2017).

CBR is pragmatic in-nature and requires immediate actions and solutions directed to serve the needs of communities, taking into account the unique economic and sociocultural idiosyncrasies of a given context (Darawsheh, 2017; Velema et al., 2010). It is based on several principles such as inclusion and empowerment of PWDs, participation, equality, and social justice (Mason et al., 2017; Velema et al., 2010; WHO, UNESCO, ILO, & IDDC, 2010). The implementation of the principles of CBR is complex and the needs in CBR are ever-changing. CBR does not only require focusing on medical needs, but also on sociocultural factors (Darawsheh, 2017; Mason et al., 2017). That is, CBR aims at promoting health and wellbeing not only by targeting illnesses and pathological health conditions, but also by creating or testing interventions (Velema et al., 2010). It also aims at empowering PWDs to have equal opportunities by targeting negative sociocultural attitudes against them (Darawsheh, 2017). This requires the incorporation of mixed qualitative and quantitative methodologies to generate a comprehensive and complementary picture concerning emergent needs of a community (Velema et al., 2010).

CBR is not only an exclusive approach to delivery of services to PWDs as previously posited when it was first established (Darawsheh, 2017; Mason et al., 2017). CBR has developed as a comprehensive strategy that aims at achieving comprehensive community development (WHO, UNESCO, ILO, & IDDC, 2010). Though CBR is an evolving field of practice, it lacks research traditions (Velema et al., 2010). About 15 years ago, the research traditions in CBR were not well-established and the definition of CBR was still developing (Finkenflügel et al., 2005). This resulted in the employment of incomprehensive research methods which contributed to a shortage in the necessary evidence to support the accountability of CBR (Adeoye, Seeley, & Hartley, 2011; Darawsheh, 2017; Finkenflügel et al., 2005).

Research conducted in the field of CBR needs to resonate with the principles of CBR in its application. The traditional methods of research such as experimental research methodologies and randomized controlled trials do not correspond with the principles and nature of CBR (Velema et al., 2010). Generally, in community-based settings, there are several challenges associated with implementing any research project which can be attributed to the novel needs of practice, lack of resources, and difficulties in establishing communications (Fänge, Risser, & Iwarsson, 2007). Research studies in CBR need to be based on non-traditional research methodologies that bridge the gap between medical and sociocultural needs in order to promote the state of health and well-being of all members and parties of a community (Velema et al., 2010). Evidence to support the effectiveness of CBR is warranted, especially if sustainability of CBR programs is to be accomplished through preserving and growing sources from funding parties (Darawsheh, 2017; Finkenflügel et al., 2005; Mason et al., 2017).

1.2 Aim

The aim of this study is to generate a broad perspective on IR and ways whereby it is congruent with the aims and principles of CBR. This in return, would reflect on the quality of required research in CBR as an intricate context that cannot be controlled. This would also assist in providing the necessary evidence to support the accountability of CBR, and the guidance of practice/actions of all parties involved.

2. Methods

A review of the literature was performed. A search strategy was applied to identify the literature pertinent to the employment of IR in CBR. The search was limited to 2005 through 2019 inclusive, and the EBSCO host platform was used to conduct the search. The search included the use of databases of CINAHL Plus and MEDLINE as they are rehabilitation and healthcare focused. Google and Google Scholar search engines were used. Reference lists of pertinent/relevant articles were also searched.

3. Results

Twenty-two articles were identified, none of which were included as pertinent to the subject of "implementation research" in "community-based rehabilitation". Excluded articles used the keyword "implementation" to refer to "application/execution" and not to refer to "implementation research" as such, or used the term "community" without referring to "community-based rehabilitation" per se.

4. Discussion

The below subsections shed more light on aspects related to IR. The authors will then discuss how IR, as a research tradition, corresponds with CBR, as a field of practice.

4.1 Characteristics of IR

IR is concerned with 'Now' and aims at developing strategies of implementing interventions directed at accomplishing tangible outcomes in real time (Peters et al., 2013). IR focuses on the contextual factors that interact with and affect its implementation (Peters et al., 2013; Theobald et al., 2018). The

uniqueness of IR is that it sprouts from immediate needs and is simultaneously implemented in real life contexts rather than controlled conditions (Theobald et al., 2018). IR is endowed with an instant nature directed at generating practical solutions, within a specific context, under certain standing conditions, and within the available resources and limitations (Theobald et al., 2018). The immediate nature of IR bridges the gap between the artificial testing conditions of traditional research, and real-life healthcare needs (Padian et al., 2011; WHO, 2011, 2014).

4.2 Type of Questions Addressed by IR

IR is not concerned with generating theoretical knowledge; it is more concerned with the practical applications of research results by the multiple active personnel involved in its design, and conduction within a specific context (Padian et al., 2011). IR is concerned with answering questions concerned with factors and strategies associated with implementation of change (Peters et al., 2013). Thus, the focus is on solving implementation problems and/or promoting the quality of care provided (Peters et al., 2013; Theobald et al., 2018). IR addresses questions such as "Which interventions will be more suitable under certain circumstances", "How to effectively carry out an intervention under given conditions?", "Can the same intervention be implemented in other similar circumstances?", "Why did a certain intervention work? How" or "What are the problems that hindered the implementation of a certain intervention?, what are the possible solutions?", "How can we best understand the complexities and interactions of factors governing the implementation of an intervention?", and "Who benefited more from a certain intervention and why?" (Peters et al., 2013; Theobald et al., 2018).

4.3 Who is Involved in IR?

Since IR aims at creating a change in the pattern, scale or quality of healthcare delivery, it involves multiple personnel. Some of its principles are derived from participatory research traditions (Peters et al., 2013; Theobald et al., 2018). There is no selected specific population to be tested, or an excluded group based on factors such as comorbidity (Peters et al., 2013). IR is for, and about, all people. Thus, the involvement of the community, researchers, funders, policy makers, program implementers, and healthcare professionals is required (Uneke, Ezeoha, & Uro-Chukwu, 2018).

Partnership is a basic principle in IR and a key to generating effective and sustainable outcomes that fit the unique idiosyncrasies of a given context (Uneke et al., 2018). Sustainability is one of the unique characteristics of IR, and an indicator of its success (Peters et al., 2013). Partnership is accomplished by the inclusion of all parties within a community (Uneke et al., 2018). For example, community leaders can be used in the introduction of new treatments (Theobald et al., 2018). Peers/people who have overcome certain pathological condition, e.g., addiction, can be used as educators for other patients undergoing similar health conditions to ensure their commitment to proposed strategies by IR (Theobald et al., 2018).The active involvement of community members as a source of information, and as an element in the design and implementation of IR ensures the sense of ownership, and adherence by community members to the implemented interventions/policies/strategies (Theobald et al., 2018).

4.4 Methods of IR

IR is concerned with real time problems in real life/world situations where multiple factors comes into interplay and the participation of multiple parties is required (Peters et al., 2013; Theobald et al., 2018). Thus, the construction of a comprehensive picture concerning research needs and the context within which IR is conducted requires the employment of multiple sources of data, and the combination of various research methods of data collection and analysis (Peters et al., 2013). Common approaches incorporated in IR are: pragmatic trials, effectiveness-implementation hybrid trials, quality improvement studies, participatory research, and the triangulation of mixed methods (qualitative and quantitative research methods) (Peters et al., 2013).

The incorporation of qualitative research methods is essential in IR (Peters et al., 2013). The questions addressed by IR always require detailed levels of description of the plot under quest (Theobald et al., 2018). A thorough and in-depth understanding of the case under scrutiny, factors affecting it, resources available, contextual elements, and parties involved is required (Theobald et al., 2018). Qualitative research methodologies correspond with the flexible nature of IR and need to be incorporated within the synthesis and design of IR studies (Peters et al., 2013). In Nepal's Earthquake in 2014, the ministry of health had collaboratively worked with implementation researchers to provide recommendations concerning strategies for providing support and eliciting coping (Theobald et al., 2018). The research team had to incorporate qualitative methods of inquiry to generate their preliminary findings (Theobald et al., 2018).

4.5 Outcomes of IR in Healthcare

The results of IR can be directed at uplifting the level of health in communities, developing policies, healthcare pathways and guidelines, enhancing the quality of services provided by healthcare professionals, and empowering communities and PWDs by their active involvement (WHO, 2011, 2014). The comprehensiveness of IR and inclusiveness of all elements of healthcare lead it to be the best effective research option for solving complicated, immediate, and prevailing pandemic crises or healthcare issues (Theobald et al., 2018).

IR uplifts the quality of healthcare services by bridging the gap between the available resources and healthcare demands (Theobald et al., 2018). It emphasizes the adoption of sustainable strategies for service delivery in real time and real-world needs (Theobald et al., 2018). Thus, the outcomes of IR equalize opportunities to access of healthcare services for minorities, disadvantaged people, and PWDs (Theobald et al., 2018). An example of that is the former WHO guidelines concerning treatment of sepsis, which emphasized the need for 10-14 days of hospitalization and administration of an injectable antibiotic (Baqui et al., 2015; Tshefu et al., 2015). This procedure may be unfeasible in low-middle income countries due to high cost (Baqui et al., 2015; Travis et al., 2004; Tshefu et al., 2015; WHO, 2014). IR conducted in Africa, Bangladesh, and Pakistan showed another feasible procedure of treating sepsis, which later on was incorporated as the new WHO guidance (Baqui et al., 2015; Tshefu et al., 2015). This new way involves less time and cost, requiring only two days of injectable antibiotic

followed by 7 days of oral antibiotic (Theobald et al., 2018).

4.6 Shortcoming of IR

The coordination between the multiple parties involved in IR poses a challenge to achieving change (Theobald et al., 2018; Uneke et al., 2018). An example of that is the Scaling up Nutrition (SUN) project across Ethiopia, Uganda, Burkina Faso and Mali. This project involved several parties including stakeholders, funders, policy makers, and nongovernmental organizations (NGOs) (Theobald et al., 2018; Uneke et al., 2018), each of which had different perspectives, goals, expectations and impetuses for carrying out the project (Theobald et al., 2018; Uneke et al., 2018). IR can even involve a risk for researchers when the government is involved as a party, and where the results of IR may not necessarily support the governmental inclinations to implement a certain planned strategy/change (Theobald et al., 2018). The challenge of coordination between different parties need to be solved by opening channels of communication and incorporating influential leadership that can take the responsibility of channelling all efforts of different parties towards eliciting positive changes (Theobald et al., 2018). An example of that is the engagement of community leaders in Community Health and Planning Services (CHPS) in Ghana, whose role had significantly contributed to reducing the levels of fertility, child and maternal mortality, solely by depending on local resources (Awoonor-Williams et al., 2013).

There are issues associated with validity and generalizability of findings of IR (Peters et al., 2013). The outcomes of IR can be described as confined to the specific context within which it was conducted (Theobald et al., 2018). Some may argue that this is a trade-off to the generalizability of the results (Theobald et al., 2018). IR is about generating practical solutions in a specific context and at a specific timeline (Theobald et al., 2018). Those determinants of IR are what make it practical and unique (Theobald et al., 2018). They might hinder the generalizability of IR's outcomes, but does not necessarily hinder their transferability (Theobald et al., 2018). Documentation is a necessary measure to take when carrying out IR, as it assists in the learning process when similar prospective research projects are implemented in different contexts (Theobald et al., 2018; Velema et al., 2010). For example, IR supported the effectiveness of the ring strategy in containing smallpox in Nigeria (Theobald et al., 2018). Though this outcome was specific in context, it is now being tested to contain Ebola across Africa (Henao-Restrepo et al., 2015; Theobald et al., 2018).

4.7 IR and CBR

IR promotes the quality of conducted research studies in CBR by meeting the principles of CBR, namely participation and use of local resources by its focus on the local context in design and execution. The significance of partnership and the pragmatic nature of IR corresponds with the principles and requirements of CBR. IR focuses on the involvement of all members of community, including PWDs, in the design, implementation, dissemination, evaluation of solutions/strategies and sharing outcomes (Peters et al., 2013; Uneke et al., 2018). By that, IR ensures the achievement of CBR's principles of inclusion, equality, empowerment and partnership. At the same time, IR aims to create a balance

between medical needs and sociocultural components of a community (Awoonor-Williams et al., 2013). IR is of flexible pragmatic nature based on emergent contextual needs, and incorporates iterative processes in the design and implementation of mixed methodologies (Theobald et al., 2018). Thus, IR can serve as a suitable research tradition to underpin and guide the conduction of research studies in CBR. Moreover, it can be used as a tool for generating the necessary evidence to support the accountability of CBR and the effectiveness of strategies involved.

The focus on context and community is central to CBR (Adeoye et al 2011; WHO, UNESCO, ILO, & IDDC, 2010). Any change brought forth by the implementation of the strategy of CBR needs to be based on a genuine understanding of mechanisms that can elicit change (Velema et al., 2010). IR sprouts from specific contextual needs and is implemented within fluctuating contextual circumstances (Awoonor-Williams et al., 2013). In IR, all possibilities to create a change (i.e., policy, solution, strategy or intervention) are based on an in-depth understanding of the context and its unique idiosyncrasies (Awoonor-Williams et al., 2013). Thus IR, not only corresponds with the needs and principles of CBR, but also serves as a perfect medium to elicit a positive change correspondent with the strategy of CBR.

5. Conclusion

IR matches the nature, principles, and aims of CBR and thus, can serve as the best match research tradition to underpin the practice of healthcare professionals in CBR. IR is based on the principles of partnership, ownership, inclusion, equality, justice, leadership and sustainability. In IR, all members of the community are involved in its implementation and benefiting from its outcomes. IR is comprehensive in studying mechanisms of eliciting change. It is pragmatic in responding to compelling healthcare needs, and flexible in generating sustainable outcomes/solutions within each specific sociocultural context. The incorporation of qualitative research methodologies in IR is essential to correspond with the flexibility and detailed level required in the design and implementation of possible methods/solutions.

Researchers using IR in the field of CBR need to use methods of documentation, and utilize simple language and multiple ways of dissemination of its results/outcomes. This is to ensure that the outcomes reach all members, and that transparency and partnership are actualized. This is also necessary to build future plans concerning meeting research needs, and to develop methods of professional development for workers in the field of CBR.

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