DESCRIPTION OF VOCATIONAL REHABILITATION PROGRAMS IN BOLIVIA AND PERU

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CHAPTER I

INTRODUCTION

The problem of disability and rehabilitation has become one of the major issues of the social health services in many developing countries of the world. This situation is due to an expanded understanding of disability and rehabilitation, a continuing increase in survival from illness, traumatic injury, congenital anomalies, and an increasing awareness of loss of productivity. The number of physically and mentally disabled in the world is estimated at 450 million people. Of this number approximately 300 million disabled people are not afforded rehabilitation services (Hammerman, 1978, p. 1). It is devastating to realize that one out of every ten of the world's population is disabled at any one time, and all indications are that this number and proportion is increasing (Newell, 1977). A substantial segment of the population in any country suffers from some kind of disability. The most common disabilities result from physical impairments, chronic illness, mental retardation, blindness, and deafness. These disabilities are largely caused by malnutrition, insufficient preventative and curative measures, poor working conditions and inadequate living conditions.

Vocational rehabilitation is a humanistic approach towards ones fellow-man, but as a professional activity it is not older than half a century and basically is a product of the highly developed social systems. Much, perhaps most, of vocational rehabilitation work in South

America is being carried out by people who are a product of that environment, working under the auspices of voluntary agencies based for the most part outside of this continent. However, the social, political, and economic background of South America has little in common with the Western and European developed countries. National care and concern for the disabled is just beginning to develop out of the South American political and cultural experience. The following quote emphasizes this point.

> The need for a vocational rehabilitation center is obvious. The number of known and untreated cases of childhood (physically disabling) diseases is staggering. The number of applications to our home who must be refused is disheartening. The struggle of a disabled child for life survival in our underdeveloped nation is a history of fear and rejection. The same struggle for a young adult in competition for the right to earn instead of begging and no hope . . . . Although the rehabilitation of physically disabled children is only a part of the necessary development to take place in Bolivia, it is a part that demands the concern and interest of not only Bolivians, but all peoples of the world (Walker, 1972, p. 1).

However, in the face of restricted resources, trained manpower and money, governments find the determination and maintenance of rehabilitation priorities extremely difficult.

In Bolivia and Peru where the function of vocational rehabilitation has been introduced, such services are confronted by a variety of limitations that prevent and distort its growth. The most common seem to be (1) lack of definition and real understanding of what vocational rehabilitation is, (2) lack of financial support, (3) introduction of unrealistic models of operation such as highly specialized services too expensive to be duplicated, (4) social and economic means of large parts of the population at survival level making traditional vocational rehabilitation alternatives unrealistic, (5) lack of opportunities for

professional preparation, and (6) lack of trained personnel and absence of leadership (Kosugen, 1972). Inflicted by incapacity, a large majority of these disabled people are as neglected and forgotten as was a disabled person in the earlier heritage of United States history.

> The lowliest and the lost, the disabled and the deprived are a sizable minority subjected to inherited injustice, inflicted by incapacity and lifelong distress, as forgotten and neglected as the Third World within the Third World. They are deaf and dumb and blind, and society is deaf and dumb and blind to them. They are retarded mentally, and a morally retarded society is indifferent to them (Iyer, 1978, p. 6).

One does not need to cite examples of the developing countries of South America to identify disabled people in a dehumanizing or second class situation in society. The President's Task Force on the Physically Handicapped in 1970 estimated that there are over six million physically disabled citizens of the United States who are not receiving the services required for rehabilitation (Hammerman, 1978, p. 1). Vocational rehabilitation for the physically and psychologically disabled varies greatly from nation to nation; however, the comprehensive vocational rehabilitation process in South America is just now demonstrating its strength as a future priority.

A comprehensive program in vocational rehabilitation can only be built upon the existing foundations of adequate services for health, education, social work, and vocational training. In the broad view, it is the creation of such an interfacing of structures that governments should give priority, yet public administration in so many countries is at a stage of development where one of the greatest difficulties encountered is the coordination of activities of different governmental departments and other agencies.

> Most health care service organizations in developing countries produce what 'they' think should be produced, without regard for the needs of the environment. They are usually dominated by physicians who want large sophisticated hospitals that meet their own needs (and the needs of politicians) but do not provide simple basic services. Such planning frequently results in services and facilities that neither respond to the actual health needs nor integrate with health-related activities of the non-health sectors (Adizes, 1977, p. 19).

The development of an organized national vocational rehabilitation program in the midst of this complex and rapidly changing world is dependent upon both the characteristics of the population and upon conditions of the national social-economic system where the population exists. In describing a national vocational rehabilitation program, it is necessary not only to have a clear picture of the number and types of existing services, and the need for additional vocational rehabilitation services, but also to gather as much information as possible on the significance of the national vocational rehabilitation program for the nation as a whole. This information is essential if an idea is to be obtained of the socio-economic repercussions which expanding vocational rehabilitation services are likely to have on a society. Social and economic development takes place on a broad scale and, in order to insure proper consideration of the national vocational rehabilitation services, it is also important to be able to identify relevant demographic information. This data required for obtaining a picture of the social-economic significance of the national vocational rehabilitation program are mainly of a macro-social economic nature. A basic assumption of this paper is that national socio-economic information will benefit the understanding of the basic strengths and limitations of a national vocational rehabilitation program.

The present study for the first time introduces social-economic indicators that make it possible to logically relate national population and social-economic characteristics with available national vocational rehabilitation statistics. Charts have been organized so that it is possible to compare intra-national population data, and socio-economic characteristics with related characteristics of vocational rehabilitation, professionals, para-professionals, and the existing national vocational rehabilitation programs available for disabled people. Also related are internationally accepted vocational rehabilitation guidelines with existing national conditions.

Definitions

The following definitions briefly identify the basic concepts to be discussed in the following chapters. Operational definitions are found in Chapter III.

Vocational Rehabilitation is the process of re-establishing the disabled to a socially accepted level of vocational, family, and community adjustment.

The National Vocational Rehabilitation Program is the official nationally recognized vocational rehabilitation program.

Guidelines refer to "Guidelines for the future in vocational rehabilitation," assembled at the Twelfth Rehabilitation Congress.

Trends are identified as the direction of the developing program and needs are aspects of the guidelines not yet identifiable in the national program.

A Handicap is a socially or environmentally imposed obstacle to an individual's ability to work or perform in vital life functions.

Population studies consist of demographic characteristics and population indicators.

Socio-economic characteristics relate to a specific or a combination of social and economic factors.

Background Information

The importance of developing vocational rehabilitation programs in South America was realized by the author while working as a rehabilitation counselor in Bolivia (1970-1973). The importance of international research in the field of vocational rehabilitation was emphasized during the Twelfth Rehabilitation Congress held in Australia in 1972. The need for basic, meaningful data has been expressed repeatedly throughout the international rehabilitation literature. In 1971 and 1972 the government of the Netherlands surveyed the physically handicapped population. In a lead article in the Rehabilitation World, Dr. Jerome Schein (1977) states:

> Establishing a reliable data base for rehabilitation is so important that it may be fairly said that the government which does not carefully enumerate it's physically disabled people lacks adequate motivation to rehabilitate them (p. 3).

A paper presented to the World Health Organizations (W.H.O.) 29th World Health Assembly (1977) entitled Health Conditions in the Americas states:

> Our present knowledge of the magnitude of the disability problem is limited by the fact that relatively few research studies have been made in this area and most of them in a small number of developed countries . . . . Some of the figures represent overestimations and others grossly underestimate the magnitude of the problem. Sampling techniques are seldom rigorous and sound survey methods are infrequently applied. It is thus necessary to state that all estimates, including those given below carry a high risk of probable errors . . . . (p. 13).

The first two guidelines of the Second International Conference on Legislation Concerning the Disabled read as follows:

> A national council for the welfare and rehabilitation of the disabled should be established by legislation in each developing country. Councils should, 'inter-alia', produce a national rehabilitation plan in which priorities are established, roles and responsibilities of the government and private sectors are defined, and coordination is assured. A prerequisite for any legislation plan is to ascertain the nature and extent of the disability problem in the country (Guidelines for Legislation, 1978, p. 5).

At this same conference Justice V. R. Krishna Iyer (1978) states:

> In many developing countries, even basic meaningful data are absent; and even so the scale, the diversity of deprivations, the depth of distress, the broad heads of classification, the socio-economic millieu of the disabled, the age groups, the therapeutic needs, tools and exercises, the occupational filments, the possibilities of treatment, the potential for employment . . . emphasize the great importance of census tabulation . . . (p. 6).

Representing Libya at the same international conference, H. E. Mansur Rashid Kikhia (1978, p. 7) states that among the problems common to rehabilitation in all developing countries is a "lack of accurate information and data, no detailed statistics or accurate census."

Guidelines were established at the 1972 World Rehabilitation Conference to stimulate and orient endeavors in international research. With these guidelines further research, evaluation and the compiling of a "National version of these guidelines suitable for each country and of its implementation within that country" was considered of the highest priority (Rehabilitation Guidelines for the Future, 1972, p. 16).

Quoting from these guidelines which will be used in this study:

> Research should be a continuing exercise in vocational rehabilitation . . . each development in the countries own economy and social structure with the attendant problems should be a challenge to research workers to find how services may be

better developed for the disabled as to insure their economic viability (Rehabilitation Guidelines for the Future, 1972, pp. 16-17).

Statement of the Problem

The problem germane to the present study is the need to develop information which adequately describes the national vocational rehabilitation programs of Bolivia and Peru. This information is to be secured by a review of the literature and focused interviews. In addition, demographic characteristics and population trends which are relevant to a developing national vocational rehabilitation program are identified and organized. The tertiary area of investigation has to do with the describing of the needs and trends of each national vocational rehabilitation program on the basis of existing international guidelines.

Purpose

The purpose of the present research is to identify, organize, and describe the present state of national vocational rehabilitation programs in the two South American countries of Bolivia and Peru. The need for this basic knowledge by both researchers and practitioners provides the significance for this study. The present study will focus attention on the serious need for current and meaningful data describing Bolivian and Peruvian national vocational rehabilitation programs.

Research Questions

The present study answers three questions:

1. What aspects of vocational rehabilitation are available in Bolivia and Peru?

2. What is the social/economic framework in which these two countries national vocational rehabilitation programs are described?
3. What are the trends and needs of the national vocational rehabilitation programs of Bolivia and Peru?

CHAPTER II

REVIEW OF THE LITERATURE

This study was undertaken for the purpose of describing the structure of the national vocational rehabilitation programs in two South American countries. The two countries of Bolivia and Peru were chosen for easy accessibility and methodological reasons. The need to identify appropriate concepts for the research of national institutions has been suggested by several authors. Specifically, Smelser (1973) has called attention to limitations in Western conceptions of national institutions when applied to other nations especially to small, rural, agrarian societies. Then, the basic question is, how does one define and operationalize a concept like vocational rehabilitation which includes a combination of medical, social-economic, vocational, and psychological aspects. The conceptual and operational appropriateness and equivalents depend upon the basic theoretical rationale of the research as well as the influence of the societies and cultures in which vocational rehabilitation is investigated. This appropriateness requires feasibility, significance, and acceptability for each culture. In addition, a second major methodological task is to devise and select conceptual schemes, with measurable indicators. Much of the following review is a discussion of South America, in general, and developing nations other than Bolivia and Peru. Inasmuch as there is sparse literature on vocational rehabilitation in relation to national characteristics in Bolivia and

Peru, the approach of this study is to use documented data from related sources and assume application to Bolivian and Peruvian characteristics.

Social Cultural Aspects

In writing about vocational rehabilitation in the Bolivian and Peruvian cultures, a great deal is to be considered. At this point social cultural aspects will be selectively described and presented both in breadth and depth according to the value placed on their importance in describing the national vocational rehabilitation program. Although this will not represent a comprehensive discussion, it should provide the necessary frame of reference for understanding a national vocational rehabilitation program in the Bolivian and Peruvian social cultural context. Specifically, the following discussion provides an overview of historical commonalities, developmental status, social organization, and how these cultural aspects affect the typical individual vocational rehabilitation process.

In terms of commonality between these two national populations, there are a number of characteristics which should be mentioned. There is an overall commonality of language where the national language of both countries is Spanish. However, spread throughout Peru and Bolivia, there are small groups or tribes which speak unique and different languages. Although both countries are now independent, they share a background of Iberian-colonialism. Prestige traditionally has been associated with aristocratic land holding, conspicuous consumption, religious and legal occupations, and the literary artistic life. Another similarity is the predominant economic pattern in production of raw materials or basic crops. There is also a commonality of political

instability. The total number of changes in government leadership although different, indicates a basic political instability over the history of each nation. Changes in the government range from changes of the palace guard to a basic agriculture or political revolution. These changes are as much a part of the system as any other aspect. Some of these changes are progressive and some are oppressive, but the common expectation is that either form of government will eventually fall.

Other commonalities shared by both Bolivia and Peru are the problems of transportation, technology, communications, and industrial development. In both countries a significant minority of the population does not yet possess a national identity and is unaware that somewhere over the horizon a government is coining money, operating schools, and writing foreign trade agreements. In the same countries another segment of the population skies in Barlochie and attends bullfights in Barcelona. These last examples represent some of the extremes of the social spectrum. Few if any of the internationally documented population characteristics even reflect their existence (Deutschmann, 1968).

From the field of sociology, Reissman (1966) indicates a typology used for identifying a society's level of development. The first of the four stages is identified as "under-developed societies." The under-developed societies are those which have made insignificant moves toward, among other things, urban changes. Societies in this stage are largely traditionalistic, agricultural and rural. Bolivia would fit in this earlier stage. Rather than being identified as a nationalized society such as Bolivia, Peru would be placed in an urbanizing society but still remaining in stage one. State two would consist of urbanizing countries such as Panama and Brazil. Stage three, or transitional

societies would consist of countries such as Italy and France, and the last of stage four is illustrated by countries such as England, the United States, and the Netherlands.

Developed nations have clearly attained a certain degree of qualitative improvements in many aspects of their social-economic life. Obviously the developed nations have vaulted into an ever new strategy of quantitative improvements. The source of strength is then, in terms of an overall developmental success, where the qualitative and quantitative aspects coincide (Hernandez, 1974). The values used as indicators of developmental success are measured by such indicators as (1) per capita income or the use of energy, (2) rates of literacy, school enrollment, academic achievement, (3) degree of urban residence, labor force participation, and manufacturing, (4) relative complexity and effectiveness of government and private organizations, (5) longevity and physical soundness of the population, (6) scale of monetary investments and level of productivity, (7) solution of public problems and welfare. Generally, most social scientists agree in this aspect of the developmental phenomenon. The assumed objectivity of these indicators then enable each population to calculate its rating in terms of development (Reissman, 1966, p. 177).

The complex power of social organizations and how they affect relationships is basic to understanding the rehabilitation of the disabled population in South America (Roberts, 1970). The three basic aspects of social organization which seem to be closely related to the national vocational rehabilitation program are community structure, communication, and public health. The first of these social organizations is community structure. Rural communities are of two types:

(1) pre-revolution type consists of the traditional hacienda where the patron is the ruler of his kingdom. In this situation the (rural residents) are financially, socially, medically, and religiously tied to the haciendas, (2) the post-revolution rural community is typified by the independent landowner. This campasino will own from one to five acres from which his total livelihood depends. Suffering from physical restrictions of the environment, the Ayamayan communities found in the highlands (16 to 20 thousand feet) have very closed communities. The rural Quecha communities of the lower lands are more open and they travel more or less freely. The urban community suffers from all of the social ills of intense unskilled migration into the city. The alienation of the campasino from "mamapacha" or Mother Earth toward the disjointed value system of the city is a frequent topic of literature in South America (Adams, 1975). The following two quotes illustrate the difference between the campasino and the city skilled laborer.

> Here we have no minimum wage, but we don't get hungry. We have everything, plenty of water, and we don't have to buy anything. We can grow what we need; in the city the best a man can do is to be a worker who pays rent and buys things. Real education is upbringing. I didn't like formal education, and I had a long way to walk. To fool the boss is the same as to fool God. The poor man has to help the boss, or he's the one who will suffer.

> Industrialization increases the importance of formal education: new employees prepare for work in school rather than through formal apprenticeships. Over a period of time the power of education itself makes itself more clearly felt on a man's life and seems to exceed experience on the job . . . (Kahl, 1968, p. 171).

The second social organization is communication. Bolivia is geographically separated into four distinct areas, each divided by 20,000-foot mountain ranges. Three of these areas have major local languages and the fourth consists of 150 to 160 small aborigine Indian languages

and dialects all but unknown to civilized man. A small percentage of Bolivians read newspapers or books. Phones or telegraphs are nationally owned and seldom privately used. Television is a rare luxury, and programming remains primitive. The one great boom to mass communication has been the Japanese portable radio. Every type of public, educational, political propaganda, and folkloric music is heard from the numerous stations throughout the country (Weil, 1974).

Peru is geographically separated by the Andes mountain chain into three major areas. The narrow coastal lowland on the west is the most populated area of Peru. To the east, the Andes mountain range rises to a height of 22,000 feet. Many of the rivers from this mountain range combine in the jungles to form the origin of the Amazon River. As in Bolivia, Spanish is the legal language, however, a large percentage of the population (1971 approximately, 4 million) speaks only one of the two major Indian languages. Telecommunication as well as the printed word are governmentally controlled (Weil, 1972).

Latin America is profuse with a wide variety of technical publications, academic journals, bulletins of international organizations, etc. However, most technical information in Bolivia and Peru comes from outside of the country, and most typically in a foreign language. Although printed media has the most informative role in the social and economic development of professionals, radio listenership has been found to be higher among lower socio-economic populace (Deutschmann, 1968).

Public health, the third social organization, is usually not preventative or rehabilitative but maintenance oriented (Read, 1966, pp. 106-119). Polio, typhoid, and diphtheria are all epidemic diseases.

During this author's employment in Bolivia from 1971 to 1973, a decision from the national public health center in Bolivia identified a national epidemic of typhoid fever. For this highly contagious disease, three innoculations two weeks apart are necessary for prevention. As a result of the epidemic, both needles and serum were flown in from Brazil, the United States of America, and Germany. During the first week, a majority of the entire population of Bolivia was innoculated against typhoid fever. After two weeks had elasped a second round of innoculations was given. Between the first and fourth weeks of the declared epidemic no further cases of typhoid fever were identified, and as a result, the public health center concluded that there was no longer an epidemic. The third shot which would have insured lifetime prevention against typhoid fever was not given by the government nor the local doctors. This example of an ineffective approach toward preventive public health may have long-term implications.

> In addition, high infant mortality, along with the prevalence of chronic diseases such as tuberculosis, malaria, ameobic dysentery, may be a constant drain on the health and vitality of the community and thus retard other developmental aspects. Medical development is not only securing medical and medicine, but public health attitudes contend with the animistic attitude which is resistant to the germ theory and changes in agricultural practices. Here again the problem is not so much of securing technical facilities as one of manipulating the social organization in such a way that it supports change (Hunt, 1966, p. 166).

Read (1966) indicates that there are basically three stages in the acceptance of social service programs in developing countries. Stage one involves the demonstration of successful modern treatment for a particular disability and a general acceptance by the community of the facilities for such treatment. Stage two has two facets. Individuals in the community begin to cooperate with the facility which

has been set up for treatment and rehabilitation. At the same time, influenced by those known successes achieved in stage one, and by the cumulative processes of socio-economic change, the people demand from their government more facilities for general rehabilitative services. Stage three is anticipated and hoped for by all public health and rehabilitation specialists. It includes a general acceptance of scientific medical care in all cases of illness, mental as well as physical, and a grasp of at least some of the the principles underlying the practices of rehabilitation shown by the individuals in communities to cooperate with public health and rehabilitation processes. One can scarcely expect an individual coming from a background that does not include modern science and specifically rehabilitation, to change their whole way of life simply to conform with the outlook of a professional in a modern social institution. "We shall have to accept the inevitable fact that our techniques of cure and preventions will be accepted irrationally" (Read, 1966, p. 113).

In terms of health problems as such, there are an aggregate of factors that condition the diseases and their distribution in both societies. These are factors of a medical, biological, economic, historical, and cultural nature. Available data shows that South America is beset by infectious diseases, undernourishment, poor sanitation, unhealthful housing and working conditions, illiteracy, lack of proper clothing, and low per capita real income. These factors together produce a high general mortality, and specifically a high mortality in children under five years of age. These interacting factors are also responsible for the poor scholastic performance of many school children, for low productivity, and a pessimistic view of life.

Although knowledge of rehabilitation has occasionally kept pace with medical development, implementation of that knowledge invariably falls behind. When one hundred dollars per person in the population is available to pay for services, there is no doubt that it is feasible for most communities to develop high quality health and rehabilitative services through a mixture of private practice and governmental action. The technical and economic dilemma in Bolivia and Peru is that less than ten dollars per person per population is available to meet all diagnostic, preventive, maintenance, and rehabilitative demands annually (Horwitz, 1968). The problem facing the ministries of health is how that ten dollars can be best spent to accommodate basic health services.

When dealing with social cultural aspects of a nation, one question which is to be dealt with is whether the proper focus of concern is the individual or the group. For example, one viewpoint is that rural vocational rehabilitation programs have effectively raised the socio-economic horizons of disabled individuals. From another viewpoint, vocational rehabilitation often drains off the most capable individuals, leaving the rural village even more stagnant than before (Hunt, 1966, p. 159). Rehabilitation specialists as other social scientists often seem to think that study of a particular culture overemphasizes local traditional practices and attitudes and given an impression of social continuity being stronger than and resistant to imported developmental changes (Read, 1966). "Only a sense of perspective in such studies will provide guidelines about why a community accepts some or all of new programs and rejects other parts or the whole of it" (Read, 1966, p. 85). The social cultural questions that vocational rehabilitation deals

with in these countries are as broad as:

1. How can one influence people living in rural areas to get water from safe sources?
2. How can one overcome the resistance of people to modern medicine?
3. How can one educate the public that childhood innoculations will prevent childhood diseases which result in deformities and disabilities?

Vocational Rehabilitation

There are a number of good reasons why the rates and types of disabilities vary from one country to another and even within groups within the same country. Most occurrences of disability just do not happen or exist because of heredity or chance factors. A disability is a result of a cause, and these causes vary in their distribution and effects. Some of these causes result in impairment which leaves a permanent or temporary loss to the body. Depending on the impairment and other causes, a person may have a functional limitation. This means that he or she cannot do something as well as would be expected. If this limitation is of a more serious degree which makes it difficult for the person to perform his or her normal roles in accordance with socially accepted age and expectations, that person can be described as disabled (Newell, 1977). Present knowledge of the magnitude of the disabled problem is limited by the fact that relatively few research studies outside a small number of developed countries have attempted to identify the disabled population.

Most common vocational rehabilitation studies deal with the

estimation of the prevalence of impairment, specific programs and abstract processes, or studies of economic dependency. There are many unknowns in an attempt to identify the disabled population in the world because in most countries the disabled have not been counted and are often hidden. "The coverage of vital statistics is estimated at 50% with patient under registration and under transmission of birth and death statistic" (The Americas, 1970, p. 429). The estimated total number of disabled of 450 million, then, includes persons with decreased ability to carry out major forms of activities such as work, taking care of oneself, housekeeping, engaging in social activities, comparable education, or being unable to get around without help or make social contacts owing to major disturbances. Approximately 33% of the disabled individuals in the world are estimated to be dependent on daily help from other individuals (Disability Prevention and Rehabilitation, 1976, p. 325). Where the experts have made their best estimates it would appear that in the developing world 50% of all disabilities can either be prevented or controlled (Newell, 1977). Neither Bolivia or Peru have had a national census or other means of identifying the prevalence or type of physical or mental disabilities.

In attempting to study the relationships between the South American society and the problem of the disabled, one is immediately struck by the almost complete lack of information in the literature about this specific relationship. Reports of vocational rehabilitation technical advisors' national visits are documented in both Bolivia and United Nations' archives, but labeled as "classified" and, therefore, unavailable for public utilization (Documentation, Vocational Rehabilitation, International Labor Organization, I.L.O., 1979). A review of the

literature contained two references which pertained to the subject in the strictest sense, and only a handful which were relevant in even a broader sense. In a 1967 article the psychosocial services for the disabled in Peru are described by Dr. Joseph Stubbins. During a sabbatical in 1965, Dr. Stubbins visited and lectured in Peru, Chile, and Argentina. The following excerpts summarize the major points as related to vocational rehabilitation.

> When I first arrived in Peru and for some time after, I was appalled at the omnipresent manifestations of social injustice and the value structure that supported it . . . . In considering the extent of voluntary activity, it must be borne in mind that the helpless or unfortunate are basically the responsibility of the family and not that of the society as a whole . . . . Officials in the Ministry of Public Health and Welfare are unaware of the unmet needs in rehabilitation . . . . Actually, few rehabilitation activities exist outside of Lima. There are no physical medicine services, no prosthetic services, and no professional psychologist and counselors outside of Lima . . . . The disabled needing services come to Lima . . . (Stubbins, 1967, p. 141-144).

A "critical analysis of 'Paul Harris' home" (Walker, 1972), represents the single document in reference to Bolivian vocational rehabilitation. This manuscript concretely describes the only institution for the physically disabled in Bolivia. Mr. Esko Kosugen, then the United Nation's vocational rehabilitation technical advisor, estimated a population of ten to twenty thousand physically disabled Bolivian children eligible for the Paul Harris Home which had a maximum residency of twenty-three. Exploration of the general literature on such subjects as medical care, education, cultural practices, deprivation, and disability of Bolivians and Peruvians produced only a few general references dealing with the subject area. The literature then is helpful in studying the subject only to the extent that it enables one to make

inference about specific areas from the general discussion of the above named topics.

While rehabilitation in some geographical areas of the world is considered to be either idealistic or a luxury, in Bolivia and Peru, rehabilitation is what might be described as being in the embryonic stage. In these countries there is a shift from idealistic generalities to an economically-oriented approach to rehabilitation (Newell, 1977). According to Karl Grunewald, society's development of rehabilitation services are divided into four stages (Woodward, 1978). The first stage is that of identification or the diagnostic aspect of rehabilitation. This is universally the first stage of rehabilitation where national programs originally begin rehabilitative services. The second stage involves centralization of treatment services. Quite typically in the first stage, or the identification stage, services come about as part of physical therapy programs, medical institutions, orphanages, and small private rehabilitation services. The second stage then involves the centralization of these treatment services into areas which allow for speech and hearing therapy, physical therapy, medical rehabilitation, psychosocial development, etc., all being provided in a more or less centralized area. The third stage is the differentiation or unique services. This stage marks the uniquenesses of vocational rehabilitation from many of the other social services. The unique services could be identified as mobilization of the blind, paraplegic gait training, or specific institutions for the purpose of controlling diabetes. The fourth stage is decentralized integration, or the providing of local community help. In the first stage of development of a vocational rehabilitation program, there is a handful of professional individuals going

throughout the country serving as rehabilitation specialists or advisors. The second and third stages these professionals move away from the people and demand that disabled individuals move from where they are to where the services are available. The fourth stage has emphasis on returning the services to the community or to the individuals rather than demanding that the individuals move to the centralized services.

The descriptive approach of vocational rehabilitation in the present study is within the framework of the national social-economic characteristics and as such shapes the kind of data collected and analyses made. The intent is not to describe individual aspects of the process or the theoretical process of vocational rehabilitation. However, a brief view of what may be considered the typical individual procedure is helpful toward understanding the national program. Vocational rehabilitation as a personal process can be summarized as follows: (1) onset of disability, (2) family problems indicate that the family can no longer maintain or tolerate the individual, (3) the individual is forced to leave home and go into the role of beggar, (4) rehabilitation begins with the admittance of the individual to some form of health service or institute of rehabilitation, thus (5) the individual relearns the well role which versus the sick role, and (6) the individual is transferred back to the community (Landy, 1964, pp. 128-131). In a rural economy which is neither diversified nor advanced, the reabsorption of individuals after treatment into their own community poses many socio-economic problems.

There are mutual problems that Bolivia and Peru share in terms of their developing vocational rehabilitation programs. The first of these

problems is that these countries lack sufficiently organized bases of medical, social, educational, and vocational services. In countries where there are many gaps in services, there is a twofold dilemma: coordination and integration of existing services and the creation of needed ones. Since one of the main characteristics of all rehabilitation work is the cooperation among many experts, it is then difficult for rehabilitation programs to preempt either preventative or maintenance programs. The second problem is the grossly inadequate understanding of modern rehabilitation.

> The motivation or rationale for rehabilitation has evolved from the earliest purely charitable stance to economic justification which played up the economic burden and dependency costs of the non-productive disabled and the economic returns on the activated productive disabled . . . to the intrinsic social obligation to rehabilitate the disabled, irrespective of economic return (Sohoni, 1977, p. 4).

The third problem is insufficient knowledge of the efforts of the disabled on the country's economy. Disability infers a cost to a society regardless of whether or not rehabilitation services are available. Although the basic information needed to understand the socio-economic impact of disability on the Bolivian/Peruvian societies is not available, it can be logically assumed that loss of the ability to function independently and inactivity in the labor market have direct socio-economic implications. The fourth problem related to the preceding one is the mistaken understanding of the actual cost of rehabilitation. On one hand,

> the magnitude of the rehabilitation costs in relation to overall national expenditures for other purposes has not and cannot be precisely defined. The costs of service delivery are dependent on the type of social system prevailing in a nation, as well as on a variety of factors related to the methods of service and delivery and the training of rehabili- personnel (Hammerman, 1978, p. 5).

In relation to the National Vocational Rehabilitation Program in the United States,

> It can be reasonably concluded that the vocational rehabilitation program, in the aggregate, is economical justified. The most conservative benefit-cost calculations (of which mine is one) show a return of at least five to one, and this is generally acknowledged to be an understatement because of the omissions of some benefits . . . (Conley, 1975, p. 22).

The fifth problem is that there is such a large unemployment ratio that the work force in general has very low demand for the employment of the handicapped. The sixth major problem is that the economic situations of Bolivia and Peru do not allow for substantial services to be spent on a minority of the population. For example, if 10% of the population is physically disabled, it seems unjustified to serve them when 90% of the population have basic public health problems.

> Rehabilitation of the disabled, as demonstrated in a number of papers in this volume (Sociology and Rehabilitation), is determined not by objective and scientific analysis of the individuals medical needs as in the case of illness, but by evaluation of characteristics found in multiple social systems (Sussman, 1965, p. 232).

Socio-Economic Characteristics

In the developing nations of the world such as Bolivia and Peru social programs including vocational rehabilitation are only in their initial stages. Social needs themselves are in a state of evolution particularly as a result of industrialization and changes in the traditional social framework (Contribution of Health Programs, 1973, pp. 11-15). This provides the rationale for describing the interrelationships between vocational rehabiitation programs and national socio-economic development. Many proponents of vocational rehabilitation are stating that in order to effectively plan for adequate services,

society's social planners, rehabilitation specialists, economists, and experts in housing, public health, transportation and labor must coordinate their programs (Hammerman, 1978, and Iyer, 1978).

It appears as though the need for vocational rehabilitation programs has a strong relationship with certain habits of life such as diet, occupation, communications, transportation, and other socio-economic and environmental factors. Therefore, the trend of this research is to place special emphasis on the collection and description of not only direct vocational rehabilitation information but also vital socio-economic factors. Internationally the problem of disability is increasing as a result of greater industrialization, road accidents, and improved life-saving medical techniques (Contribution of Health Programs, 1973). In addition, in developing countries where as many as 10% of all children suffer from severe malnutrition, educational levels are minimal and disabling diseases remain uncontrolled (Curle, 1970).

Generally, South America's rapid population growth has hampered socio-economic development. Specifically for Bolivians and Peruvians, ". . . it has adversely affected employment opportunities, health services, education, housing, the crime rate, and the overall quality of life (Black, 1971, p. 129). Considering poverty as a specific socio-economic characteristic, there are general directives being applied by the developed nations onto the underdeveloped nations. These directives are imposed in the following hierarchical order:

1. Promote public health.
2. Reduce the average size of families.
3. Maximize food production.
4. Encourage an urban lifestyle.

5. Industrialize the economy.
6. Increase per capita income.
7. Expand and strengthen markets.
8. Universalize literacy.
9. Reward scientific and academic excellence.
10. Absorb family and community functions into standardized and large scale organizations of public welfare (Hernandez, 1974).

It should be noted that rehabilitation is directly involved in the first, eighth and tenth of these directives. The question at hand is whether the developmental guide is likely to be successful in eradicating poverty, and improving the quality of human life.

The description of a national vocational rehabilitation program can no longer ignore the major socio-economic problems such as the rate of population growth, rapid industrialization and urbanization, vocational instability, environmental pollution, and growing desparity of material living standards. Specifically, a number of studies have reported that there is an association between disability and the following socio-economic disadvantages, poverty (Finney, 1969), lack of education (Curle, 1970) and job opportunities (Rehabilitation for the Disabled, United Nations, U.N., 1977), working conditions (Hammerman, 1978), geographic isolation (Schein, 1977), social prejudice built into the structure of society (Jordan, 1969), ethnic and religious factors (Jordan, 1969). Although the highest incidence of disability is found among the underprivileged (Disability Prevention and Rehabilitation, 1976), the number of disabled persons in the world is not known with any degree of certainty, and no simplistic intervention such as improved medical services will solve this complex and multi-faceted problem. I

conclude then that the description of a national vocational rehabilitation program in the midst of a complex and changing society is dependent upon both the socio-economic characteristics of the population to be served, as well as the identifiable aspects of the program itself.

Vocational rehabilitation is an organized activity of assistance and as such is inevitably tied to the needs and characteristics of the system and the means and resources possessed by that system. Needs and characteristics of the system are reflected by the degree and type of development in such areas as education, health, employment, and cultural uniquenesses. On the other hand, tendencies such as population growth and distribution, educational and health service access, and the implementation of technical advances also have a direct relationship to the type of vocational rehabilitation services available. National development is not a purely economic factor, and should not be used as the sole measure of variations in living standards or of the wellbeing of a population (Income Distribution in Latin America, 1971). On the contrary, steps to improve conditions of life may well limit productivity as in the fight against pollution. It is also well known that high expenditures on health or social services do not necessarily result in improved productivity (Hernandez, 1974). An increasing problem in Bolivia and Peru, as well as many other countries both developed and developing, is even if the money is available there seems to be no possibility of recruiting or educating the manpower required to keep pace with the future development of rehabilitative services. The planning of a national vocational rehabilitation program interfaced with the socio-economic framework has become an absolute necessity.

South America has for a large number of years been the fertile

ground for the gathering and comparing of social-economic data. The following quote should provide a basic understanding of the effect that the overall economy of a nation such as Peru or Bolivia has on the funding of a social program. Bishop Mortimer Arias has explained the basis of the national economic situation in an effective manner:

> When we sell tin, our main export product, we are paid according to the international price of 10¢ per manhour which means that we might have to pay the miner less than one dollar for eight hours of work in the entrals of the earth. This man has a life expectancy of 32 years and will die of cilicosis or tuberculosis after 8 to 10 years of production, leaving behind him a skeleton, a widow, and 6 to 10 orphans in the most abject misery. But when we buy manufactured products, we have to pay about three dollars per manhour. One hour of an American worker is worth thirty times an hour's work of the Bolivian worker . . . . The trick of the game is that when we sell, who decides the price? The buyers; that is, the powers that control the international trade. But when we buy, who decides the price? This time the seller; that is, the same powers (Stockwell, 1971, p. 4).

Recent studies of countries by income levels per capita and inequality of distribution distinguished three levels of income per capita. Assuming a definition of poverty at a level of $75 U.S. annual income per capita, it is estimated that some 17% of the population of South America is poor (Hunt, 1966). There is no widespread evidence of significant improvement for the low income majority in the two most basic components of the level of living, food and shelter (Rehabilitation for the Disabled, 1977). And although the range and coverage of publically financed social services is greatly increasing, the distribution of these services has continued to be very uneven between urban and rural settings, and among occupational and income groups.

In the expansion of services, education has had the leading role both in the proportion of services absorbed and in the importance and complexity of its impact on society. However, for both countries it

should be noted that a similar pattern of high dropout rate was observed for the second, third, and fourth grades. In addition, a gap in quality between urban and rural education continues to be very wide. Studies of education and social mobility suggest that the status of the family continues to be one of the most important factors in determining the upward educational mobility of the student.

The expansion of health services has also been important in practically all countries as a decline in infant mortality and an increase in life expectancy indicate. Another social service, social security indicates that coverage in 1969, included 8% of the Bolivian workers and 28% of the Peruvian workers (Rehabilitation for the Disabled, 1977). In the field of vocational rehabilitation the concept of socio-economic characteristics requires reconceptualization to account for the phenomenal impact of disability, as well as the social roles associated with the condition, and the involvement of social systems in the definition, identification and treatment of the disabled.

> Many studies have correlated standard socio-demographic variables with the consequences of disability. Few, however, have recognized fully the sociological significance of the variables under scrutiny. Not only should the social significance of standard socio-demographic variables be recognized, but more use should be made of other sociological variables (Myers, 1965, p. 40).

Data Collection and Analysis

Internationally, within the last few years, there has been a considerable growth of interest in identifying and describing National Vocational Rehabilitation programs. There are certainly some countries in which national vocational rehabilitation objectives are defined, a national planning body exists, and development is interfaced with the

overall developmental plans of the country. There are also countries which, although set targets for program improvement, have no defined and comprehensive national vocational rehabilitation objectives, and no overall development plan. The fundamental criteria which determines the existence and development of a national program are identified as (1) established need or the identification of the problem; (2) budgetary priorities or the socio-economic status of the nations; and (3) community expectations (Contribution of Health Programs, 1973). In 1971 and 1972 the government of the Netherlands conducted a survey of that country's physically handicapped population.

Methodologically, because of the high expense of direct interviews, mail surveys were also used, which according to the authors yielded reliable population rates. Significant relationships were found between socio-economic characteristics and the disabled population. For example, there were relationships found between the disabled population and both age and geographic location, social stress in relation to urban-rural location, and contact with social agencies. This approach represents the most involved nationally supported study reported in the literature.

Internationally, the branches of the United Nations (UNESCO, ILO, WHO) have conducted studies at the request of member nations, but the results are not available to the public (Documentation, Vocational Rehabilitation, 1979). Rehabilitation International has also conducted selected surveys. A large majority of these surveys represent the mailing of a single survey instrument and tabulation of results, or the subjective interpretation of an expert on-site visit (U.N. Finds Household Survey, 1979). In addition, there have been a number of

countries attempting to formulate disability related estimates based on census information. For example, the Rehabilitation Services Administration in the United States of America, using a 5% sample in 1970 census, identified one-third of the population ages 16 to 64, excluding students and persons in institutions, as disabled and eligible for vocational rehabilitation services (Struthers, 1976). Also using the 1970 census, as well as Social Security surveys, a private advertising agency identified the disabled population in terms of incidence and potential marketing products for the disabled (U.N. Finds Household Survey, 1979).

One shot surveys such as these also appear to be the more common documented national level research found in the literature. However, the demographic and social statistics branch of the statistical office at the United Nations is scheduled to release a new publication entitled "Improving Social Statistics in Developing Countries-Conceptual Framework and Methods." In reference to this publication, Mr. William Seltzer, Director in charge of the demographic and social statistics branch of the statistics office in the United Nations, indicates "The most effective means of gathering the full range of needed statistics about the indicence of disabling conditions is the household survey" (U.N. Finds Household Survey, 1979, p. 4). This method involves gathering information concerning selected social and economic situations by structured interviews. "This method is capable of producing much more meaningful data . . . than the most frequently discussed alternatives the national census and the extraction of information from administrative records" (U.N. Finds Household Survey, 1979, p. 4). Although not noted in this article, this method of household surveys had not yet been used at a national level. However, Mr. Seltzer suggests that for

developing countries, surveys concerning disabilities should realistically be an integrated element in a more general survey of those economic and social factors most importrant for the planning of the nation or the area to be covered. In her article entitled, "Counselor Preparation in a Developing Social System," S. Essenfeld de Breuer (1978) of Caracas, Venezuela, indicates that the needs and characteristics of a national social system are determined by the description of such areas as education, health, employment as well as demographic information. These demographic statistics can be used to describe population characteristics.

> An analysis of current demographic levels and past trends is the necessary first step in the construction or population forecasts that in turn form the underpinning of national plans for economic development (Shryock, 1976, p. 2).

Population studies, or the relationship between demographic statistics (population age, density, rate of growth, etc.) and other variables (social, economic, political, etc.) can be defended on the ground that they often have to serve in this capacity as is shown by the case of the World Handbook of Political and Social Indicators (Russett, 1964). "Among the seventy-five indicators nearly one-third have their origin in population data and (simple) demographic analysis . . ." (Carlsson, 1972, p. 169).

Limitation of these statistics have to do with their range and relevance.

> Because of the definitions used, the restricted number and form of the questions, the scope of the census, survey or register, and the extent of cross-classifications in the tabulations, the statistics can at best give only approximate answers to the broad questions that they were designed to answer . . . (Shrylock, 1976, p. 2).

It is accepted that there is an unknown degree of accuracy

> in the researched official statistics. The term accuracy used here is measured within the limitation of the statistics and does not include those limitations. In the field of population studies, there is the concept that the . . . true value does not depend on whether something has in fact been measured with perfect accuracy, or even if it can be so measured, but rather on the possibility of 'imagining' the counting or measuring procedure (Carlsson, 1972, p. 170).

Assuming that the identifying indicators representing the theoretical concepts used in the present study coincide with the definitions and categories used in the literature, the adequacy of the reported data will be accepted as the best information available and therefore valid and reliable.

Summary

Historically, national studies of vocational rehabilitation programs have identified the various characteristics of a specific program, estimated the disability populations and matched resulting data together to identify needs and trends.

The section on cultural background includes historical commonalities, international developmental status, related social organizations and a description of how these aspects are related to the individual rehabilitation process. This discussion indicates the importance of describing a national program on the basis of the culture involved rather than from the viewpoint of another culture.

The developmental aspects of a national vocational rehabilitation program has been considered from a theoretical frame of reference by a number of authors. There has been considerably less study on vocational rehabilitation in South America and practically speaking none involving Bolivia and Peru. However, for both countries there is an abundance of

literature on such vocational rehabilitation related subjects such as public health, education, and deprivation. On the basis of this background information and the research accomplished in this present study, the various aspects of the existing national vocational rehabilitation program will be identified.

Throughout recent literature the importance of the socio-economic characteristics of a society is fundamental to the description of a national program. The very nature of a national vocational rehabilitation program demands effective relationships with many other ministries and departments at all levels of government. The societal demands, implemented programs and success of those programs depend to a great extent on the socio-economic status of the population. Therefore, the socio-economic impact of the rehabilitation process will be identified as a vital aspect in description of the National Vocational Rehabilitation Programs in Bolivia and Peru.

The methodological approach to the present study has historically been the enumeration of projects and estimation of the disabled population. However, there is ample research indicating the feasibility of identifying demographic data and socio-economic characteristics as a means of a more complete description of the present state of a national program. This description of the National Vocational Rehabilitation Programs of Bolivia and Peru consist of the identification of existing aspects of the program, cultural background, socioeconomic characteristics and the needs and trends based on international guidelines.

CHAPTER III

METHODOLOGY

The task of this chapter is to delineate the research design used in identifying and describing the present state of the national vocational rehabilitation programs in the two South American countries of Bolivia and Peru. Existing literature indicates that a meaningful way of approaching this phenomena is to focus on three major components - the national vocational rehabilitation programs as they now exist, the socio-economic situations found in each country, and the identification of the needs and trends of each national vocational rehabilitation program on the basis of internationally accepted guidelines. This descriptive study is organized into four methodological operations: (1) definitions, assumptions, limitations, and the selection of germane concepts and indexes, (2) the selection of the subjects, development of the instrument, and the collection of the data, (3) the analysis of the frequency and distribution of the phenomena, and (4) the assimilation of the research findings into an organized whole.

Operational Definitions

The present study approaches vocational rehabilitation in the South American countries of Bolivia and Peru by identifying and describing the existing national vocational rehabilitation programs in relationship to the socio-economic characteristics of the respective countries. In

order to facilitate the understanding of specific terminology and for the purposes of the present study, major terms used in this text are considered appropriately defined as follows:

Vocational Rehabilitation is involved with the development and application of methods and techniques to re-establish individuals in some way seriously disabled to a socially accepted level of vocational, family, and community adjustment. These considerations include aspects such as the legal requirements governing the process, the medical, psychological, social and vocational evaluation of the individual, information relating to the evaluated needs and strengths of the individual, first-hand knowledge of community services, and professional counselling expertise. An individual vocational rehabilitation plan is then implemented for the purpose of providing resources for the disabled individual to meet their legal and human rights of self-fulfillment. This definition emphasizes rehabilitation of the physically disabled. Other aspects of vocational rehabilitation involving the mentally ill, mental retardation, alcohol, and other drug related disabilities will be mentioned only peripherally. This approach is justified for the reason that the problems of the physically disabled provide a significant focus for the present study, and major consideration of other disability groups would involve investigation in areas not at the disposal of this author. Vocational rehabilitation then is a process of integrating these methods and techniques into a national program.

The National Vocational Rehabilitation Program is defined as the nationally supported program existing in the country which contains directly related elements of the national guidelines and contributes to the over-all vocational rehabilitation process. The vocational

rehabilitation process for both of the countries under consideration are in early developmental stages and as such important elements of the process are often found in non-traditional situations.

Guidelines refer to certain basic principles developed by both professionals and recipients of vocational rehabilitation services, assembled at the Twelfth Rehabilitation Congress. This committee's expressed purpose was to identify the basic principles upon which a solid foundation of vocational rehabilitation services are developed. The complete section on "Guidelines for the Future in Vocational Rehabilitation", is found in Appendix A. These guidelines also provide the standard by which the national vocational rehabilitation program needs and trends are identified.

The identified Needs and Trends represent the present status of the national vocational rehabilitation program in each country as they are compared with the international guidelines. Trends represent the direction of the developing program and needs are aspects of the guidelines not yet identifiable in the national program.

Disability may be defined as an inability to perform some vital life function. Since there is a wide-spectrum of disability levels and categories, the definition begins somewhere after a diagnosis of residual limitations or impairments and realistically stops prior to extremely severe disabilities for which there is no technology or method to be offered through a rehabilitation process.

A handicap is the cumulative result of the obstacles which disability interposes between the individual and their ability to work or perform in vital life functions.

Population Studies consist of demographic characteristics and

population indicators. Demographic characteristics are concern with the size, distribution, structure and change of population. Population indicators, however, are concerned with relationships between population changes and other variables - social, medical, educational, economic, etc. The field of population studies includes the consequences of related population trends given defined limits.

Socio-economic characteristics relate to a specific or a combination of social and economic factors.

Assumptions and Limitations

Sources of data are from two areas: the review of national/international literature and focused interviews administered to rehabilitation specialists in Bolivia and Peru. It is recognized that historical, as well as interview sources have limitations. However, the collected data are assumed to reflect the actual situation in Bolivian and Peruvian national vocational rehabilitation programs. The focused interview form is a straightforward device for reporting what aspects of the vocational rehabilitation program exists and how they are used. With suitable assurances of confidentiality it is assumed that respondents described the actual vocational rehabilitation situation with relative candor. The instrument is designed on the basis of the International Guidelines and validated by a committee of experts. Since this is a descriptive study, no correlation can be made either between the two selected nations or among other South American nations. Therefore, results and conclusions should be carefully generalized beyond each individual country.

Concepts and Indexes

The present study is an effort to bring into focus the national vocational rehabilitation programs in the nations of Bolivia and Peru. In light of each country's unique socio-economic situations and identified needs and trends, the conceptual scheme for the present study includes two major areas (see Table I). The first concept is the quantity and quality of the socio-economic standard of life as identified by population indicators. This includes the identification of natural assets, produced assets, and social assets. The second conceptual area is that of vocational rehabilitation or the identification of the national vocational rehabilitation programs and the needs and trends based on international guidelines.

Prior descriptive studies of national vocational rehabilitation programs have not considered the society's socio-economic complexities and only identified the total number of vocational rehabilitation projects. The present study differs strikingly in this characteristic. Relating these two measures provides a richer conceptualization of a vocational rehabilitation program in a national setting. This does not imply that the only way of measuring a national vocational rehabilitation program is by identifying all of the socio-economic characteristics of a country. Indeed a large number of characteristics have been omitted from the present study for several reasons: some because the relationship to this researcher is not quite clear, others because information is lacking, and still others because the available evidence is unsatisfactory and requires separate discussion.

TABLE I

CHARACTERISTICS TO BE MEASURED

Concept	Indicator
A. Natural Assets	
1. Population	1. Number and characteristics
2. Natural Resources	2. Amount and value
B. Produced Assets	
3. Knowledge and skills	3. Amount of primary and secondary and technical education.
4. Capital	4. Productivity and the amount of produced goods.
5. Wealth	5. Value and durability of consumer goods.
C. Social Assets	
6. Social organizations	6. Amount and effectivess of organization in society.
7. System legitimacy	7. Basic acceptance of the political/economic systems.
D. National Rehabilitation Process	
8. National Vocational Rehabilitation	8. National and International literature and administered interviews.
9. Needs and Trends	9. Internationally accepted guidelines matched with existing National vocational rehabilitation programs.

Selection of Subjects

The two countries of Bolivia and Peru have been chosen from among the fourteen South American countries for the following reasons. There are a large number of similarities between the two countries of Bolivia and Peru including historically such aspects as independence, political and agrarian reform, language, socio-economic stability, and development. Although various cultural and geographic differences are being controlled, the two concepts of central importance, national vocational rehabilitation programs and socio-economic characteristics both contain considerable variations between countries. In addition, there are sufficient international and national archival data available for identifying basic characteristics of both countries. Also important are the two aspects of convenience and available contacts. The advantages of restricting the present study to two countries are twofold: (1) more complete data have been collected as a result of the limitations and (2) more reliable data have been collected as a result of contacts made in the upper echelons of the national vocational rehabilitation programs. The major limitation to the selection of these subjects is basically that of generalization.

The research methodology is designed to control the difficulties of gaining access to and cooperation from individuals in the two national vocational rehabilitation programs. Although random stratified sampling would have been the preferred method, it was not considered feasible because of difficulties involved in drawing random samples of individuals in a foreign city, especially with the absence of adequate records and materials used as sampling frames. Therefore,

this investigator defines the sampling design as a non-random, non-stratified purposive approach as the most appropriate for the research conditions and objectives. The sampling design is considered appropriate inasmuch as the purpose of the study is limited to the description of the national vocational rehabilitation program. In this light, then, the appropriate interview subjects or respondents for the study are elite public officials in the national vocational rehabilitation program rather than a cross section of the population.

Instrumentation

The instrument to identify the various aspects of the national vocational rehabilitation programs in Bolivia and Peru was constructed by this investigator. The actual interview form is thirteen pages in length and consists of thirty-eight fill-in-the-blank or fixed-alternative items (Appendix B). Basically, each question in the interview indicates significant presence of the various aspects of the national vocational rehabilitation program. The validity of the content of this instrument was established by a committee of experts in the field of vocational rehabilitation. The committee of experts consisted of two vocational rehabilitation educators and two rehabilitation specialists, one functioning as a counselor and one functioning as a National Vocational Rehabilitation Clearing House director. This committee has judged that the interview form adequately measures the content of the International Guidelines. The interview form has been translated into Spanish by a Spanish/English translator and a Spanish speaking professional in the field of vocational rehabilitation. Anytime translation is involved, the literature suggests that the

investigator should be skilled in both languages. In addition, the South American Studies Association recommends an exploratory trip to the countries under investigation. Finally, a procedure called "back-translation" or the translation of the interview form from Spanish to English helps establish a more accurate translation (Elder, 1976, pp. 127-159). This interview is a structured focused interview based on international guidelines used in this study and is written both in terms of content and function specifically, with respondents' language and culture taken into consideration.

The personal contact, flexibility of face-to-face interaction and the opportunity for clarification and follow-up questions provides a major advantage over other data collection procedures such as questionnaires or collection of organizational documents. This instrument is considered to be valid and reliable in terms of format, language, and content as verified by a panel of experts. It was a decision of this author as a result of the theoretical purposes and assumptions underlying this research that one measurement technique for each major concept would be sufficient. The research of the literature is organized to provide data on demographic, social, and economic aspects of each nation. The focused interview provides data on the size and characteristic of the national vocational rehabilitation program.

Data Collection

The first phase of the collection of data was a search of the literature. This was for the purpose of identifying population indicators and socio-economic characteristics. For the most part this information is available for both countries in international journals

and reviews. However, there are validity and reliability problems which are noted in terms of this phase of the research process. As with other countries in South America, both Bolivia and Peru took a population census in 1950, but as a result of financial problems both countries grossly reduced both the census and the analysis of that data in 1960. An examination of recent censuses indicates that publication of preliminary results takes from one to three years and publication of the final results from two to six more years. In a number of cases census data were published on only parts of the information collected (United Nations Economic Commission for Latin America, Report of the Latin American Seminar, 1975). It should also be noted that archival and official sources often reflect considerable bias. It is unknown whether this bias is deliberate and self-serving or may result from poor data-gathering procedures. As the World Health Organization publication notes in The Americas, "The rudimentary state of development of the system of health statistics hampers the assessment of the demand for and the supply of health services" (The Americas, 1970, p. 488). Another example of this phenomena has been recorded in Communication and Social Change in Latin America.

> Her position at the gathering point of agriculture, labor, economic, and demographic surveys made her far more aware of what was happening in the nation than might be expected from a typical urban civil servant . . . she had been reading a published report which she had prepared on the economic growth rate. Her trained eye caught a major discrepancy which she verified as a mistake by checking with the report draft she had submitted to her superiors . . . . She read on apprehensively and discovered a number of 'errors' in the supported data used to compile the growth rate index. A quick computation revealed that the figures had been systematically altered (Deutschmann, 1968, p. 26).

Changes in the government often result in destroyed records and

replacement of employees from the top to the bottom of the government. However, given these disadvantages, the data that has been researched, collected, and included in the present study is both official and internationally accepted and for the purpose of the prsent study is not only considered adequate, but the best documentation available.

The second phase of the data collection method includes the individual interview given by this researcher to equivalent administrative personnel in national vocational rehabilitation programs. The actual interview presentation is considered appropriate for the following reasons: Given the nature of the data desired, a face-to-face interaction, in the Spanish language, with organizational elite respondents who had the requested information, were accessible to this interviewer and were willing to release the requested data, was considerably more appropriate than questionnaires, observation, or the research of organizational documents (Gay, 1976, pp. 123-141). In-depth data secured through immediate feedback to vague or incomplete answers were accomplished by the means of establishing a professional positive and non-threatening relationship. The fact that the interview format results in a smaller sample than the questionnaire format is not judged to be a disadvantage (Gordon, 1975, pp. 197-210). The respondents in possession of the desired information were mid-level governmental management professionals (Dexter, 1970). Respondents were chosen from nationally equivalent positions within the national program and assured of anonymity. In addition, informational data rather rather than attitudes or opinions are being researched. This researcher, who functioned as the interviewer, is bilingual and has had previous cross-cultural experiences, including more than three years in Bolivia and Peru. Therefore, it is

the opinion of this researcher that the interview method of measurement is adequate for the purpose of this research.

Analysis of the Data

All three research questions are answered using descriptive statistics. The process of analysis includes coding of the interview replies, identifying the data drawn out of the review of the literature and the performing of the statistical computations. Multi-national descriptive research refers to research in measurable units of a given social organization regardless of the homogeneity, similarity, or differences in their cultures. The units in this situation are static rather than dynamic in that the identification and description of the actual national vocational rehabilitation programs are not comparative over a period of time or between national states. Fundamentally, the two key issues in this research process are that the analytical methods are appropriate for the particular purposes, data, and the setting of this research, and that the methods are equivalent in both countries.

State descriptive statistics provide the appropriate analytical approach for the purpose of the present study. This approach basically specifies that some aspect of the international guidelines has been observed in a specific national vocational rehabilitation program. Inasmuch as this is basic or descriptive research, nominal data which possesses no quantitative properties will be used. These data determine whether a concept is present or not and communicates the exact meaning of that concept. To characterize the distributions, descriptive statistics is used to identify the concepts, their central tendencies, and dispersions. The organization of these data infer certain

relationships. Giving the research objectives and measurable indicators for all the concepts being identified and described, and assuming that the instrument measuring these concepts accurately measures the phenomenon as reported by the committee of experts, then the resulting data should accurately describe the Bolivian and Peruvian national vocational rehabilitation programs.

CHAPTER IV

DEMOGRAPHIC DATA

The birth rate of both Bolivia and Peru have long been studied by demographers with special interest. It has been estimated by demographers that the population maldistribution appears to be a major problem.

> The birth rate in Bolivia and Peru approaches the maximum and the rate or population increase is checked almost exclusively by infant mortality. These countries, without massive technological development, may be only one generation away from a Maltusian nightmare (Patch, 1970, p. 10).

In 1977 the Bolivian population was estimated at 5.95 million. Population density country-wide was approximately five persons per square kilometer ranging from less than one person per square kilometer in the southeastern plains to 25 per square kilometer in the more heavily populated northern Altiplane, Yungas, and valleys. With one of the highest mortality rates in South America, Bolivia's annual population growth rate is about 2.7%. According to a 1970 census, LaPaz, the nation's political and administrative capital, has one million inhabitants. The fastest growing city is Santa Cruz, the commercial and industrial hub of the eastern lowlands. There are no reliable figures on the ethnic composition of the Bolivian population. However, the 1950 census together with later revisions estimated the ethnic distribution approximately as follows: Indian, 65%; Caucasian, primarily Spanish, 5-15%; and mixed, or Cholo, 20-30% (Weil, 1974).

Peru's 1977 population is estimated at 16.52 million with an annual

growth rate of 3.0%, one of the highest in the world. Population density is approximately 13 persons per square kilometer. The capital, Lima, has approximately 46% Indian, 11% Caucasian, and 43% mixed or Mestizo (Weil, 1972, p. 59).

There are several population estimates for both Bolivia and Peru as documented in the international literature. It is important to note one more time that the demographic statistics noted in the following tables are considered accurate in terms of international demographic information. However, the following quote again emphasizes one of the basic underlying problems demographers have in South America.

> The 1970 census of LaPaz seriously underestimates population at a time when problems associated with overpopulation in that city are becoming acute. There are no reliable complementary statistics-records of births, military service, or deaths to aid in computing a correction factor (Patch, 1970, p. 12).

Table II shows basic population figures for Bolivia and Peru with additional figures for the United States of America.

In the mid-1800's Peru passed a law establishing national civil registers in births, marriages, and deaths. This same type of law was not passed in Bolivia until 1940. The most recent national population census taken by Bolivia was in 1954, and 1974 in Peru. Tables II, III, and IV indicate basic population estimates for the years 1975 and projected to year 2000. Table V gives the rate of marriages and divorces for the year of 1975. However, more importantly, this chart also gives information as to residency as distinguished by rural and urban residential situations, population density, and the number of cities with a population of 100,000 or more.

In the early 1970's the agricultural and industrial sectors of the

TABLE II

BASIC DEMOGRAPHIC CHARACTERISTICS--POPULATION
(In Millions)

Country	1973	1975	1977	Annual Rate Of Increase 1977	Density Per Square Km
Bolivia	5.0	5.6	5.95	2.7	5
Peru	14.9	15.5	16.52	3.0	13
U.S.A.	204.9	214.1	216.817	0.8	23

Source: United Nations Department of International Economic and Social Affairs, 1978 Report on the World Social Situation, (1979), pp. 4-10.

TABLE III

BASIC DEMOGRAPHIC CHARACTERISTICS--POPULATION GROWTH

Country	Birth Rate	Death Rate	Rate of Natural Increase	Years to Double Population	Expectation of Life at Birth 1970-1975	Rate of Infant Deaths
Bolivia 1975	46.6	18.0	13.5	27	46.80	77.3
Peru 1975	41.0	11.9	29.1	24	51.64	58.2
U.S.A. 1977	14.7	8.9	5.8	116	72.60	15.1

Source: United Nations Department of International Economic and Social Affairs, 1978 Report on the World Social Situation, (1979), pp. 4-10.

TABLE IV

BASIC DEMOGRAPHIC CHARACTERISTICS--POPULATION PREDICTIONS FOR YEAR 2000

Country	Population	Birth Rate	Death Rate
Bolivia	10,100,000	36.7	10.4
Peru	33,500,000	32.9	4.9

Source: Sanchez-Albornoz, Nicolas, The Population of Latin America, (1974), pp. 254-256.

TABLE V

RESIDENCY

Country	Rural	Urban	Percent of Population Urban	Surface Area Km^2	Number of Cities With Population of 100,000 or More	Marriage Rate Per 1,000	Divorce Rate Per 1,000
Bolivia	3,609,000	2,024,800	35	1,098,581	5	3.8	NK
Peru	8,146,000	6,766,200	48	1,285,216	10	3.4	0.1
U.S.A.	53,866,966	149,324,930	74	9,363,123	167	9.9	5.0

Source: World Population Growth and Response, 1965-1975, Population Reference Bureau, (1976), p.266.

Peruvian economy were being restructured by the government. The key issue in agriculture then was the coordination of agrarian reform program with intensity in both agriculture and industry. Millions of acres of land have been redistributed to thousands of landless farmers. In terms of agricultural products, sugar cane and potatoes are the two leading crops. However, the leading exports are the anchovy catch and the fish meal produced by the world's largest fishing industry.

Mining and petroleum resources are also large and the government's policy is for the state to acquire a large share of the profits of these sectors. Leading the Peruvian mineral production list are petroleum, copper, iron ore, steel, and zinc (see Table VI).

Bolivia and Peru have equivalent but mutually exclusive educational structures. Within each country there are various structures. There is a public and a private, a denominational and a nondenominational, a professional and a technical, and sometimes a national and a state structure. This diversity, however, does not necessarily mean flexibility.

In Bolivia it is estimated that 40% of the overall adult population is literate. About 30% of the people speak Spanish, the official language, as a mother tongue. The Spanish spoken by these individuals is among the purest in all South America. Of the predominant Indian population about one million speak Quechua, over half a million speak Aymara, and approximately 150 thousand speak other Indian dialects.

The official language of Peru is Spanish, although many Indians still speak their native Quechua and Aymara. Literacy is estimated at 61%. The forrest Indians of the eastern region speak a wide variety of unrelated dialects and languages. Their number is small, approximately 100 thousand, and diminishing rapidly. These people are considered

TABLE VI

ECONOMIC STATISTICS--PRINCIPAL NATURAL RESOURCES

Bolivia, 1972		Peru, 1970	
Product	Production In Thousand Metric Tons	Product	Production In Thousand Metric Tons
Agriculture		Agriculture	
Corn	300	Sugarcane	7,200
Bananas	125	Potatoes	1,750
Cassaua	250	Anchovy Catch	12,383
Potatoes	614	Fishmeal	2,257
Mineral		Mineral	
Bismuth	649	Copper	373,540
Gold (kilograms)	822	Iron and Steel	10,094,390
Silver	156	Stone	1,181,135
Zinc	43	Petroleum (42 gallon barrels)	87,559,293
Tin	31.1		

Source: United Nations Economic Commission for Latin America, Yearbook of International Trade Statistics, pp. 189-705.

among the most primitive in the world, still maintaining a Stone Age existence.

Both Bolivia and Peru provide tuition-free education through University for National Citizens. Table VII indicates the number of teachers and students actually participating in the complete educational institutions.

Knowledge and skills in a national system include not only the concept of participation in formal education, but also reflects the emphasis of science and technology within the national system. The following table (Table VIII) indicates the number of scientist and technicians as well as research publications.

Throughout the underdeveloped world there is a predisposition to see national action as a primary factor in the process of economic development. When other economic institutions are weak or nonexistent the nation seems to be one of the few places where resources and capital can be accumulated and mobilized for the task of development. In Bolivia there are two clearly favorable economic aspects that can be distinguished. On one hand there has been a persistent increase in the national income of about 7%, and on the other there has been a continued slacking of the inflationary process since after attaining high rates of 32% in 1973, and 63% in 1974, the rate of increase of consumer prices fell sharply to 8% in 1975 and 4.2% in 1976.

The characteristic feature of the 1976 Peruvian economy was the continuation of the preceding years. The growth rates were similar representing a marked decline with respect to the dynamic performance of previous years. The growth rate of the Peruvian economy was once again about 3% in 1976 so that for two consecutive years it only just

TABLE VII

SOCIAL STATISTICS--SCHOOL ENROLLMENT: NUMBER AND PERCENTAGE COMPLETED BY LEVEL OF EDUCATION (1975)

Country	Enrollment Primary School		Percent of Students Who Finish Primary School (1960-1965)	Enrollment Secondary School		Percent of Students Who Finish Secondary School (1966)	Higher Education		Percent Literacy Rate (1971)
	Students	Teachers		Students	Teachers		Students	Teachers	
Bolivia	880,836	38,737	34.7	--	--	22	51,585	--	40.0
Peru	2,961,202	73.849	29.5	890,106	34,555	31	190,635	12,113	61.0
U.S.A.			98.0			90			97.6

Source: Rivera, Julius, Latin America, pp. 72-74.

TABLE VIII

SOCIAL STATISTICS--EDUCATION AND CULTURE, 1974

Country	Total Number of Scientists	Total Number of Technicians	Total Engaged in Research	Total Expenditure for Research	Total Number of Books Published
Bolivia	9,674	--	--	--	339
Peru	84,923	60,000	2,775	984,636 sols	1,090

Source: United Nations Department of International Economic and Social Affairs, 1977 Statistical Yearbook, 1977, pp. 892-927.

succeeded in keeping pace with population growth. In Table IX the Consumer Price Index, which has a stable rate of 100 during the year of 1970, depicts a moderate to rapid rise for both Bolivia and Peru. The Consumer Price Index for the two border countries of Argentina and Chile are listed for comparison. Table X indicates the main shortrun economic indicators for 1972 and 1976.

Table XI classifies central government expenditures and receipts into sectoral categories. With regard to economic growth the most significant phenomena for Bolivia in 1976 was the expansion of the agricultural sector. However, despite the favorable external situation in respect to prices, the current account of the balance of payments showed an appreciable deficit in 1976. Imports, which had reached an exceptionally high level in 1975, continued to rise in 1976 but at a much more moderate rate. Illegal imports have become a major problem of increasing in intensity.

In Peru, the drop of nearly 19% in the volume of imports was an important factor in bringing the supply of goods and services down by nearly 1%. The growth of exports was the only dynamic factor in the economy activity. The increase of over 6% in 1976 contrasted with the drop in investment and consumption and the decline in export activities in the previous two years.

It is gratifying that experts in economics and politics seem to be coming more dissatisfied with national per capita gross domestic product or the gross national product as the single measure of development in a community. Indicators of development often conceal a lopsided distribution in terms of per capita income. If interpreted to express a midpoint around which most of the population is found, this can be a

TABLE IX

ECONOMIC STATISTICS--NATIONAL ECONOMIC SITUATION

	Gross Domestic Product				Per Capita Gross Domestic Product							
	In Millions of U.S. Dollars		Annual Growth Rate				Annual Growth Rate		Inflation	Consumer Price Index		Total Economic Aid 1974-1976 Per Capita in U.S. Dollars
Country	1972	1976	1972	1976	1972	1976	1972	1976	1972-1976	1970	1976	
Bolivia	1,357	1,768	5.1	6.9	271	319	2.6	4.2		100	267	10.94
Peru	7,917	9,559	5.8	3.0	551	592	2.8	0.0		100	242	4.94
Argentina										100	6,539	
Chile										100	86,565	

Source: United Nations Economic Commission for Latin America, Economic Survey of Latin America, 1976, pp. 65-71, 343-345.

TABLE X

ECONOMIC STATISTICS--MAIN SHORT-RUN ECONOMIC INDICATORS

	Annual Growth Rates			
	Bolivia		Peru	
	1972	1976	1972	1976
Gross Domestic Product	5.1	6.9	5.8	3.0
Per Capita Gross Domestic Product	2.6	4.2	2.8	--
Value of Export of Goods and Services	13.3	15.2	8.4	4.8
Value of Import of Goods and and Services	14.6	5.5	9.0	-16.4
Current Income of Government	21.7	19.2	10.3	25.9
Total Expenditure of Government	48.9	34.0	14.1	37.9
External Sector Trade Balance (Goods and Services)	-36.0	-95.0	51.0	-777.0

Source: United Nations Economic Commission for Latin America, Economic Survey of Latin America, 1976, pp. 65, 244.

TABLE XI

ECONOMIC STATISTICS--STRUCTURE OF GROSS DOMESTIC PRODUCT, 1971

Sector	Bolivia	Peru
Agriculture	18.0	14.3
Manufacturing	14.0	21.4
Commerce and Finance	14.0	--
Mining	10.4	5.0
Transportation	8.0	--
Government	7.9	8.8
Construction	4.0	3.7
Services	--	1.1
Petroleum	3.6	Included with Mining
Energy	1.9	--
Housing	--	5.6
Fishing	--	1.8
Other	18.2	38.3
Total	100.0	100.0

Source: United Nations Department of International Economic and Social Affairs, Yearbook of National Accounts Statistics, 1977, pp. 189, 905.

very misleading measure of the common person's actual economic situation. The typical distribution leaves the majority well below the per capita level with a much smaller elite group having incomes substantially higher than the supposedly central measure. For example, in South America, the income of the middle 60% is far below the national average.

> In Latin America the average income is only a numerical result and cannot be regarded as a typical income. Most people have incomes well below the average. Only a small proportion have incomes close to the average itself and this is offset by a small group at the top with incomes very far above the average (United Nations Economic Commission for Latin America, Income Distribution in South America, 1971, p. 14).

The following table (Table XII) indicates the importance of viewing this economic information in terms of the distribution as well as the level and amount of income. This chart indicates patterns of income distribution and their relation to social structures in the United States of America, South America in general, and the country of Peru.

For purposes of comparison with Table XII, Figure 1 provides an oversimplified view of class structures of the United States and South America. Comparison of Table XII and Figure 1 provides a general understanding of the distribution of income in comparison with the class structure.

Social organizations denote an important but elusive societal input. Organizations are created to accomplish tasks more effectively. People working in an organization can do more than the same people can singly. Therefore, the amount of production is related to the amount and effectiveness of societal organization.

As has been documented earlier, one of the major problems in

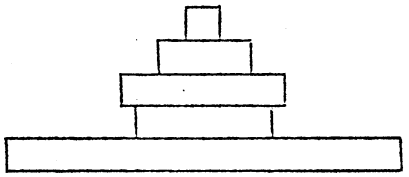
TABLE XII

ECONOMIC STATISTICS--DISTRIBUTION OF INCOME

Country	Income Share Received By				
	Poorest 20%	30% Below the Median	30% Above the Median	15% Below Top 5%	Richest 5%
Peru	2.0	10.0	28.0	26.0	34.0
South America	3.1	10.3	24.1	29.2	33.4
U.S.A.	4.6	18.8	31.1	25.5	20.0

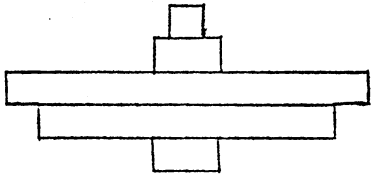
Source: United Nations Economic Commission for Latin America, Income Distribution in Latin America, 1971, p. 15.

SOUTH AMERICA



3.5% -	I -	1.5%
7.5% -	II -	12.0%
18.0% -	III -	42.0%
15.0% -	IV -	35.5%
56.0% -	V -	9.0%

UNITED STATES



Source: Hernandez, Jose, People Power and Policy, 1974, National Press Book, p.20

Figure 1. Class Structure of South America and United States

Bolivia is the intense density of population in the metropolitan area in contrast to the lowlands where the density is one person per square kilometer or less. In 1973 there were an estimated two million radio receivers in Bolivia with broadcasts reaching an average weekly audience estimated at three million. Since the importation of transistor radios in the 1960's the radio has become the most significant means of mass communication in the country. In 1973 Bolivia had one government owned television station broadcasting to an approximate 20,000 television sets in the city of LaPaz. In 1979 there were four television stations, each located in a major metropolitan city in Bolivia and each with the capability of broadcasting only to their specific metropolitan area. In 1975 Bolivia had 20,000 telephones.

In 1972 it was estimated that in Lima, Peru the population had at least one radio for every family in the metropolitan area. In the rural area it was estimated that 85% of the families had access to a radio. By 1975 there were over 350,000 telephones, and slightly over 368,000 television sets in the country of Peru (see Table XIII).

The social organization which relates most directly to the national vocational rehabilitation program is public health. In Bolivia the Ministry of Social Welfare and Public Health and 23 other agencies which make up the health sector are responsible for public health and medical care. With very few resources the Ministry has to serve practically the entire rural area and it is estimated that only 60% of the total population has access to health services in Bolivia. The high infant mortality rates, exceeding 250 per 1000 live births in some regions and averaging 154.6 per 100 live births for the country as a whole together for the high maternal mortality resulting from complications in

TABLE XIII

SOCIAL STATISTICS--ELECTRONIC COMMUNICATIONS

Country	Number of Telephones (1976)	Number of Radios (1973)	Number of Televisions (1975)
Bolivia	28,000	2,000,000	20,000
Peru	350,000	13,310,000	368,000
South America	9,900,000	53,000,000	19,000,000
U.S.A.	173,800,000	449,000,000	139,000,000
World	398,000,000	941,000,000	366,000,000

Source: United Nations Department of International Economic and Social Affairs, U.N. Demographic Yearbook, 1977, pp. 123, 597.

childbirth and the high incidence of preventable disease in children under fifteen years of age, confirm the priority that maternal and child health problems demand (see Table XIV).

Owing to the fact that not enough food is available and that what is there is being improperly utilized in the family unit, 43% of the children under five years of age suffer from various degrees of malnutrition. Generally speaking then, communicable diseases continue to be the main cause of the high rate of morbidity and mortality. As noted in Table XV, malaria, tuberculosis, leprosy, yellow fever, plague, and Chagas disease continue to be epidemic in various regions of Bolivia.

In Peru, a rough idea of the health situation can be gained from the following indicators for 1972. The overall birth rate per 1000 inhabitants was 42.0. The general mortality rate was 12.1. Infant mortality was estimated at 101.4 per 1000 live births, and maternal mortality was 1.9 per 1000 live births. Deaths from infectious and parasitic diseases accounted for 25.5% of all deaths, and the percentage of deaths without medical certification was estimated at 33.1%. Communicable diseases rank first among the causes of death, particularly among children under five years of age. The most frequent causes of death from diseases preventable by immunization were whooping cough, measles, and tetanus. Triatoma, plague, leprosy, tuberculosis, jungle yellow fever, hepatitus, and Chagas diseases remain epidemic in various regions of Peru. Figure 2 shows the principal causes of death in South America from 1973 to 1976.

The following tables (Tables XVI and XVII) provide information as to the preventive maintenance and rehabilitative services and facilities.

The coup d' etat of August 1971, which placed General Hugo Banzer

TABLE XIV

SOCIAL STATISTICS--PUBLIC HEALTH INDICATORS

Country	Percent of Government Expenditures for Health (1975)	Percent of Population Covered by Social Security (1975)	Total Deaths All Ages (1971)	Deaths Prior To Age 5 (1971)	Maternal Deaths Per 10,000 Live Births (1973-1976)
Bolivia	8	22	34,039	16,138	10.0
Peru*	5	17	87,335	48,205	1.9

Source: United Nations Department of International Economic and Social Affairs, U.N. Demographic Yearbook, 1977, pp. 153, 380.

*Excluding Jungle Indian Population.

TABLE XV

SOCIAL STATISTICS--HEALTH CONDITIONS, 1973-1976

Disease	Date	Country	
		Bolivia	Peru
Cases of Yellow Fever and Plague[1]	1976	42	2
Typhus[1]	1976	150	141
Ratio of Children Under 5 Years of Age Immunized With DPT Vaccine[2]	1972-1976	.036	.376
Percent of Deaths Among Children Under One Year of Age Assigned to Diptheria, Tetanus, and Whooping Cough[2]	1972	--	4.61
Ratio of Children Under 5 Years of Age Receiving Measles Vaccine[2]	1976	.112	.912
Ratio of Children Under 5 Years of Age Receiving Poliomyelitis Vaccine[2]	1976	.341	.672
Percent Change in Identified Cases of Tuberculosis[1]	1965-1970	+660.6	-18.8
	1970-1975	-59.6	-40.3
Number of BCG Vaccinations Performed[1]	1972-1976	33,513	4,265,880
Reported Cases of Chagas Disease[1]	1976	128	8
Active Leprosy Cases[1]	1976	1,705	2,708
Active Cases of Malaria[3]	1977	10,106	32,410

TABLE XV (Continued)

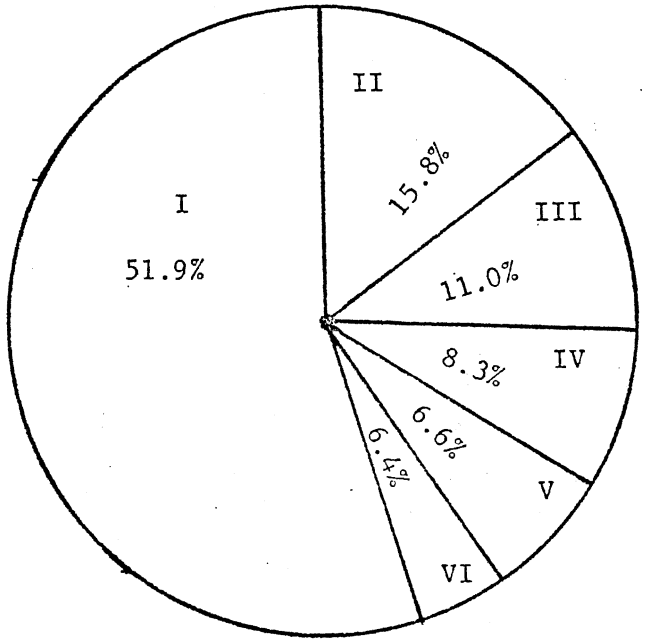
Disease	Date	Country	
		Bolivia	Peru
Percent of Children Under the Age of 5 Years with Malnutrition[4]	1976	43	

Sources: [1]Health Conditions in the Americas 1973-1976, WHO, 1977, pp. 15-81.

[2]Hechos y Cifras Sobre Salud en ias Americas; Boletin de la Oficina Sanitasia Pan Americana, Vol. 84, No. 1, 1978, p. 65.

[3]Servicios Desalud y Programas de Malaria, Boletin de la Oficina Sanitasia Pan Americana, Vol. 85, No. 5, 1978, p. 451.

[4]Disability Prevention and Reliabilitation, WHO Chronicle, Vol. 30, 1976, pp. 101-107.



I. Remainder
II. Diseases of the heart
III. Malignant neoplasms
IV. Influenza and pneumonia
V. Accidents
VI. Cerebrouascular diseases

Source: Health Conditions in the Americas 1973-1976, WHO, 1977, p.27.

Figure 2. Principal Causes of Death in South America 1973-1976

TABLE XVI

SOCIAL STATISTICS--TOTAL NUMBER OF HEALTH SERVICES, 1976

Country	Hospitals	Physicians	Dentists	Pharmacists	Nurses	Rehabilitation Physical Therapist and Others (1975)	Percent of Population With Access to Health Services
Bolivia	2,868	2,583	4,629	668	853	NK	60[2]
Peru	435	8,023	2,542	2,422	7,563	55	
U.S.A.	7,336	348,443	107,320	132,899	962,800	24,000	86

Sources: Health Conditions in the Americas 1973-1976, WHO, 1977, pp. 320-323.

[2]The Americas, WHO Official Records,1977, Nos. 236-239, p. 429.

TABLE XVII

SOCIAL STATISTICS--NUMBER OF PROFESSIONALS
PER 10,000 POPULATION, 1976

Country	Doctors	Dentists	Nurses	Hospital Beds
Bolivia	4.6	8.1	1.5	21.0
Peru	5.0	1.6	4.73	22.1
U.S.A.	161.3	49.7	446.4	65.8

Source: United Nations Department of International Economic and Social Affairs, U.N. Demographic Yearbook, N.Y., 1978, pp. 123, 547.

Suarez in power, was, by some calculations, Bolivia's 187th uprising against a seated government in its 148 years of independence. A few months before that coup, then President Juan Jose Torres, who had himself attained the office through a coup d' etat, commented that the biggest problem for a Bolivian President is survival. Speaking in terms of the government as a social organization, the phenomena of legitimacy is the general population's degree of acceptance of the way in which society is organized. It seems well accepted that since the 1950's the masses of population throughout Bolivia and Peru as well as other South American countries have come to believe that they and their children are entitled to far better real wages, food, housing, dress, educational opportunities, and health services (Smith, 1975). The two major aspects of system legitimacy to be discussed are wage and labor information and housing utility information. Average wages for 1975 as well as unemployment for the year 1976 are found in Table XVIII.

Both Bolivia and Peru are notable for their high population growth and rapid urbanization. Housing construction costs are high, the volume of the construction industry is low and the labor force is lacking in many basic skills. In 1975 in Bolivia, 60% of the dwelling units were not habitable. As has been pointed out, the problem is not only a low average per capita income, but also income distribution, the literacy rate, inadequate health standards, etc. In Peru, a two-year graduate program concerned with urban and regional development has been introduced for students from all countries of the hemisphere. It can be seen from this activity that the major problems of urban development and housing are of considerable importance and being attended to by the

TABLE XVIII

SOCIAL STATISTICS--WAGES AND UNEMPLOYMENT

Country	Average Wages in Manufacturing in U.S.A. Dollars Per Week in 1975	Unemployment - 1976	
		Number	Percent
Bolivia	21.36	63,000	3.2
Peru	29.75	258,300	5.2
U.S.A.	207.60	7,288,000	7.7

Source: United Nations Department of International Economic and Social Affairs, 1977 Statistical Yearbook, 1978, pp. 91-93, 673-675.

governments of both countries. In Table XIX information as to housing and utilities are identified.

National Rehabilitation Process

The results of the data collected from the administered interview are summarized in terms of the international guidelines being used as a basis for the present study.

Identification

Neither Bolivia nor Peru has surveyed their national population in an effort to identify the approximate number of disabled individuals in their country. Estimated population of disabled listed in Table XX represents estimates made by the rehabilitation professionals. The professionals of both countries were unaware of a legal definition or an official definition of vocational rehabilitation. Basic eligibility requirements for both nations included identification of disability and a favorable prognosis. Professionals in Peru indicated that a third important criteria was the age of the disabled individual, specifically stating that youth were a priority. Professionals in Peru also indicated that prior work experience and educational level were considered in terms of basic eligibility requirements. The listing of the approximate number of vocational rehabilitation programs includes all governmental rehabilitation programs (see Table XXI).

Vocational Assessment

A typical vocational rehabilitation process for the disabled Bolivian begins with medical evaluation, physical restoration, and

TABLE XIX

SOCIAL STATISTICS--HOUSING AND UTILITIES, 1977

Country	Total Number of Households	Average Size Persons Per Household	Owners Percent	Percent of Housing Units With: Habitable Dwelling Units (1975)	Three or More Persons Per Room	Water Piped Inside Housing Unit (1976)	Any Type Toilet (1976)	Electric Lighting
Bolivia	1,051,000	4.4	69.3	40	--	14.4	14.3	33.0
Peru	2,772,000	4.9	69.5	--	36.8	25.3	24.7	32.1

Sources: [1]United Nations Department of International Economic and Social Affairs, 1977 Statistical Yearbook, 1978, pp. 880-881.

[2]Disability Prevention and Rehabilitation, WHO Chronicle, Vol. 30, 1976, pp. 329-332.

TABLE XX

SOCIAL STATISTICS--RESPONDENT'S ESTIMATES OF DISABILITY RELATED INFORMATION

Type of Disability	Estimated Number of Disabled		Estimated Number of Disabled Served by Vocational Rehabilitation Programs	
	Bolivia	Peru	Bolivia	Peru
Orthopedic	2,066	525,000		2,000
Disabilities of the Nervous System (MS, CP, Polio)	1,983	12,500		500
Circulatory Disorder (Cardiovascular)	300	10,000		--
Mental Retardation	1,867	916,667		3,000
Respiratory Disorders (TB)	660	3,500	60 Percent*	3,500
Visual Disorder	2,333	3,333		1,500
Speech and Hearing Disorders	350	474,000		1,000
Endocrine Dysfunction (Diabetes, arthritis)	3,250	--		--
Neuropsychiatric (MI, Alcohol, Drug)	333	300,000		2,500
Other (itemize)	--	100,000		--

* Percent of total estimate and number of disabled

TABLE XXI

SOCIAL STATISTICS--RESPONDENT'S ESTIMATES OF NUMBER OF NATIONAL VOCATIONAL REHABILITATION PROGRAMS

Area	Total Number of Programs	
	Bolivia	Peru
Vocational Evaluation	1	1
Identification of Disabled	2	5
Physical Impairment	3	15
Mental Illness Impairment	1	18
Mental Retardation Impairment	1	13
Drug Abuse Impairment	1	3
Alcohol Abuse Impairment	1	10
Rural Vo-Rehab	0	0
Special Education	1	2
Sheltered Workshops	1	2
Prisons	0	3

physical therapy as the major emphasis, and can continue with vocational training, possible specialist evaluation, lowest emphasis is placed on counseling. In Peru, the respondents basically agreed that medical, psycho-social evaluation, vocational evaluation, physical restoration, vocational training, and job placement represented the typical process a disabled person will experience from the time they have been identified through the termination of the case.

In Bolivia, the rehabilitation philosophy indicates that the program is geared to keep the disabled individual at home and under local care rather than moving the disabled to institutions for specialized care. However, in Peru, there was a difference of opinion. Half of the respondents indicated that the disabled should be kept at home under local care, and the other half indicated that the disabled should be institutionalized for specialized care. All professionals in both countries emphasized the need for specialized vocational training for the disabled. However, these same individuals stressed the lack of facilities and trained personnel to realize this aspect of rehabilitation.

Vocational Guidance and Pre-Vocational Preparation

To date, there is no official definition of vocational rehabilitation in either Bolivia or Peru. Although special education in Peru is a recognized and well established aspect of education, it is not yet considered as aspect of vocational rehabilitation.

Vocational Training

In Bolivia the respondents indicated that there is an emphasis to place the disabled in employment according to the individual's skills and desired vocation. Respondents also indicated that in terms of vocational placement, it is most important to know the employer rather than the job concerned. All respondents also emphasized the importance of training the client for the job as opposed to adapting the job to match the disabled or providing on the job training. All respondents agreed that job placement is primarily accomplished through reference with a specific employer. The Bolivian rehabilitation professionals indicated that listed public service agencies was the least effective method of vocational placement. Two of the respondents were aware of economic support available for the disabled who were involved in vocational rehabilitation training. Specifically this was identified as monthly payments, not made to the disabled child, but rather economic funds moved within the government bureaucracy to pay for room and board.

In Peru the disabled are placed in employment according to employment demands rather than to an individual's skill or preferred vocational interests. Respondents were split in terms of placement approaches. Rehabilitation professionals from Peru indicated that knowing clients' abilities is as important as knowing employers' abilities and limitations in the place of employment. However, all respondents indicated that matching a specific disabled individual to the actual employment situation did not appear to be of great consequence. As in Bolivia, personal reference or personal contact is a most frequent method of monitoring the labor market and the newspaper was the least

effective means.

Professionals in Peru indicated that during vocational training food, lodging, and transportation are provided to a few eligible disabled students. In addition, equipment and tools under specific situations can be loaned or leased to the disabled.

Placement and Sheltered Employment

In Bolivia not all the respondents were aware of Bolivia's single sheltered workshop. This sheltered workshop began in 1942 on a part-time, temporary basis, was established in 1950, and became an official program under the Ministry of Health in 1973. The function of the sheltered workshop was seen by these professionals as a place to train the disabled to competitively work with "normals" in society or where the disabled would learn to work, not beg, for a living. These respondents identified four areas of sheltered workshop experiences. These emphasize the importance of self-employment, mainly in terms of tailoring, sewing, shoe repair, and the area of commerce, or the buying and selling of goods. Minimal emphasis was placed on public service or governmental positions and agriculture.

The first Peruvian governmentally supported workshop was opened in 1975. In terms of the function of the sheltered workshop respondents indicated that the sheltered workshop's function was to change the emphasis of rehabilitation from that of medical to a vocational emphasis and to provide a generally positive atmosphere for the disabled. The major emphasis of the workshop as indicated by the respondents is that of self-employment, most commonly that of shoe repair, tailoring, and clerical services. In addition, basic homebound information was also

emphasized as a sheltered workshop goal. Respondents identified two workshops emphasizing special crafts and a transitional idea of workshops. These sheltered workshops do not provide long-term employment but provide transition for the disabled back into society.

Development of Employment Opportunities for the Disabled in Less Industrialized and Rural Areas

Bolivian respondents were in agreement that there is only one comprehensive rehabilitation center which is located in the national capital of LaPaz. In terms of specific rehabilitation programs the respondents did not list programs in any other city in the nation for which the Department of Rehabilitative Services is responsible. In terms of communicating the availability of rehabilitation services outside of the capital and the major cities into the less industrialized and rural areas, the respondents indicated two main methods of communication. All four respondents emphasized the use of television as a method of communicating this information. Least emphasized was the use of small one-page pamphlets. All respondents agreed that the resettlement from the rural areas to LaPaz is a necessary part of the rehabilitation process.

In terms of the types of vocational training available for the disabled from rural communities, respondents indicated that there were only two kinds of vocational training for the disabled from rural areas. Those two areas are industrial training and home-bound training. Home-bound training was described as the disabled learning to meet their own needs, thus freeing nondisabled individuals to be engaged in other

activities. Essentially there are no rural vocational rehabilitation programs, but rather rehabilitation programs are available for the disabled from the rural communities within the metropolitan areas. In response to the item questioning vocational rehabilitation problems in rural areas, all respondents agreed that the major problem was a low national economic priority or simply the lack of money. The two items that ranked second place were the lack of basic rehabilitation facilities and disability oriented preventive rehabilitation measures. All respondents indicated that Lima has the only comprehensive vocational rehabilitation center in Peru. Respondents then indicated that there is one major rehabilitation facility in Ariquipa. The respondents identified approximately 350 rehabilitation programs which are under the direction of the Ministries of Health, Education, Special Education, Social Security, and Labor, as well as private institutions which receive governmental support. It should be noted that 277 of the 350 rehabilitation programs are located in the metropolitan area of Lima. Respondents ranked the methods of mass communication of rehabilitative services to the general public from highest to lowest as follows: (1) television, (2) radio, (3) newspaper, and (4) posters and pamphlets. It was also indicated that there have been special campaigns on television which emphasize the needs of one special person or a small group of people. The television, publications, and special campaigns are basically an appeal made to the metropolitan area of Lima and do not include other areas of the country.

Specifically, in terms of rural rehabilitation individuals who are disabled in the rural areas come to centralized areas to receive rehabilitative services. In addition, there is at least one program which

has an experimental program in cultivation specifically geared for the disabled from the rural population. None of the respondents were aware of any mobile rehabilitation units of any kind being available in the rural area or nonindustrialized areas of Peru. In reference to the more common problems with rural rehabilitation all respondents ranked attitude of the disabled as evidenced by family and community as the most important problem. Following this emphasis are the lack of basic rehabilitation facilities and low national economic support. Listed as not important or minor emphasis were preventive rehabilitation and under utilization of manpower.

Legislation, Administration, and Finance

Bolivian respondents indicated that there is no formal legislation or informal policy requiring employment of qualified competent disabled individuals in governmental or private employment. Administratively the Nation Department of Rehabilitation in Bolivia is under the direction of Ministry of Public Health and Welfare. Structurally, all respondents agreed that there is not a designated agency for vocational rehabilitation. The national rehabilitation program is not service oriented but is charged with the coordination of inter-institutional services. Specifically, all respondents view rehabilitation as being a governmental rather than private responsibility. They also indicated that rehabilitation is basically medically and psychologically oriented rather than either vocational or social. All respondents also indicated that education is not a direct part of the rehabilitation process.

The respondents also indicated that all administrative decisions are made at the Ministry level rather than at the rehabilitation

department level. All funding for the national rehabilitation program comes through a national tax. Respondents also indicated that there is not an annual budget for the general national rehabilitation program, and volunteer and foreign organizations do not economically contribute significantly toward the overall rehabilitation program.

In reference to identification of the staff in vocational rehabilitation programs there was a difference of opinion between the respondents as to the exact number of employees in the national rehabilitation program. The exact number is not yet known but it was estimated that the total number of employees in the national rehabilitation program was six. Average years of experience at rehabilitation varies in a range from to twenty years and averages six years. The respndents stated that only medical doctors and social workers have advanced degrees, while administrators, counselors, and support personnel usually have high school degrees. In the National Department of Rehabilitation there is no inservice training. The respondents indicated that a majority of the professionals in the field of rehabilitation work within the Department of Rehabilitation. However, related professionals are located in the field of social work, medicine, Social Security, the Department of Labor, and in the field of education. There is no local institute for the education or training of rehabilitaqtion personnel. Professionals receive advanced degrees most commonly from universities in Brazil, Argentina, and Peru.

In Peru all respondents indicated that there is no legislation providing for the employment of disabled in either governmental or private employment. However, there are specific plans which are being discussed and coordinated between the Ministries of Labor, Education, and Health

to propose such legislation.

All respondents were aware that there is an official agency for vocational rehabilitation and that the agency is administratively placed in the Ministry of Health. All respondents emphasized that medical, psychological, social, educational, and vocational evaluation take place as a function and responsibility of the National Department of Rehabilitation.

The respondents were unable to agree as to the placement of the function of personal, social, and vocational guidance. Specifically the discrepancy was whether these services were provided as a part of the National Department of Rehabilitation or whether they occurred under the auspices of education and labor. The same discrepancy was true of training as a majority of the respondents indicated that the vocational and special education was the responsibility of the Department of Rehabilitation while one respondent indicated that there is, in effect, no general vocational or special education within the Department of Rehabilitation and that vocational and special education were a function of the Department of Education.

All respondents agreed that the National Department of Rehabilitation coordinated the four functions of evaluation, guidance, training, and vocational placement. The definition of professional vocational rehabilitation terminology in terms of goals and objectives is under the complete control of the National Department of Rehabilitation. The Ministry of Health controls budget decisions and technical advice. The Department of Vocational Rehabilitation shares the following responsibilities of publicity, promotional legislation, personal decisions, and regionalization.

Respondents were aware that the annual budget for the National Department of Rehabilitation for 1979 was approximately 121 million soles or 20 million dollars, U.S. The major funding resource is through the national budget appropriations as one department of the Ministry of Health. The following additional economical sources were ranked from high to low as follows: (1) fund raising projects, (2) loan of personnel, free use of premises, and (3) support by qualified volunteer organizations. Contributions to the National Vocational Rehabilitation program from volunteer and foreign organizations is negligible or nonexistent. However, respondents who were aware of this type of aid indicated that these sources emphasized medical assistance and prosthetic devices.

Respondents indicated that approximately 20% of the total vocational rehabilitational work force was labeled as administration and that the majority of those individuals have high school educations. Consultants consist of approximately 30-40% of the total work force and a majority of those individuals have university degrees. Professional counselors and psychologists make up approximately another 30% of the total work force and these individuals also have university degrees. In terms of average years of experience in rehabilitation, respondents indicated that psychologists have up to 10 years of experience in the department while other professionals specifically medical personnel, have very short term experiences since rehabilitation seems to be a stepping stone to future employment. There is no in-service training for rehabilitation personnel in Peru. A majority of the rehabilitation personnel are employed in the department of National Department of Rehabilitation. However, other professionals who coordinate and consult with

professionals within this department come from the Ministries of Health, Education, and the Ministry of Labor.

There are approximately 450 professional staff members in the National Department of Rehabilitation and consultants from other areas dealing directly with that department in the nation of Peru. A majority of these professionals with the exception of the medical staff have been educated in Lima. Medical staff for the most part have been educated outside of Peru.

Research

There are no professional rehabilitation journals or national or international publications in reference to rehabilitation available in Bolivia. However, each of the respondents indicated that rehabilitation journals would be useful. Only one of the respondents was aware that one publication has been published by personnel of the National Vocational Rehabilitation Program in the last five years.

In Peru respondents also indicated that professional rehabilitation publications are not available for resource purposes. However, the respondents indicated that there are specific plans to acquire international rehabilitation publications. Two of the respondents indicated that they are aware of rehabilitation articles that have been published by personnel in the National Rehabilitation Program in the last five years. Of the three publications two are national publications identifying the services available and economic needs to achieve departmental objectives. The third publication is a journal article published in a Brazilian neurological journal by a department of rehabilitation physician.

International Cooperation

The Bolivian professional indicated that the national rehabilitation program in Bolivia is primarily a program of identification and diagnosis. All respondents indicated that an inter-South American rehabilitation organization would improve cooperation between the national rehabilitation agencies. None of the respondents were aware of any international vocational rehabilitation resources being used by the National Department of Rehabilitation in Bolivia.

The professionals in Peru were evenly divided when asked to identify the basic orientation of the National Rehabilitation Program. The two orientations that were listed are: (1) a program primarily of identification and diagnosis and (2) centralized treatment for specialized disabilities. The difference of opinion seems to indicate a transition between the basic identification and diagnosis orientation to a higher level of vocational rehabilitation sophistication.

All respondents indicated that inter-South American rehabilitation organization would improve cooperation between rehabilitation agencies and be beneficial to the nation of Peru. Two of the respondents were aware that United States vocational rehabilitation experts have visited Peru twice in the last five years.

Vocational rehabilitation professionals in Bolivia list the following positive trends in their national program. The two emphases placed on positive trends are: (1) the potential for the rehabilitation program and (2) the equality of the disabled within the vocational rehabilitation program. Listed as somewhat less innovative are the following two trends: (1) medical emphasis in terms of restoration and

(2) the equality of the disabled within the vocational rehabilitation program. Listed as somewhat less innovative are the following two trends: (1) medical emphasis in terms of restoration and (2) acquiring employment for the disabled. In terms of specific needs of vocational rehabilitation in Bolivia, all the respondents listed the following three basic needs: economic support, material and technical support, and professional rehabilitation training.

In Peru respondents indicated that the trends of the national program are moving the emphasis of rehabilitation from medical to vocational and increasing the ability to work with special disability groups. Also indicated in terms of positive rehabilitation trends were identification of the disabled, adequate economic support, and the further education of the over-all general population as to the realistic assets and limitations of the disabled. Estimating the priority needs of the national vocational rehabilitation program in Peru respondents listed additional economic support and the education of technical personnel as major needs. Listing as secondary needs are technical materials and the professional training necessary in the field of the psychology of rehabilitation of the disabled as a vital aspect for the re-entry of the disabled into society.

The opportunity for reviewing archivial data in the national capitals of LaPaz, Bolivia, and Lima, Peru, were made available during the summer of 1979. The following capitalizes basic data retrieved out of the archives in both national capitals. In Bolivia, in 1976, a national plan for the implementation of preventive rehabilitative services was presented to the Minister of Health. In this document it is estimated of the 4,687,718 inhabitants of Bolivia, approximately

1,000,000 persons have the need of rehabilitative services. Of these 1,000,000, the document states that approximately 15,000 receive rehabilitative services.

In 1978 a second document, originating in the Department of Rehabilitation, concludes that there are approximately 1,000,000 handicapped individuals in the population with approximately 20.55% receiving services.

In the Institute of Infant Rehabiitation, which is the major institute for physical rehabilitation in the country, the final report for the year of 1978 to the Ministry of Health indicates that there were 1,003 patients attended to throughout the year. Of these, two-thirds were female and approximately 73% were under the age of five.

One of the respondents doing the interviews stated that the most difficult situation he has to deal with is convincing doctors that rehabilitation is something more than a scalpel. One of the orthopedic surgeons who deals with rehabilitation as a regular part of his practice, stated the most problematic aspect of orthopedic surgery in rehabilitation is the acquisition of brace material. Aluminum brace material is not available in the country of Bolivia. Because of its scarcity, this author was informed that the same method of acquiring brace material was used in 1979 as was used in 1973 when this researcher worked in the field of vocational rehabilitation in Bolivia. This method is the acquisition of aluminum parts from planes that crash within the national boundaries of Bolivia. In yet another document this researcher had identified five national laws all with reference to vocational rehabilitation. Only one of the five laws will be identified specifically. This is law number 45-60 which institutes a ten centavo

tax for each admission ticket sold to a movie theater during the month of December of every year. These funds are specifically earmarked for use in the special education of handicapped children.

In Peru this researcher was presented with a copy of the only two federally funded publications in reference to rehabilitation in Peru. The first document, whose translated title reads Recourses for Rehabilitation in Peru, indicates that at any one time between 7% and 20% of all the children need special rehabilitative attention, and that of the adult population, approximately 33.5% of the population was disabled. Of this population, in 1976, it had been estimated that 5.2% of the population was unemployed and 44.2% was underemployed as a direct result of their handicap. Considering the blue-collar physically disabled class only, it is estimated that 5.2% are adequately employed, 44.2% are underemployed, and 50.6% are unemployed. It was further estimated that if the government was to employ the unemployed and the underemployed handicapped individuals in the country of Peru, it would cost approximately 95 billion soles per year. This document identifies that the far-reaching rehabilitation program consists of over 250 rehabilitation programs. These are all federal or federally supported and are found in all aspects of the federal government. In terms of personnel, there were approximately 1,131 professionals in 1978 working in the field of rehabilitation which includes the Ministries of Health, Welfare, Labor, Transportation, and other sub-agencies found in other Ministries. The following table (Table XXII) indicates an estimation of the number of individuals affected by the five major categories of disabilities and the percent of that number receiving services.

TABLE XXII

SOCIAL STATISTICS--NATIONALLY DOCUMENTED SOURCES OF TOTAL NUMBER OF DISABLED AND DISABLED RECEIVING SERVICES

Type of Disability	Estimated Number of Disabled		Estimated Percent Disabled Receiving Services	
	Bolivia	Peru[1]	Bolivia	Peru[1]
Mental Retardation		1,796,830		10
Speech Pathology		628,890		10
Orthopedic	100,000 *	718,732	15*	50
Visual Disorder		35,936		10
Learning Disability		253,583		10

* Total

Source: [1]Comite Multisectoral Permanente de Rehabilitation, Recursos de Rehabilitation en el Peru, 1978, pp. 1-3.

The second publication's translated title is The Second National Congress of Rehabilitation, a summary of the actual Congress held in August of 1977 in Lima, Peru. This 300-page volume effectively outlines the entire field of vocational rehabilitation. This text covers the themes of architecture, transportation, family counseling, sports and recreation, vocational preparation, training and placement, and the general welfare of the disabled. It is a remarkable text indicating that a great deal of professional preparation has gone into its preparation and also indicates to this investigator that rehabilitation in Peru is progressing at a remarkable rate.

CHAPTER V

SUMMARY, CONCLUSIONS, AND RECOMMENDATIONS

Summary

Throughout the world vocational rehabilitation is being offered as the hope of the physically disabled individual, and yet everywhere one observes different, contrasting, and even contradictory views on the goals, content, and methods of vocational rehabilitation. The present study provides alternative ways of thinking about unique socio-economic influences and the field of vocational rehabilitation. The overall research task is conceptualized into three separate but related research problems: (1) a description of the national vocational rehabilitation program; (2) identification of relevant social, economic, and demographic characteristics of the country, and (3) the trends and needs of national vocational rehabilitation programs. The major interest of the study is to provide an accurate description of the national vocational rehabilitation program in a multi nationstate research study.

The national vocational rehabilitation programs were identified by responses on a guided interview instrument constructed by this author. Subjects were selected from equivalent administrative levels of the national vocational rehabilitation programs in Bolivia and Peru. Selection was made by the investigator with specific considerations given to accessibility of the subject and the subject's knowledge of the

requested information. The subject population consisted of four vocational rehabilitation professionals within the administration of each national vocational rehabilitation program.

The guided interview form of thirty-one questions was presented to each subject individually. The results of this instrument were collected together with a search of the literature at the international as well as national level. The differences between information acquired through research of the literature at the international and national levels and on the recorded results of the interviews have been noted.

Conclusions

The underlying causation and pathology of disabling conditions appear to have, in all probability, a relationship with certain habits of life such as diet, education, and the nature of physical activity as well as with occupational and environmental factors and with certain socio-economic factors. The trend of research activities is to place special emphasis on the collection and study of accurate scientific data regarding the incidence and prevalence of disabling disorders. In countries where medical rehabilitation services are at an early state of development a shortage of technically qualified personnel is acutely felt. Although progress in vocational rehabilitation in this developing region of the world is dynamic, their social programs are only in the early stages of evolution. The rate of progress is still hampered by the inadequacy of human and materials resources.

The identification of socio-economic concepts in Chapter III identify three broad classes of variables as important determinants of the national vocational rehabilitation program: (1) natural assets

including demographic information and the amount and value of natural resources; (2) produced assets, which include educational, academic, as well as economic information involving productivity, and value of consumer goods; and (3) social assets, emphasizing specific social organizations and the legitimacy of the basic political economic system. The extent of national support for the national vocational rehabilitation program is influenced, then, by these aggregate characteristics; namely, demographic characteristics, socio-economic characteristics, and basic socio-cultural information.

In Table I (page 41) the population of both Bolivia and Peru are identified. In 1977 Bolivia had an annual rate of increase of 2.7, a life expectancy at birth of 46.8 years, and it is estimated that the population will double in 27 years. The estimated population for the year 2000 for Bolivia is approximately 10,100,000. To make this estimate, statisticians in the United Nations assumed that in South America the birth rate, although reduced, would remain high and that there would be a regular decline in mortality. Peru's population was listed as 16.52 million with an annual rate of increase of 3%. Life expectancy at birth has been identified at 51.64 years with 24 years to double the population. The death rate in Bolivia for 1977 was 18 per 1,000 with the death rate for children below the age of five at 77.3 per 1,000. The death rate per 1,000 for Peru in 1975 was 11.9 with the rate of infant death at 58.2. Specifically, in Bolivia, the number of deaths prior to age five for 1966 is listed at 16,138 deaths. In Peru in 1971 deaths prior to age five were 48,205.

The nation-wide density for Bolivia is 5 persons per square kilometer with 35% of the population living in urban areas. There were

only five cities in 1975 with a population of over 100,000. In 1975 Bolivia had over 1,000,000 households, only 40% of which were habitable. Of the total number of households only 14.4% had water piped inside of the housing unit and 33% had electrical lighting. In 1975 Peru had a national density of 13 where 60% of the population lived in urban areas. In Peru in 1975 there were ten cities with 100,000 population or more. The total number of households in Peru in 1977 was 225,000,000. Of this total number of households approximately 25% had water piped inside the housing unit and 32% had electrical lighting.

Education found in Bolivia and Peru is limited basically to primary education. Secondary students frequently must move to urban areas to pursue their education. As noted in Chapter IV availability of professional education is frequently sought in the exterior. Prominent individuals who dominate the economy and politics of South America usually send their children to urban schools or to schools in foreign countries. Therefore those individuals with investable funds have little interest in improving local education.

In Bolivia 34.7% of all students enrolled in primary school complete all six years. Twenty-two percent of all children enrolled finish secondary school. In Peru, approximately 30% of all enrolled students finish primary school, and approximately 31% of all children finish secondary school. These figures do not reflect the number of children who never enroll in school. The literacy rate which is vaguely defined as the ability to read a newspaper and write a simple letter is 40% in Bolivia and 61% in Peru.

Practically all of the developing countries which include Bolivia and Peru are desperately short of trained administrators, physicians,

teachers, and engineers. But of even greater concern is the shortage of technicians who have received the type of training which can be given in a vocational high school. Skilled craftsmen, physical therapy assistants, social workers, and medical assistants seem to be almost completely lacking in many areas.

It seems obvious that a massive effort to promote higher levels of literacy in societies such as Bolivia or Peru does not necessarily lead to the maximum stimulation of economic enterprise. South American universities have traditionally existed to train young men for the honored professions of medicine, law, engineering, and priesthood. Thus, the college graduate instead of becoming a dynamic element in the country's progress simply develops into part of the intellectual proletariat. One of the most curious aspects of the educational situation is the persistent tendency of the few highly educated specialists to leave their own countries for work in the United States or Europe. Development requires educated manpower but a provision of educated manpower does not necessarily lead to development.

It is not an unreasonable argument that a person who has the ability to receive a diploma as a law clerk with a little bit of additional effort can become a lawyer. Prestige, traditionally, has been associated with the aristocratic land holding, conspicuous consumption, religious and legal occupations, and the literary and artistic life. The attitude toward a technical pursuit has ranged from condemnation to hostility. In addition, social, scientific, or economic innovations have been suspect as immoral or at least nontraditional. This educational trend of having a population which is either educated to the point of expertise or uneducated results in a void of technical

expertise. Technicians, supervisors, and foremen who supplement the more specialized work of the professional are simply not available. This dilemma can be demonstrated by the following illustration of the medical profession in the United States and Bolivia. Table XVI (page 73) indicated that although there was over 35 times better coverage for doctors in the United States the provision of nurses was over 298 times better. From another point of view, in the United States of America there are 2.7 nurses to every doctor. In Bolivia there are 3 doctors to every nurse.

Whatever the diversities among the two countries they have in common a need for higher level and more pervasive structure of the technology of vocational rehabilitation. Such innovations would include use of more modern counseling skills, surgical techniques, modern equipment, and overall process for rehabilitation. To realize these changes educators, scientists, physicians, therapists, and nurses are needed. If trained personnel, both professional and technical, are not available, it will be idle to speak of national economic growth.

It is common knowledge that the increase of population requires considerable capital investment in order to support the existing standard of living of the population. The range of publicly financed social services has greatly increased but the distribution of these services has continued to be very uneven among both national regions, urban and rural settings, and among occupational and income groups. In the expansion of services, education has had the leading role both in the proportion of resources absorbed and the importance and complexity of its impact on society. The expansion of health services has also been important in both countries, as a decline in infant mortality and

an increase in life expectancy indicate. Funds spent for buildings of schools, hospitals, as well as land reclamation, and expansion of production capacities of the plants are all referred to as demographic invertments. The higher the rate of population growth, the more is the share of the demographic investments. These demographic investments for the two countries of Bolivia and Peru include the vital areas of food, shelter, education, public health, basic economic stability, as well as a variety of other basic life needs.

The main economic indicators for both Bolivia and Peru indicate that the national ability to control prices and exports is restricted as a result of the limited natural resources that each country has to offer to the international market. On the other hand, the flooding of South America by cheaply made products of European, American, and Japanese materials have stifled local craftsmen and small entrepreneurs. At the same time the greater part of production is carried out by unskilled labor cheaply and easily obtained. Thus, there is little stimulation for technical development and education, and in spite of per capita economic conditions which tend to keep pace with the gross national product, there is a tendency for capital to flow from the underdeveloped to those countries which offer wider opportunities for investment, larger returns, and greater stability. In addition, the squeeze between the flow of external resources and the outflow of debts, and the readmittance of profits give rise to a balance of payment difficulties that chronically threaten to bring economic growth to a halt in both Bolivia and Peru. For a number of reasons these South American countries have contracted external indebtedness on terms less favorable than other developing regions. This squeeze has been most severe in

Bolivia and Peru and has resulted in a sluggish export expansion and relatively small foreign exchange earnings.

The annual growth of the gross domestic product for Bolivia in 1976 was 6.9, somewhat ahead of the rate of increase of the population. For Peru the annual gross domestic product was the same as the annual rate of population, or 3.0. Inflation over the period of 1972 to 1976 for Bolivia was 190% and Peru 102%. Where the consumer price index was stabilized in 1970 at 100 for all countries, in 1976 Bolivia had a consumer price index of 267 and Peru 242. Although this is a substantial rise it should be noted that the consumer price index for Chile was also fixed in 1970 at the constant rate of 100 and in 1976 rose to 86,565.

The per capita gross domestic product for Bolivia in 1976 was $319 and Peru $592. This indicates the average income; however, it cannot be regarded as a typical income. Most people have incomes well below the average and only a small portion of them come close to the average itself and this is offset by a small group at the very top with incomes very far above the average. Given the limitations of the average income concept, a supplementary and perhaps clearer way of looking at the distribution is by comparing incomes of the different socio-economic groups with the median income and also directly with each other. In Peru, for example, 60% of the total national income is shared by only the richest 20% of the population. The middle 60% of the population shares 28% of the total distribution of income and the poorest 20% of the population share in only 2% of the income. It is obvious at this point that the financial cost of rehabilitation prevents most Bolivian and Peruvian nationals from seeking and/or receiving vocational rehabilitation services. While consumption has diversified and patterns have changed

there is no widespread evidence of significant improvement for the low income majority in the three most basic components of the level of living or food, shelter, and health care. Health services are inadequate in quantity and quality especially in rural areas. In the recently created slums brought about by the ever-increasing urbanization in both countries, social services are inadequate. Through a lack of education, masses of the population are unaware that they can contribute to their own health betterment. Health problems are the direct result of an aggregate of factors that condition the diseases as well as their distribution in each society. These are factors of a biological, economic, historical, and cultural nature. The absence of safe water supplies and of facilities for sanitary collection and disposal of human waste, refuse and industrial waste, and the high incidence of sickness from communicable diseases are still the prime environmental problems in Bolivia and Peru. Available data show that Bolivia and Peru are beset by infectious diseases, undernourishment, poor sanitation, unhealthful housing and working conditions, illiteracy, lack of proper clothing, and a low per capita real income. These factors together contribute toward a high general mortality and, more specifically, an extremely high mortality in children under the age of five.

The findings of the present study suggest that the trends and needs of the national vocational rehabilitation programs in Bolivia and Peru are influenced by such demographic characteristics as diet, occupations, communications, transportation, and access to educational and medical facilities. However, these socio-economic characteristics are subject to constant pressure toward change and their influence on vocational rehabilitation will be altered in future years. For example, the

national balance of trade which currently supports the general budget from which the national vocational rehabilitation program of Bolivia is funded will be directly affected by either a favorable or unfavorable future balance of trade. Future research could further refine and identify specific relationships between the national vocational rehabilitation program and the socio-economic characteristics which would explain the uniquenesses and similarities among national programs.

In spite of the essential differences pointed out, it seems possible to isolate some common major trends which have characterized the evolution of vocational rehabilitation in Bolivia and Peru. These major trends may be summarized as follows: (1) increased governmental responsibility; (2) increased emphasis on the family; (3) continued development of assistance toward self support; and (4) continued emphasis on the training of vocational rehabilitation personnel. Specifically in Peru, increased emphasis has been placed on legislative aid for the establishment of services as an integral part of broader national services for improvement of the family and community levels of living.

The description of vocational rehabilitation in Chapter II emphasizes the development of rehabilitation facilities and programs throughout the developing countries of the world. While few studies involve the countries of Bolivia and Peru, the relationship between the Bolivian and Peruvian struggle for the further development of their vocational rehabilitation programs are similar to the experiences of other developing nations at an earlier time in their development.

The relationship between rehabilitation and a national population is usually analyzed in terms of economic trends. This does not mean that good physical health is not recognized as wealth for each human

being, but acknowledges that a social service it requires an investment of funds from the national income. Prevention of diseases, rehabilitation, and the extension of life are interpreted by the effects they have on the investments of current and future economic stability of each country. These actions are, therefore, components of development. National social services are, therefore, directly affected by an increase in the economy and by the structural change intended to improve the living condition of the population.

The great imbalance between needs and resources in Bolivia and Peru forces the assignment of basic survival priorities, and the distribution of funds do not necessarily correspond to the most prevalent problems or benefit the greatest number of people either immediately or on a long-term basis.

Studies made into economic development in the past century have shown that the economic distance between developed and underdeveloped nations was brought about by a higher growth rate of industries and a slightly lower rate of growth of population. Mr. Robert K. Gardiner, executive secretary of the United Nations Economic Commission for Africa, has characterized symptoms of underdevelopment as follows:

> . . . extremely low levels of school enrollment; quasi-non existence of industry; dominance of agriculture in the national economy and in relation to labor force . . . dependence on a single or narrow range of commodities, both for international consumption and for export; dualism between the traditional and modern sectors of the economy; the predominance of expatriates in business enterprises, both as owners and managers . . . (Som, 1970, pp. 70-71).

The major socio-economic conclusions arrived at as a result of this study indicate a close relationship with Dr. Gardiner's description of underdevelopment.

Recommendations

The author believes that the rehabilitation process and general social development are two variables with the same purpose. The welfare of the population which, as it evolves in size and structure, requires regular realignments in methods used to achieve such a purpose. In other words, the author considers societies as differential entities in which it is possible to identify various interacting activities intended to improve the life of its components. This viewpoint conforms to vocational rehabilitation and public health concepts which considers general socio-economic indicators as a reflection of the continuing process of adaption of the individual to their environment which is undergoing constant modification.

Analysis of the consequences which preventive, maintenance and restoration of the disabled through vocational rehabilitation have on the size and structure of the population must take into account their close dependency on the factors which contribute to creation and evolution of life in any society. These have been identified as the socio-economic characteristics in this study. It is in this context that the state of vocational rehabilitation in Bolivia and Peru was described. The resources and instruments which are used to describe the national vocational rehabilitation program, the socio-economic characteristics of each country, and the needs and trends for the future have all been constructed to meet this basic need.

We cannot deal with prevention, cure, and rehabilitation of illnesses and accidents separately from the important forces to which people are subject. In the past, in an attempt to keep science pure,

professionals have avoided participation in the conflicting issues of society. The relationship between the social climate and our professional pursuit is now so close and clear that to continue to avoid these social issues constitutes professional neglect. In one developing country after another, governments are planning extensions of social and rehabilitative services to both urban and rural areas which were formerly neglected. The tide of socio-economic change, however, has not reached everywhere. There are many tropical communities in Bolivia and Peru whose isolation has cut them off from new development. Whatever the geographic environment these rural areas have a common characteristic that profoundly affects the well being and ill health of people by the rehabilitative services that are available to them.

Rehabilitative programs have to be seen in relation to the national socio-economic conditions, educational factors, population trends, and material and human resources. For example, people in countries characterized by a slow rate of change have adopted certain health practices, habits, and a general view of health along certain traditional lines. Generally, when we undertake a study of vocational rehabilitation we very often focus on these health related characteristics and forget the economic situation, the interests, the needs, the wishes, the problems, and the knowledge of the individual or other groups concerned. Only a very few individuals can go through a total rehabilitation process anywhere in Bolivia or Peru. In Bolivia and Peru there is little remedial or curative treatment available. The disabled frequently have minimal education, they are considered social outcasts, a general community nuisance, and frequently their families cannot even afford their maintenance. A partial answer to the situation is a nontraditional answer,

and nontraditional ideas cut across the grain of accepted, modern, advanced, vocational rehabilitation technology.

Vocational aspects of rehabilitation do contain a partial answer to this huge problem yet the approach is nontraditional. It can be postulated that vocational training of the employable disabled can be undertaken without the need for the specialized surgical, prosthetic, and educational services. The leg amputee, the below the waist paraplegic, and the deaf person are able bodied when sitting at a bench. The arm or hand amputee, if his disability is not related to the job, can maintain productivity. Advanced countries tend to work on the principle that the job must be adapted to the disabled. In these situations there is a tendency to make artificial legs first and to adapt employment possibilities to meet the needs of the individual. Rehabilitation as practiced in Bolivia and Peru frequently consists of corrective surgery and then bypasses the formative rehabilitation process going directly to vocational placement.

The tradition in both national vocational rehabilitation programs in Bolivia and Peru to date is to bring the rural disabled resident to the metropolitan area to be involved in the rehabilitation process. In as much as approximately 65% of the population in Bolivia and 40% of the population in Peru is defined as rural, it appears as though agricultural rehabilitation would have certain advantages over industrial or craft work vocational education. There is always a market for farm crops and livestock products. The disabled person can grow their own food and need not be dependent on other people. The disabled individual would not rely on a sympathetic market for the sale of his products as is frequent with the case in sheltered workshops. In addition, the

disabled rural individual can return to his own rural situation and carry on his work.

In both Bolivia and Peru the problem of removing individuals from the rural environment to the urban metropolitan areas for the purpose of education, health services, or vocational rehabilitation results in a sentiment that too often has provided a channel which has drained off the most capable individuals leaving the rural area even more stagnant than before. Unless other policies intervene, one impact of urbanization now occurring in Bolivia and Peru may be that workers will leave the farm for the cities at an even greater rate in the next decade. Confrontation with a variety of possible developmental alternatives is never fully avoided as a country advances. Each country must make choices again and again at the various stages of development. Those that over increase their urban population are most likely to encounter problems of underemployment, depressed living standards, and social unrest.

Well planned rehabilitative services, especially those providing vocational preparation and training, are needed to orient disabled persons so that favorable conditions may be created for integrating those persons into society. Many types of disabilities can be prevented and comprehensive programs of preventive rehabilitation are needed.

Specific conclusions which lend themselves to further research are as follows:

1. Vocational rehabilitation should be promoted as an integral part of the national social developmental policy.
2. In as much as a majority of the working force is directly associated with agriculture, rural vocational rehabilitation

programs are a necessity.

3. Meaningful governmental legislation should promote medical assistance, adequate housing and social insurance for disabled citizens.

4. Community, inservice and professional education involving the various areas of vocational rehabilitation will raise the overall awareness and effectiveness of a national vocational rehabilitation program.

The recommendations for future descriptive research are of several sorts, some rather well founded in fact, and others at a more intuitive level. The latter are presented in the belief that in the last analysis research progresses because of the commitment and even because of the prejudices of the researcher. The data from the two nations largely support the theoretical approach used in this study. However, it is my opinion that the conceptual approach is sound enough to warrant pursuing it further, and that refinements in research design, instrumentation, and methodology may allow the operationally defined characteristics to be identified more effectively. As one attempts to ascertain within national differences and between groups the measurement problem becomes more acute. Basic understanding of the present state of the national vocational rehabilitation program in Bolivia and Peru is focused primarily by the degree of understanding of basic demographic and socio-economic characteristics. In the process of researching basic information for the description of a vocational rehabilitation program in a specific nation-state, the author encountered special measurement problems. These problems, although not unique to this type of study, are intensified in multi-national research.

Results of the present study suggest that data collection procedures from which international data has been collected are not as valid as might be hoped. Further study could elicit more information regarding the identification, classification, and prediction of vocational rehabilitation needs. Using a different method of analysis it would be possible to determine whether these social, economic, and demographic characteristics occur in distinctive national patterns and whether there are discernible relationships between the national vocational rehabilitation programs and these specific social characteristics.

Further research is desperately needed to secure basic data with which comparative and predictive questions can be more effectively addressed. The following recommendations for further research represent only a few of the many research needs in the area of vocational rehabilitation in Bolivia and Peru:

1. How do we estimate what would have happened in vocational rehabilitation's absence?
2. How do we measure social costs?
3. How do we measure benefits?
4. The construction and development of appropriate socio-economic and health indicators.
5. The construction of a valid measure of national welfare development.
6. The most emphatic recommendation by this researcher in terms of description of the national vocational rehabilitation programs in Bolivia and Peru is in agreement with Dr. Seltzer, the assistant director in charge of the Demographic and Social Statistics branch of the Statistical department of the United

> Nations Headquarters. Dr. Seltzer indicates that the most effective means of gathering the full range of needed statistics about the incidence of disabling conditions is the household survey. This method is capable of producing extremely meaningful data about such complex problems as disability and its consequences.

There is no guarantee that descriptive social research will make a difference in the further development of a national vocational rehabilitation program. If this approach can make a contribution, it is in describing what <u>is</u>; international and national vocational rehabilitation experts, legislators, and the citizenry at large must decide what <u>will</u> be.

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APPENDIX A

GUIDELINES

1. Identification

a. Efforts should be made to establish a system either on a voluntary basis or on a statutory basis, or both, with a view to ascertaining the size of the disability problem and identifying those who are likely to benefit from vocational rehabilitation services.

b. Vocational rehabilitation services should be made available to all disabled persons, whatever the origin and nature of their disability or age, provided they can be prepared for and have reasonable prospects of securing and retaining suitable employment.

c. There may not be a clear line of demarcation between disability arising from medical factors and disability arising from other factors. Any definition of disability should therefore be sufficiently flexible to permit the inclusion of not only those with unstable disabilities and those with associated social and cultural problems.

2. Vocational Assessment

a. The success of vocational rehabilitation will not only depend upon adequate functional assessment - which in turn depends upon the nature and degree of the disability and such matters as total personality, home background, and acquired skills and knowledge - but also on the range of employments available.

At the point where non-medical personnel are involved in assessment there may be difficulty for ethical or other reasons in securing from medical or para-medical authorities adequate information. This can be helped by good personal relationships and the establishment of confidence in commonalty of purpose.

b. Vocational assessment services should include if possible:

1. Medical consultation and treatment.

2. A Social Worker.

3. A Vocational Rehabilitation oriented Psychologist.

4. A Selective Placement Officer.

5. The provision of work conditioning facilities in either a special workshop or in an "on-the-job" setting in public or private employment or in sheltered employment.

6. A Vocational Evaluator and any other relevant specialist

c. Once the initial assessment process is completed, action should proceed with the least possible delay. When delays do arise the value to the rehabilitee of the assessment and reconditioning course may be lost.

d. The assessment process is rarely complete in a changing industrial situation. There should be provision for re-assessment periodically.

e. In addition to the psychological, social and economic factors future employment should take into account the "continuing rehabilitative process." A desirable objective is the reduction or even the relative disappearance of disability in the development of alternative capacity. In other words, merely fitting disabled people into dead-end jobs with no opportunity for improving capacity or status is not real rehabilitation.

f. A trial period with an employer under actual work conditions might be arranged to give added confidence and independence to a disabled individual and to assist in or confirm the assessment recommendation for vocational training or employment.

3. Vocational Guidance and Pre-Vocational Preparation

a. It is essential to keep in mind that the goal of this process is gainful employment. Guidance which does not provide constructive help in finding work is doomed to failure.

b. Pre-vocational preparation ideally should include wherever possible familiarization with equipment and materials common to the desired occupations. Severely handicapped young people, educated in special schools, sometimes also need an "adjustment course" to help them come to terms with everyday living in the community.

c. Vocational guidance and indeed all vocational rehabilitation services for disabled young people of school age should be organized and developed in close cooperation between the authorities responsible for education and those responsible for vocational rehabilitation and placement.

d. Vocational guidance should start at least two years before a child leaves school, and should, ideally, continue until after a handicapped person is settled in suitable employment. The educational process should be, at least in the years near the school-leaving age, a form of vocational preparation.

e. Special education (whether in ordinary or special school) is concerned with the amelioration of handicap, with minimizing its effects on a child's functioning, with the fostering of independence and a realistic attitude towards a disability, with the development to the fullest extent of a child's potential, not least in the fundamental subjects on which vocational training and further education must be based.

f. The presence of a handicapping condition frequently retards the educational progress and development of handicapped young people, who can often therefore profit from a period of extended education in school or college or in association with some form of vocational training. Many disabled people are able to take part in further education alongside those who are not handicapped, and it is in their interest to do so; for those who cannot, specialized facilities or supporting services may be needed.

g. Pre-vocational preparation of people who have become disabled during adulthood and which may begin in the hospital should be linked to the work conditioning facilities mentioned under 2(b)4.

4. Vocational Training

a. The training program should provide the opportunity of progress to higher grade work through experience. (See Section 2(e) above.)

b. If the assessment process is reasonably good and accurate and the essential aids and adaptations provided, training by normal standards in normal environment is preferable.

c. Training programs for each trade or occupation should be worked out in cooperation with future employers' and workers' representatives, naturally including analysis of the operations, skills, and safety factors involved. However, when there is a large theoretical element in a training course some adjustment in training hours might be desirable.

d. It is important to keep in touch with the labor market conditions and match training programs to its needs.

e. The economic position of the disabled person and his dependents, if any, should be safeguarded during the training period. This is done in a variety of ways in many countries and is regarded as a good investment.

f. Formal education, as mentioned hitherto, may play an important part in preparation for and participation in vocational training. (See 3(d) above.) A system of Further and Higher Education, including university programs, refresher courses, accelerated training, and "on-the-job" instruction for adults, running concurrently with vocational training, is the practice in some countries and often provided free in the education budget.

5. Placement and Sheltered Employment

a. The most satisfactory form of settlement for most disabled people is in "open" employment alongside non-disabled people, and this should be achieved normally through selective placement techniques which involve three distinctive processes:

1. knowing the worker,

2. knowing the job, and

3. matching the worker with the job and the job with the worker.

b. Wherever possible placement services for disabled people should be linked with normal existing placement services.

c. The placement officer should seek the employers' and trade union cooperation in ensuring that a newly engaged disabled person receives proper induction to the job, including:

1. Explaining the duties and, if required, arranging for any necessary training for the job, including where needed adaptations of machinery, environment, etc.

2. Encouraging supervisors and fellow workers to accept and give every assistance in settling down in new surroundings so that development of full potential may be achieved as soon as possible.

d. Government and local authorities should set a lead in offering adequate opportunity in their service for suitably trained disabled people.

e. Follow-up measures should be taken:

1. to ascertain whether placement in a job (or recourse to vocational training or retraining services) has proved to be satisfactory; and

2. to evaluate vocational rehabilitation policy and methods generally with a view to improving the service.

f. For those disabled people who because of the severity of their handicap in relation to the situation on the labor market, resettlement in "open" employment is not yet possible, opportunities for sheltered employment should be created.

g. Sheltered employment may be provided:

1. in special craft, industrial or transitional workshops;

2. (for certain categories) on open-air projects;

3. (for non-manual workers) in clerical service centers;

4. in single or group posts in public service, industry, agriculture or commerce;

5. in special production co-operatives;

6. by way of homework, or self-employment in small business; or

7. any other available local resources.

h. Sheltered employment should include, wherever possible, reconditioning for work so as to promote the disabled worker's health and opportunities for "open" employment. For this reason, working conditions and circumstances should approach as near as possible to normal conditions.

6. Development of Employment Opportunities for the Disabled in Less Industrialized and Rural Areas

a. Recognizing the basic principle that disabled and non-disabled people should be afforded equal opportunity to perform work for which they are qualified, including the right of choice, emphasis should be placed on the abilities and work capacities of disabled people and not on their disabilities.

b. The aim should be to provide a stepping-off place for the later establishment for further vocational rehabilitation services. A comprehensive center may provide a good starting point for a national program of Vocational Rehabilitation.

c. The idea of employing disabled people may be new to many employers particularly in developing countries. It may, therefore, be of great value to conduct special publicity campaigns, either nationally or in the area where pilot schemes are to be operated, designed to better inform the public and, in particular, the employers and fellow workers regarding the abilities and acceptability of disabled people.

d. Certain populations are predominantly agricultural and disabled people living in these regions probably account for three quarters of the world's disabled population. In view of the fact that urban-oriented methods of vocational rehabilitation and training are not usually suitable in rural settings, special attention needs to be given to establishing and developing suitable facilities of vocational rehabilitation to meet the requirements of such people in rural areas and to the finding and creating of resettlement opportunities.

e. In the absence of industrial opportunity Vocational Rehabilitation in rural areas of developing countries should be geared to the problem of daily living and the aim of ensuring that the disabled person can become a productive and self-supporting member of his

community. This may mean and involve or necessitate a varied course of work conditioning and training in a number of rural skills, e.g., animal husbandry, horticulture, crop-raising, repair of shoes, clothing utensils, etc. As the economy expands, in meeting some of these problems it might be possible to develop food-processing, deep-freezing, canning and package industries. Factories and plants could be established in food-growing areas thus reducing transport costs, preserving "freshness" and above all providing near-at-hand employment for the disabled rural worker.

f. Although the stages of development and the scope of rehabilitation measures differ from one country to another, there seem to be some common problems associated with rural rehabilitation of disabled people. They are:

1. difficulties in disability preventive measures;

2. the attitudes of the disabled man, his family and the community, who may well need counseling and assistance;

3. under-utilization of manpower;

4. lack of adequate basic rehabilitation facilities and supporting services; and

5. more need for government support.

g. The development of mobile rehabilitation facilities in rural areas may encourage the disabled rural worker to undertake training and achieve employment without disrupting the family unit.

7. Legislation, Administration, and Finance

a. The enactment of appropriate legislation requiring employment of disabled workers could be one of the means open to governments to ensure that properly trained and competent disabled people have a fair share of employment opportunities.

This may take the form of:

1. an imposition of an objective on employers to employ a fixed quota of disabled people;

2. the reservation of posts for disabled people and/or allocating them special priorities or preferences; and

3. co-operative schemes as may be appropriate in some countries.

Vocational Rehabilitation legislation should provide for the disabled equal service and employment opportunities. However, such measures should be judged also in the light of the danger of putting a stigma on disabled people. (See 4(a) above.)

b. The ideal is to coordinate ALL assessment, guidance, training, and placement disciplines under one authority. If this is not possible, an alternative is to set up a coordinating authority.

The AUTHORITY should be capable of action in such general matters as:

1. definition of terms of reference;

2. budgetary considerations (finance);

3. technical advice (e.g., subsidies to employers during training periods, bursaries for special courses, etc.);

4. programs suitable to the economy;

5. publicity;

6. regionalization;

7. promotion of legislation when necessary (one instance, e.g., Accessibility to places of employment);

8. ensuring that professional vocational rehabilitation personnel have attained at least the standards required by their universities, colleges, institutes, etc. (this does not discount the value of auxiliaries or para-professionals); and

9. the delineation of employment opportunities in governmental departments.

c. The training of personnel is largely a matter for the authorities enumerated in 8(b) above, but a system of combined courses or seminars in which the various skills and disciplines may be helped to discern the role of each in the full program, should be developed. Assistance in the interim may be sought from international organizations such as the I.L.O. or by bilateral arrangements between countries.

d. The costs vocational rehabilitation programs should be borne by the community, for instance by:

1. state subsidies and the community at large;

2. tax concessions;

3. fund-raising campaigns;

4. free use of premises;

5. loan of personnel;

6. establishing official or semi-official bodies for implementation of vocational rehabilitation programs; and

7. support of qualified voluntary organizations.

8. Research

a. Research should be a continuing exercise in vocational rehabilitation. Much useful work of a varied nature has been done, e.g., in the Comparative Study of Legislation by Rehabilitation International; Employment in Rural Areas (W.C.V.R. Halle Seminar), etc. A list of recommended reading is attached to this document. The International Research Referral Service established by Rehabilitation International is available also. Each country should both use and contribute to an exchange of this service, the results of which will be for the good of all.

b. There is a need for a continuing cross-reference document service in which research findings of every kind may be traced and brought up-to-date from time to time. This will enable specialists in the field of vocational rehabilitation to keep abreast of developments - and help them establish their own library.

c. Each development in a country's own economy and social structure with the attendant problems should be a challenge to research workers to find how services may be better developed for the disabled so as to ensure their economic viability.

9. International Cooperation

a. Vocational Rehabilitation programs are of necessity related to national or local conditions. Nevertheless, certain elements may have common values and virtues useful to all. The established international governmental and non-governmental organizations are media through which aid may be sought.

b. At country, regional and inter-regional levels experts of the U.N. and I.L.O. may be able to assist with the organization of staff training courses.

c. A unified concept within the community can be effective only through coordinated activity at all levels of services - both voluntary and official. A requirement here is for a uniform terminology readily understood in all the disciplines and skills involved among disabled people by prospective employers and the public in general. The aim should be an integration of assessment and guidance policy and practices on the part of all.

d. International cooperation in the exchange of service, research, information, manpower and even finance is for all potentially enobling, breaking down barriers, unifying mankind, particularly when the task is that of restoring our disabled fellow citizens to as full a life as possible.

APPENDIX B

INTERVIEW

1. Does Peru/Bolivia have an officially designated agency for Vocational Rehabilitation? Yes_____ No_____

   Under what ministry is Vocational Rehabilitation administratively placed? _____

2. In what agencies do these related disciplines function?

   I) Evaluation

   a. Medical_____
   b. Psychological_____
   c. Social_____
   d. Educational_____
   e. Vocational_____

   II) Guidance

   a. Personal_____
   b. Social_____
   c. Vocational_____

   III) Training

   a. General vocational____
   b. Special education_____

   IV) Vocational Placement

   a. Government_____
   b. Public_____

   What agency coordinates these functions?_____

   _____

3. By what means (A,B,C,D) are these administrative aspects solved?

Means	Administrative Aspects
A. Inner Agency (Vo-Rehab)	_____Definitions of professional Vocational Rehabilitation Terminology
B. Ministry Level	
C. Ministry of Economy and Finance	_____Budgetary decisions
	_____Technical advice
D. Other_____ (itemize)	_____Publicity campaigns
	_____Promotion of legislation
	_____Personnel decisions
	_____Regionalization
	_____Priority Programs

4. What is the official definition of Vocational Rehabilitation?

_____

_____

5. What are the basic eligibility requirements for the disabled to receive vocational rehabilitation services?_____

(Probes: Definition of disability, vocational handicap, reasonable expectation, age, nationality, type of disability, type of services available.)

6. Generally, describe the typical vocational rehabilitation process a disabled person will experience from the time they have been identified through the termination of the case.

(Probes: Screening, general medical evaluation, specialist medical evaluation, medical surgical evaluation, physical therapy, training, on-the-job training, vocational school, prosthetic, counseling, social evaluation, psychological evaluation,

vocational evaluation, sheltered workshop, maintenance, transportation.)

7. Which of these orientations most closely represents your national Vocational Rehabilitation program? Rank 1 = Low 4 = High

_____Primarily Identification/diagnosis

_____Centralized treatment for specialized disabilities

_____Destandardized treatment according to Individual need

_____Integration of specialized programs with existing services for the general population

8. This is a list of sources for potential funding for vocational rehabilitation programs. Are the Peruvian/Bolivian Vocational Rehabilitation programs funded through other means not listed? Please add under other.

_____National Tax

_____State Subsidies

_____Fund Raising Campaigns

_____Free use of Premises

_____Loan of Personnel

_____Support by qualified volunteer organizations' (UN, etc.)

Other_____
(itemize)

Now please rank accordingly: x=not applicable 1=owest priority
higher numbers = higher priorities

9. What is the approximate annual budget for general vocational rehabilitation? _____

10. Volunteer and foreign organizations often contribute significantly toward the overall Vocational Rehabilitation Program. Please review the following list and add any other contributions which are appropriate for Peru/Bolivia.

_____Prosthetic Devices

_____Vocational Technical Preparation

_____Medical Assistance

_____Institutions

_____Psychosocial Technical Advice

_____Other_____
(itemize)

Now please rank the above accordingly.

x = not applicable

1 = lowest level of contribution from volunteer and foreign organizations.

higher numbers represent higher levels of contributions.

11. By what method of mass communication is vocational rehabilitation publically advertized to inform employer and/or the public in general of the special needs/abilities and acceptability of the disabled. Below is a partial list of mass communications methods. Please add additional methods and then rank according to emphasis. x = not applicable, 1 = lowest utilization, higher numbers = more frequent usage.

_____Special Annual Campaigns

_____T.V.

_____Radio

_____Movies

_____Newspapers

_____Posters

_____Other (itemize)_____

_____Other (itemize)_____

Has there been a special drive you would like to mention?____

_____

12. Please review the following list and check ( ) if there is presently legislation of these types or others requiring the

employment of qualified, competent disabled individuals in governmental or private employment.

_____Fixed quota

_____Reserving special posts

_____Allocating Special priorities

_____Cooperative Schemes

_____Other_____

(itemize)

Other than the above are there other opportunities that governmental agencies make available for the employment of the disabled?

_____No _____Yes Please indicate_____

13. Nationally, what is the approximate number of staff involved in the total vocational rehabilitation program?_____

14. At which institutions are most vocational rehabilitation professionals educated/trained?

Institution/Department

15. Please estimate the following information.

Staff	Percent of Total Work Force	Average Years Experience in VR	Average level of Education: High School years	Average level of Education: College degree	Number of hours of Inservice per year
Administration					
Consultants					
Professional Counselors					
Support Personnel					
Other_____ (itemize)					
	Total 100%				

Probes: Continuing education, seminars, further education, etc.

In which agencies are the above mentioned vocational rehabilitation personnel found. Please itemize additional agencies and rank accordingly.

x = not applicable 1 = least emphasis greater numbers = greater proportion of personnel

_____Vocational Rehabilitation	_____Education
_____Social Work	_____Labor
_____Medical	_____Social Security
	_____Other_____ (itemize)

16. On this map will you indicate the approximate locations of vocational rehabilitation programs with a star (*). Mark comprehensive vocational rehabilitation center with concentric circles (0). Comprehensive vocational centers are those in which a majority of the service needed for vocational rehabilitation are available.

17. Has a survey of the population of Peru/Bolivia been made which identifies the approximate number of disabled individuals in your country?

Yes_____ No_____

If yes, when was the survey conducted 19____

Who was the sponsoring agent of this survey?

_____National Governmental Agency

_____Volunteer Agency

_____UN

_____Other_____
(itemize)

Where are the results of this survey available?

If No, Is one planned for the future? Yes_____ No_____

18.

Type of Disability	Estimated Number of disabled in country	Approximate Number of disabled served by all VR related Programs (educ., Social, Medical, Voc.)
Orthopedic		
Disabilities of the Nervous System (MS, CP, Polio)		
Circulatory Disorder (Cardiovascular)		
Mental Retardation		
Respiratory Disorders (TB)		
Digestive System		
Visual Disorder		
Genito-urinary System (Ulcer, functional disorder)		
Speech and Hearing Disorders		
Endocrine Dysfunction (Diabetes, arthritis		
Neuropsychiatric (MI, Alcohol, Drug)		
Other (itemize)		

19. Place the approximate number of vocational rehabilitation programs especially designed for each of the following programs areas.

Area	Number of Nation-wide Supported Programs			
	Government	Volunteer	Foreign	Combined Gov-Vol-For
Vocational Evaluation				
Identification of Disabled				
Physical Impairment				
Mental Illness Impairment				
Mental Retardation Impairment				
Drug Abuse Impairment				
Alcohol Abuse Impairment				
Rural Vo-Rehab				
Public Education				
Special Education				
Higher Education				
Sheltered Workshops				
Prisons				

20. Which of these approaches seem to underscore your national vocational rehabilitation program orientation. Check one.

____A. Keep the disabled at home and under local care.

____B. Keep the disabled in institutions for specialized care.

Check one.

____A. Place the disabled in employment according to employment demands.

____B. Place the disabled in employment according to the individuals skills and desired vocation.

21. Rank these rehabilitation approaches as stressed in your national vocational rehabilitation program. 1 = low 3 = high emphasis

____A. Provide special training to match worker with job.

____B. Special adaptation of machines to match job to worker.

____C. Provide on the job training or trial placement.

22. Rank these placement approaches as relatively emphasized in your national vocational rehabilitation program.

1 = low 3 = high emphasis

____A. Know clients abilities/limits

____B. Know job abilities/limits

____C. Know employer abilities/limits

23. These are some of the means used to economically support the disabled during the vocational rehabilitation process. Please check those methods applicable and list others used in Peru/Bolivia.

____Monthly payments ____Free food

____Free lodging ____Free transportation

____Other_____
(itemize)

24. The labor market is frequently monitored by the vocational rehabilitation professional placement staff using these methods. Please list other methods used in Peru/Bolivia and then rank accordingly. x = not applicable, 1 = low usage, higher numbers = greater application.

____Public Service Publication ____Personal Reference

____Public Service Agency ____Other_____
(itemize)

____Newspaper

25. When was the first Sheltered Workshop opened? 19__

What function do you see these Sheltered Workshops have in the overall Vocational Rehabilitation process?_____

_____

26. Are Sheltered Workshop experiences available in the following areas? Check if available.

____Special Production Cooperative

____Self-employment (small business)

____Commerce

____Agriculture

____Public Service/Government

____Clerical Services

____Homebound

27. Approximately how many Sheltered Workshops are available with the following orientations? Check if available.

____Special Craft

____Transitional (ADL-PSA)

____Industrial

____Permanent

____Combination of the Above Areas

____Other resources_____
(itemize)

28. In addition to urban oriented vocational rehabilitation programs, there are often programs geared toward rural vocational rehabilitation needs. Please review the following list and add any training areas. Then rank these types of vocational training that are available in rural programs. x = not applicable, 1 = infrequent usage, higher numbers = more prevalence of area in rural vocational rehabilitation.

____Animal Husbandry

____Horticulture

____Crop Raising

____Food-processing

____Shoe Repair

____Industrial

____Homebound (ADL)

____Other_____
(itemize)

29. Are mobile vocational rehabilitation units of any kind used in your national program? Yes____ No____

What geographic areas do they cover?_____

What services do they offer?_____

_____

30. Is resettlement used as a technique with the vocational rehabilitation process? Yes____ No____

31. These are some of the more common problems with vocational rehabilitation services in rural areas. Rank these problems according to intensity as viewed by your agency.

x = not applicable, 1 = low priority, 5 = greater intensity of problem

____Disability oriented

____Preventive measures

____Attitude of disabled as evidenced by family and community

____Lack of basic rehabilitation facilities

____Low national economic priority

____Under utilization of manpower

32. What national and international vocational rehabilitation publication do you have available for resource purposes?_____

_____

Do you find the information from these sources useful in your work? Yes____ No____

33. How many articles or books on vocational rehabilitation have been published by personnel within the national vocational rehabilitation program in the last five years?_____

34. In what ways do you believe vocational rehabilitation publications could be of greater benefit to your needs?

#1_____

#2_____

#3_____

35. In your estimation, what are the positive vocational rehabilitation trends in your national program?

#1_____

#2_____

#3_____

36. In your estimation what are the priority needs of vocational rehabilitation in your nation?

#1_____

#2_____

#3_____

(Probes: Permanently disabled, terminally disabled, severely disabled, blind-CP, Social-cultural problems.)

37. Do you believe that an inter-South American vocational rehabilitation organization would improve co-operation between national vocational rehabilitation agencies to such an extent to warrant serious consideration of such an undertaking? Yes__ No__

38. How often have you utilized international vocational rehabilitation agencies in the last five years? (i.e., UN, ILO, etc.)_____

_____

VITA

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