COMMENTARY

Medical rehabilitation in low and middle income countries for adult acquired disability: challenges posed by rapidity of health system change and position on the individualistic-collectivist axis

Karl Sandin[a]

[a] MD, MPH, Clinical Associate, University of Chicago Pritzker School of Medicine; President and Medical Director, Schwab Rehabilitation Hospital; Chair of Physical Medicine and Rehabilitation, Sinai Health System

Abstract

Chronic illness prevalence has rapidly increased in low or middle income countries (LMIC) and with it, the need for medical rehabilitation for adults with acquired conditions that stem from aging and long-term conditions. While Western medical rehabilitation programs have had at least two generations to develop, in LMIC, post-acute health care delivery change has been much more rapid. As a result, there has been little opportunity for models of medical rehabilitation to deliberately emerge in LMIC that reflect societal values. While adaptation of an independence-foremost model of medical rehabilitation may succeed in non-Western societies, there is a risk that adaptation of such a model will be ineffective where many value collectivism more than individualism. The rapid change in medical rehabilitation service delivery in LMIC gives Christian providers and organizations an opportunity to pause and reflect whether the dominant Western medical rehabilitation paradigm serves LMIC cultures and reflects Biblical principles.

Introduction

Chronic illness incidence and prevalence continue to rise in LMICs.[1] In these countries, the transition from a health system primarily concerned with responding to acute and communicable illness to one additionally focused on managing chronic disease is being compressed into a shorter time frame than was experienced by high-income countries that made and are making such transition over generations.[2] Particularly in middle income countries, there has been a rapid transition from health burden related to morbidity and mortality from infectious disease to health burden related to chronic health conditions (hypertension, diabetes, obesity), which themselves increase disability prevalence.[3] Outside of chronic disease management, expansion of the global health sector has led to improved trauma and critical illness care in LMIC. Consequently, more than 155 million

disability-adjusted life years (DALYs) were lost in low and middle income countries from injury, ranking first in conditions that result in years of health life lost.[4] So, whether due to aging, trauma, advanced acute care, or chronic disease burden, many LMICs have joined the West in experiencing increased prevalence of individuals with physical and cognitive impairments from acquired disability. The speed of change has not allowed deliberate, contextually appropriate development of health (and other) services to care for people with acquired disabilities that reflect the non-Western ethos. Absent time for due consideration of explanatory models of disability and societal position along the individualist-collectivist axis, Western perspectives about medical rehabilitation are being directly copied.

International Classification of Functioning, Disability, and Health

The WHO has developed the International Classification of Functioning, Disability, and Health (ICF) as the paradigm for classifying disability, itself an umbrella term encompassing impairment, activity limitation, and participation restrictions.[5] ICF purports to avoid segmenting individuals into those who can and those who can't, attempting to mainstream disability as a universal human experience. Moreover, it integrates medical and social causality, recognizing some aspects of disability as internal to the individual and others as related to the environment in which individuals find themselves.

The ICF places disability in three domains: impairment, activity limitation, and participation restriction. Impairment is loss of function at the organ level, such as paralysis due to a problem in body function or structure. Activity limitation is difficulty executing a task performed daily by most people such as moving, dressing, or bathing. Participation restriction is a difficulty in a social or life role such as inability to work or to parent. Disability involves dysfunction at one or more of these levels. Two factors modify response to disability: 1) environmental factors including social attitudes, architectural characteristics, legal and social structures, climate, and terrain and 2) personal factors including age, gender, coping styles, social background, class, education, experience resilience, and behavior.

Disability in cross cultural perspective and the relationship to individualism and collectivism

Meyer compares individualist and collectivist societies in framing disability.[6] His work builds on Hofstede's classic individualism score, a measure of the importance of the individual in any given society; the higher the score, the more individualistic the society and the lower the score, the more collectivistic.[7] Meyer notes individualist cultures tend to give priority to claims of the individual, and in collectivist cultures, the claims of the group trump those of the individual. Individualist societies respond at the micro-level with personalized accommodation and support and at the macro-level with societal inclusion through equal rights. Collectivist societies tend in two directions: either isolating people with disabilities from public inclusion because of potential group shame or dishonor or emphasizing family or social group's responsibility for care of individuals with disabilities. Smart and Smart reported on the experience of disability in Hispanic families.[8] The determining influences for the families were traced to an enlarged sense of responsibility that the family felt toward the family member with a disability. The family was reluctant to allow independence on the part of a person with disability based on the perception that society would criticize the family as inhuman, insensitive, or lacking love for the individual. Disability is at least in part socially constructed, so by extension, its medical treatment reflects social and cultural values. Western medical rehabilitation tends, therefore, to focus on self-determination and achieving independence.

Western models of medical rehabilitation informed by overarching importance of achieving individual independence

While many rehabilitation clinicians world-wide embrace the biopsychosocial model of disability, Western healthcare financing and delivery reinforces the medical model that disability is something undesirable (a state of non-health, a disease) that must be minimized or eliminated through individual care.[9] The primary American measurement of disability is the Functional *Independence* (emphasis added) Measure (FIM), itself an activity measure.[10] The goal of medical rehabilitation in the USA is to achieve a higher score that indicates more ability to perform activities on one's own with less outside assistance. A low score, reflecting greater need for assistance in performing activities, is undesirable. American rehabilitation hospitals publicize large FIM increases per stay and high discharge FIM scores as evidence of quality.[11] The FIM channels a Western preference for individualism into assessment of function. Medical rehabilitation approaches developed in the West when applied to LMIC bring with them the perspective that the most important goal of rehabilitation treatment is maximizing what one can do for oneself. More collectivist cultures may not see individual achievement as the pinnacle of recovery; interdependence may be a more desirable endpoint than independence. A potential clash ensues when highly individualistic medical treatment worldviews are imposed upon or imported to non-Western contexts that value collectivism.

The FIM is a seven point, eighteen item ordinal scale. A score of "1" indicates dependence in a particular task; a score of "7" indicates independence. An individual with paraplegia who is physically helped to move by someone else on uneven surfaces, such as stairs, would be scored low; the individual able to ascend and descend stairs on his buttocks using strong upper arms for propulsion would be scored high. A technological solution such as an exoskeleton or all-terrain wheelchair would decrease need for assistance resulting in a higher score for mobility on uneven surfaces. But, is it a rehabilitation failure to be physically helped up and down stairs? Different cultural contexts may see interdependence as healthy (see Hispanic family profiled by Smart and Smart previously). In many situations, it may be more desirable or appropriate that family or clan help an individual with activity limitation to execute a task: to expect that the individual with a disability would seek to perform independently as much as possible may be inappropriate in communitarian contexts.

Health services for people with disabilities and their relationship to societal values

Many societies and developed nations have implemented health and social programs and services aimed at helping people with disabilities provide become self-sufficient and participate as full members of society. While these countries often have an economic cushion that allows funding for treatment and rehabilitation, these care models at their core reflect the ascendance of the individual. The disability care system of a more collectivist society would be expected to de-emphasize support for maximal individual independence and see treatment success as effective adaptation of the family and other groups to impairment, activity limitation, and participation restriction.

Middle income countries, in particular, are seeing rapid growth in the medical rehabilitation sector.[12] The type of care being delivered imitates Western medical rehabilitation. I believe that this phenomenon is occurring because changes in healthcare delivery systems and shifts from acute to chronic disease are so rapid there has not been adequate time to develop location-specific and

cultural appropriate care models in LMIC. Conversely, a long held success story for healthcare delivery in LMIC has been community health workers (CHW). This model of care delivery for communicable diseases and maternal/child health programs was distinctly non-Western at time of creation and developed *in situ*.[13] Time will tell whether rehabilitation centers stemming from a Western medical care model focused on the individual will be successful in collectivist contexts.

Theological perspectives along the individual-collectivist axis

Individualistic theology accelerated in the Reformation, whose leaders dismissed the inherent inter-relatedness of each member within the Church and espoused the Church as the sum of individual beliefs.[14] Proceeding through Moody and Scofield, American Christianity became focused on the individual instead of a communal entity.[15] In conjunction with the American frontier myth of rugged individualism, the ninth beatitude might have been "blessed are those that do for themselves, for. . . " *Koinonia*, the spirit of generous sharing, can often be marginalized by an ethos that requires individual attainment. Scriptural examples of individualism abound (Luke 19:15), but so do examples of collectivism (Acts 2). Paul synthesizes elements from each perspective in 1 Corinthians 12: individual parts are important as is their work together.

American spirituality tends to emphasize the individual, not only in religious experience, but also in social action, including healthcare that stems from religious commitment. The Church throughout the world may, or even should, resist merely imitating the individualistic Western tradition. Rehabilitation clinicians who practice in a Christian context or ethos may need to confront the tension between achievement of independence as the prime directive in treating individuals with acquired disability and the benefits of inter-dependence.

References

1. Anderson GF, Chu E. Expanding priorities — confronting chronic disease in countries with low income. N Engl J Med. 2007;356(3):209-11. http://dx.doi.org/10.1056/nejmp068182

2. Miranda JJ, Kinra S, Casas JP, Davey Smith G, Ebrahim S. Non-communicable diseases in low- and middle-income countries: context, determinants and health policy. Trop Med Int Health. 2008; 13(10):1225-34. http://dx.doi.org/10.1111/tmi.2013.18.issue-10

3. Field MJ, Jette AM, editors. The future of disability in America/Committee on Disability in America, Board on Health Sciences Policy. Washington DC: IOM National Academies Press, 2007, p. 17.

4. *Ibid*. Anderson

5. World Health Organization. [Internet] Towards a common language for functioning, disability and health. Geneva: 2002. [cited 2015 April 20] Available from: http://www.who.int/classifications/icf/training/icfbeginnersguide.pdf

6. Meyer H-D. Framing disability; comparing individualist and collectivist societies. *Comp Sociol.* 2010;9:165-81.

7. Hofstede. World Map of Individualism. [Internet] [cited 2015 April 20] Available from: http://www.kwintessential.co.uk/map/hofstede-individualism.html

8. Smart J and Smart D. Acceptance of disabilities and the Mexican American cultures. Rehab Couns Bull. 1991;34:357-67.

9. Drum CE. Models and approaches to disability. In Drum CE, Krahn GL and Bersani H, editors. Disability and public health. Washington, DC.: APHA; 2009. p. 29.

10. FIM® instrument. [Internet] [cited 2015 April 20]. Available from: http://www.rehabmeasures.org/Lists/RehabMeasures/DispForm.aspx?ID=889

11. Madonna.org. [Internet] [cited 2015 Sept 26] Outcomes. Available from: http://www.madonna.org/patient/rehab/continuum/acute/outcomes.html

12. UPH Medical Science Group. [Internet] [cited 2015 Sept 26] Available from: http://msg.uph.edu/siloam-hospitals/siloam-general-hospital.html

13. Kok MC, Dieleman M, Taegtmeyer M, Broerse JE, Kane SS, Ormel H, et al. Which intervention design factors influence performance of community health workers in low- and middle-income countries? A systematic review. Health Policy Plan. 2014;1-21.

14. Lortz J. Why did the reformation happen? In: Spitz LW, editor. The Reformation: material or spiritual? Lexington MA: Heath; 1961. p. 61.

15. Bajis J. Common ground: introduction to Eastern Christianity for the American Christian. Minneapolis, MN: Light and Life Publishing Company; 1991. [Chapter 11]

Peer Reviewed

Competing Interests: None declared.

Correspondence: Karl Sandin, University of Chicago, United States. ksandinmd@gmail.com

Cite this article as: Sandin K. Medical rehabilitation in low and middle income countries for adult acquired disability: challenges posed by rapidity of health system change and position on the individualistic-collectivist axis. Christian Journal for Global Health (Nov 2015), 2(2): 5-9.
