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Disability and Poverty: A Conceptual Review

Michael Palmer[1]

Abstract

The relationship of disability to poverty is of increasing interest to policy makers as persons with disabilities are being mainstreamed into national poverty reduction programs. However, previous reviews on disability and poverty have not systematically addressed the concept of poverty. This article examines the conceptual and empirical links of three definitions of poverty to disability: basic needs, capability, and economic resources. It is shown that different definitions of poverty have different implications when applied to disability and that however defined, it is defined, poverty is closely related to disability. By drawing attention to the limitations of existing studies, this article identifies areas for future research and their implications for policy.

Keywords

disability, poverty, basic needs, capability approach, disability costs

> The most dangerous and widespread threat to disabled people comes from a less dramatic source, so pervasive as to be increasingly invisible—poverty.
>
> Ghai, 2001, p. 28

Like disability, poverty can be interpreted and understood in various ways. Disability and poverty are interconnected—each a cause for and a consequence of the other (Elwan, 1999). Consequently, disability has been flagged as a key development issue in meeting the United Nations Millennium Development Goals and eradicating world poverty (U.K. Department for International Development, 2000). People with disabilities (PWDs) are increasingly being mainstreamed into national poverty reduction strategies (Mwendwa, Murangira, & Lang, 2009). Despite the acknowledged links between disability and poverty, the relationship is not comprehensively documented. In her review of disability and poverty in 1999, Elwan concluded that little was understood of the processes linking disability and poverty, even in developed countries. Nearly a decade later, Braithwaite and Mont (2008) wrote that even basic income-based relationships between disability and poverty had not been calculated in most developing countries. Previous literature reviews on disability and poverty do not systematically review the concept of poverty. Poverty is addressed predominantly through its measurement with an emphasis on the monetary metrics of low- and middle-income consumption. This article provides a conceptual review of poverty with application to disability. Exploring the association between disability and poverty has important implications for the design of policies and programs of social protection. The article is divided into four sections. The first section outlines different definitions of poverty, followed by an application to disability. Empirical evidence on disability and poverty is then presented from high-income and low/middle-income countries. The concluding section provides recommendations for future research and discussion of policy implications.

Defining Poverty

Throughout the 1990s, the World Bank recorded poverty through the eyes of more than 40,000 men and women from 50 countries: The report was published as *Voices of the Poor* (Narayan, 2000). A key finding from the study was that poverty is multidimensional. There was no single character that defined poverty, but many interlocking factors related to socioeconomic status, geographical area, and others. Drawing on this study as well as a book by Paul Spicker, *The Idea of Poverty* (2007), three definitions of poverty are presented: the basic needs approach, capability approach, and economic resources approach.[1]

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Basic Needs Approach

Poverty may be multidimensional; however, participatory poverty assessments routinely focus on material well-being (Narayan, 2000) pp. 30, 36:

> Don't ask me what poverty was because you have met it outside my house. Look at the house and count the number of holes. Look at my utensils and the clothes that I am wearing. What you see is poverty. [Kenya, 1997]

> The worst aspects of poverty are hunger, poor health, lack of adequate clothing, and poor housing conditions. [Moldova, 1997]

In particular, a lack of food, and hunger, was core to poverty (Narayan, 2000, p.35):

> Your hunger is never satiated, your thirst is never quenched; you can never sleep until you are no longer tired. [Senegal, 1995]

> When I leave for school in the mornings I don't have any breakfast. At noon there is no lunch, in the evening I get a little supper, and that is not enough. So when I see another child eating, I watch him and if he doesn't give me something to eat I think I'm going to die of hunger. [Gabon, 1997]

Material views of poverty are consistent with a *basic needs* approach. Here, poverty is characterized by the deprivation of basic needs, including food, safe drinking water, sanitation facilities, health, shelter, education, and information (Meier, 1984; Spicker, 2007). The basic needs approach arose out of the need to provide a broader (non–income exclusive) dimension of well-being, evidenced by inter- and intra-country variation between economic and non-economic indicators of well-being (McGillivray, 2006; Sen, 1997). There is a minimum of needs that ought to be satisfied for everyone (regardless of nationality, culture, or social class) below which people are regarded as poor (Streeten, 1984). The attainment of universal basic needs can highlight fundamental deprivations of people within and across countries (Lipton & Ravallion, 1995). There is no composite measure of basic needs because some needs are difficult to quantify, such as housing and information, and some need indicators are more universally collected than others (Meier, 1984). Moreover, minimum standards of needs differ across different settings. What constitutes adequate education or housing differs dramatically from one society to another. A number of multidimensional measures of poverty have developed. The most well-known, the Human Development Index, ranks countries on health (life expectancy), education (adult literacy rate, gross enrollment rate), and living standard (GDP per capita) indicators (McGillivray, 1991).[2]

Capability Approach

Perhaps the most famous critique of the basic needs approach to poverty is offered by Amartya Sen, who argues that it is the *capability* to convert needs into well-being, rather than the needs themselves, that determines poverty: "to define basic needs in the form of commodities (e.g., for food, shelter, clothing, health care) . . . may distract attention from the fact that these commodities are no more than the *means* to the real ends" (1993, p. 40). The need for health care, for example, is valuable only to the extent that a person can achieve good health. For Sen (1993), the distinction between needs (as commodities) and capabilities is important because the capability to convert commodities into well-being varies greatly between individuals and societies. The relation between using health care and health achievements depends on the underlying health status of the person and the availability and quality of services, among other factors, for example. For Sen (1992), capability depends on a set of personal characteristics (e.g., age, gender, and health status), the resources available to a person, and the surrounding environment. This "capability set" in turn determines the functionings from which people have the freedom to choose. Functioning has broad application to the attainment of basic needs, such as being well nourished and sheltered, to more complex ones, such as achieving self-respect and social integration.[3] Equal to functioning is the practical opportunity or capability to achieve a given functioning that determines well-being. "The capability approach," writes Sen, "can accommodate the real issues underlying the concern for basic needs, avoiding the pitfall of 'commodity fetishism' " (1993, p. 40). For poverty analysis, it is necessary to identify basic capabilities and the minimal acceptable level below which people may be considered poor. Since the ability to reach minimum levels of basic capabilities differs between individuals and societies, the selection of capabilities and their weightings becomes a value judgment and a social choice exercise (Sen, 1997). The limited operational measurement of the capability approach is recognized (Townsend, 1985). However, Sen (1993) states that basic absolute capabilities, such as the ability to be well nourished and sheltered and to escape morbidity and premature mortality, may be sufficient to determine extreme poverty in developing countries. The capability approach has been highly influential in the modern conceptualization of poverty. Its influence can be seen in various multidimensional measures of well-being including the Human Development Index, Human Poverty Index, Gender-Related Development Index, and gender empowerment ratio.

Economic Resources Approach

For many people, poverty boils down to not having sufficient money to live on (Narayan, 2000, pp. 39, 35): "Poverty means working for more than 18 hours a day, but still not earning enough to feed myself, my husband, and my two children" [Cambodia, 1998]; "It's the cost of living, low salaries, and lack of jobs. And it's also not having [the money to buy] medicine, food and clothes" [Brazil, 1995]. Under this definition, people can be money poor without actually being in need or lacking in capability to convert income into well-being. The test is whether people have enough economic resources (income, savings, and other fixed, productive, and financial assets) to meet their needs, not what the needs or capabilities are.

A view of poverty based on a lack of resources is consistent with conventional methods of measurement. Generally, poverty is measured by computing the cost of basic needs whereby anyone whose income is below the cost of basic needs is deemed poor (Fields, 2001). In India, for example, in 1973–1974 prices, people were considered poor if they lived in a household whose per capita monthly expenditure was less than 49 rupees in rural areas or 57 rupees in urban areas (Deaton, 1997). This poverty line, like many, was calculated on the cost of obtaining minimum adequate nutrition (daily calorie norm). A calorie-based approach to poverty rests on the observation of German economist Engel that the poorer people are, the higher the proportion of income that has to be spent on food (Spicker, 2007). In the United States, food is estimated to take up a third of the budget of poor people, whereas in poorer countries such as India the proportion is much higher (Spicker, 2007). People living on a dollar per day are estimated to spend about 70% to 80% of their income on food (Spicker, 2007). Poverty lines typically incorporate a minimum of basic needs and contextual factors. Costs of health care, education, housing, and other daily living costs are excluded from most poverty-line calculations. In the case of India, though allowing for rural urban differences, no account was taken of the fact that the amounts people spend on food vary according to age, gender, and health status.

Disability and Poverty

Whether poverty is understood as the deprivation of basic needs, capabilities, or economic resources, there is a close relationship to disability. The following discussion draws on the conceptual links from disability to poverty. However, poverty may also be the cause of an impairment or disability. Poor nutrition and working and living standards together with limited access to health and maternity care are among many poverty-related factors contributing to disability. Lower birth weight and immunization coverage, and higher rates of illiteracy, unemployment (and underemployment), and occupational mobility, are associated with higher rates of disability (Elwan, 1999). The two-way relationship between disability and poverty is described as a "vicious cycle" that places PWDs among the poorest of the poor (Elwan, 1999).

Relative to people without disabilities, PWDs are more likely to experience poverty of basic needs. The minimum needs required for a basic level of well-being are higher for PWDs than nondisabled people. If this premise is accepted, it follows that measurement of deprivation on the basis of basic needs underestimates the extent of poverty among PWDs. PWDs have higher needs across all basic categories. Due to underlying health conditions, PWDs are high and specialized users of health care, particularly rehabilitation services, surgery, and pharmaceuticals. PWDs may require special foods, adaptation to vehicles or housing, special education or personal assistance in the classroom, or information transfer through Braille or sign language. The need to access safe drinking water and sanitation will be higher for people with physical impairment compared with those who can transfer freely. Furthermore, PWDs also have specific needs that are not recognized as basic needs, notably personal caregiving and assistive devices.

Disability can restrict a person's capabilities in various ways (Mitra, 2006). This may be due to the nature of impairment itself and other personal characteristics, the resources available to the person, and the environment. Severe mental or physical impairment can lead to a reduction in the range of an individual's practical opportunities. A paraplegic cannot work as a laborer, for example. Equally, low earning capacity attributable to impairment may restrict a person's capabilities in other ways, such as the ability to send his or her son or daughter to school. At the same time, impairment induces costs to generate capability; a person with physical impairment may require a wheelchair to achieve mobility, for example. "These income-using disadvantages," writes Sen, "can tremendously compound the feature of low earning power" (1992, p. 113). Discriminatory views in society can dramatically influence the capabilities of a person with impairment; for example, a minor impairment such a harelip may inhibit a person's ability to appear in public. This, in turn, can limit the person's participation in social roles including work, schooling, and community events. The opulence of a society also influences capabilities and functionings of people with impairment by the availability of social security, assistive devices, quality of health services, and roads on which to transport to health services, for example.

PWDs are prone to economic deprivation for three main reasons (Glendinning & Baldwin, 1988). First, PWDs have lower earning capacity. Second, expenses attributable to disability create an extra drain on resources. Expenses may not be met from existing resources or may be met only by cutting down on expenditures not related to the disability. Third,

assistance and caring by other family members can detract from the available household labor. These financial consequences of disability have direct bearing on the household. Disability is not an individual phenomenon. Low earnings, additional expenses, and caring for a member with a disability can affect to varying degrees the lifestyle and living standard of other family members. This is particularly the case in low-income countries where formal welfare systems and caring support services are limited. Economic hardship can contribute to poor health and disability of all household members, exacerbating the risk of poverty.

PWDs are characterized by low human and social capital which, in turn, affects their ability to earn income. Human capital encompasses health, education, and labor, each of which may be compromised by disability as a result of either impairment itself or social discrimination. *Voices of the Poor* identifies labor power as the most important human capital asset (Narayan, 2000). Loss of a productive adult can affect economic stability of the household, particularly among households that rely on physical labor for income, reducing capacity to overcome external shocks (Narayan, 2000). Low education is also an important determinant of poverty; at the most extreme, illiteracy limits opportunity for securing employment, using government services, and obtaining credit (Narayan, 2000).

Social capital is understood as the value of networks of social interaction and support (Spicker, 2007). Social networks are an important resource, particularly in poor countries where formal systems of support are limited. As one Senegalese man states, "the most important asset is an extended family and well-placed social network from which one can derive jobs, credit and financial assistance" (Narayan, 2000, p. 55). Prejudice toward PWDs limits their social relationships. In religious societies impairments may be perceived as "misfortunes, sent by deity, fate, [or] karma[,] often associated with parental sin" (Ghai, 2001; Miles, 1995, p. 52). In certain societies, the entire family may be shunned because of the presence of a member with a disability. Since giving is a part of the generation of social capital, families with a member with a disability and scarce resources may not be able to give and so may be socially excluded (Narayan, 2000).

By standard poverty line measures of income, PWDs are likely to be poor. This assumes, however, that the minimum basket of resources encapsulated in the poverty threshold is sufficient to meet the basic needs of PWDs. PWDs have particular needs that demand greater economic resources to achieve a given level of welfare. Therefore, standard poverty lines underestimate the degree of deprivation among the population with disabilities. In developing countries, income is usually collected at the household level and calculated individually. Income is commonly divided evenly among family members or weighted for children and/or economies of scale in consumption (Deaton, 1997). However, it is possible that PWDs do not enjoy an even share of household income (or consumption) as allocations are made in favor of members without disability. Also, income is only one dimension of economic well-being. Due to extra costs of disability, households containing PWDs are less likely to accumulate savings and other assets, leaving them vulnerable to economic shocks, such as poor harvests and illness, and high-risk coping strategies, such as borrowing from formal money lenders, which compounds the risk and magnitude of poverty (Narayan, 2000).

A Review of the Evidence

Information on disability and poverty is not comprehensive due to the multidimensional and evolving concept of poverty. Nonetheless, there exists a lot of literature on the varied aspects of poverty and disability. Most of this information is from high-income countries, but studies from middle- and low-income countries are rising in number. Developing country studies are typically regional or village based. Due to the different contexts and nature of studies, discussion is divided between high- and middle/low-income countries.

High-Income Countries

Studies tend to focus on the employment situation of PWDs in order to estimate costs to national productivity and economic growth as well as social security (Haveman & Wolfe, 2000). It is consistently reported that PWDs experience lower rates of labor force participation, work fewer hours and earn less per hour, and are more likely to be unemployed (Glendinning & Baldwin, 1988; Haveman & Wolfe, 2000). In the United States, regardless of how disability is measured, the employment rate of working-age PWDs is significantly lower than the rest of the working-age population (Stapleton, O'Day, Livermore, & Imparato, 2006). In 2003, 38% of working-age PWDs were employed compared with 78% of persons without disabilities in the same age range (Stapleton et al., 2006). The income poverty rate in the same year was 23% among American working-age PWDs compared with 9% among their counterparts without disabilities (23% vs. 9%; Stapleton et al., 2006). Note this rate accounts for income support payments, which 9 million American PWDs were receiving, and thus underestimates the extent of income poverty (Stapleton et al., 2006).

In a study of the Italian population, Parodi and Sciulli (2008) examined the income affects of disability at the household level. In 2000, mean equivalized income of households with members with a disability was 12% lower than those without members with a disability. Twenty percent of Italian households with members with a disability were poor compared with 15% of other households. The poverty rate almost doubled (38%) among households with PWDs when

disability benefits were removed. The study further examined labor market participation of the partner of the household head for households with and without PWDs, under the assumption that this person was most likely to undertake caring duties. Labor force participation rates were 37% versus 55%, respectively. Regression estimates were consistent with a negative relationship between carer labor market participation and the presence of a member with a disability.[4] These results support the theory that informal caregiving is an additional financial cost on the household.

Although novel in its approach, Parodi and Sciulli's study (2008) of the Italian population did not take into account the additional household expenditures attributable to disability. Furthermore, no account was taken of the nature or severity of impairment on earnings. In the United States, people with a mental disability experienced lower employment rate and higher rate of poverty than people with a physical or sensory disability (Stapleton et al., 2006). Thirty percent of people with a mental disability lived below the poverty line compared with 24% and 20% of people with physical and sensory disability, respectively. Similarly, indicators of disability severity, including the inability to perform self-care, go outside the home, or work, were associated with lower employment and higher poverty in the United States (Stapleton et al., 2006). Employment rates ranged from 17% to 18% and poverty rates ranged from 28% to 29% for severe disability measures compared with 28% and 23% for the overall population with disabilities, respectively. Gender was also an important covariate of disability and labor force participation in the United States, with working-age women with disabilities reporting lower participation rates than their male counterparts—50% versus 60% for persons aged 18 to 44 years in 1992 (Haveman & Wolfe, 2000). Other double disabilities including race or low education affected earnings negatively, compared with Caucasian or better educated men with disabilities (Haveman & Wolfe, 2000).

In recent years, a number of studies have attempted to quantify the extra costs of living with a disability (Mitra, Findley, & Sambamoorthi, 2008; Saunders, 2007; She & Livermore, 2007; Zaidi & Burchardt, 2005). In Australia, the costs of disability consumed 29% of equivalized household income, rising to between 40% and 48% of income for households with a severe or profound disability (Saunders, 2007). Deducting the costs of disability from household income and comparing income with other households, households with a member who had a disability experienced a sixfold increase in the rate of poverty. This study did not measure the costs of disability directly. The standard of living of people with and without disabilities, with the same income, was modeled with the differential forming a proxy for the extra costs of disability. The approach is commonly referred to as the *standard of living approach* (refer to Saunders 2007; Zaidi & Burchardt, 2005 for description).

An alternative approach is to estimate disability costs from an equivalence scale.[5] Jones and O'Donnell (1995) found that disability (particularly physical) in the United States had a positive effect on household fuel and transport expenditure, and households spent a larger budget share on necessities and less on luxuries. Higher heating (fuel) costs may be a consequence of mobility limitation. Although it spanned seven expenditure categories including fuel, transport, food, services, alcohol, clothes, and others, the study did not consider health care expenditures. Health expenditures are consistently reported as a substantial cost for PWDs (Glendinning & Baldwin, 1988; Haveman & Wolfe, 2000). In the United States, in 2004 PWDs on average spent 2.5 times more on health care than other Americans (Mitra et al., 2008). After controlling for a range of covariates, researchers found that having a disability was associated with a 50% increase in out-of-pocket health care payments during the period 1996–2004.

Studies of the income and direct costs of PWDs and their families reflect the resources available. Inspired by the capability approach, a few studies have attempted to assess the ability of households with PWDs to meet their economic needs. She and Livermore (2007) used a set of "hardship" measures to assess the extent to which disability affects the ability of households to meet essential expenses in the United States. Disability was found to affect the odds of material hardship more than any other factor. In 1998, PWDs were more than twice as likely to experience hardship in meeting essential expenditures compared with persons without disabilities. Among expenditure categories, most difficulty was in meeting the costs of medical care ($OR = 3.1$) and dental care ($OR = 2.4$), followed by food ($OR = 2.0$) and utilities ($OR = 1.9$). Rosano, Mancini, and Solipaca (2009) estimated the level of income required for Italian households with PWDs to meet a given level of economic satisfaction. A PWD living alone required approximately twice the level of income to attain the same economic satisfaction as a single-person household without disabilities; the rate was threefold for a two-person household with a member with a disability. These findings suggest that conventional measures of income and consumption underestimate the needs of households with PWDs.

The capability of PWDs to attain a given level of well-being is restricted by segregation and social prejudice. In a qualitative study of PWDs in New Zealand, the large majority did not have a network of close friends and acquaintances (O'Brian, 2003). The most frequent contact with the community was with a group of PWDs and carer staff; PWDs had few transactions with members of the public for goods and services and few social interactions with other members of the community. Speaking of her community in Invercargill, a PWD named Marie said, "I guess I know the outside of Invercargill, but not much of the inside" (Milner & Kelly, 2009, p. 47). Referring then to the community with disabilities, she explained

that "It is a community, but it's a closed community. We are all closed in to one big room" (Milner & Kelly, 2009, p. 54). The psycho-emotional effects of social integration have negatively influenced Marie's use of the community: "At school, they used to make fun of me. Those things just stuck with me because they hurt. It stopped all my confidence. . . . I am scared to go out there [into the community] and give it a go. I am scared they will judge me" (Milner & Kelly, 2009, p. 55). Speaking of the negative social perceptions toward the abilities of PWDs, Marie said, "They had me wrapped up in cotton wool and I couldn't break free. I wanted to prove myself and show them that I can. They made me feel as if I was useless by telling me you can't do this" (Milner & Kelly, 2009, p. 57).

Middle- and Low-Income Countries

There is little statistical evidence of the relationship between income poverty and disability in developing countries. One reason is that it is difficult to obtain representative statistics for small population groups (Hoogeveen, 2005). Census or national living standard surveys frequently do not include disability questions. If they do, questions are focused on impairment which tends to capture severe disabilities. Typically, the number of observations is too small for poverty estimates to be precise. Sample stratification enables small subpopulations in sufficient numbers to provide representative estimates, however, this strategy is rarely employed. Using an advanced technique of combining census with survey data, Hoogeveen (2005) derived consumption poverty estimates for households with a disabled household head in urban Uganda. Consumption per capita was 14-22% lower and poverty was 15-44% higher for households with versus without disabled heads, depending upon the region. The poverty gap[6] was also higher (range 20-63%) which suggests that not only are households with disabled heads more likely to be poor, but the degree of poverty is higher, than households with an able-bodied head.

While income poverty data is scarce, there is considerable information on poverty correlates for PWDs in developing countries. As in high income countries, PWDs in lower income countries experience lower rates of labor market participation than other working-aged persons. In a study of 15 rural villages in Tamil Nadu,India, in 2005, the employment rate for working aged men with disabilities was 66% that of their non-disabled counterparts (Mitra and Sambamoorthi, 2008). Relative to other workers, PWDs were more likely to be self-employed in agriculture (23% versus 18%) and less likely to be an employee (29% versus 35%). This is consistent with findings from urban Uganda where 27% of working PWDs were farmers and 21% were employees compared with 12% and 45% for the control, respectively (Hoogeveen, 2005). It is possible that employment rates among PWDs are higher in developing than developed countries due to more opportunities for self-employment. Sixty percent of PWDs in India were employed at a rate significantly higher than the United States(38%) (Mitra and Sambamoorhi, 2006). However, it is also conceivable that higher proportion of PWDs in developing countries is poor due to large numbers working in agriculture or informal jobs, which are associated with low earnings, together with low levels of public welfare support in these countries.

PWDs experience lower levels of education than non-disabled persons. In Tamil Nadu, the illiteracy rate among PWDs was over four times that of their non-disabled counterparts (26% versus 6%) (Mitra and Sambamoorhi, 2006). In South Africa a higher proportion of PWDs of school age had never attended school compared with their counterparts without disabilities (12% versus 1% in Eastern Cape; 22% versus 4% in Western Cape) (Loeb et al., 2008a). In Uganda, eighty-one percent of PWDs had no educational qualifications compared with 71% for nondisabled household heads (Hoogeveen, 2005).

Households with disabled members possess fewer assets than those without disabled members. In Uganda, disabled households were more likely to have mud floors (60% versus 48%); use wood as fuel for cooking (54% versus 35%); have less access to tap water (22% versus 33%) and flush toilets (7% versus 14%) than the control (Hoogeveen, 2005). In Chuadanga, Bangladesh, around 60% of disabled households had little to no land (<0.2 ha) compared with a similar proportion of non-disabled households which had more than 1.2 ha (Foley and Chowdhury, 2007).

Few developing country studies have attempted to calculate the economic costs associated with disability. Erb and Harris-White (2002) estimated the direct costs of treatment and rehabilitation, as well as opportunity costs of income arising from incapacity and caregiving, in five hamlets in Tamil Nadu, India. The loss of a productive adult (particularly a male) for the average household (two adult workers and three dependents) left insufficient resources to meet daily food and travel expenses, pushing the household into debt. A similar finding was reported from Chuadanga, Bangladesh, where landless households, in particular, were vulnerable to debt financing of the loss of a male breadwinner (Foley & Chowdhury, 2007). Health care costs in Tamil Nadu were a significant financial burden on the household (Erb & Harriss-White, 2002). Average annual outpatient expenditures for adults with disabilities who sought care were roughly a quarter of the average annual household income.[7] The cost of major surgery and orthopedic care was equivalent to almost twice the annual household income. Many households had a portfolio of small loans from neighboring households to finance ongoing treatments. For expensive treatments, households borrowed from formal money lenders or pawnbrokers at high rates of interest and sold off assets including jewelry and land. In Chuadanga, medical

treatment and equipment costs for PWDs varied from 5 days to 1 year of income, with the average being 4 months of income (Foley & Chowdhury, 2007). Households reported reducing consumption on food and other necessities, selling household assets, and taking loans to pay for medical costs. This was particularly so if the person was a male breadwinner. In Tamil Nadu, India, indirect costs of caring were significant only in 4% of households where full-time care for the family member with a disability impeded the ability of carers to carry out agricultural work (Erb & Harriss-White, 2002). In the majority of cases, caring duties were performed by female family members in addition to their domestic responsibilities. Most respondents were unable to say how much time they dedicated to caregiving activities. Findings differed in Bangladesh, where 28% of carers gave up 26 hours of paid work per week, and another 26% forfeited 15 hours of paid work per week (Foley & Chowdhury, 2007).

Social and cultural factors routinely excluded PWDs from achieving an equitable level of well-being in developing countries. In Tamil Nadu, negative attitudes toward PWDs entering the labor market was reported, particularly for people with mental disabilities; less than 1% of people interviewed thought that people with mental disabilities could be successfully employed (Mitra & Sambamoorthi, 2008). Perhaps because of these attitudes, PWDs also displayed low expectations regarding employment. Econometric analysis confirmed that the employment gap between PWDs and nondisabled people was largely explained by unobservable group differences. In a different study in Tamil Nadu, there was evidence of discrimination by family members toward female PWDs in the utilization of health care (Erb & Harriss-White, 2002). Relative to male PWDs, females were one third less likely to seek care and paid 26% less for treatment.

In Bangladesh, PWDs were excluded from microfinance schemes because they were perceived as high risks of loan default (Foley & Chowdhury, 2007). The schemes worked on a peer-group basis in which loan default was the responsibility of the group. Only 8% of women with disabilities in Chuadanga were members of nongovernment credit organizations compared with more than 90% of able-bodied women. Limited opportunities for socialization further deprived PWDs of the opportunity to network and improve their lots. A man with disabilities named Mujib remarked on how friends disappeared from his life: "They have all forgotten me" (Foley & Chowdhury, 2007, p. 383). Family members of PWDs reported having less time to socialize due to caring obligations and felt unable to attend community events due to social stigma.

Conclusion

Different definitions of poverty have different implications when applied to disability. However it is defined, poverty is closely related to disability. Research on the relationship between these two important social issues is growing but remains limited. Consequently, poverty research has had little influence on disability policy. Most of the empirical work on disability and poverty has addressed poverty through an economic resources lens with application to high-income countries. Typically, studies examine the income poverty rate of PWDs or their families and do not take into account the additional expenditures attributable to disability. A small number of studies have demonstrated that poverty lines considerably underestimate the extent of poverty when the extra costs attributable to disability are accounted. As mentioned earlier, the novel *standard of living approach* measures the costs of disability indirectly. The approach is preferred to the construction of equivalence scales that are not theoretically verified and require extensive expenditure data. This is particularly relevant to middle- and low-income countries where data collection systems are limited. The drawbacks of the approach are in deriving accurate measures of living standards and that estimates are an aggregate proxy of disability costs. The latter particularly concerns health care costs, which represent a significant economic burden. For policy purposes, it may be prudent to apply the standard of living approach to income poverty estimates to assist in the design of cash transfers and to directly estimate health care costs for health insurance design. Inspired by the capability approach to poverty, a few studies have recently attempted to measure the ability of households to meet their economic needs. Findings suggest that an economic resources approach to poverty measurement underestimates needs. Measures of ability, however, are limited by individual choice and preference, and presently there exists no common measure or consensus about what constitutes ability. Negative social forces exclude PWDs from achieving an equitable level of well-being across a range of countries. Further research is required to understand the extent to which discrimination influences poverty among PWDs. In almost all studies, PWDs are included as a homogeneous group and are not disaggregated by severity or type of impairment. Disability severity is a common eligibility criterion for social protection programs and should thus be included in poverty analyses. Other important poverty correlates such as gender, race, and education of the PWDs are frequently omitted. To best inform disability policy, a comprehensive approach to the measurement of disability and poverty is required.

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Notes

1. Note that definition categories are not discrete; the capability approach, like the basic needs approach, is a multidimensional conceptualization of well-being whereas the economic resources approach may be perceived as unidimensional (based on income). The founder of the capability approach, Amartya Sen, was instrumental in the development of a basic needs approach to poverty. However, there are fundamental differences between the two approaches.
2. The composition of the index was criticized as flawed: McGillivray (1991) finds that assessing country development levels on each of the index component variables yields similar results to the index itself. In a later study, adult literacy is found as the indicator that best captures noneconomic well-being achievement (McGillivray, 2006).
3. In the functioning sphere, Sen (1997) is influenced by John Rawls's (1971) theory of justice, which concentrates on primary goods including rights, liberties and opportunities, income and wealth, and the social bases of self-respect. Sen's approach differs from that of Rawls's by focusing on capabilities of human beings rather than the characteristics of primary goods they possess: "If the object is to concentrate on the individual's real opportunities to pursue her objectives, then account would have to be taken not only of the primary goods the person holds but also of the relevant personal characteristics that govern the conversion of primary goods into the person's ability to promote her ends" (Sen, 1997, p. 393).
4. Note that the coefficient for a member with a disability for labor force participation of the household head partner was negative yet insignificant. Parodi and Sciulli (2008) offer two possible explanations for why the estimate was not significant, including selection bias and the presence of children that require caregiving in households without members who have disabilities.
5. The approach estimates the impact of disability on spending patterns over market goods and constructs equivalence scales (e.g., Jones & O'Donnell, 1995). Equivalence scales are an expenditure deflator: evaluating the relative expenditure needed by two different household types to reach the same level of well-being (Rosano, Mancini, & Solipaca, 2009).
6. The poverty gap is the mean distance below the poverty line as a proportion of the poverty line (Deaton, 1997).
7. Annual household income is calculated for an average landless agricultural household with two employed adults.

References

Braithwaite, J., & Mont, D. (2008). *Disability and poverty: A survey of World Bank poverty assessments and implications* [Electronic version] (SP Discussion Paper 0805). Washington, DC: World Bank.

Deaton, A. (1997). *The analysis of household surveys: A microeconomic approach to development policy*. Washington, DC: International Bank for Reconstruction and Development/ World Bank.

Elwan, A. (1999). *Poverty and disability: A survey of the literature* (Social Protection Discussion Paper Series No. 9932). Washington, DC: Social Protection Unit, Human Development Network, World Bank.

Erb, S., & Harriss-White, B. (2002). *Outcast from social welfare: Adult disability, incapacity and development in rural South India*. Bangalore, India: Books for Change.

Fields, G. S. (2001). *Distribution and development: A new way of looking at the developing world*. Cambridge, MA: MIT Press.

Foley, D., & Chowdhury, J. (2007). Poverty, social exclusion and the politics of disability: Care as a social good and the expenditure of social capital in Chuadanga, Bangladesh. *Social Policy and Administration*, *41*, 372–385.

Ghai, A. (2001). Marginalization and disability: Experiences from the Third World. In M. Priestley (Ed.), *Disability and the life course* (pp. 26–37). Cambridge, England: Cambridge University Press.

Glendinning, C., & Baldwin, S. (1988). The costs of disability. In R. Walker & G. Parker (Eds.), *Money matters: Income, wealth and financial welfare*. London, England: Sage.

Haveman, R., & Wolfe, B. (2000). The economics of disability and disability policy. In A. J. Culyer & J. P. Newhouse (Eds.), *Handbook of health economics* (Vol. 1B, pp. 995–1051). Amsterdam, Netherlands: Elsevier.

Hoogeveen, J. G. (2005). Measuring welfare for small but vulnerable groups: Poverty and disability in Uganda. *Journal of African Economies*, *14*, 603–631.

Jones, A., & O'Donnell, O. (1995). Equivalence scales and the costs of disability. *Journal of Public Economics*, *56*, 273–289.

Lipton, M., & Ravallion, M. (1995). Poverty and policy. In J. Behrman & T. N. Srinivasan (Eds.), *Handbook of development economics* (Vol. 3B, pp. 2551–2657). Amsterdam, Netherlands: Elsevier Science.

Loeb, M., Eide, A. H., Jelsma, J., Toni, M. K., & Maart, S. (2008). Poverty and disability in Eastern and Western Cape provinces, South Africa. *Disability & Society*, *23*, 311–321.

McGillivray, M. (1991). The human development index: Yet another redundant composite development indicator? *World Development*, *19*, 1461–1468.

McGillivray, M. (2006). Measuring non-economic well-being and achievement. In M. McGillivray (Ed.), *Inequality, poverty and well-being* (pp.208-224.) New York: Palgrave Macmillan.

Meier, G. M. (1984). *Leading issues in economic development* Oxford, England: Oxford University Press.

Miles, M. (1995). Disability in an eastern religious context: Historical perspectives. *Disability & Society*, *10*, 49–69.

Milner, P., & Kelly, B. (2009). Community participation and inclusion: People with disabilities defining their place. *Disability & Society*, *24*, 47–62.

Mitra, S. (2006). The capability approach and disability. *Journal of Disability Policy Studies*, *16*, 236–247.

Mitra, S., Findley, P. A., & Sambamoorthi, U. (2008). *Healthcare expenditures of living with a disability: Total expenditures, out of pocket expenses and burden, 1996–2004* (Fordham Economics Discussion Paper Series No. dp2008-18). New York, NY: Fordham University.

Mitra, S., & Sambamoorhi, U. (2006). Employment of persons with disabilities: Evidence from the National Sample Survey. *Economic and Political Weekly*, *41*, 4022–4026.

Mitra, S., & Sambamoorthi, U. (2008). Disability and the rural labor market in India: Evidence for males in Tamil Nadu. *World Development*, *36*, 934–952.

Mwendwa, T. N., Murangira, A., & Lang, R. (2009). Mainstreaming the rights of persons with disabilities in national development frameworks. *Journal of International Development*, *21*, 662–672.

Narayan, D. (2000). *Voices of the poor: Can anyone hear us?* Washington, DC: World Bank.

O'Brian, P. (2003). Envisioning the future without the social alienation of difference. *International Journal of Disability, Development and Education*, *50*(1), 17–38.

Parodi, G., & Sciulli, D. (2008). Disability in Italian households: Income, poverty and labour market participation. *Applied Economics*, *40*, 2615–2630.

Rawls, J. (1971). *A theory of justice*. Cambridge, MA: Harvard University Press.

Rosano, A., Mancini, F., & Solipaca, A. (2009). Poverty in people with disabilities: Indicators from the capability approach. *Social Indicators Research*, *94*, 75–82.

Saunders, P. (2007). The costs of disability and the incidence of poverty. *Australian Journal of Social Issues*, *42*, 461–480.

Sen, A. (1992). *Inequality reexamined*. Oxford, England: Clarendon Press.

Sen, A. (1993). Capability and well-being. In M. Nussbaum & A. Sen (Eds.), *The quality of life* (pp. 30–53). Oxford, England: Clarendon Press.

Sen, A. (1997). From income inequality to economic inequality. *Southern Economic Journal*, *64*, 384–401.

She, P., & Livermore, G. A. (2007). Material hardship, poverty, and disability among working-age adults. *Social Science Quarterly*, *88*, 970–989.

Spicker, P. (2007). *The idea of poverty*. Bristol, England: Policy Press.

Stapleton, D. C., O'Day, B. L., Livermore, G. A., & Imparato, A. J. (2006). Dismantling the poverty trap: Disability policy for the twenty-first century. *Milbank Quarterly*, *84*, 701–732.

Streeten, P. (1984). Basic needs: Some unsettled questions. *World Development*, *12*, 973–978.

Townsend, P. (1985). A sociological approach to the measurement of poverty: A rejoinder to Professor Amartya Sen. *Oxford Economic Papers*, *37*, 659–668.

U.K. Department for International Development. (2000). *Disability, poverty and development*. London: Author.

Zaidi, A., & Burchardt, T. (2005). Comparing incomes when needs differ: Equivalization for the extra costs of disability in the U.K. *Review of Income and Wealth*, *51*(1), 89–114.

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