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Article abstract

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Using two pilot communities in El Salvador, this investigation highlights how the economic needs and challenges of persons with disabilities differ within rural and urban settings. Among individuals with disabilities residing in urban areas, discrimination and inaccessibility prevail as challenges in attaining employment, whereas a lack of training and skills is more commonly noted as a barrier to employment among respondents from rural areas.

Although the economic barriers faced by persons with disabilities vary widely between communities, these differences have not been addressed by current rehabilitation models. This research provides guidance to local Salvadoran agencies in the development and implementation of needs-based rehabilitation programming at the community level.

Elusive Employment : Understanding the Role of Disability and Rehabilitation in Post-conflict El Salvador

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Article

Abstract

In the developing world, persons with disabilities tend to be concentrated in the poorest segments of society, in which they have limited access to education, training, and employment. When they do work, this is generally at a lower level than their true potential, and in temporary or unstable markets. In El Salvador, poor skill development, lack of awareness and neglect have further marginalized those with disabilities from contributing to the economic welfare of their families and communities.

Using two pilot communities in El Salvador, this investigation highlights how the economic needs and challenges of persons with disabilities differ within rural and urban settings. Among individuals with disabilities residing in urban areas, discrimination and inaccessibility prevail as challenges in attaining employment, whereas a lack of training and skills is more commonly noted as a barrier to employment among respondents from rural areas.

Although the economic barriers faced by persons with disabilities vary widely between communities, these differences have not been addressed by current rehabilitation models. This research provides guidance to local Salvadoran agencies in the development and implementation of needs-based rehabilitation programming at the community level.

Key words : post-conflict, economic hardship, persons with disabilities, employment, rehabilitation

Résumé

Dans les pays en voie de développement, les personnes handicapées tendent à se concentrer dans les tranches les plus pauvres de la société, où elles ont un accès limité à l'éducation, à la formation et à l'emploi. Lorsqu'elles travaillent, elles réalisent des tâches ne mobilisant pas leurs aptitudes réelles, et ce, dans des marchés de l'emploi temporaires ou instables. En El Salvador, le faible niveau du développement des compétences, le manque de connaissances et la négligence dont les personnes handicapées font l'objet ont contribué à les marginaliser davantage et à les empêcher de contribuer au bien-être de leurs familles et de leurs communautés.

Au moyen de la comparaison de deux communautés pilotes salvadoriennes, la présente recherche soulignera les différences entre les besoins économiques et les défis que doivent affronter les personnes handicapées selon qu'elles habitent dans un contexte urbain ou rural : celles vivant dans un milieu urbain ont identifié l'inaccessibilité et les discriminations comme facteurs limitant leur accès à un emploi, tandis que celles vivant dans un milieu rural ont signalé le manque de formation et de compétences.

Malgré le fait que les barrières économiques rencontrées par les personnes handicapées soient différentes selon leur lieu de résidence, les modèles de réadaptation actuels ne tiennent pas compte de cette réalité. Cette recherche a pour objectif d'orienter les agences locales salvadoriennes dans le développement et la mise en place de programmes locaux de réadaptation axés sur les besoins des personnes handicapées.

Mots-clés : post-conflit, difficultés économiques, personnes ayant des incapacités, emploi, réadaptation

Work is one of life's most fulfilling roles, providing self-esteem and economic stability to those who partake in it. Worldwide, however, those with disabilities are often subject to discrimination, segregation and exclusion in the workplace. In the developing world, people with disabilities tend to be concentrated in the poorest echelons of society, with limited access to education, training and employment. When they do work, this is generally at a lower level than their true ability, and in temporary or expendable markets (Tirmusani, 1999). Disability is defined as "any restriction or lack (resulting from an impairment) of ability to perform an activity in the manner or within the range considered normal for a human being" (WHO, 1980). The most recent estimate by UNICEF puts the number of people with disabilities worldwide at 514 million, with over 75% of these people living in developing countries (UNICEF, 2001).

Although a number of efforts have helped to bring issues surrounding disability to the forefront of international agendas, individual nations have been slow in incorporating these as national priorities. In many cases, this has been due to a lack of knowledge regarding the specific needs and challenges of those with disability as well as effective methods to integrate them into functional sectors of society.

Despite a growing recognition of the needs of persons with disability in developing countries over the past decade, there remains a scarcity of relevant scientific literature regarding the social and economic welfare of these groups. El Salvador provides no exception, with questions regarding disability only first addressed in the 1992 National Survey. The studies that have been conducted have largely been administrative in nature. Generally, the aim of these has been to quantify the magnitude of disability within El Salvador rather than exploring the health, social and economic realities of those currently living with a disability.

Economy and Disability in El Salvador

Although the Salvadoran economy is largely agrarian, massive population growth in the last 5 decades has resulted in a significant reduction in the amount of farmable land. The result has been an influx of previously rural inhabitants into urban centers looking for alternative forms of employment (PAHO, 1999). El Salvador's capital, San Salvador, has absorbed most of the 16% increase in the number of internal migrants over the past 10 years and is now inhabited by nearly three quarters of the nation's population (World Bank Social Protection Project, 2005).

From 1980 to 1992, El Salvador experienced one of the most deadly civil wars in the region and was subsequently hit by Hurricane Mitch (1998) and two devastating earthquakes (both in 2001). The result has been dramatic losses, both human and economic, as well as extensive infrastructural damage.

Of El Salvador's 6.5 million inhabitants, it is estimated 500,000 (7.7%) of these has some type of disability (JICA, 2006). It is also estimated that 30,000 people were disabled during the 12 years of fighting in El Salvador, 12,000 of which were civilians (Landmine Monitor, 2003). Visual impairments and problems with mobility remain the most common remnants of the war, while landmine injuries alone accounted for 44% of the total number of injuries incurred by soldiers during the war. Most of these injuries occurred among people living in El Salvador's so-called "Misery Belts"; that is, in rural areas, small towns and in the marginal areas of San Salvador.

Amongst those with disabilities in El Salvador, it is estimated that fewer than 125,000 (~25%) of these currently receive any kind of rehabilitation services; those that do are often limited to physical and speech therapy services. Additionally, there currently exist no health promotion or prevention programs on disability in El Salvador's most rural communities (JICA, 2006).



Poverty and Rehabilitation

In El Salvador, as in other post-conflict settings, poverty remains a major contributing factor in the overall health and wellbeing of persons with disability. Although people with disability typically require higher income to maintain the same standard of living as the non-disabled, most have incomes that barely meet their basic needs (Dudzik *et al.*, 2001). Globally it is estimated that 98% of persons with disability are either unprotected, or excluded altogether, from health and rehabilitation services, even though it is estimated that only 1 to 1.5% of these people have disabilities that require complex rehabilitation services (ILO/UNESCO/WHO, 1994).

A major factor contributing to poverty rates among those with disability is a high unemployment rate. Poor skill development, a lack of awareness and neglect often precludes those with disability from contributing to the economic welfare of their families and communities, as indicated by worldwide unemployment rates among disabled people that are two to three times higher than the non-disabled (ILO/UNESCO/WHO, 1994).

When rehabilitation is available, these often lack the capacity to address the physical, social and economic barriers to employment faced by those with disabilities. Traditional approaches to the rehabilitation in El Salvador have largely emphasized segregated institutional care and neglected the desirability of integrating people with impairments into the wider society or of changing the community attitudes to facilitate such integration (Coleridge, 1993).

In response to the varied challenges of those with disability in developing countries, however, there has been a growing movement in shifting the focus of rehabilitation from institutional care to community-based programming. Introduced nearly 25 years ago, community-based rehabilitation (CBR) is gaining increasing popularity due to its advocacy for the inclusion of people with disability in addressing issues of poverty, stigma and social exclusion in all sectors of society (ILO/UNESCO/WHO, 2004). Using

largely local resources, this approach is shifting away from complex rehabilitative services to programming that works with community stakeholders to address the specific needs of people with disability while fostering the development of services that are both appropriate and accessible to even the most marginalized of groups.

Research Aim & Paper Outline

This investigation is one part of a larger program that seeks to understand and address issues of poverty and social inequality among those with disability in post-conflict El Salvador, while also fostering the decentralization of current rehabilitation services to a community base.

In line with such aims, this investigation seeks to understand the role of disability in the perceived difficulty in finding employment in El Salvador, while exploring the extent to which rehabilitation services contribute to the success of these persons in attaining gainful employment. An examination of the demographic and economic profiles of the study sample is first undertaken, followed by a look at how these factors have helped or hindered respondents' efforts in attaining gainful employment and/or accessing rehabilitation services. Finally, a conceptual model of Community-Based Rehabilitation (CBR) is presented, followed by a discussion of how this approach may prove beneficial in improving the integration of persons with disability as active and able members of El Salvador's workforce.

Methodology

A random, multistage sampling method was used to select a representative sample of persons with disability from the communities of Tonacatepeque and Santiago de Maria. These communities were chosen to represent a semi-urban and rural context, respectively, in El Salvador. Data regarding the current state of disability within these communities were collected through an interview-based survey, using a questionnaire previously developed and tested by the Pan American Health Organization

(PAHO) and the El Salvador Ministry of Health (MSPAS). This survey included information on the socio-economic, education and economic status of persons with disability, as well as indicators of rehabilitation use and quality. A total of 591 persons with disability were surveyed, 290 (49.1%) of whom were from Santiago de Maria and 288 (48.7%) of whom resided in Tonacatapéque. Thirteen respondents (2.2%) did not specify their place of residence.

Data was collected in June of 2006 with the aid of 30 trained personnel from a number of local health and health care organizations. These included the Ministry of Health and Social Assistance (MSPAS), University of Don Bosco (UDB), the Salvadoran Social Security Institute (ISSS), the Handicapped Rehabilitation Salvadoran Institute (IRSI). Other institutions such as the National Council for Integral Attention for Persons with Disability (CONAIPD) and the Pan American Health Organization (PAHO) also provided logistical and personnel support for this project.

When possible, the person with the disability was interviewed. However, because of challenges in communication for those with severe disabilities, or in the case of a minor, this was not always possible. In either instance, a parent or guardian of the participant was interviewed. During the survey, the coordinator carried out observation visits within the communities in order to monitor the quality of survey administration.

Bivariate and multivariate analyses were conducted to explore the relationship between the use and quality of rehabilitation services on employment status and perceived difficulty finding employment. Potential confounding variables used in these models included age, gender, type of disability (sensory, physical, or mental), severity of disability (more or less severe) and the respondent's number of concurrent disabilities. Socioeconomic variables were measured both by the respondent's ability to read and write, as well as the socioeconomic quintile to which they belonged. Wealth quintiles were constructed using principal components analysis (PCA) to create an asset index

for each respondent's household and divided accordingly. Data analysis was conducted using STATA Version 11.0.

Results

Demographic Characteristics of the Population with Disability

Of the 591 participants taking part in the investigation, 288 (48.8%) respondents were from the urban community of Tonacatapéque and the remaining 290 (49.0%) respondents were from the rural community of Santiago de Maria (Table 1). Of the study participants who indicated their gender, 281 (51.7%) were male, 262 (48.3%) were female. Within the rural context, data from a greater number of men with disability were gathered (55.9% from males, versus 44.1% from females) while this was reversed in the urban demographic (48.0% versus 52.0% for men and women, respectively).

Of the respondents who disclosed their age, 180 (32.6%) were under 19 years of age, 260 (38.0%) were between the productive working ages of 20 and 59 years and 150 (28.9%) were above the age of 60. Respondents from the urban demographic tended to be younger ($p=0.027$) and more affluent ($p<0.001$) than those from the rural setting. The youngest subject was less than one year of age, while the oldest was 101.

Profile of Sample Population

Sensory impairments (deafness or difficulty hearing, partial or total blindness, difficulty speaking or complete muteness) were the most common disabilities among the study population, characterizing 44.8% of respondents. This was followed by physical disabilities (difficulty walking, getting up or jumping, difficulty grasping, lifting or carrying things or having an amputated arm or leg) and mental impairments (dementia, mental retardation or epilepsy), with prevalence rates of 30.5% and 24.7%, respectively. The majority of respondents (69.5%) noted only one disability, though 27.0% of participants had two disability types while 3.5% had three disabilities.



TABLE 1 : SOCIO-DEMOGRAPHIC PROFILES OF RESPONDENTS, BY URBAN/RURAL CONTEXT

| Variable | Total | | Urban | | Rural | | P-value |
|-----------------|-------|------|-------|------|-------|------|-----------|
| | N | % | N | % | N | % | |
| Urban | 288 | 48.8 | | | | | |
| Rural | 290 | 49.0 | | | | | |
| Not specified | 3 | 2.2 | | | | | |
| Gender | | | 271 | | 263 | | |
| Male | 281 | 51.8 | 130 | 48.0 | 117 | 55.9 | 0.067 |
| Female | 262 | 48.3 | 141 | 52.0 | 116 | 44.1 | |
| Age | 590 | | 288 | | 290 | | |
| Under 19 | 180 | 30.5 | 94 | 32.6 | 79 | 27.2 | 0.027* |
| 20-29 | 58 | 9.8 | 18 | 6.3 | 39 | 13.5 | |
| 30-39 | 77 | 13.1 | 38 | 13.1 | 39 | 13.5 | |
| 40-49 | 76 | 12.9 | 32 | 11.1 | 43 | 14.8 | |
| 50-59 | 49 | 8.3 | 23 | 8.0 | 24 | 8.3 | |
| 60-69 | 51 | 8.6 | 32 | 11.1 | 19 | 6.6 | |
| 70+ | 99 | 16.8 | 51 | 17.8 | 47 | 16.1 | |
| Can read/write | 591 | | 288 | | 290 | | |
| Yes | 254 | 43.0 | 136 | 47.2 | 113 | 39.0 | 0.045* |
| SES Group | 473 | | 227 | | 236 | | |
| Lowest | 96 | 20.3 | 4 | 1.7 | 91 | 38.6 | <0.001*** |
| 4 th | 95 | 20.1 | 13 | 5.7 | 80 | 33.9 | |
| 3 rd | 98 | 20.7 | 50 | 22.0 | 45 | 19.1 | |
| 2 nd | 90 | 19.0 | 73 | 32.2 | 14 | 5.9 | |
| Highest | 94 | 19.9 | 87 | 38.4 | 6 | 2.5 | |

* p<0.05 **p<0.01, ***p<0.001

As demonstrated in Table 3, there exist significant differences ($p<0.001$) with respect to the prevalence of physical, sensory and mental disability types across demographic contexts. While sensory disabilities showed little variation among rural and urban demographics, there was significant geographic variability in the distribution of physical and mental impairments: physical disabilities were reported more within urban environments, while the prevalence of mental impairments was twice as high in rural environments (31.7%) than it was in urban areas (17.6%).

Among all study participants, 317 (56.5%) reported that their disability was severe in nature. More severe disabilities included those disabilities that would be of a greater detriment to someone in finding a job. These included total

blindness, total deafness, muteness, difficulty grasping, lifting or carrying things, amputated arm, dementia and mental retardation. Less severe disabilities included diminished vision, hard of hearing, speech problems difficulty walking, climbing, getting up or jumping, an amputated leg and epilepsy.

Neither the severity of the disability nor the prevalence of people with multiple and concurrent disabilities appeared to vary across urban and rural demographics.

The Economic Characteristics and Challenges of Persons with Disabilities

At 28.7%, labour participation rates among the entire group of respondents are low. In the agrarian economy of El Salvador, however,



TABLE 3 : DISABILITY PROFILES OF RESPONDENTS, BY URBAN/RURAL CONTEXT

| Outcome | Total | | Urban | | Rural | | P-value |
|------------------------|-------|------|-------|------|-------|------|---------------|
| | N | % | N | % | N | % | |
| Type of Disability | 561 | | 273 | | 278 | | |
| Physical | 169 | 30.1 | 100 | 36.6 | 68 | 24.5 | <0.001 *** |
| Sensory | 254 | 45.3 | 125 | 45.8 | 122 | 43.9 | |
| Mental | 138 | 24.6 | 48 | 17.6 | 88 | 31.6 | |
| Number of Disabilities | 561 | | 273 | | 278 | | |
| 1 | 390 | 69.5 | 189 | 69.2 | 194 | 69.8 | 0.961 |
| 2 | 152 | 27.1 | 74 | 27.1 | 75 | 27.0 | |
| 3 | 19 | 3.4 | 10 | 3.7 | 9 | 3.2 | |
| Severity of Disability | 561 | | 273 | | 278 | | |
| More severe | 317 | 56.5 | 109 | 39.9 | 131 | 47.1 | 0.089 |
| Less severe | 244 | 43.5 | 164 | 60.1 | 147 | 52.9 | |

* p<0.05 **p<0.01, ***p<0.001

traditional age limits for ‘working’ populations may not apply as they would in more developed contexts. Among our respondents, for example, the youngest person who was identified as working while not simultaneously studying or participating in another type of activity was six years of age. The oldest person in the sample still working was 96. While recognizing that any age limitation will underestimate the proportion of respondents taking part in any form of economic activity, a working age range of 10 through 70 has been used for the purposes of this investigation.

Using this criterion, labour participation rates in the group improved to 34.0% with significant variation shown to exist between urban and rural contexts, as well as among working age groups (Table 4). Labour participation was significantly higher in rural communities (p=0.007), and among respondents aged 30 through 59 years of age (p<0.001). However, these rates decreased significantly for respondents with mental impairments (p=0.004) and those with multiple and concurrent disabilities (p=0.002).

Regardless of working status, difficulty attaining employment was common, characterizing 78% of respondents. This perceived difficulty was noted more consistently among those with

physical and mental disabilities and those aged 30 through 59, over 80% of respondents in these groups noting employment challenges. Difficulty attaining employment did not appear to vary significantly by the severity or number of concurrent disabilities.

Barriers to Employment

While a lack of training and skills was perceived as a major factor in attaining employment for respondents of both demographics, issues of poor infrastructure and discrimination within the workplace were significantly higher among urban respondents. A lack of skills or inadequate training for those with more severe disability is clearly demonstrated in Table 5, with this being the prominent reason for difficulty finding employment. While a lack of skills was also an issue among those with less severe disabilities as well, discrimination and issues of poor infrastructure play a more prominent role among this disability group. The gender of the individuals did not seem to be associated with difficulty in getting a job, or for the reasons for their difficulty (not shown).



TABLE 4 : LABOUR PARTICIPATION AND PERCEIVED DIFFICULTY FINDING EMPLOYMENT, BY SOCIO-DEMOGRAPHIC AND DISABILITY CHARACTERISTICS

| | Labour Participation | | | | Has had difficulty finding employment | | | |
|---------------------------|----------------------|-----|------|---------|---------------------------------------|-----|------|---------|
| | N _{total} | N | % | P-value | N _{total} | N | % | P-value |
| Total | 572 | 164 | 28.7 | | | | | |
| Total (aged 10-70) | 415 | 141 | 34.0 | | | | | |
| Urban/Rural Status | | | | | | | | |
| <i>Urban</i> | 288 | 67 | 23.3 | 0.007 | 181 | 144 | 79.5 | |
| <i>Rural</i> | 290 | 97 | 33.5 | ** | 205 | 158 | 77.1 | 0.555 |
| Gender | | | | | | | | |
| <i>Male</i> | 281 | 80 | 28.5 | | 162 | 128 | 79.0 | |
| <i>Female</i> | 262 | 69 | 26.3 | 0.578 | 152 | 152 | 78.0 | 0.808 |
| Age | | | | | | | | |
| 10-19 | 99 | 3 | 3.0 | | 26 | 17 | 65.4 | |
| 20-29 | 58 | 22 | 37.9 | | 52 | 39 | 75.0 | |
| 30-39 | 77 | 37 | 48.1 | <0.001 | 62 | 52 | 83.9 | 0.049 |
| 40-49 | 76 | 39 | 51.3 | *** | 69 | 62 | 89.9 | * |
| 50-59 | 49 | 20 | 40.8 | | 42 | 35 | 83.3 | |
| 60-69 | 51 | 18 | 35.3 | | 43 | 31 | 72.1 | |
| Type of Disability | | | | | | | | |
| <i>Physical</i> | 169 | 61 | 36.1 | | 128 | 108 | 84.4 | |
| <i>Sensory</i> | 354 | 77 | 30.3 | 0.004 | 167 | 122 | 73.1 | 0.051 |
| <i>Mental</i> | 138 | 26 | 18.8 | ** | 80 | 65 | 81.3 | |
| Severity of Disability | | | | | | | | |
| <i>More severe</i> | 244 | 62 | 25.4 | | 166 | 126 | 81.9 | |
| <i>Less Severe</i> | 317 | 102 | 32.2 | 0.081 | 209 | 159 | 76.1 | 0.169 |
| Number of Disabilities | | | | | | | | |
| 1 | 290 | 130 | 33.3 | | 276 | 217 | 78.6 | |
| 2 | 152 | 33 | 21.7 | 0.002 | 88 | 70 | 79.6 | 0.873 |
| 3 | 19 | 1 | 5.3 | ** | 11 | 8 | 72.7 | |

* p<0.05, **p<0.01, ***p<0.001

TABLE 5 : REASONS FOR DIFFICULTY FINDING A JOB, BY URBAN/RURAL CONTEXT AND SEVERITY OF DISABILITY

| Reason for difficulty finding a job | Urban | | Rural | | More Severe | | Less Severe | |
|-------------------------------------|-------|------|-------|-----------|-------------|------|-------------|--------|
| | N | % | N | % | N | % | N | % |
| <i>Total</i> | 137 | | 16 | | 135 | | 160 | |
| <i>Lack of training/skills</i> | 31 | 22.6 | 76 | 47.2 | 57 | 42.1 | 49 | 30.6 |
| <i>Poor infrastructure</i> | 45 | 32.9 | 37 | 23.0 | 26 | 19.3 | 55 | 34.4 |
| <i>Discrimination</i> | 31 | 22.6 | 27 | 16.8 | 26 | 19.3 | 32 | 20.0 |
| <i>Other</i> | 30 | 21.9 | 21 | 13.0 | 26 | 19.3 | 24 | 15.0 |
| <i>P-value</i> | | | | <0.001*** | | | | 0.022* |

* p<0.05, **p<0.01, ***p<0.001



Type of Employment

Of those who currently worked, most occupied a position in one of three productive categories: owning a self-run business, working in domestic/co-operative employment or working as an apprentice (Table 6). The attainment of any type of fixed employment was low among respondents, with only 14 participants (8.4%) indicating this success.

The type of employment undertaken by respondents was also shown to vary significantly ($p=0.001$) between urban and rural context. With the exception of fixed employment, which was low in both demographics, the distribution of employment among rural respondents was consistent across all other job types. In contrast, employment in the urban sample tended to be either in domestic/ co-operative work or in the running of a self-owned business.

Where women were employed, this was typically in jobs of a gender-specific nature. In both urban and rural communities, women constituted a majority of those with domestic/ cooperative employment while men typically occupied temporary positions or ran their own businesses ($p<0.001$, not shown).

Rehabilitation Attention for those with Disabilities

There were prominent differences among respondents with respect to the use and quality

of rehabilitation services (Table 7a). Although gender and the severity of a disability did not appear to disadvantage respondents with respect to the use or quality of rehabilitation attention they received, rehabilitation attention was more common in the urban demographic as 79.5% of urban respondents and 59.6% of rural respondents reported receiving rehabilitation services ($p<0.001$). Moreover, urban respondents noted a better quality of the services received than did rural respondents ($p<0.001$). A multivariate logistic regression was undertaken to explore the likelihood of receiving rehabilitation services when controlling for potentially confounding variables. This analysis further supported previous evidence of geographic variability in rehabilitation attention, showing that those in a rural context were significantly less likely to receive such services when other factors, such as the type, severity and number of disabilities and the socio-economic position of the respondent, were controlled (Table 7b).

The Role of Rehabilitation in Attaining Employment

A secondary logistic model was used to examine whether the use of rehabilitation services had an impact on the perceived difficulty attaining employment or current labour participation (Table 8). In both cases, having received any type of rehabilitation attention did not show any significant impact on the outcomes.

TABLE 6 : TYPE OF EMPLOYMENT AMONG RESPONDENTS, BY URBAN/RURAL CONTEXT AND SEVERITY OF DISABILITY

| Type of Employment | Urban | | Rural | | More Severe | | Less Severe | |
|----------------------|-----------|------|-------|------|-------------|------|-------------|------|
| | N | % | N | % | N | % | N | % |
| Total | 67 | | 97 | | 62 | | 102 | |
| Temporary | 13 | 19.4 | 22 | 22.7 | 14 | 22.6 | 21 | 20.6 |
| Domestic/Cooperative | 20 | 29.9 | 25 | 25.8 | 18 | 29.0 | 28 | 27.5 |
| Own business | 24 | 35.8 | 23 | 23.7 | 16 | 25.8 | 30 | 29.4 |
| Fixed employment | 9 | 13.4 | 5 | 5.2 | 4 | 6.5 | 10 | 9.8 |
| Apprenticeship | 1 | 1.5 | 22 | 22.6 | 10 | 16.1 | 13 | 12.7 |
| p-value | <0.001*** | | | | 0.893 | | | |

* $p<0.05$, ** $p<0.01$, *** $p<0.001$



**TABLE 7A : PREVALENCE AND QUALITY OF REHABILITATION SERVICES,
BY URBAN/RURAL CONTEXT AND SEVERITY OF DISABILITY**

| | Urban | | Rural | | More Severe | | Less Severe | |
|--|-------|-----------|-------|------|-------------|------|-------------|------|
| | N | % | N | % | N | % | N | % |
| <i>Has had rehabilitation attention</i> | 288 | | 290 | | 244 | | 317 | |
| Yes | 229 | 79.5 | 173 | 59.6 | 167 | 68.4 | 223 | 70.4 |
| <i>p-value</i> | | <0.001*** | | | 0.627 | | | |
| <i>Quality of rehabilitation attention</i> | 189 | | 154 | | 147 | | 186 | |
| Good | 136 | 73.5 | 74 | 52.2 | 85 | 57.8 | 122 | 65.6 |
| Regular | 37 | 20.0 | 48 | 33.8 | 38 | 25.8 | 48 | 25.8 |
| Bad | 12 | 6.5 | 20 | 14.0 | 24 | 16.4 | 16 | 8.6 |
| <i>p-value</i> | | <0.001*** | | | 0.087 | | | |

**TABLE 7B : LIKELIHOOD OF HAVING HAD SOME TYPE OF REHABILITATION ATTENTION
CONTROLLING FOR SOCIO-DEMOGRAPHIC AND DISABILITY CHARACTERISTICS**

| <i>Explanatory Variable</i> | OR | 95% Confidence Interval | P-value |
|------------------------------|------|-------------------------|---------|
| Urban/Rural Status | | | |
| Urban | 1.00 | | |
| Rural | 0.47 | 0.25-0.90 | 0.023* |
| Sex | | | |
| Female | 1.00 | | |
| Male | 1.49 | 0.94-2.35 | 0.085 |
| Socioeconomic Position (SEP) | | | |
| Lowest SEP | 1.00 | | |
| Highest SEP | 2.46 | 0.96-6.30 | 0.059 |
| Severity of Disability | | | |
| Physical | 1.00 | | |
| Sensory | 0.57 | 0.32-1.01 | 0.058 |
| Mental | 1.14 | 0.56-2.34 | 0.722 |

†Confounders included in regression model include: urban/rural status, gender, socio-economic position (SEP), type of disability, severity of disability and number of disabilities noted.

* p<0.05, **p<0.01, ***p<0.001

The quality of the services received, however, did appear to play a role in any difficulty finding employment. Those who had rehabilitation of a mediocre ('regular') quality were three times more likely to have difficulties finding employment than those receiving 'good' quality services, suggesting that the quality, rather than the frequency, of rehabilitation attention may be a more important predictor of attaining employment. With respect to current labour participation, rural respondents were nearly four

times more likely to be employed than urban respondents.

Discussion

In most developing nations, persons with disability are generally among the poorest in society. Segregated socially and economically, these persons become incapable of being fully contributing members of society (Turmusani, 2003). The recent industrialization of labour

TABLE 8 : LIKELIHOOD OF (A) HAVING HAD DIFFICULTY FINDING A JOB AND (B) OF CURRENTLY BEING EMPLOYED, CONTROLLING FOR SOCIO-DEMOGRAPHIC, REHABILITATIVE AND DISABILITY CHARACTERISTICS

| Explanatory Variable | Difficulty finding a job | | | Currently works | | |
|---------------------------|--------------------------|-----------|---------|-----------------|------------|---------|
| | OR | 95% CI | P-value | OR | 95% CI | P-value |
| Urban/Rural Status | | | | | | |
| <i>Urban</i> | 1.00 | | | 1.00 | | |
| <i>Rural</i> | 0.40 | 0.11-1.37 | 0.148 | 3.72 | 1.30-10.60 | 0.014* |
| Sex | | | | | | |
| <i>Female</i> | 1.00 | | | 1.00 | | |
| <i>Male</i> | 1.32 | 0.57-3.10 | 0.514 | 1.21 | 0.62-2.40 | 0.574 |
| SEP | | | | | | |
| <i>Lowest SEP</i> | 1.00 | | | 1.00 | | |
| <i>Highest SEP</i> | 0.19 | 0.04-1.00 | 0.051 | 0.72 | 0.17-2.94 | 0.650 |
| Severity of Disability | | | | | | |
| <i>Physical</i> | 1.00 | | | 1.00 | | |
| <i>Sensory</i> | 3.14 | 1.05-9.40 | 0.040* | 0.90 | 0.41-1.97 | 0.800 |
| <i>Mental</i> | 0.86 | 0.27-2.77 | 0.812 | 0.75 | 0.26-2.20 | 0.610 |
| Has had rehabilitation | | | | | | |
| <i>No</i> | 1.00 | | | 1.00 | | |
| <i>Yes</i> | 1.40 | 0.20-9.75 | 0.731 | 0.72 | 0.17-2.94 | 0.650 |
| Quality of Rehabilitation | | | | | | |
| <i>Good</i> | 1.00 | | | 1.00 | | |
| <i>Regular</i> | 3.14 | 1.05-9.40 | 0.040* | 0.90 | 0.41-1.97 | 0.800 |
| <i>Bad</i> | 0.86 | 0.27-2.77 | 0.812 | 0.75 | 0.26-2.20 | 0.610 |

†Confounders included in regression model include: urban/rural status, gender, socio-economic position (SEP), type of disability, severity of disability, number of disabilities and the use and quality of rehabilitation services.

* p<0.05, **p<0.01, ***p<0.001

markets has further compounded the marginalization of persons with disability, as developing nations continue to shift from agriculturally-based markets to urban industries (Oliver & Barnes, 1992).

High unemployment among people with disabilities is a central problem in marginalization, as income is a key to financial independence, as well as a source of satisfaction and self-esteem. Moreover, the unemployment rate among disabled people in the developing world is much higher than that of the developed world. Even when the benefits of development begin to economically disadvantage groups, people with disability are among the last to receive such assistance (Coleridge, 1993).

Decades ago, de Mezerville (1979) referred to the cycle of underdevelopment by which socio-economic poverty leads to malnutrition and sickness which in turn, contributes to impair-

ments and disability. These impairments often go on to impact life expectancy and lower overall levels of production in the community. A more recent conceptualization in Community Based Rehabilitation suggests that the impacts of organized rehabilitative services, community based prevention initiatives, and health economic policy adjustments all contribute to decreases in poverty and increased economic growth (Figure 1, Boyce *et al.*, 2006).

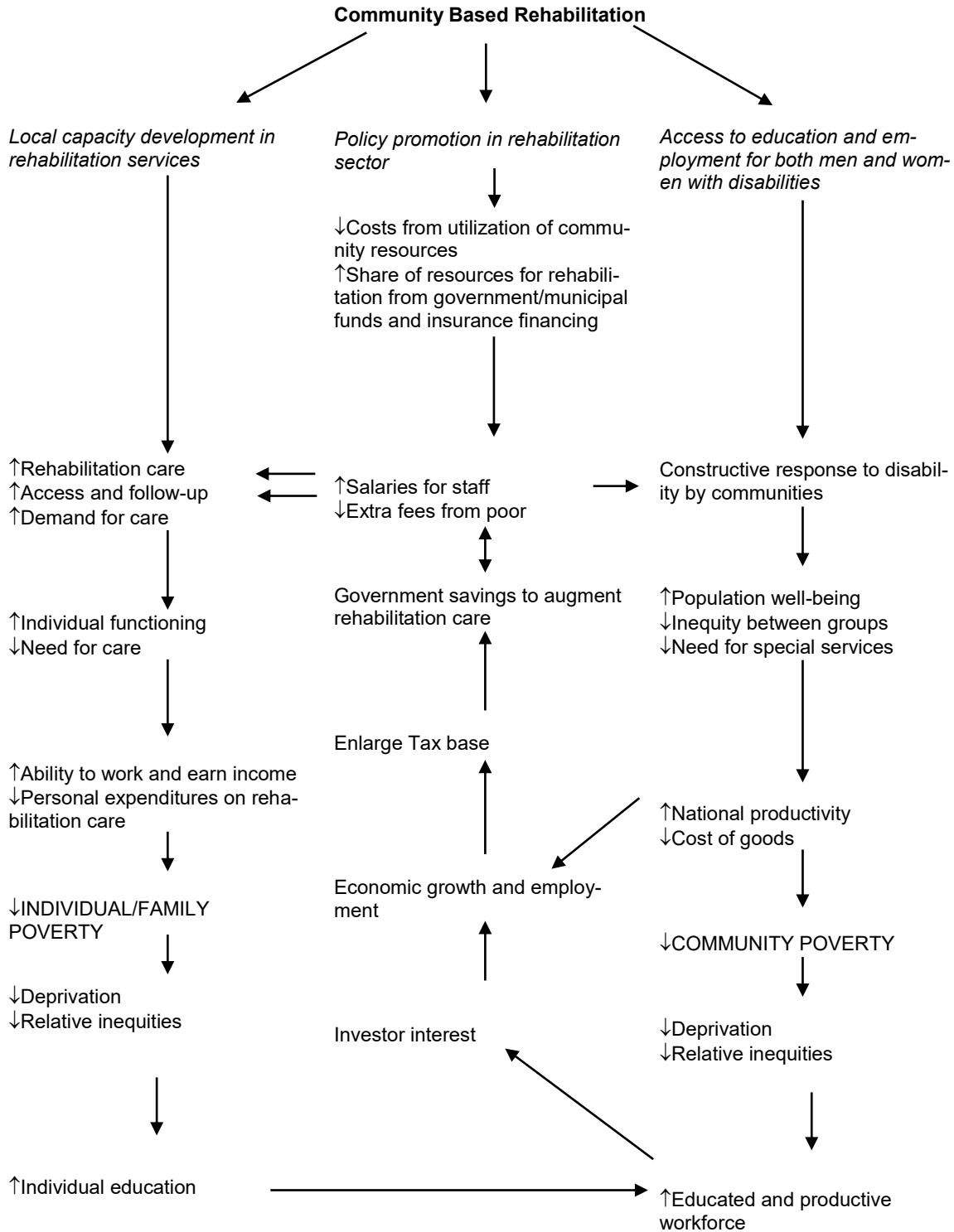
The enhancement of economic participation and access to work of those with disability is of utmost importance. While not only helping to ensure their basic needs are met, improved labour participation also puts persons with disabilities in a better position to realize long-term personal development.

For persons with disability in the communities of Tonacatepeque and Santiago de Maria, El Salvador, the prospects for employment are



FIGURE 1 : CONCEPTUAL MODEL OF THE RELATIONSHIP BETWEEN COMMUNITY BASED REHABILITATION (CBR) AND POVERTY

Community Based Rehabilitation: Mechanisms for Poverty Reduction
(Boyce *et al.*, 2006)



limited. Labour participation rate among respondents aged 10 through 70 was 34.0%, with less than 10% of participants having any form of fixed employment. When respondents did find work, it tended to be in temporary or expendable markets.

The demographic variability of labour participation among this sample supports findings by Coleridge (1993) and Oliver (1992) in which employment rates among the disabled are higher in rural settings than they are in urban settings. Although both populations in this study noted similar levels of difficulty in attaining employment, those from a rural context were nearly four times more likely to find a job. The lack of variation in the perceived difficulty of finding employment among those various types, severity and number of disabilities suggests that any classification of disability may itself be prohibitive in gaining employment, even when the functional capacity of an individual is high. Our examination of the reasons respondents had difficulties in finding employment support this finding, especially within an urban context. Within urban markets, infrastructural barriers and discrimination play a pertinent role in employment opportunities for those with disability, meaning that more people in this demographic find themselves in jobs with little security or with incomes of unforeseen security, such as self-run businesses. In rural settings, conversely, employment opportunities for those with disabilities were higher, even though a lack of skills and training was seen as an obstacle to employment.

When rural respondents did work, this also tended to be in more diverse roles than urban respondents, suggesting that lower discrimination and infrastructural barriers may be a more pertinent factor in attaining rural employment among the disabled, irrespective of skill sets. Increased competition for jobs may also be a factor in the difficulty in attaining urban employment, as able-bodied persons are preferentially considered for positions over those having a disability. This may be an important factor for urban respondents, as Tonacatepeque is located near San Salvador where job competition is likely to be high.

Rehabilitation Services

There exists wide variability between persons with disability concerning the use and quality of rehabilitation services across demographic contexts. Use of rehabilitation services was noted more often among the urban sample than the rural sample. Although proximity to specialized rehabilitation institutions (most of which are located around San Salvador) is likely to play a role in the access to such services, there is some evidence that those within the highest socioeconomic positions, irrespective of their location of residence, are more likely to access rehabilitation services. These findings serve as a reminder of the existence of poverty gradients even among groups that are, on the whole, economically marginalized and provide significant rationale for rehabilitation services that are accessible to persons of all socioeconomic positions. Moreover, the 16.4% of respondents with severe disabilities who note receiving 'bad' quality rehabilitation attention (nearly twice the rate in those with less severe disabilities) is a cause for concern in that it suggests that those with complex disabilities are not receiving the quality of care they require.

Rehabilitation and Employment

Just as the obstacles faced by those with disability vary within different demographics, so do the types of rehabilitation services available to these individuals. Traditional models of rehabilitation in El Salvador have largely been based around improving technical skills of persons with disability. Although this may be an appropriate approach within rural areas, where lack of training and skills is noted as the primary reason for difficulty in finding employment, it does not solve the majority of labour participation problems for those with disabilities in El Salvador.

In urban communities where employment barriers are not necessarily skill-based, however, traditional models of vocational rehabilitation may fail in addressing more pertinent underlying issues such as discrimination in the workplace. In these urban contexts, not only must



rehabilitation services themselves improve, but this also needs to be accompanied by institutional support that promotes the active integration of persons with disability into the workforce.

Traditional approaches to rehabilitation of persons with disabilities in developing countries have emphasized segregated institutional care, principally for the convenience of over-concentrated professional elite, and have largely neglected the benefit of integrating persons with disability into the wider society (Coleridge, 1993). In increasingly industrialized El Salvador, it is clear that this model is no longer adequate. These findings call into question the adequacy and the quality of current rehabilitation services for the purposes of both national socio-economic growth and the self-development of persons with disability.

Research Limitations

There are a few limitations that must be considered when interpreting the findings of this investigation. First, survey respondents were chosen from a pre-existing disability database of persons who had their condition identified, and chose to register this impairment. The results of this investigation may therefore be biased toward individuals who both have the physical access and the opportunity of reaching the formal institutions where both of these activities can take place. Second, due to survey design, educational status of the respondents could not be included in the analysis. Third, the use of a parent/guardian to complete the survey in the case of a minor or persons with a severe disability may have also introduced bias due to invalid recall or social desirability.

Although multinational research projects are common in epidemiological practice (Boyce *et al.*, 2006), Whyte and Ingstad (1995) remind us that there are some limitations in this type of research, stating that we tend “to look at other cultures in terms of our own problems, and thus fail to grasp the premises upon which other people are operating” (p.5). Beresford (1996) further illustrates that in non-industri-

alized cultures there often exists a wide range of attitudes towards those with disability, many of which people outside that culture may not be able to understand or even identify. An example of this is highlighted in the definition of the category ‘Owns/runs business’ in this survey. In a developed country context, for example, someone who owns his or her own business is often perceived to be of a higher educational and economic status. In El Salvador, however, this same assumption cannot be made and lends itself to cross-cultural misunderstandings in the analysis. Moreover, the classification of severe and less severe disabilities in this survey was based on the perceived difficulty these persons may have in the workplace. Whether this classification is practically valid in El Salvadoran work places remains unknown.

Conclusion

The specific challenges in attaining employment for persons with disability in El Salvador vary greatly with the socio-demographic context in which one lives. As the obstacles faced by those with disability vary across different geographies, rehabilitation services need to be able to adapt to different socio-demographic conditions. Current models of rehabilitation in Tonacatepeque and Santiago de Maria show little impact on improved employment rates among persons with disabilities. This highlights the need to adapt traditional models to meet the evolving needs of those with disability in the workplace. While in rural contexts this may mean improving skill-based training, other issues such as infrastructure barriers and discrimination, especially in urban communities, must be addressed to promote the active integration of persons with disability into the workforce.

In recent years there has been an international shift in recognizing the breadth of contributions that persons with disability can make, both economically and socially. While it is our hope that these research findings will contribute to the consolidation of this movement, this cannot take away from the importance of engaging in open discussion with those with disabilities in

helping them to become economically active and contributing members of society.

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