

Authors:

Yetsa A. Tuakli-Wosornu, MD, MPH
Andrew J. Haig, MD

Affiliations:

From the Department of Physiatry, Hospital for Special Surgery, New York, New York (YAT-W); and the Department of Physical Medicine and Rehabilitation, University of Michigan, Ann Arbor (AJH).

Correspondence:

All correspondence and requests for reprints should be addressed to: Yetsa A. Tuakli-Wosornu, MD, MPH, Department of Physiatry, Hospital for Special Surgery, 535 East 70th St, New York, NY 10021.

Disclosures:

Financial disclosure statements have been obtained, and no conflicts of interest have been reported by the authors or by any individuals in control of the content of this article.

0894-9115/14/9301(Suppl)-S50/0
American Journal of Physical Medicine & Rehabilitation
Copyright © 2013 by Lippincott Williams & Wilkins

DOI: 10.1097/PHM.0000000000000023

ANALYSIS

Implementing the World Report on Disability in West Africa

Challenges and Opportunities for Ghana

ABSTRACT

Tuakli-Wosornu YA, Haig AJ: Implementing the world report on disability in West Africa: challenges and opportunities for Ghana. *Am J Phys Med Rehabil* 2014;93(Suppl):S50–S57.

Disability issues have taken a prominent role on international stages in recent years. Beginning with the May 2005 World Health Assembly Resolution 58.23 and culminating in the June 2011 World Bank and World Health Organization World Report on Disability, comprehensive disability analyses from nations at various stages of development can now be accessed and used by relevant stakeholders in health, policy, and aide arenas. The implementation of this landmark report is critical for the advancement of social inclusion in diverse countries, including those with limited resources. However, activating the World Report on Disability in resource-limited countries remains a significant challenge because of threadbare data and cultural, institutional, and physical barriers to social inclusion. This review summarizes current national disability data and describes challenges and opportunities for the implementation of the World Report on Disability in Ghana. As a structural point of departure, the article uses the three broad categories of challenges outlined by the World Health Organization: attitudinal, physical, and institutional.

Key Words: Rehabilitation, Persons with Disability, Epidemiology, Policy

As stated by the preamble to the Convention on the Rights of Persons with Disabilities (CRPD), the understanding of disability is continually evolving.¹ The well known medical model of disability in which individual health conditions frame impairment, disability, and handicap is different from the social model of disability that highlights contextual factors. Recently, an integrative, universal biopsychosocial model of disability has emerged.² Here, disability is appropriately understood as a dynamic interaction between health conditions and both internal and external environmental factors. This is the central concept around which present-day disability dialogues pivot.³ With increasing frequency and momentum, these conversations are unfolding on the highest stages of international decision making.⁴

The 2006 United Nations' CRPD lays bare the full complement of human rights to which persons with disability (PWDs) are entitled including civil,

cultural, political, social, and economic participation. The 2010 World Report on Disability (WRD), coauthored by the World Health Organization and the World Bank, presents the best evidence on the current status of PWDs around the world.⁵ This first-ever comprehensive summary of global disability offers governments, policy makers, and other relevant stakeholders a blueprint for implementing the CRPD and facilitating social inclusion in countries at all stages of development. It is a call to action.

Ghana passed its first-ever Disability Rights Bill in 2006.⁶ The goal is to provide Ghanaian citizens with disabilities a variety of services and equal employment opportunities by the year 2016. This is to include access to public places; equal employment opportunities; transportation at a free or reduced cost; free general and specialist medical care; creation of work desks specifically for PWDs; and a national disability program, the Action on Disability and Development. Despite legislation, disability culture in Ghana remains nascent. Although there is evidence of growing public acceptance of PWDs, widespread stigma toward those with disabilities persists often because of nonbiologic conceptions of disability.⁷ Further, there is no consensus on who is responsible for enforcing and funding new policies including the national Disability Rights Bill, the recently ratified CRPD, and the recommendations of the WRD.

One of the WRD's explicit recommendations for social inclusion in developing nations is community-based rehabilitation (CBR). Unfortunately, in Ghana, CBR programs have not been successful, in large part because of deeply entrenched nonbiologic conceptions of disability and bidirectional social stigma, where citizens with disabilities are actively excluded from participation with the able-bodied public and, at the same time, citizens with disabilities consciously avoid opportunities to liaise with the able-bodied public.⁸ Published data that characterize the status of Ghanaians with disabilities and the reasons for both success and failure of past efforts for social inclusion help guide future campaigns for social inclusion.⁹

In contrast to the WRD's recommendation, in Ghana, programs such as CBR that take as their starting point the needs of citizens with disabilities (and thus, highlight those needs) may not find traction because of the aforementioned bidirectional social stigma. The underlying assumption that PWDs are weak, in need, and burdensome is shared by broader Ghanaian society (including by PWDs). This assumption needs to be replaced rather than combated.¹⁰ Programs and public health campaigns that underscore the achievements and

abilities of Ghanaians with disabilities might be more effective than CBR and other efforts that begin and revolve around an assumption of need/incapacity.¹⁰ Exploiting the social cognitive theory, both efforts to redefine external representations of PWDs and replace widespread assumptions rather than refute these assumptions will find traction in Ghana and more quickly create a climate of true inclusion.¹¹

The strengths and the weaknesses of the WRD, as well as facilitators and barriers to its implementation, must be reviewed if there is to be any progress in advancing the Disability Rights Bill, CRPD, the WRD, and social inclusion in Ghana. Further, Ghana has historically enjoyed relative sociopolitical stability when compared with its neighbors in the West African subregion. National stability, taken together with Ghana's recent rapidly expanding economy, gives Ghana the potential to be a subregion leader in a number of arenas. An analysis of the WRD in Ghana will have implications for social inclusion efforts in neighboring nations, giving Ghana an opportunity to lead the region in inclusion efforts and potentially impact countries in other regions of the world with similar development profiles.

Burden of Disability

Disability data from Ghana are limited, but the World Health Organization and the World Bank estimate a 7%–12% population prevalence of disability. A total of 64% of Ghanaian adults with disabilities are women. The disability prevalence rate of women is 10.6%; and of men, 6.2%. There are similar rates of disability in urban *vs.* rural areas, and prevalence is higher in older age groups. Thirty-eight percent of working-aged Ghanaians with disabilities are between the ages of 46 and 65 yrs, whereas less than 20% of the total Ghanaian population is in these ages.¹² The three most common types of disability in Ghana seem to be visual, auditory, and physical impairments. Understanding which confers the highest burden of disability can be difficult because regional and subject-specific data are limited, disjointed, and at times conflicting. The paucity and the inconsistency of available data prevent a clear understanding of national prevalence estimates at either end of the life spectrum.

What is known, however, is that among young children, disability may increase with age. A 2001 study reported a 14.4 and 16.6 per 1000 disability prevalence among children aged 1–5 and 6–9 yrs in central Ghana. In the same study, disability prevalence

was closely related to immunization status, sex, education, and geography.¹³ In 2010, the World Health Organization reported that most disability among adults 50 yrs or older is caused by communicable diseases, nutrition, and noncommunicable diseases.¹⁴ In one Ghanaian community study involving both in-school and out-of-school children, physical, then visual and auditory, then neurocognitive disabilities were most common. In a separate school-based study, visual then neurocognitive then auditory then physical impairments were most common in the same age group.¹⁵

The World Bank has shown that when compared with able-bodied individuals, PWDs in Ghana have higher rates of undereducation, including total years of education and primary education percentage completion rate (2.41 *vs.* 2.63 yrs, respectively, $P < 0.05$, and 54% *vs.* 65%, respectively, $P < 0.05$). This is compounded by teachers' lack of special education and training for students with physical and/or intellectual impairments. When compared with their able-bodied counterparts, PWDs in Ghana also have higher poverty rates as assessed by asset deprivation and medical/total monthly expense ratio. Using a nationally representative sample, the World Bank used a ten-item multidimensional poverty measure to compare households that contained a person with a disability with households that did not contain a person with a disability.

The results for disability households were similar to the results for nondisability households across every dimension except lack of primary education and asset deprivation, in which there were significantly higher rates for disability households. Educational attainment remains significantly lower for those with disability as compared with those without disability; because education directly impacts economic potential, it logically follows that the acquisition of personal and household assets is the second index that definitively distinguishes Ghanaians with disability as more impoverished than able-bodied Ghanaians in the multidimensional model.¹²

Many organizations for PWDs have been established since the 1960s, the most prominent of which include the Ghana Federation of the Disabled (1987), an umbrella organization encompassing the Ghana Society of the Physically Disabled (1980), Association of the Blind (1963), National Association of the Deaf (1968), Parents Association of Children with Intellectual Disability (2001), Association of Persons Living with Albinism (2003), and Share Care Ghana (2006).¹⁶ Further resources can

be marshaled through the Ghana Research and Advocacy Initiative; the Orthopedic Training Centre; and multiple outfits supported by the Salvation Army and Catholic, Anglican, and Presbyterian churches.

At the national level, a formal governmental initiative, the Persons with Disability Act, was passed by parliament in 2006. Two broad objectives were to fulfill constitutional and international obligations to protect the rights of PWDs including the right to family life; participation in social, creative, and recreational activities; equal residential treatment; and access to public spaces. Sixty-one clauses constitute the act and span topics such as employment, education, transportation, health care, and miscellaneous provisions. Despite formal legislation, the effectiveness and the real-life impact of social, humanitarian, and governmental initiatives remain limited in part because of the weak lobbying power of those concerned with disability issues and in part because of the attitudinal, physical, and institutional challenges outlined hereafter.¹⁷

Attitudinal Challenges

Although Ghana's general public has made progress toward accepting citizens with disabilities, attitudinal challenges to the full socioeconomic inclusion of PWDs persist at the level of the individual, the family within which that individual is reared, and the broader society of which that family is a part.¹⁸ At the level of the individual, perhaps the more obvious point is that limited exposure can enable negative perceptions of self and society.¹⁹ Because of a variety of internal and external forces, Ghanaians with disabilities may isolate themselves from family, friends, schools, places of employment, and other opportunities for social interaction. Thus, the development and the refinement of one's self-concept may occur in isolation rather than in nurturing social settings. Devoid of social feedback (either positive or negative), perceptions of self can become narrow, negative, and self-doubting; a focus on one's inabilities rather than capabilities and a general fear of society (which, in many cases, represents a stark "unknown") can set in.

The less obvious point is that negative perceptions of self can be paradoxically amplified by organized social integration programs.²⁰ Inclusion programs can draw attention to celebrated and expected social roles such as self-reliance and independent productivity. In so doing, these can highlight weaknesses, dependence, and inabilities at the level of the individual with disabilities. This

has been most clearly demonstrated in the public health literature by the surprisingly poor reception CBR programs have received among people with disabilities in sub-Saharan Africa. Nonparticipation in these programs was in part caused by people with disabilities' resistance to being publically seen as receiving and thus needing help from able-bodied CBR staff to perform basic activities of daily living such as finding work and negotiating transportation. West Africans with disabilities who engaged in CBR programs voiced a preference for independence rather than dependence (perceived or real), including a preference for generating capital through independent begging rather than receiving help and handouts from assistance organizations and their community health ambassadors.²⁰

These attitudes and resistances may be encouraged by unspoken norms of African society including prescribed sex roles (i.e., men as breadwinners).²¹ Traditionally, women are also prescribed strict sex roles in sub-Saharan Africa. Women may accrue most of their social value through sex-specific functions including childbearing.²² For a woman with a disability who may be (mistakenly) viewed as incapable of childbirth, these external social attitudes may impact self-perception, personal goals, and perceived potential for full social inclusion.^{23,24}

At the level of the family, despite advances in medical knowledge and an increasingly westernized approach to congenital and acquired disabilities, a nonbiologic, spiritual model of disability predominates.⁷ This enables intentional educational and social exclusion caused by shame. A child with a disability and his/her disability itself may still be regarded as curses, the result of witchcraft or punishments from God. Historically, children born with disabilities were given names such as *kinkirgo*, or spirit children.²⁵ They were and may still be abused and/or put to death particularly in rural settings.²⁶ Because of a family's shame of this perceived curse, children with disability are often kept home from school and outside social settings.²⁷ This limits educational attainment and appropriate social development in children with disabilities and negatively impacts the accurate measurement of disability in Ghana, particularly in rural areas.

At the level of society, despite legislation, widespread apathy, avoidance, and discrimination in public spaces and the workplace limit the social mobility of those with disability.²⁸ This can discourage PWDs from seeking help. Indeed, a 1998 study confirmed that because, in part, of social stigma, many PWDs preferred to beg rather than seek rehabilitative assistance.²⁹

Physical Challenges

Ghana's built physical environment lacks key accessibility tools that enable social inclusion.³⁰ First, the landscape of Ghana and much of sub-Saharan Africa must be considered: unpaved and/or dirt roads; unfinished or absent walkways; and treacherous, uneven terrain in both urban and rural settings make navigation with or without prostheses, ambulatory aides, and wheelchairs difficult or impossible. Institutions including schools, stadiums, hospitals, and workplaces can be inaccessible even with adaptive equipment.¹⁹ Maneuvering stairways and narrow doorways without accessibility tools such as ramps, functional elevators, lifts, and generous dimensions is difficult with or without adaptive equipment.³¹ Often, Ghanaians with physical and/or intellectual disabilities require external assistance from friends and/or charitable strangers to move through inaccessible cities, towns, and neighborhoods. For those with visual impairment, public spaces rarely feature Braille or enlarged text.

In addition to landscape and buildings, public vehicles also challenge the mobility and the subsequent social participation of Ghanaians with disabilities. Popular means of mass transit include private-owned public buses, both large and small. Often crowded, worn, and/or inaccessible, *tro-tros* and public coach buses are deployed without standard accessibility tools.³² Finally, the physical demands of traditional activities of daily living such as food preparation (pounding, grinding), manual laundering, farming, and homemaking are high. The physicality of activities of daily living in addition to the clear paucity of available modifiers, such as utensil build-ups and adapted tools, challenge Ghanaians with disabilities further.

Institutional Challenges

Institutional challenges for Ghanaians with disabilities cut across medical, financial, public health, social science, and religious arenas, among others. In this review, the authors focus on medicine. Rehabilitation medicine is a fitting field from which disability issues can be broached because the specialty's core philosophy is anchored by an interdisciplinary approach to care at the individual, family, and community level. In Ghana, medical rehabilitation is largely absent. Indeed, a 2007 mixed methods review confirmed that there are no rehabilitation specialists nationally. One retired occupational therapist was identified in Accra, as was a single speech language pathologist. There are sophisticated trauma units, particularly at the two

teaching hospitals with 1000 beds or greater in the capital city Accra and in the central city Kumasi, but there are no inpatient rehabilitation units.³³ The increase in the number of physical therapists and physical therapy students was caused in large part by the 2002 establishment of the University of Ghana School of Allied Health Sciences.³⁴

Although the national health insurance scheme was launched in 2005, there was only 25% coverage in 2006, and the limited available rehabilitation is not covered; rather, a “pay-as-you-go” scheme is relied on, excluding those without some degree of financial buoyancy.³³

A critical look at the institutions that fabricate ambulatory aids and durable medical equipment indicates serious deficiencies. There are five subsidized but somewhat outdated prosthetics and orthotics fabrication centers. The single large-scale private prosthetics and orthotics outfit is located in the Eastern region. Owned by the Dutch and operated by the Catholic church, the Orthopaedic Training Center in Nsawam serves approximately 6000 PWDs yearly, a significant number but a small fraction of the total number of persons with physical disability in the nation.³⁵

As alluded to under the “Attitudinal Challenges” subheading, CBR programs were initiated in 1992 by the national department of social welfare and supported by four international nongovernmental organizations. The program was designed in response to the inadequacy of social welfare programs and included provision of community resources, access to healthcare services, educational institutions, social services, and vocational training with the help of trained community workers. Outcome analyses confirmed improved social acceptance and self-reliance among PWDs enrolled in CBR, but the programs were not as successful as anticipated secondary to some of the attitudinal challenges heretofore described.²⁰

How the WRD Might Influence Ghana

At present, Ghana is in good position to implement the WRD.³⁶ Development indicators including total population, gross domestic product, poverty level, life expectancy, under-five mortality rate, adult literacy rate, and primary school completion rate collectively show a positive trend in recent decades.³⁷ The improvement in under-five mortality rate is of particular importance. It demonstrates that sustained, systematic, cross-discipline public health programming can successfully improve a complex, poverty-based problem such as early mortality.³⁸

Disability and its various sequels are similarly complex and poverty based; a focused cross-discipline approach to addressing disability may succeed in Ghana and neighboring West African nations in similar positions.

Parliament passed Ghana’s Disability Act in 2006, and the government of Ghana has resolved to provide PWDs equal opportunities by 2016. Even still, most government facilities (including those in which such legislation was brought to life) remain without basic but critical accessibility tools such as ramps, functional elevators, visual aids, adapted occupational equipment, and employment opportunities for PWDs. Moreover, influential organizations including the United Nations Development Programme, the United Way, and the United Nations International Children’s Emergency Fund, which could help operationalize the WRD, may not be formally engaged regarding WRD contents and recommendations. For this reason, beyond local momentum, internationally disseminated guidance from the WRD has not been explicitly exploited for its practical instructions and suggestions for social inclusion.

Ghana’s growing interest in social inclusion at high levels of government stands in contrast to the general lack of awareness, communication, and dissemination of local recommendations for inclusion as proposed by the Disability Act and international recommendations as suggested by the WRD. The World Report, then, if packaged and disseminated appropriately, stands to influence Ghana profoundly. Starting with the highest levels of government, the WRD can be packaged with the 2006 Disability Act. The World Report was developed as a practical guide for the implementation of the CRDP. In the same way, whereas Ghana’s 2006 Disability Act outlines the rights and the opportunities that should be respected for Ghanaians with disabilities, the WRD can help guide the concrete action for which the Disability Act calls.

Specifically, the WRD should first be disseminated. Local branches of international disability, human rights, development, and aid organizations should be appraised of the WRD and its import. Then, the nine recommendations of the WRD should be tailored for Ghana. The 2006 Disability Act was, in effect, the completion of the first recommendation to enable access to all mainstream policies, systems, and services. The second recommendation to invest in specific programs and services for PWDs is feasible in Ghana and should be completed. The government should consider earmarking resources for the renovation of facilities such as the Accra rehabilitation

center, a stand-alone rehabilitation facility with antiquated adaptive equipment and weathered physical facilities. Further, given the abundance of rehabilitation organizations in Ghana, many of which have successfully acquired grants and equipment for their members, the development of a formal consortium could facilitate interagency communication, resource pooling, and strategizing. The third recommendation to adopt a national disability strategy and plan of action can be completed with the realization of the second recommendation.

The fourth recommendation to involve PWDs is feasible through the various disability organizations of which Ghana boasts. Leading by example, the government of Ghana should aim to train and employ PWDs as consultants and full-time employees during the road to full social inclusion by 2016. The fifth and the sixth recommendation declare that both human and monetary resources need to be marshaled and prioritized. Currently, 2% of Ghana's common fund is allocated for "disability-related services," but this does not translate into clear inclusion-promoting activities and projects.

The seventh recommendation is to increase public awareness and understanding of disability. Ghana will need to develop a creative strategy that takes the pervasive nonbiologic conceptions of disability into consideration. Programs that paradoxically highlight the needs of PWDs such as CBR may not work. These programs fail in Ghana largely because of deep-seated attitudinal barriers to the acceptance and the inclusion of people with clear cognitive and/or physical differences. This stigma could undercut any public health messaging strategy but clearly steers Ghana away from programming and strategies that pivot around addressing inabilities. Programs and messages that highlight the strengths, abilities, and accomplishments of citizens with disabilities might serve as an effective starting point for public health messaging and a national disability awareness campaign. Changing rather than refuting perceptions about people with disabilities might prove an effective way of improving awareness and understanding. Strategies might include profiling paralympians and including the success stories of prominent national figures with disabilities.³⁹

The eighth and the ninth recommendation to improve disability data collection and strengthen research on disability can certainly occur at both national and international levels. Although some disability data are available, a comprehensive picture of the evolving status of PWDs in Ghana needs to be created. To alleviate the disjointed nature of disability data and efforts, communication between

humanitarian, development, media, transport, education, and scientific sectors needs to be streamlined and bolstered. Interagency strategizing, collaboration, and accountability will be required to ensure data quality and completeness.

Strengths and Weaknesses of the WRD in Relationship to Ghana

The WRD illustrates the multifaceted challenges and opportunities for social inclusion throughout the world. Further, it promotes an interagency, multidisciplinary model for promoting inclusion. From the foregoing, it is clear that Ghana is a microcosm of this portrait. The clear delineation of attitudinal, physical, and institutional challenges facing PWDs translates easily to Ghana, and the nine recommendations for inclusion can also be implemented in Ghana, taking advantage of the momentum generated from the 2006 national Disability Act. Bolstering public and individual education; developing targeted public health communication; effectively using human and economic resources; and installing systems of strict accountability, monitoring, and evaluation can reframe the disability debate in the country and promote social inclusion. Pursuant to the nature of the challenge, an interdisciplinary approach to action makes sense.

The most salient weakness of the WRD in relationship to Ghana involves the unique cultural milieu in which disability, sex roles, and social productivity are understood. The apparent spiritual, nonbiologic belief models surrounding disability in combination with prescribed sex roles and perceptions of appropriate human function lead to the failure of inclusion programs that promote assistance without first attempting to creatively address cultural perceptions. Rather than implementing CBR programs, Ghana should start by attempting to adjust perceptions while at the same time creating a physical environment that empowers and enables PWDs to more easily fulfill their social roles alongside rather than apart from or via different channels than able-bodied members of their communities.

CONCLUSIONS

Although disability data from Ghana remain disjointed and incomplete, from the foregoing, it is clear that the challenges facing Ghanaian PWDs are complex and cut across public health, medical, social, educational, spiritual, and business fields. Although the attitudinal, physical, and institutional challenges are complex, their end result is singular: social exclusion. The WRD nicely summarizes the

plight of PWDs in both rural and urban centers in Ghana and the world. Excluded from full and rightful participation in their country, Ghanaian PWDs would benefit from most of the practical suggestions of the WRD.

In the end, Ghana's solution to the social exclusion of PWDs should reflect its complexity. In addition to further research, an interdisciplinary plan of action emphasizing education, communication, appropriate resource use, and accountability is required. Borrowing from the model of care that physical medicine and rehabilitation teams use, a multitiered, multidisciplinary approach must be adopted if citizens with disabilities are to achieve full integration into Ghanaian society. The implementation of the WRD should be a national priority for Ghana and is a logical follow-up to the 2006 Disability Act. With the explicit allocation of adequate resources, thoughtful interagency strategic planning, and strict attention to the unique and pervasive sociocultural ideas that frame disability issues in Ghana, implementing the WRD is an unprecedented opportunity to elevate the position of Ghanaians with disabilities and Ghana itself as a beacon of social inclusion in West Africa.

REFERENCES

1. United Nations: *Convention on the Rights of Persons with Disabilities (Resolution 61/106)*. New York, NY, United Nations, 2007
2. Costa-Black KM, Feuerstein M, Loisel P: Work disability models: Past and present, in *Handbook of Work Disability*. New York, NY, Springer, 2013, pp. 71–93
3. Kostanjsek N, Good A, Madden RH, et al: Counting disability: Global and national estimation. *Disabil Rehabil* 2013;35:1065–9
4. Stuart H: United Nations convention on the rights of persons with disabilities: A roadmap for change. *Curr Opin Psychiatry* 2012;25:365–9
5. World Health Organization: *World Report on Disability*. Geneva, Switzerland, World Health Organization, 2011
6. Parliament of the Fourth Republic of Ghana: Persons With Disability Act 2006, act 715. Available at: www.gfdgh.org. Accessed June 2013
7. Avoke M: Models of disability in the labeling and attitudinal discourse in Ghana. *Disabil Soc* 2002;17:769–77
8. Kuyini AB, Alhassan AR, Mahama FK: The Ghana community-based rehabilitation program for people with disabilities: What happened at the end of donor support? *J Soc Work Disabil Rehabil* 2011;10:247–67
9. Finkenflugel H, Wolfers I, Huijsman R: The evidence base for community-based rehabilitation: A literature review. *Int J Rehabil Res* 2005;28:187–201
10. Agbenyega JS: The power of labeling discourse in the construction of disability in Ghana. 2002. Available at: www.education.monash.edu. Accessed June 2013
11. Bandura A: Human agency in social cognitive theory. *Am Psychol* 1989;44:1175–84
12. Mitra S, Posarac A, Vick B: *Disability and Poverty in Developing Countries: A Snapshot from the World Health Survey*. April 2011. World Bank Social Protection and Labor Unit, Human Development Network Discussion Paper 1109
13. Biritwum RB, Devres JP, Ofosu-Amaah S, et al: Prevalence of children with disabilities in central region, Ghana. *West Afr J Med* 2001;20:249–55
14. Kowal P, Khan K, Ng N, et al: Ageing and adult health status in eight lower-income countries: the INDEPTH WHO-SAGE collaboration. *Global Health Action* 2010; 3(suppl 2):11–22
15. Obeng C: Teacher's view on the teaching of children with disabilities in Ghanaian classrooms. *Int J Spec Educ* 2007;22:96–102
16. Kwame Nkrumah University of Science and Technology Center for Disability and Rehabilitation Studies Disability Database [online]. Kumasi, Ghana, 2012
17. Walker S: A comparison of the attitudes of students and non-students toward the disabled in Ghana. *Int J Rehabil Res* 1983;6:313–20
18. Naami A, Hayashi R: Perceptions about disability among Ghanaian university students. *J Soc Work Disabil Rehabil* 2012;11:100–11
19. Body and Soul (De Corpo e Alma). Documentary film distributed by Meetings Production, Matthieu Bron; 2011
20. Kassah AK: Community-based rehabilitation and stigma management by physically disabled people in Ghana. *Disabil Rehabil* 1998;20:66–73
21. Naami A, Hayashi R, Liese H: The unemployment of women with physical disabilities in Ghana: Issues and recommendations. *Disabil Society* 2012;27:191–204
22. Donkor ES, Sandall J: The impact of perceived stigma and mediating social factors on infertility-related stress among women seeking infertility treatment in Southern Ghana. *Soc Sci Med* 2007;65:1683–94
23. Brown CK: *Gender Roles in Household Allocation of Resources and Decision Making in Ghana*. 1994. University of Ghana, Legon, Family and Development Program Technical Series 2. Legon, Ghana
24. Naami A: Women with disability need economic empowerment. *Daily Graphic*, Gender and Children. 2009;11
25. Allotey P, Reidpath D: Establishing the causes of childhood mortality in Ghana: The 'spirit child'. *Soc Sci Med* 2001;52:1007–12
26. Kassah AK, Kassah BLL, Agbota TK: Abuse of disabled children in Ghana. *Disabil Soc* 2012;27:689–701
27. Avoke M: Some historical perspectives in the development of special education in Ghana. *Eur J Spec Needs Educ* 2001;16:29–40

28. Reynolds S: Disability culture in West Africa: Qualitative research indicating barriers and progress in the greater Accra region of Ghana. *Occup Ther Int* 2010;17:198–207
29. Kassah AK: Begging as work: A study of people with mobility difficulties in Accra, Ghana. *Disabil Soc* 2008;23:163–70
30. Ben Hagan E, Wellington HN: The promotion of access legislation—A developing country perspective from Ghana. *Building Environ* 1998;33:253–8
31. Danso AK, Owusu-Ansah FE, Alorwu D: Designed to deter: Barriers to facilities at secondary schools in Ghana. *Afr J Disabil* 2012;1:1–9
32. Tijm M, Cornielje H, Edusei AW: ‘Welcome to my Life!’ Photovoice: Needs assessment of and by persons with physical disabilities in the Kumasi metropolis, Ghana. *Disabil CBR Inclusive Dev* 2011; 22:55–72
33. Tinney MJ, Chiodo A, Haig A, et al: Medical rehabilitation in Ghana. *Disabil Rehabil* 2007;29:921–7
34. Castle O: University of Health and Allied Sciences Outdoored At Ho. *Ghana Embassy News Archives* [online]. 2012
35. Christian A, Gonzalez-Fernandez M, Mayer RS, et al: Rehabilitation needs of persons discharged from an African trauma center. *Pan Afr Med J* 2011;10:32
36. Kassah BLL, Kassah AK: Implementing inclusive education: A commonwealth guide to implementing Article 2244 of the UN Convention on the Rights of Persons with Disabilities (2nd ed.). *Disabil Soc* 2013;28:291–3
37. The World Bank: World Development Indicators. The World Bank, Washington, DC, 2012
38. Rutherford ME, Mulholland K, Hill PC: How access to health care relates to under-five mortality in sub-Saharan Africa: Systematic review. *Trop Med Int Health* 2010;15:508–19
39. Bourgeois A: Contested perspectives of ‘marvel’ and ‘mockery’ in disability and sport: Accra, Ghana. *Sport Soc* 2011;14:1237–50