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PERCEIVED BARRIERS AND PROPOSED SOLUTIONS FOR EMPLOYMENT
OF THE HANDICAPPED: ATTITUDES OF EMPLOYERS
AND EMPLOYMENT AGENCIES

by

Leonard Robert McConnell II

A Dissertation
Submitted to the
Faculty of The Graduate College
in partial fulfillment of the
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Western Michigan University
Kalamazoo, Michigan
August 1986

PERCEIVED BARRIERS AND PROPOSED SOLUTIONS FOR EMPLOYMENT
OF THE HANDICAPPED: ATTITUDES OF EMPLOYERS
AND EMPLOYMENT AGENCIES

Leonard Robert McConnell II, D.P.A.

Western Michigan University, 1986

The intent of this research was to analyze the employment barriers and to identify possible policy strategies for the unique employment problems faced by persons with handicaps. The study surveyed barriers to employment and proposed employment solutions for the handicapped as perceived by private- and public-sector employers and employment agencies. The handicapped and six disability groups were compared with women, blacks, and Hispanics on the same barriers and solutions. It was hypothesized that: (1) the handicapped as a protected group faced more and different employment barriers than did women, blacks, or Hispanics, and therefore (2) the handicapped needed more and different employment solutions than women, blacks, and Hispanics. The two subhypotheses were (1a) that some disability groups faced more and different employment barriers than did others, and therefore (2a) more and different employment solutions were needed for some disability groups than others.

The hypotheses were substantiated by the research findings. Four out of 13 potential barriers were identified for the handicapped. Conversely, women, blacks, and Hispanics were perceived to face fewer and different employment barriers. The mentally retarded

were perceived to face 10 of 13 barriers, more than the mentally ill, persons with hidden disabilities, the deaf, the blind, and the physically disabled. Four employment solutions--tax credits and financial incentives, government subsidy, increased employer awareness, and job training--were supported as effective for the handicapped, whereas only one--job training--was perceived as effective for each of the other protected groups. Among the disability groups the most solutions were supported for the physically disabled, blind, and mentally retarded. Job training was the only employment solution of the six proposed which was rated as effective for all groups.

It was concluded that more and different employment strategies are needed for the handicapped and certain disability groups which are related to the unique employment barriers that they face. Considering both the number of barriers faced and the number of solutions rated as effective, the mentally retarded were determined to be most disadvantaged in employment.

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Leonard Robert McConnell II

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CHAPTER I

INTRODUCTION

This chapter introduces the reader to the problem addressed in this research, discusses the factors that affect the problem, and describes the purposes, scope, and public policy implications of the research. Terms used in this dissertation are defined, and an outline for the dissertation is presented.

Statement of the Problem

Employment Problems of the Handicapped

Historically, classes of individuals with certain characteristics have faced particular problems in obtaining equal access to the labor force. Women, racial and ethnic minorities, older workers, and the handicapped not only are underrepresented in the labor market, but are also more often underemployed and in lower-paying occupations. Of all of the aforementioned groups, it would appear that the handicapped face the most severe problems.

Wolfe (1980) demonstrated empirically that the handicapped are substantially disadvantaged in a number of labor-market areas. The labor-force participation rate for disabled persons stood at 59% compared to an estimated 80% of nondisabled persons. Wolfe's analysis also showed substantial differentials in hours worked and wages earned. Thirty percent of disabled men work full time compared to 74%

of nondisabled men. For comparable occupational levels and for identical educational levels, the wages for disabled persons were less than those of nondisabled persons. Other sources have reported an estimated 50% to 75% unemployment rate among handicapped workers (U.S. Commission on Civil Rights, 1983, p. 29).

The level of unemployment and underemployment of persons with handicaps describes only one aspect of the problem. Equally as important is the tremendous waste of human resources. The human resource issue not only represents a loss in national productivity and economic resources, but also has profound implications for the quality of life for handicapped individuals. The cost of disability in this country is phenomenal. Berkowitz (1981) estimated that public and private expenditures for cash-benefit and transfer-payment programs for the disabled exceeded \$47.6 billion in 1977, an increase of 147% since 1970. An additional \$13 billion in 1977 was estimated by Berkowitz for Medicare expenditures attributable to medical costs for disabled persons of working age. While it cannot be assumed that all of this population can or should be employed, even a small percentage increase in employment can have a significant effect on the economic equation. This is true simply because employment provides a two-pronged benefit: (a) a tax contribution through wages earned and (b) a reduction or elimination of a transfer payment and a medical cost. Researchers, writing in support of programs directed at employment and training of handicapped workers, using these two principles, have estimated a 3:1 economic return to society (Burkhauser & Haveman, 1982). It is clear

that the employment problems of the handicapped have significant effects for the individual and society. It is also clear that this problem surfaces important public policy questions relating both to societal cost and benefits and to social equity.

Factors Affecting the Problem

A number of factors contribute to the disadvantaged position that handicapped persons occupy in the labor market. While similar to those that other protected groups such as women, blacks, and Hispanics face, there also appear to be additional and different causative factors that are operative. In a general sense, all protected groups experience societal, and more specifically, employer, prejudice and discrimination. The differences between the handicapped and other protected groups occur not only in the basis and extent of prejudice and discrimination, but also in systemic disincentives to work and in labels that undermine the motivation to work.

The most commonly catalogued manifestations of prejudice toward handicapped persons have been labeled as discomfort and fear, patronization and pity, stereotyping and stigmatization. While some of these phenomena are exhibited in relation to other protected groups, no other group appears to face the total spectrum. In addition, the intensity of these factors appears more severe in the case of handicapped individuals. Employers, as members of society, also reflect these feelings and behaviors. The effect in the employment arena of such perceptions and reactions to disability is significant.

There are other factors that operate to place the handicapped at a severe competitive disadvantage with employers. Most significant are the myths and misperceptions surrounding handicapped workers. These occur most frequently in the areas of cost, workers compensation risk, limitations on capacity, and absenteeism. Pati, Adkins, and Morrison (1981) identified these and other commonly held beliefs about handicapped workers and noted, "Despite numerous studies to the contrary (and the actual experiences of many companies, both large and small), too many employers continue to give credence to these false notions" (p. 17). Unlike certain other protected groups, the concept of disability inherently connotes barriers and limitations that are perceived to contradict employment feasibility. The net effect of these perceptions is strong disincentives to employ handicapped individuals.

A related factor that affects the employability of the handicapped also deals with perceptions but resides in the terminology used to define this category of individuals. The Merriam-Webster Dictionary (1978) defines disabled as "incapacitated by or as if by illness, injury or wounds" (p. 208). Similarly, it defines handicap as "a disadvantage that makes achievement difficult" (p. 323). A literal translation of disabled is "not able." No other group is defined by a deficit or limitation. What incentives exist for employers to hire those who, in the label attached to them, are already defined as unable, sick, incapacitated, or limited? The largest handicap faced by disabled persons may be in their definition.

There are systemic factors that exist outside the arena of perceptions and attitudes, and operate to discourage the handicapped individual from seeking work. While these also occur with other populations, they seem to have a more profound effect on persons with handicaps. There are both definitional and disincentive levels to this issue. At the definitional level, the problem surrounds the eligibility conditions for entitlement to benefits from programs such as workers compensation, social security, and medicare. In all cases of disability benefit programs, the individual is defined as eligible based on an inability to work. If programs have "declared" the individual as unable to work, the handicapped individual becomes defined by, and internalizes, this expectation. Instilling motivation in the handicapped individual thus requires that the person ignore or overcome society's definition of his status.

Compounding this problem is the issue of financial disincentives that are inherent in such transfer-payment programs. At the most basic level, in many cases the economic benefits and services for not working exceed those of working. This is true not only because of the additional cost associated with disability, but also because labor-market discrimination places handicapped workers at the lower end of the earnings spectrum. Burkhauser and Haveman (1982), Berkowitz (1981), and many others have assessed the disincentives inherent in these programs and argued for the need for changes.

A more recent report of the Michigan Interagency Task Force on Disability (1985) noted the current work disincentives in social

security disability programs and made several recommendations for their removal. The report noted the potential loss of medical benefits and net income for persons opting to work instead of receiving Supplemental Security Income benefits. Among other recommendations, the report argued for a continuation of medical benefits, wage supplements, and an extended trial work period where benefit payments are not jeopardized. While the disincentives issue is not the focus of this paper, it cannot be ignored as a major policy issue affecting the employment of the handicapped.

Other levels of the problem are relevant not only to the concept of employment barriers, but also to the employment-solutions side of the equation. These, too, appear to be unique to the handicapped as a protected-group class. One of the most important is the heterogeneity of the group itself. The group "handicapped" includes individuals whose disabilities, functional limitations, and capabilities are significantly different. The class includes persons with physical, mental, and sensory characteristics, which may be either visible or nonvisible. Moreover, within the same disability groupings wide variations in severity and functional limitations occur. Such variations suggest differences in the consideration of vocational alternatives and influence the perceptions of valid employment options held by employers. Even more significant is the variability in intensity and direction of attitudes held by employers, which are specific to the disability and its severity. This issue of group heterogeneity

and its related implications compounds the problem of formulating employment strategies and policy solutions for persons with handicaps.

Civil rights legislation as an employment policy solution provides an excellent example of the difficulty in applying the protected-group model to the class of persons defined as handicapped. To understand the complexities in applying this paradigm to the handicapped, it is first necessary to examine civil rights initiatives in the context of public policy.

America, as a matter of public policy, has enacted civil rights legislation where a history of discrimination has been shown to exist against certain protected-group members--racial and ethnic groups, older workers, women, and, more recently, the handicapped. In the area of employment, civil rights legislation--nondiscrimination and affirmative action--has existed as the predominant public policy solution toward overcoming work-related discriminatory practices and achieving the integration of the particular protected-group members into the work force. The common ingredient underlying discriminatory practices for all protected groups and the stimulus for civil rights legislation rest in the fact that all are victims of societal prejudice.

Civil rights legislation, therefore, addresses the symptoms of prejudice, i.e., discrimination, with a focus on bringing about behavior change in the employment arena. Its clear intent is to counter existent and past attitudinal barriers which have served to deny opportunities for employment based only on an individual's

particular group status. The passage of civil rights legislation for a particular group thus serves as both a public acknowledgement of discrimination and prejudice, and a public commitment to corrective action and equality of opportunity.

While generally viewed as a public policy response to an ethical and human rights issue, civil rights legislation in the employment area must also be recognized as an important component of a comprehensive employment and training policy. It addresses an important barrier to full employment. To be effective as a part of an overall employment and training policy, there must first be a public commitment to the concept of full use (irrespective of group status) of human resources in the workplace. It is this twofold public policy commitment--equality of opportunity and maximization of all human resources--that is essential in achieving the integration of all protected-group members into the work force. Over time, there is evidence that this two-pronged commitment has had a profound effect on the integration of various protected groups, particularly blacks, women, and Hispanics, into the work force.

With the enactment of Title V of the Rehabilitation Act of 1973, the handicapped have become the most recent recipients of protective civil rights legislation in employment. The extent to which the handicapped are victims of prejudice and discrimination in employment is well documented. In fact, the U.S. Commission on Civil Rights (1983) has stated that discrimination against the handicapped not only

pervades employment but also occurs in education, institutionalization, medical treatment, sterilization, transportation, and several other areas. Thus, the necessity for civil rights protection would seem to follow. Whether such legislation is sufficient to achieve its intended purpose remains an open question.

The feasibility of the civil rights solution remains a serious question from several perspectives. First, and probably most significant, is the changing climate toward civil rights, especially affirmative action in the 1980s. Affirmative action is under challenge on both ethical and legal grounds. The handicapped, as the newest protected group included in such legislation, fall victims of a societal backlash that questions the legitimacy of such practices for even more established groups.

Adding to this problem are the complexities of definition and potential employer financial hardship. The ability to implement affirmative action programs requires an ability to identify clearly the target population both for purposes of recruitment and to monitor progress. In the case of the handicapped this issue becomes complex. Definitional issues surface surrounding the severity of the disability, the temporary versus the permanent conditions, the distinction between disability and handicap, visible and nonvisible handicaps, and a distinction between illness and handicap. The range of disabling conditions also makes establishing affirmative action goals for the class "handicapped" even more confusing. For example, is it legitimate to meet one's affirmative action goals for the handicapped by

selecting only those persons who are blind, or deaf, or use wheel-chairs? Johnson (1981) suggested that the present definition of handicapped in Title V is unworkable for both affirmative action and nondiscrimination purposes. He argued that unless two separate operational definitions are developed--one for affirmative action and one for nondiscrimination--the intent of these civil rights provisions cannot be realized.

Civil rights law, as presently written for the handicapped, requires that the employer take necessary steps to accommodate handicapped workers. This may require a cost to the employer in modifying the work site or in providing adaptive devices, support services, or other means to enable the otherwise qualified handicapped individual to perform. Unlike civil rights law as traditionally applied, the accommodation feature requires a difference of treatment in order to achieve an equity of employment opportunity. Civil rights law for the handicapped, as presently constituted, not only focuses on the individual's characteristic, but also makes accommodation to that characteristic an employer obligation. The placement of this accommodation responsibility on the employer, considering cost and potential job-site adjustments, would appear to build disincentives to hire into the legislation itself.

The handicapped as a protected-group class are thus significantly unemployed and underemployed. The cost of this problem can be seen not only in terms of lost human potential, but also in national economic terms.

A number of factors contribute to the employment problems of handicapped persons. Persons with handicaps not only face the traditional barriers of employer prejudice and discrimination that occur with all protected groups, but they also appear to be subject to additional attitudinal and situational factors that are unique to them as a class of individuals and compounded by the heterogeneity of this population.

These unique barriers derive from both definitional and conceptual issues, as well as commonly held myths and misperceptions associated with handicapped individuals as workers. In combination with institutionalized disincentives, they operate as deterrents to employment for both the handicapped individual and the employer.

The traditional public policy paradigm for affecting the employment of protected groups has incorporated employment and training strategies, public awareness, and civil rights legislation. Over time, this broad-based approach, in concert with a public commitment and clear public mission, has proven reasonably effective for protected groups. The application of this same paradigm to persons with handicaps would appear to be inadequate and incomplete, based on the unique and complex issues that enter the employment equation for this particular group.

Assumptions Underlying the Research

There are several major assumptions underlying this research which have implications for the use, application, and effect of the

findings and conclusions. First and foremost is the assumption that integration of the handicapped into the labor-market mainstream is an important national public policy objective. Inherent in this assumption is that a strong national climate exists sufficient to express the priority in terms of resource allocation, legislative strategies, and policy formulation. This is far from a certainty. Such integration of the handicapped must not only compete with other national programs and priorities, but must also wrestle internally with conflicting and competing policy in the issue area of disability. So also must this policy formulation be considered as a larger part of national employment and training policy for all persons.

This research does not address itself to the problems of work disincentives inherent in social security, workers compensation, and other income-transfer programs associated with disability. While it is recognized that these factors play a significant part in disability employment policy, an assumption is made here that addressing more specific employment barriers and solutions can still have a profound effect on the employment problems of the disabled.

An assumption is also made that the protected-group employment paradigm exists in reality as a conscious public policy strategy. This may be a large assumption, especially since civil rights legislation and employment and training policy have not traditionally been developed in tandem as a part of a larger employment policy strategy.

Other assumptions are made that have implications for the study findings. To argue, for example, that civil legislation for the

handicapped, as it presently exists, will be less effective for the handicapped than it has been for other protected groups requires assumptions on equivalency in scope, enforcement, clarity, and time to take effect. It could be argued that as the newest piece of national civil rights legislation the full effects of the legislation are yet to occur. An analysis of this phenomenon would at best be complex. Rather than addressing this issue, the research focuses on the present status of policies and programs, suggesting needed changes accordingly.

In choosing a survey methodology, several broad assumptions are made that are inherent in that approach. The two basic assumptions are: (a) that actual employer practices are accurately reflected in a self-report survey instrument and (b) that respondents answered honestly. The study findings are therefore as valid as the collective responses, as reflected in the answers provided by persons who completed the written survey.

Research Hypotheses and Theoretical Model

Research Hypotheses

Two major research hypotheses are addressed in this study which focus on employment barriers and employment solutions for the handicapped as a protected group. Two subhypotheses are also tested which address barriers and solutions for various disability groups that comprise the larger class defined as handicapped. The hypotheses are:

Barriers:

1. The handicapped as a protected group face more and different employment barriers than do women, blacks, and Hispanics.

1a. Some disability groups face more and different employment barriers than others.

Solutions:

2. The handicapped require more and different employment solutions than do women, blacks, or Hispanics.

2a. Some disability groups require more and different employment solutions than others.

The null hypothesis being tested with regard to barriers is that there is no difference in the number or type of barriers faced based on either protected-group category or disability group. In the case of employment solutions, the null hypothesis is that there is no difference in the number and type of solutions proposed based on either protected group or disability group.

Theoretical Model

In its simplest terms, the theoretical model is based on the assumption that the greater and more diverse the barriers to employment, the more diverse and greater must be the solutions. A series of assumptions, from the broader to the more specific, provide the theoretical model from which the research hypotheses are derived. These assumptions apply to the concepts of barriers, solutions, and the handicapped as a unique protected group.

Barriers Assumptions

1. The designation of protected group status defines the existence of societal prejudices and stereotypes.

2. The existence of societal prejudices and stereotypes for protected group members also creates employment barriers for protected group classes.

3. Employer decisions to hire are based on attitudinal factors, the perceived ability of the applicant, and considerations of financial cost.

4. The type and extent of employment barriers are specific to the particular protected group category and its unique characteristics.

5. The type and extent of barriers faced by a specific protected group class relate both to the extent and basis of prejudice and to the existence of other factors which operate as disincentives to hire.

6. The concept of disability creates additional barriers which do not exist for other protected groups.

Employment Solutions

1. All protected groups are disadvantaged in obtaining employment.

2. The existence of barriers to employment for all protected groups, as compared to nonprotected groups, requires that additional and different employment strategies be used to facilitate their employment.

3. All protected groups face employment discrimination, which requires that employment strategies incorporate measures to modify employer behaviors.

4. Civil rights protection is part of a larger employment paradigm for protected groups which includes other measures to alter employer behavior, and employment and training programs to prepare the individual.

5. The type and number of employment strategies needed will be specific to the particular protected group class, based on the type and number of barriers faced.

6. The existence of different and additional barriers for the handicapped will require different and additional employment solutions than required for other protected groups.

The Handicapped as a Heterogeneous Group

1. The designation of a group as a protected class identifies those group members as having a shared characteristic.

2. Attitudes, behaviors, and perceptions toward protected group members derive from generalizations and stereotypes surrounding the particular group characteristic.

3. While prejudices and stereotypes are common to all protected classes, the type, basis, and extent of the stereotypes and prejudice will be unique to the characteristic of the protected group class.

4. The protected group class handicapped includes a number of disability categories which are reacted to in different ways.

5. The societal reaction to the population handicapped appears to be specific to the disability and not to the larger class.

6. Employer reaction to the handicapped is based on the specific disability category and not on the larger class of the handicapped.

7. Different employment barriers, dictating different employment solutions, are based on the specific disability category.

The Need to Examine Employment Barriers of the Handicapped

The ability to influence the employment problems of persons with handicaps requires that a comprehensive approach incorporating practical measures and policy solutions be adopted. The development of such an approach must be sensitive to the unique issues and barriers that affect the handicapped as a heterogeneous protected-group class. Increasingly, the handicapped are being classified as a minority group, with their employment problems viewed in the same context as those faced by other "minority" groups. Where the minority-group model is adopted, the principal public policy solution is directed at the elimination of prejudice and discrimination: the civil rights approach. If, however, the minority-group model is incomplete or inadequate, the implied solution also is.

A test of the appropriateness of the minority-group model must examine similarities and differences between the handicapped and other protected groups as they relate to the employment arena. The most valid evidence in such a comparison is that which is derived from the

employer community. In this context the employer community is defined as both public and private employers and public and private employment agencies. An assessment of the employer community on both barriers and solutions, compared across protected groups, should provide insight into the viability of the application of the protected-group employment paradigm to the handicapped.

While a number of studies have examined employer prejudice, discrimination, and attitudes toward handicapped persons, little or no research exists that has examined these issues in the context of practices and policies toward protected-group members. Nor has research looked simultaneously at both barriers and solutions.

The Purpose of This Study

This study is intended to examine perceived employment barriers and proposed employment solutions to identify similarities and differences between the handicapped and some other protected-group classes. The ultimate objective is to discern the appropriateness of the protected-group employment paradigm for the handicapped and the various disability groups that constitute the larger protected-group class. The appropriateness of fit, as validated by the employer community, should identify the type and mix of employment approaches necessary to achieve employment of the handicapped.

In this sense, a comparison with other protected groups is useful only to test the utility of the paradigm and point to needed policy solutions. It would be inappropriate and counterproductive, based on

this comparison, to suggest that other protected groups are less deserving or do not also need unique and comprehensive approaches addressed to their particular employment problems. A conclusion of that kind not only pits one group against another for competing resources but fails to achieve the larger public policy mandate: an equity of access and employment participation for all members of society.

The results of this research should have important implications for both public policy formulation and implementation. From the public policy perspective, it should assist in the development and implementation of legislation and programs responsive to the needs of employers and handicapped individuals. More important, it may point the way to a more effective achievement of public policy agendas both in human rights and full employment. Both agendas have significant implications in economic and human terms for the handicapped individual and the public at large.

At the practitioner level, a knowledge and understanding of unique barriers and viable solutions will increase their overall effectiveness. Information based on the perceptions of the employer community will significantly enhance their capability to develop and apply approaches targeted to the issues identified, for the handicapped at large and for the various disability groups included. Ultimately, the application of such targeted knowledge and strategies should increase the capacity of employment and training program

managers and program practitioners in facilitating employment of handicapped persons.

Organization of This Study

Chapter II includes a broad review of the relevant literature. The literature review follows the theoretical framework used in the dissertation and proceeds from the general to the specific. Salient literature is presented concerning disability, considering attitudinal dimensions, employment barriers, and employment solutions.

Chapter III describes the methodology used for this research study. Included are a description of the theoretical framework, the research design, the method for data analysis, and the rationale for selecting the methodology.

Chapter IV presents the research findings. The data derived from the survey methodology are summarized and analyzed. The data are presented in narrative and tabular form.

Chapter V presents the conclusions and recommendations from the research study. The conclusions and recommendations draw upon this research study, relevant literature, and the writer's own experience. Also discussed are the limitations of the research and implications for further study.

Terms and Definitions

To facilitate an understanding of the dissertation, terms used throughout the study are here defined.

Barrier: An identifiable characteristic of an individual or class of individuals, or a quality associated with an individual or class of individuals that operates as an impediment to employment. Barriers are defined by employers and employment agencies based on their perceptions. They may be attitudinal, based on cost considerations or an ability to perform.

Characteristic: An identifiable feature of an individual or class of individuals. Such features are generally used to classify individuals, such as, for example, by race, sex, or handicap.

Class: A term used to define groups of individuals who have certain characteristics in common or are reacted to in certain common ways.

Coefficient of concordance: A statistical measure of the degree of correlation of rankings for more than two sets of rankings.

Confidence interval: The upper and lower ends of a range around a sample mean. The chosen confidence level defines the percentage of time one would expect the actual population mean to fall in this range. In general, the larger the sample size, the smaller the confidence interval range. For purposes of this research, a 95% confidence interval was used.

Disability type, disability category, handicapped subpopulation. These terms are used interchangeably to define handicapping conditions with similar characteristics or functional limitations. Six groups are defined in this study: blind, deaf, hidden disabilities, history of mental illness, mentally retarded, and physically disabled.

Employer community: Used in this sense, community includes employers and agencies who hire or have a direct role in the referral, selection, or hiring of applicants for employment. For purposes of this study, the employer community is composed of four groups: public sector employers, private sector employers, private sector employment agencies, and public sector employment agencies.

Employer community subgroup: Any one of the four groups identified above.

(Employment) solution: A method, approach, strategy, or technique in a policy or program intended to increase the employment opportunities for a class of individuals. Solutions can be broadly classified as directed at the individual applicant or directed at the employer.

Handicap, disability: These terms are used interchangeably to define a determinable physical, mental, or emotional characteristic or condition associated with an individual. Most generally, the characteristic is regarded as permanent or of substantial duration and imposes some degree of limitation in function. Disability is generally regarded as a more negative term than handicap because of its connotation of inability or limitation. The most favorable terminology for reference to this class of individuals is persons with handicaps.

Hidden disability: This term defines physical conditions that are not readily discernible through normal interaction patterns.

Invisible handicap is a synonym for these conditions, such as cancer, heart conditions, epilepsy, and diabetes.

Michigan Employment Security Commission (MESC): The Michigan branch of the United States Training and Employment Service.

Minority (group): As used in this research the term includes individuals distinguished by racial/ethnic, national origin, or language and cultural characteristics. Under this definition, blacks, Hispanics, Asian Americans, and American Indians are the only groups included.

Protected groups: This definition includes any of those classes of individuals named for protection under federal civil rights employment statutes, i.e., women, minorities, handicapped, and older workers.

Statistical Package for the Social Sciences (SPSS): This computer-based software program is used for formatting, statistical computation, and statistical analysis of social science data.

Work disincentives: This term refers to the effects of social security, workers compensation, and other income-transfer programs that discourage individuals from seeking employment for fear of loss of economic security and social and medical benefits.

CHAPTER II

REVIEW OF LITERATURE

Introduction

The theoretical model set forth in this research is one that examines the handicapped as a more recent protected group category, in comparison to three more established groups--women, blacks, and Hispanics. This examination recognizes that all protected group categories share a common societal problem as recipients of prejudice and discrimination. It argues, however, that the basis and extent of discrimination and prejudice, as it operates in the employer arena, is substantially different for the handicapped than for other protected group classes.

The nature of the topic requires both a broad and a specific review of literature in the areas of prejudice, attitudes, and employment as it affects the handicapped as a protected group. The literature review proceeds from the general to the specific and parallels the structure established in the research design.

The literature review has been divided into four major headings. Section one is a review of literature on the topic of prejudice. It includes the major works in the field, examining theories addressing causation, impact, and behaviors. Both sociological and psychological models are included. The intention is to provide a framework for

understanding prejudice as it applies to those who have been labeled as different. A summary is presented at the end of this and ensuing sections, which draws from the major themes presented.

The second portion is an examination of prejudice as it applies to persons with handicaps. Section two follows the same model and covers the same general topic areas as presented in the first section. Both research and the works of major writers on the topic are included. The second section includes five subparts: sociological theories, psychological theories, reaction to persons with handicaps, attitudes toward specific disability groups, and methods for altering attitudes toward persons with handicaps.

The third section of the literature review addresses employer prejudice and behavior toward persons with handicaps. Literature is included that substantiates the existence of employer prejudice and discrimination, examines cause and basis, and reviews the effect of specific disability types and other factors on employer behavior.

The final section reviews various approaches to facilitate employment of persons with handicaps. Potential employment solutions are grouped and analyzed in terms of those directed at handicapped individuals and those directed at employers. This review and analysis includes a discussion of present and suggested programs and strategies in employment and training, employer awareness, and civil rights legislation. Issues and potential surrounding each of the approaches are discussed.

General Theories of Prejudice: Social and Psychological

General works in the area of prejudice provide a background and foundation for understanding the cause and effect of this phenomenon as it applies to classes of individuals with different characteristics. Most theories and research are grounded in sociological and psychological principles or reflect a combination of both. While initial theories and concepts were based on manifest prejudice toward racial and ethnic groups, they have application for any discernible characteristic (e.g., age, sex, disability) to which some value can be placed and attributes assigned. All discussions of prejudice have in common a recognition that certain attributes of individuals cause the formulation of unwarranted negative perceptions and behaviors toward those individuals.

The literature disagrees as to whether or not the cause of prejudice is inherent in certain personality types or occurs as a result of social and cultural phenomena. All writers seem to agree that stereotyping always accompanies prejudice and that prejudice has a negative effect on the recipient.

One of the most frequently cited sources on the subject of prejudice is that of Gordon Allport. In The Nature of Prejudice (1954), he discussed the causes, components, and effects of prejudice. He suggested that prejudice has its foundations in a number of factors, including historical, sociocultural, situational, psychodynamic, and phenomenological principles. Drawing on other theorists, he described the prejudiced personality as one whose traits are

moralistic, rigid, and authoritarian. Such a personality externalizes causes, has intolerance of ambiguity, and desires social order.

Allport (1954) suggested that a number of factors can serve to reinforce and support prejudice; probably the most important of these is the visibility of the difference. Prejudices are also reinforced through the use of labels and stereotypes and the perceptual need to categorize individuals. Stereotypes serve to simplify perceptions and lead to either/or generalizations. Labels operate to reinforce stereotypes and serve to color the perceptions of the whole person.

Allport (1954) proposed both a legal solution and an interaction solution for counteracting prejudice. He suggested that legal solutions are probably the most fruitful because of their ability to force behavior change, which, he believed, will eventually alter habits, thoughts, and feelings. In addition, he suggested that equal-status contact between majority and minority persons will dispel prejudice, except in those persons who have character disorders.

The work that has probably had the most influence among psychological theories of prejudice is Adorno, Frenkel-Brunswick, Levinson, and Sanford's The Authoritarian Personality (1950). Adorno's et al. two most important contributions were (a) their identification and definition of a prejudiced personality type and (b) the disclosure that such personality types tend to be prejudiced toward a number of minority groups. In their research, they found high correlations among the scales measuring anti-Semitism (A), ethnocentrism (E), and Fascism (F). The combined attributes from the three scales

define the authoritarian personality. They characterized the authoritarian personality as one who has strong in-group biases and feelings, stereotypes out-groups, shows rejection and hostility toward out-groups, views the in-group as superior, believes in power and toughness, supports authoritarian submission and aggression, and has a propensity for destructiveness, cynicism, and projectivity.

The strong correlation among the A, E, and F personality scales provides the basis for projecting that an individual who is anti-Semitic will also be ethnocentric and Fascist. The ethnocentric attributes are defined as strong out-group and in-group feelings, with negative stereotypes attributed to out-group members. Persons with anti-Semitic characteristics exhibit extreme receptivity to negative attitudes towards Jews and a strong resistance to change those attitudes. The Fascism scale describes the attributes of conventionalism; a preoccupation with authority; an opposition to subjectivity; a belief in power, toughness, and superstition; and a tendency to stereotype. While Adorno's et al. work exists as a major contribution to the field in describing the personality types associated with prejudice, it did not address causal factors or suggest ways to counter its effects.

Writing after Adorno et al., Rokeach (1960) defined prejudice as a function of closed-mindedness. He characterized the closed-minded personality as one that is authoritarian in approach and intolerant toward opposite beliefs. According to Rokeach's theory, it is the structure of the belief system and the rigidity of beliefs, rather

than the content of the beliefs, that distinguishes the closed-minded personality. Rokeach acknowledged that the dissonance in beliefs that characterizes the person with a closed mind is insufficient to explain all racial and ethnic prejudice. The closed mind will, however, more likely display a greater intensity of prejudice toward certain groups and, by definition, be less likely to change those prejudicial beliefs.

The writings of both Adorno et al. and Rokeach suggested strongly that prejudice is inherent in certain personality types. Implicit in their writings was the notion that prejudice is not a social phenomenon and that some persons are unlikely to change their beliefs.

Other writers have viewed prejudice in a more sociocultural context. While the principal focus of The Marginal Man (Stonequist, 1937) was a description of the causes and effects of prejudice, the work also proves useful in providing insights into the behavior of the majority toward others. The marginal man, according to Stonequist, is one caught between the culture of the majority and his own subculture. The dominant culture seeks to maintain control, define the rules, and determine what and who is acceptable. When the individual experiences the conflict between his own culture and the majority culture, he becomes a marginal man and must adopt a variety of coping skills, for survival. Stonequist's work is useful in providing a sociological context for the phenomenon of prejudice,

especially with its emphasis on the need for the dominant culture or group to maintain control.

Ehrlich (1973) provided a description and explanation of the various dimensions of prejudice. In The Social Psychology of Prejudice, he identified cognitive, conative, and affective components of prejudice and described the principles underlying each.

The cognitive dimension is characterized by stereotypes. Stereotypes are formed and continue to exist because they enable persons to distinguish social objects based on belief systems; such belief systems are widely diffused in society, and there is a societal consensus on the belief systems associated with these objects.

Ehrlich (1973) identified several factors that affect this dimension. He suggested that visibility will reinforce stereotypes but that changes in intergroup relations will alter stereotypes. In addition, lack of knowledge about individuals is said to increase the likelihood of stereotypes. Further, stereotypes held about a group tend to be all positive or all negative.

The conative dimension of prejudice describes the concept of social distance, seen in terms of the desirability of interaction with various groups. Ehrlich (1973) stated that the relative desirability of certain groups remains stable over time but that social-distance measures toward certain groups can diminish with changed interaction patterns. Social-distance norms are defined as learned behavior in society. Social-distance behavior is seen as determined

jointly by (a) the degree to which an individual can be "coded" within a certain group and (b) the desirable or undesirable characteristics of the individual.

The affective domain describes the emotional-reaction patterns associated with prejudice. Ehrlich (1973) suggested that affective-response patterns will be based in large part on the person's social group and not his or her individual characteristics. The less knowledge one has about the individual, the more likely the affective response will be based on the person's categorical grouping. Unlike personality theorists, Ehrlich saw prejudice being explained in terms of perceptual and sociological forces operating in a situational context.

Feagin and Eckberg (1980) also provided a social perspective on the concepts of prejudice and discrimination. They suggested that prejudice operates to distort social relationships by overemphasizing some characteristics, such as race, sex, age, or handicap. The authors further defined discrimination as incorporating the following dimensions: (a) motivation, (b) discriminatory action, (c) effects, (d) the relationship between motivation and action, (e) the relationship between action and effects, (f) the immediate organizational context, and (g) the larger societal context. Their analysis provided a framework for understanding and interpreting prejudice and discrimination, emphasizing situational, social, and environmental factors. It also suggested that prejudice and discrimination are not always cause-and-effect relationships.

The authors cited in this general review of writings on prejudice identified both differences and commonalities in their discussion of the subject. Clearly, the major difference is between those who attribute cause to psychological or sociological factors. If one accepts the propositions of the personality theorists, which suggest that prejudice is inherent in certain personality types, it becomes difficult to explain why these personality types occur and provides little hope for modifying behavior. Social explanations see prejudice as learned behavior, determined largely by social and cultural factors. While such theories provide more insight into causes and remedies, they fail to explain individual differences in intensity and in manifestations of prejudice.

The authors addressing prejudice generally suggest that the manifestation of prejudice occurs based on a devaluation of attributes which are different. In addition, prejudice is always accompanied by stereotypes. Stereotypes serve as a way to classify persons who share certain common attributes. Stereotypes may be positive or negative; they are not factually based--yet, they are believed to be true. Further, stereotypes must be shared and reinforced by a larger group in order to exist.

A reconciliation of the social and psychological schools of thought suggests that there must be social support for the manifestation of prejudice toward certain groups. The existence and intensity of prejudice within that social context is a function of the personality attributes of the individual. It would appear that for many,

prejudicial attitudes may be changed, either through increased knowledge, interaction, or forced behavioral change. Conversely, in some personality types, attitudes of prejudice may not be subject to change.

Prejudice Toward Persons With Handicaps

A number of authors have written about the basis, components, and effects of prejudice toward persons with handicaps. Much like the general theorists who have researched and described the nature and cause of prejudice, the writers here have also offered psychological or social bases. The literature cited in this section is divided into three parts: sociologically based research, personality or psychologically based literature, and literature that discusses reaction to disability.

Social Theories

Wright (1960) was one of the earliest writers to describe the disabled as a minority group and to offer parallels between persons with handicaps and traditionally defined minority groups. She suggested that persons with handicaps are a minority group because they are victims of prejudice, discrimination, and stereotypes, as are other minority groups. More specifically, she cited evidence in terms of discrimination in employment, restricted social and educational opportunity, an expectation that they "stay in their place,"

and studies that have shown common negative attitudes toward the blind and ethnic groups.

She also noted some significant differences between the handicapped and other minority groups, including the lack of a social-group identity, a division of their minority status within the family structure, and an inability to take on certain behaviors of the dominant culture. In addition, Wright (1960) felt that devaluative spread--the tendency to generalize disability to all aspects of the individual--is unique to the handicapped as a minority group.

Wright identified four factors as the basis for attitudes toward the handicapped. The "cause/effect" factor suggests that persons themselves are somehow to blame for their disability. Extension of this factor suggests that the disabled are evil or have sinned, which is supportive of a "blame the victim" mentality. The "different and strange" factor includes the tendency to like those persons most similar to ourselves, to fear those most different, and to be threatened by the difference. Wright also suggested that "childhood experiences," because of negative associations with health, injury, or sickness, help shape later negative attitudes toward persons with disabilities. Finally, she suggested that "socioeconomic" factors play a part. In this situation, the cultural belief system acting in combination with the availability or scarcity of resources, will shape attitudes.

Safilios-Rothschild (1976), in The Sociology of Physical Disability and Rehabilitation, also argued for viewing the disabled as a

minority group. Her basis for the analogy lay in the fact that the disabled, like other minority groups, are reacted to as a category of people. She also argued that the labels and perceptions of this categorization process, in concert with the behaviors of professionals, have defined inappropriately the role expectations and goals for the disabled. Her essential argument was that societal attitudes toward the disabled are being shaped not by the disabled themselves, but by the professionals who serve them. By implication, she suggested that the disabled, as a minority group, must use self-definition and self-advocacy to effect attitude and behavioral change.

Eisenberg, Griggins, and Duval (1982) defined the disabled as "second-class citizens" and attributed that status to their dependence on the medical community and certain prevalent American social values. The authors suggested that labels and stigmas have become especially significant in fostering attitudes and stereotypes concerning the disabled. Such labels have served to categorize individuals and, in turn, dominate all perceptions surrounding the disabled individuals.

Eisenberg et al. (1982) felt that labels in large part have derived from the medical community, with its emphasis on disability, incapacity, and illness. They cited biblical references as reinforcing stigmas attached to the disabled. Collectively, these influences have contributed to feelings of prejudice and aggression toward the disabled, according to the authors.

In addition, Eisenberg et al. (1982) suggested that existing social-value systems have contributed to prejudice and discrimination toward the disabled. Value-system factors include belief in the survival of the fittest, issues concerning the rights of the majority, and a slow rate of change in societal values.

Several other writers have identified social and cultural values as the basis for prejudice toward the handicapped. Vash (1981) suggested that devaluation as a psychological concept has its roots in an overvaluation of certain attributes in the American culture. Such devaluation and overvaluation then act in combination to form the basis for prejudice.

According to Vash (1981), American society overvalues intellect and physique, while tending to undervalue attributes like spirituality. In addition, society cannot discern the difference between the disability--the condition itself--and the handicap--the functional limitation imposed by the condition. The disabled thus become devalued people because they fail to possess the desirable cultural attributes and are also defined by their disability. She further suggested that these attitudes derive in part from a psychological tendency to "blame the victim" for his condition.

In his chapter on "Disability and the Socialization Process," Albrecht (1976) said that social values have influenced the treatment and classification of the disabled. He stated that the socialization process teaches values of independence, physical health, youth, beauty, and productiveness and places high value on marriage,

children, and sexual performance. Much like Vash (1981), he suggested that the disabled are devalued because they do not possess or cannot attain these qualities. Attitudes and behavior toward the disabled thus stem from their status as devalued persons.

The importance of stigmas and labelling has been identified by several authors as they relate to attitudes and behavior toward the handicapped. Goffman's (1968) work is most often cited in the discussion of stigmas. He described stigmas as a reflection of the majority's attitudes toward those who possess an "undesirable difference." Stigmas derive from society's needs to categorize people and to set expectations for what people should be. Stigmas become operative when a discrepancy exists between what people should be and what people are.

Goffman (1968) suggested that stigmas can be one of three types: (a) abominations of the body, (b) blemishes of character, or (c) tribal stigmas. Persons who have stigmas are discredited if their stigmas are known. Further, the visibility of the stigma determines the intensity of reaction to it. Visibility has three dimensions: (a) knowledge about the characteristic, (b) obtrusiveness, and (c) its perceived effect on other activities.

Typically, stigmatized persons are not accepted by majority others and are avoided in social situations. Goffman (1968) also suggested that "normals" place limits on acceptance of stigmatized persons and that stigmas serve as a vehicle for the dominant members of society to maintain control.

Several other principles associated with stigmas were identified by Goffman: (a) familiarity with stigmatized persons does not necessarily reduce the effect of stigmas, (b) all stigmas are associated with certain symbols that call attention to and disclose the stigma, and (c) stigmas have a tendency to spread to those closely connected to stigmatized persons.

Thoreson and Kerr (1978) suggested that severe disability is inherently stigmatizing and that societal practices have served to reinforce the stigmas and shape negative attitudes toward persons with disabilities. The authors cited several factors to substantiate the stigmatized status of the disabled, including the phenomenon of the healer-patient relationship. They suggested that the disabled are defined as patients and thereby placed in a position that is inherently patronizing.

The authors also contended that the concept of acceptance of disability advocated by the nondisabled further conditions attitudes and behavior toward the disabled. Thus the disabled are perceived to have other negative attributes beyond their disability. Further, they are defined by society as inferior and are expected to accept their inferiority. Finally, they are perceived as occupying a "sick role," which has been defined as undesirable.

Thoreson and Kerr (1978) also described the attitudes of the able-bodied toward the disabled as varied and conflicting. They suggested that "acceptance and rejection, sympathy and pity, trust and fear, valuation and devaluation are the rule" (p. 24).

Gove (1976) described the effect of identifying or labelling the disabled as disabled. Labeling theory suggests that deviant status is conferred on certain members of society. Once conferred, the deviant label colors all perceptions of the individuals. According to Gove, such labels are irreversible and become self-fulfilling prophecies. The labeled person over time takes on behaviors, which are deviant, consistent with his or her label. Gove suggested that the disabled have been labeled as deviant. As a result, all interactions as well as the perceptions of others are defined by this label. Gove suggested that the deviant label can cue both positive social responses--treatment, care, rehabilitation--and negative reactions--rejection, avoidance, and mistreatment.

Smith (1980) argued that labelling, when applied to the physically handicapped, is defined more by the medical model than by societal reaction. In this context the deviant status may include the physical condition itself which differs from the norm, or behavior by the disabled person which is different from a typical way a disabled person should behave. One of the major differences in the application of labels to the disabled, according to Smith, is the positive behaviors toward the disabled by society. He suggested that care and rehabilitation are two such examples designed to facilitate normalization.

Psychological Theories

One of the major contributions of Siller (1976) was his finding that attitudes toward the disabled could not be measured along a single dimension such as acceptance or rejection, but were multi-dimensional. Siller identified seven components that operate as the basis of attitudes toward the disabled:

The factorially defined dimensions were interaction strain: an uneasiness in the presence of the disabled and uncertainty as to how to deal with them; rejection of intimacy: a rejection of close, particularly familial, relationships; generalized rejection: a pervasive negative orientation with derogation, unpleasant personal reactions and advocacy of segregation; authoritarian-virtuousness: an ostensible "pro-disabled" orientation which is rooted in an authoritarian context and advocates special treatment; its correlations with other disability dimensions suggest that it is a negative dimension despite its surface tone; inferred emotional consequences: intensely hostile references to the character and emotions of the disabled person; distressed identification: highly personalized reactions to disability with the emphasis on the disabled as a stimulus which activates anxiety about one's own vulnerability; imputed functional limitations: an evaluation of the ability of the disabled person to function in his environment. (p. 475)

Siller (1976) went on to cite the summary of findings of a number of studies addressing attitudes toward the disabled. Those studies indicated that (a) for most persons disability has little salience; (b) there is some tendency to attribute superior powers to the disabled or to admire excessively their coping skills; (c) attitudes toward the disabled are consistent in test-retest correlations; (d) attitudes toward the disabled are only weakly correlated with personality variables, except for dogmatism, authoritarianism, and alienation; (e) in considering demographic variables, only education seems to be important; (f) attitudes appear to be generalized--that

is, someone averse to one condition is likely to be averse to others; and (g) attitudes toward the disabled are multidimensional.

Siller (1976) also noted that in any given interaction with the disabled, any one of several factors may play a role, including personality, socioeconomic status, cultural background, religion, prior experience, or the specific contextual elements. He also suggested that reactions to disability are varied; in some cases courtesy, consideration, and kindness are shown, while in others avoidance, curiosity, and rudeness may occur.

Other research by Siller (1967) examined the relationship of personality characteristics to attitudes toward disability, described differential reactions to various disabilities, and analyzed the components of attitudes toward the disabled. Their findings were based on an analysis of responses to the Attitude Toward Disabled Persons Scale (ATDP), Siller's Feeling Check List (FCL), and the Social Distance Scale (SDS) used in conjunction with personal interviews of those who responded to the questionnaires.

In general, Siller (1967) found that more accepting attitudes toward the disabled were associated with greater ego strength and psychological health. Persons with positive feelings also showed greater ego strength, feelings of security, social poise and presence, and personal adjustment. Conversely, negative feelings were associated with anxiety, hostility, self-criticalness, aggression, and rigidity.

Differences were also noted in attitudes and reactions to eight disability types measured by Siller (1967). It was found that deafness and blindness received the most favorable reactions. Blindness was perceived as the worst disability an individual could suffer. Deafness evoked the least sense of personal loss of all the disabilities.

Skin disorders and body deformation produced the most aversion, while muscular dystrophy and cerebral palsy were least socially acceptable. Siller (1967) found that there are consistent ways that specific disabilities are perceived by the nondisabled. For example, aesthetic-sexual aversion was a reaction common to skin disorders, cerebral palsy, muscular dystrophy, and body deformations, but not to deafness, blindness, and paralysis.

The researcher also identified some 13 different "aversive" response categories to the disabled. The three most prevalent were perceptions of severe functional limitations, aesthetic-sexual aversion, and discomfort or strain in social interaction. A small number of nonaversive responses were also identified, including a benevolent attitude, sympathy, and some who perceived the handicapped as human or equal. In summary, Siller's (1967) research suggested that reaction to and attitude toward disability is a complex phenomenon. It evokes a range of positive and negative responses, which differ based on disability type and are dependent on a combination of social, psychological, experiential, educational, and situational factors.

The research of Chesler (1965) produced similar findings. He compared ethnocentrism with attitudes toward the disabled and found that people who were prejudiced toward the disabled also tended to be prejudiced toward ethnic groups. Conversely, people who were not prejudiced in general tended not to be prejudiced toward the disabled.

Research by Noonan, Barry, and Davis (1970) attempted to identify the primary personality factors that explained attitudes toward the disabled. Five theories offered in the literature were tested: (a) cultural conformity as a basis for negative attitudes, (b) degree of ego strength, (c) degree of authoritarianism, (d) degree of field independence (high field independence is characterized by an acceptance of what the individual is versus what he or she is supposed to be), and (e) levels of conscious and unconscious body satisfaction.

Noonan's et al. findings were based on a sample of 240 female college students who responded not only to measures of the factors, but also to two scales that measured attitudes toward the disabled. Responses to the scales were analyzed against measures of the five personality factors.

The findings indicated that authoritarianism was the best predictor of attitudes toward the disabled. Individuals who scored high on authoritarianism measures, indicating dogmatism, rigidity, strength, and so on, had the most negative attitudes toward the disabled. The strongest inverse relationships were found between authoritarianism and attitudes toward the disabled in those persons

who had high authoritarianism scores and also had low body satisfaction, moderate or low social conformity needs, high ego strength, and moderate or low field independence.

Writing in "Roots of Prejudice Against the Handicapped," Gellman (1959) took the position that prejudice toward the handicapped was a real phenomenon and that it had its roots in four factors. He suggested that the evidence of prejudice could be seen in the discrimination that the handicapped face in social, educational, and vocational areas. The language used to describe the handicapped was also seen by Gellman as reinforcing and substantiating prejudice.

Gellman (1959) defined the roots of prejudice as social customs and norms, child-rearing practices stressing normalcy and health, a resurfacing of childhood fears in anxiety-producing situations, and prejudice by invitation--discrimination-provoking behavior by the disabled. In the last case, Gellman suggested that the disabled learn to accept an inferior role and behave in a manner consistent with that role. This serves to reinforce prejudice and discriminatory behavior by the nondisabled.

Gellman (1959) also felt there were three types of persons who were prejudiced toward the disabled. He identified the conformist who followed the prejudicial behavior of his peers, the frustrated person who vented his frustration on the handicapped, and neurotics who react to childhood insecurities by acting out prejudice toward the handicapped. All prejudicial behavior, according to Gellman, is based on the prior life experiences of the individual. It is the

individual's response to these prior life experiences that defines the prejudiced individual.

Reactions to Disability

A number of writers and researchers have described individual and societal reactions to persons with handicaps. The best summary of societal reaction patterns is found in the publication of the U.S. Commission on Civil Rights (1983). Based on a review of the literature in the field, it stated that the four major consistent patterns of response were discomfort, patronization and pity, stereotyping, and stigmatization.

The notion of discomfort in social interactions was articulated by Davis (1964). Davis suggested that the visibly handicapped, by drawing attention to their disability, place a strain on social interactions with the nondisabled. He identified four factors that operate to disrupt normal social interaction patterns. First, attention is drawn to the disability rather than the individual. Reactions such as fear, repugnance, and pity are aroused and impede normal interactions. Second, the inundation potential of the disability operates to create extreme discomfort. Inundation potential describes the capacity of the disability to create discomfort based on its negatively perceived physical characteristics. Third, Davis described a "contradiction in attributes" phenomenon in which the handicapped individual has qualities that are perceived to be incompatible with his or her disabilities.

Finally, the disabled are said to provide "ambiguous predictors"; limits and capabilities are not understood, so appropriate responses are unknown.

Similar conclusions were drawn by Kleck, Ono, and Hastorf (1966). They compared the response patterns of individuals interviewed by disabled and nondisabled persons. Their results showed that individuals interviewed by disabled persons showed more uneasiness, discomfort, and "emotional arousal" than the other group. Other findings were that persons showed less variability in their behavior, terminated their interaction sooner, and expressed opinions less representative of their actual beliefs.

In other research, Zahn (1973) analyzed several factors associated with disability to determine their effect on interpersonal relations. Zahn looked at severity of disability, degree of functional limitation, visibility of impairment, and several other factors. Their most significant finding was that the incompatibility between severity and visibility of impairment, in relation to the degree of functional limitation, had the greatest effect on interpersonal relations. Stated differently, where the functional limitation was clearly defined, obvious, and understood, those persons enjoyed better interpersonal relations. The severity of the disability was not as significant a factor. Other findings were that the more severely disabled enjoyed better interpersonal relationships than the less severely disabled; disabilities that affected communication

skills were very disabling in interpersonal relationships; and work disabilities had a negative effect on interpersonal relationships.

The collection of literature on reaction to disability suggests certain common themes. The reaction to disability is variable, ranging from pity and a patronizing attitude to fear, discomfort, and aversion. Reaction to different disabilities is also variable; some disability types evoke different and more intense responses than others. Individual response to disability is a function of psychological, social experiential, and contextual factors. Finally, reactions to a specific disability are related to the visibility of the characteristic and the extent to which the functional limitations associated with the disability are understood and perceptually compatible.

Attitudes Toward Specific Disabilities

A related body of literature has addressed the topic of attitudes and behaviors toward different types of disabilities. In this literature as well, the subject has been approached from both a sociological and a psychological perspective. Irrespective of approach, there is consensus that attitudes toward persons with handicaps do vary, based on the specific disabling condition. The work of Tringo (1970) and Siller (1967) probably best represents the sociological and psychological perspectives, respectively.

Tringo's (1970) research identified a hierarchy of social preferences existing toward various disabilities. Using a Disability

Social Disability Scale (SDSDS), Tringo measured preferences of 450 respondents toward 21 disability variables, including ex-convict and old age. The findings indicated an order of preference for physically disabled first, sensory disabled second, and brain injured third. The four groups that were ranked consistently lowest were ex-convict, mental retardation, alcoholism, and mental illness.

Other findings of Tringo's (1970) study related to demographic differences among respondents. High school students were more negative in attitude toward all disabilities than those beyond high school. Females were found to be more accepting of all disabilities than were males. No significant differences in attitudes toward the disabled were noted between students and practitioners in rehabilitation and other students.

The research of Siller (1967), cited earlier, yielded several findings with respect to reactions to different disability types. The principal finding was that attitudes and aversive behavior did differ, based on the salient features that various disabilities have to the public. Among the findings was that blindness and deafness received the most favorable reactions. Blindness, however, was perceived to be the worst disability one could suffer, and severe functional limitations were assumed to exist for this condition. Deafness was the disability that elicited the blandest responses.

Skin disorders and body deformations (i.e., hunchbacks and dwarfs) produced the most aversion. Muscular dystrophy and cerebral palsy were perceived as least socially acceptable. Also identified

was a reaction of aesthetic-sexual aversion associated with skin disorders, cerebral palsy, muscular dystrophy, and body deformation, but not toward deafness, blindness, and paralysis.

Several other findings were also important. Individual differences did exist in reactions to the same disabilities. The authors suggested that individuals' personality differences explained these differences. A moderately high (.57) rank-order correlation existed between social acceptance of and feeling toward disabilities. Lack of knowledge about the functional limitations of disabilities was more prevalent with some conditions than with others and influenced attitudes toward those disabilities.

Comments from other writers may be germane here also. For example, Goffman (1968), in identifying "abominations of the body" as one of three types of stigma, also described factors that relate to the intensity of the stigma. He felt visibility of the stigma was a key factor surrounding its intensity. Visibility, he asserted, was defined by the knowledge about the characteristic, its obtrusiveness, and its perceived effect on other activities. By Goffman's definition, certain disabilities are more stigmatizing and less socially acceptable than others.

Several writers (Albrecht, 1976; Vash, 1981; Wright, 1960) have attributed prejudice toward the disabled to dominant social and cultural values that emphasize such qualities as independence, physical health, youth, beauty, productiveness, intellect, physique, and strength. Although not suggested by these authors, it may be assumed

that those disabled persons who possess more of the culturally desired characteristics would be more socially acceptable than those who do not. In general, those disabled persons who possess characteristics that most severely impede normal social interaction patterns may be the most stigmatized and least preferred.

Changing Attitudes

Traditionally, approaches used to counter prejudice have focused on three methods--increasing knowledge, increasing interaction, or forcing behavior change in order to alter attitudes. The literature that has addressed the handicapped has followed this same pattern. The literature cited here includes that based on specific research, as well as that based on theories of writers in the field.

Most writers on the topic of prejudice have also postulated theories for counteracting it. Yuker (1965), in discussing acceptance/rejection and prejudice as dimensions of attitudes toward the disabled, suggested that certain strategies must be focused on changing the dimensions of prejudice. Prejudice, as separate from rejection, was described as the tendency to group and stereotype all disabled persons. Yuker identified two factors that are necessary to alter prejudice. The first is the awareness of attitude accompanied by a will to change. Second, the author suggested contact--close personal contact and meaningful interactions between the prejudiced person and recipients of prejudice.

Siller (1967) suggested that prejudice can be affected by decreasing the anxiety associated with individual contact with the disabled. According to Siller, much of the initiative must be taken by disabled persons to achieve this end. First, he suggested that the disabled develop enhanced coping skills to enable the nonhandicapped to feel more at ease. In addition, he felt that additional role models are necessary, who can serve to demonstrate the functional capabilities of disabled individuals. He further saw that education is important, especially for those disabilities where functional limitations are commonly misunderstood.

Thoreson and Kerr (1978), in discussing the stigma attached to severe disability, identified four strategies to effect change. The suggested strategies were directed primarily at practitioners in the field and addressed new ways to conceptualize disability. The first strategy involves a redefinition of acceptance of disability to connote tolerance. To the authors, the traditional definition of acceptance suggests a static, unchangeable state, whereas tolerance should imply a process for coping and change. Second, a redefinition of the role relationship with the disabled is offered so that the disabled person is treated because he is human, not because he is sick. The usual connotation of sickness associated with disability automatically places the disabled person in an inferior status, according to the writers. The third strategy suggests an enlargement of the term "handicap" to recognize the role that the environment plays in maintaining and fostering disability. The fourth strategy

is to redefine disability as a problem not unlike that which all people face.

Gellman (1959) saw social customs and norms, child-rearing practices stressing normalcy and health, the recurrence of childhood fears, and prejudice-provoking behavior by the disabled as the "roots" of prejudice against the disabled. Countering prejudice, according to Gellman, requires attacking these four basic causes. He recommended a continuing education program aimed at altering the social climate as the key ingredient in fostering change. He suggested a five-point educative focus: (a) emphasis on the acceptance of disability as a natural phenomenon, (b) recognition that handicapped individuals can function as school, work, and recreational companions of the nonhandicapped, (c) the use of positive job specifications that emphasize abilities, (d) the avoidance of negative job specifications that serve to reject the disabled, and (e) a recognition that handicapped persons can contribute to society, regardless of the type and severity of disability.

Gellman (1959) believed that an education effort could influence social norms, resulting in changed individual and group behaviors and attitudes. He felt that this strategy is especially important with regard to employment, where prejudicial behavior is most prevalent.

Research conducted by Gaier, Linkowski, and Jaques (1968) looked at contact as a factor in influencing perceptions of the disabled. The researchers administered a questionnaire to 462 undergraduates and analyzed results along three dimensions of contact--occurrence of

contact, social distance, and the perceived effects of disability. The major conclusion drawn from the research was that contact had a favorable effect on the perception of disability. Other findings were that the mother's level of education was significantly associated with reported contact with mentally disabled persons; occurrence of contact was significantly associated with ethnic origin; those who reported more contact with the physically disabled also perceived them to have more coping skills than those who did not; as social distance increased, frequency of reported contact also increased; and no significance emerged between sociological variables (i.e., sex, education, social class, ethnic origin, and religion) and reported contact with the physically disabled.

A dissertation by Saunders (1969) examined the influence of selected college curriculum, exposure to coursework on disabled, sex, and age on the attitudes of persons toward the disabled. Saunders administered the Attitude Toward Disabled Persons (ATDP) scale and analyzed the results against the above variables. He found that there was no significant difference in attitude between those choosing to study in a teaching or human-service curriculum and those in other curricula, males and females, different age groups, or those exposed to special-education coursework. Such research seems to challenge the notion that knowledge and exposure significantly influence attitudes.

The most comprehensive review of research in this field was probably that conducted by Anthony (1972). He reviewed approaches

that had discussed both information and contact as strategies for affecting attitudes toward the disabled. In reviewing self-report and experimental studies, the author found conflicting results and no conclusive findings. Some studies reported slightly more favorable attitudes based on contact, while others reported more negative attitudes after contact. Anthony concluded that "contact in and of itself does not significantly change attitudes toward persons with a disability" (p. 120).

In his review of research that had addressed information as a vehicle for attitude change, Anthony (1972) also found no conclusive results. His review included those studies based on college curriculum, effect of films, specific coursework, and educational programs and media campaigns. Anthony concluded that

providing individuals with information about disabled people has demonstrated only the obvious effect--it increases a person's knowledge about disabled people. . . . More information . . . does not enable the nondisabled person to evaluate the disabled person more positively. (p. 121)

Anthony (1972) also reviewed studies that had used contact plus information approaches. He found that all studies using this approach reported a favorable effect on the nondisabled person's attitudes. Anthony concluded that the attitudes of nondisabled persons could be influenced positively by providing the nondisabled person with an experience that included contact with disabled persons and information about the disability.

Employer Prejudice Toward Persons With Handicaps

A large body of literature, data, and research exists which substantiates that persons with handicaps are disadvantaged in the labor market. Such research has documented substantially higher unemployment rates, lower wages, and a disproportionate number of the handicapped performing entry-level and more menial tasks. The literature addressed here was not focused on these more global indicators of job discrimination, but rather on research studies that serve as indices of employer prejudice toward the disabled. Included are selected studies that looked both at prejudice toward the disabled as a group, and at employer preferences toward specific disability groups.

In a study conducted by Rickard, Triandis, and Patterson (1963), a sample of personnel directors and school administrators was surveyed to determine their preference for hiring disabled and nondisabled persons for positions as accountants and third-grade teachers. In addition to disability, the researchers also measured the influence of competence, sex, and sociability on hiring decisions.

The major conclusion from the study was that employers were prejudiced toward the disabled. The disabled applicants were rejected more frequently than nondisabled applicants. Of the five disabilities considered--deaf, ex-tuberculosis patients, ex-mental patients, epileptics, and wheelchair users--the epileptics were the most disadvantaged. Differences in preferences were also shown for

all five disability groups. Greater prejudice toward the disabled was shown for the position of third-grade teacher than for that of accountant. The authors suggested this may be due to job stereotyping by employers. Competence, sex, and sociability were also found to be significant factors affecting applicant ratings. Of the three, competence was the most significant factor outside of disability. Thus while prejudice was substantiated, it appeared in this study that competence played a major role in candidate selection, even for persons with disabilities.

Another study conducted by Johnson and Heal (1976) attempted to measure attitudes of private employment agencies toward handicapped applicants. The authors theorized that the prejudicial attitudes of employers would also be mirrored by employment agencies. The research design measured the responses of employment agencies in terms of such factors as courtesy, type of job offered, number of referrals, and discouragement/encouragement by the employment counselor. The same individual applied to jobs at employment agencies, once as an able-bodied person and next as a wheelchair user.

The researchers found that the wheelchair applicant did not receive the same treatment as the able-bodied individual in the private employment agency system. The wheelchair applicant was given fewer chances for job interviews, counseled that his chances were poorer, and referred for jobs where he or she would be less visible.

No differences were noted in the courtesy and consideration given to the two types of applicants.

The perceptions of handicapped persons on employment barriers appear to support the discriminatory practices reported in other research. A recent Harris poll survey of disabled persons conducted for the National Council on the Handicapped (in press) reported that 25% of working-age disabled persons say they have encountered job discrimination due to their disability. Forty-seven percent of those unemployed or working part time say that employers will not recognize that they are capable of working full time.

In an article entitled "Work, Employment and the Disabled," Nagl, McBroom, and Collette (1972) reviewed research and literature that existed at the time in this subject area. In regard to employer attitudes, they concluded that (a) there is a discrepancy between the expressed willingness of employers to hire the disabled and actual practice, (b) favorable past experience contributes to positive employer attitudes toward disabled workers, and (c) favorable past experience increases the likelihood of hiring such workers in the future. The authors also cited studies which reflected that employers tended to view disabled workers as undesirable, tended to underestimate their capabilities, and feared future injury and liability. The study also found that cost considerations were most frequently mentioned as reasons for rejection of disabled workers; larger organizations were more likely to hire disabled workers than smaller

ones; and personnel offices often reflect more negative attitudes and practices than upper management.

More recent studies have served to substantiate the effect of perceived competence in countering the effects of disability. In a study completed by Thomas and Thomas (1984) that evaluated both handicapped and nonhandicapped applicants, the authors found that the perceived competence of the applicant was clearly the most dominant factor. While neither sex nor handicap was found to be significant, the researchers did note preferences for certain disabilities over others. Among paraplegics, persons with epilepsy, and persons with multiple sclerosis, paraplegics were most preferred.

Similar findings were reported in a study by Krefting and Brief (1976). Subjects were asked to review paper profiles of paraplegics and nonhandicapped "applicants" for the position of typist. No significant differences were noted in ratings of ability, potential for quality output, potential for absenteeism, potential for tardiness, potential for getting along well with others, and overall qualifications. Experience was found to be the most significant determinant in overall ratings. The disabled were, however, perceived as less healthy and as exhibiting less potential for promotion. Some limitations of the study were the use of simulated applicants, the use of college students in the ratings, and the use of only one disability category.

Several other studies have dealt directly with surveys of employers and have focused on preferences for various disability

types. Bragman and Cole (1983) investigated the types of jobs that an individual with a visible or nonvisible disability would be capable of performing. The results showed that employers willing to hire a disabled individual would hire either a person with a visible or a nonvisible disability. However, employers were better able to determine realistic job choices for the visibly handicapped than for those with nonvisible disabilities. The overall findings suggested that some problems may exist with respect to employers' attitudes toward the abilities of individuals with specific disabilities to perform specific jobs.

Mithaug (1979), writing in The Journal of Contemporary Business, surveyed 43 Fortune 500 companies on the subject of employment of the handicapped. Subjects were asked to estimate the percentage of handicapped persons in their work force, to indicate preferences for disability types, and to identify the factors that would influence their decisions to hire the handicapped. Over 50% of the respondents indicated that only 2% to 4% of their work force was handicapped. The balance of the respondents' estimates ranged from no handicapped employees to 20% work-force representation.

Preferences for certain disabilities were clearly shown. The physically disabled and hearing impaired were most preferred, while the blind, severely physically disabled, and severely mentally retarded were least preferred. The employers also expressed concern about handicapped workers' abilities, productivity, absenteeism, emotional personality, turnover rate, and liability as an employer as

factors affecting their decisions to hire handicapped workers. This survey appears to be consistent with other research in substantiating employer preferences for certain disabilities over others and in validating the existence of specific misperceptions surrounding handicapped workers.

In another study of employer attitudes, Fugua, Rathburn, and Gade (1983) assessed perceptions of work traits and conditions for eight types of disabled workers. The work traits and conditions considered included productivity, absenteeism, turnover rate, accident rate, ability to handle new situations, physical tolerance, emotional stability, co-worker relationships, reliability, workers compensation problems, building modification, and supervision. The eight disability types were blind, cerebral palsy, paraplegia, emotional problems, epilepsy, amputation, deafness, and mental retardation.

The results indicated that employers had the greatest concern about productivity, accident rates, and workers compensation problems. Reliability and relationships with co-workers were least important. Employers expressed the most concern about hiring the blind and mentally retarded. The least concern was expressed for the epileptic. No differences were noted, based on either sex of the employer or on the number of handicapped employees the companies had.

More recent research by Bordieri and Drehmer (1986) has shown that the cause of disability as well as the type of disability has an influence on employers' hiring decisions. The authors reported that

distinctions are made between disabilities that are perceived to be externally or internally caused. Externally caused disabilities are those which derive from external factors over which the person has no control. Internally caused disabilities assume some control, such as a motorcycle accident.

Employer preferences were shown toward disabling conditions where the cause of the disability is believed to be external. Employer biases toward disabilities with externally caused factors were evidenced in perceptions on worker productivity, reliability, and projected tenure with the company. Bordieri and Drehmer (1986) suggested that negative attitudes toward persons with internally caused disabilities derive from assumptions that the person was responsible for his or her own condition.

Limited research exists that has compared employer preferences toward existing protected groups. The existing research has generally addressed sex and disability as multiple factors. Those studies have been inconclusive. A survey to assess employer attitudes toward affirmative action, conducted by Barnhill-Hayes (1981), did contain one question addressed to this topic. In a survey of nearly 300 employers, respondents were asked to consider which group stood the least chance of making significant employment strides over the next five years. Among women, blacks, Hispanics, Vietnam veterans, and the handicapped, the handicapped were perceived to have the poorest chances. Women were rated as having the best chances.

Several conclusions can be drawn from the literature addressing employer attitudes toward persons with handicaps. A number of attitudinal and work-related barriers do exist for the handicapped. More recent literature has seemed to suggest some reduction in attitudinal barriers. In those cases in which the handicapped are perceived equally in terms of employability, some differences have been noted in terms of promotability and wages. The most favorable attitudes are reflected by employers who have been exposed to handicapped workers. There are differences, however, in the expressed attitudes versus the actual practices of employers.

A number of factors seem to influence employer attitudes toward hiring handicapped workers. Workers compensation problems, accident risks, productivity, and work-site modifications operate as deterrents to employment. Size of company is related to employment of persons with handicaps. Perceived competence and experience are highly valued by employers and can outweigh the effect of disability in hiring decisions. Handicapped individuals are viewed more favorably in certain occupations than in others. Some occupational stereotyping appears to exist.

There are clearly employer preferences for certain disabilities over others. The blind, mentally retarded, and mentally ill appear to be least preferred. The deaf, physically disabled (primarily wheelchair users and less severely disabled), and persons with invisible handicaps (epilepsy) are more preferred. Employers are less inclined to hire persons with those disabilities where the functional

limitations are not obvious or clearly understood. Preference for certain disabilities is related to the type of position being considered. Occupational stereotyping also exists within disability categories. While research is limited, it appears that employers prefer women and other minority groups over the handicapped.

Employment Solutions

Employment and Training Strategies

Only a limited number of options can be used to effect the employment of any group. Those efforts can usually be categorized as strategies directed at preparing the client or those aimed at the employer. Client-preparation strategies are generally encompassed in those employment and training programs designed to equip clients with skills, knowledge, abilities, modified behaviors, or adaptive devices to compete for specific occupational areas. The principal national employment and training program for the handicapped is the federal/state vocational rehabilitation program currently authorized under the Vocational Rehabilitation Act of 1973 as amended. The Jobs Training Partnership Act (JTPA) also provides federal funds to states to increase the employment of all unemployed and disadvantaged groups, including the handicapped. The United States Employment Service through its state affiliates also has a mandate for the selection and referral of all applicant groups for employment. A number of other programs also exist, but they are much less significant in scope and magnitude.

Differences in definitions and reporting make it difficult to compare the relative effectiveness of these programs. For example, the state-federal vocational rehabilitation program reported rehabilitations (placements of at least 90 days duration) in fiscal year 1985 of 225,772 persons. Average weekly wages of rehabilitants were reported at \$161.30 (Rehabilitation Services Administration, 1985).

A number of cost-benefit studies have been done on the vocational rehabilitation program, all substantiating the positive cost-benefit of the program. Burkhauser and Haveman (1982), in reviewing these studies, noted that even while many of them were methodologically flawed, "in terms of social benefit-cost criterion, the vocational rehabilitation program does appear to yield substantial benefits" (p. 70). The authors also advocated that program efficiency could be increased by focusing on younger, less disabled, and more productive workers. In advocating for a national disability policy, Berkowitz (1981) suggested that rehabilitation as well as prevention ought to receive additional funding as the highest priorities. He also supported the favorable cost-benefit ratio of the vocational rehabilitation program.

Little information is available on the effect of the JTPA program or its predecessor, the Comprehensive Employment and Training Act (CETA), on persons with handicaps. Burkhauser and Haveman (1982), in reviewing the CETA program, stated that as late as 1980, "only a small number of jobs went to the handicapped, and few went to those with severe disabilities" (p. 76). A report to the Congress

completed by the U.S. General Accounting Office on CETA in 1980 reported that women, minorities, and handicapped were underserved in prime sponsor areas. The report noted that the handicapped were in some cases not enrolled, or in other cases were significantly under-represented in both public service employment (PSE) and on-the-job training (OJT) programs. In more recent years, those numbers have increased, although the handicapped are still underserved in proportion to their rate of unemployment.

The United States Employment Service and its state affiliates represent the only nationwide public employment service with responsibility for serving all sectors of the general public. In the area of employment, it has responsibility for registration of all applicants for employment, providing counseling services, and prescreening and referral of qualified applicants to employers.

Information from the Employment Service Performance Report (Michigan Employment Security Commission, 1984) for the period October 1, 1982, through September 30, 1983, for the Michigan Employment Security Commission (MESCC) provided some indication of its service levels to handicapped persons. During that period, it registered 16,085 handicapped persons and placed 1,811 in employment. Job placements of persons with handicaps thus represented about 11% of those registered for that period. The figures for all applicants registered and placed during that period were, respectively, 528,538 and 94,283. Handicapped persons thus represented 3% of all registrants and slightly less than 2% of all placements. The percentage

of placements to registrants for all applicants for the same period was slightly less than 18%, about 7% higher than the rate for the handicapped.

It would be dangerous to draw any conclusions on state employment agencies in general, or even the MESC, based on one year's performance data. It does appear, however, for this period that handicapped individuals were underrepresented in applications and in job placements.

Employer Incentives

Efforts to influence the employer can generally be viewed along a continuum from inducements to forced compliance. Inducement approaches would encompass financial incentives and educational or awareness activities designed to influence or alter employer attitudes and behaviors. Compliance activities reflect civil rights laws, which may include either or both nondiscrimination and affirmative action provisions.

Presently, the total spectrum of employer-based approaches exists in a variety of legal and programmatic practices. In the incentive area, the two most notable examples are the Targeted Jobs Tax Credit (TJTC) and Vocationally Handicapped Worker Certificate (VHWC) programs. The TJTC program, initially established through the Revenue Act of 1978, provides a tax credit of up to 50% of the first \$6,000 in wages paid the first year, and 25% of the first \$6,000 of wages paid in the second year, for employers hiring

handicapped workers and other designated target groups (Pati et al., 1981). Michigan statistics show that 2,118 handicapped persons were employed in fiscal year 1985, representing 11% of the total TJTC placements for that year. It is difficult to assess, however, the impact of the TJTC program on increasing placements of the handicapped, principally because it is not known how many of those persons would have been hired anyway. Burkhauser and Haveman (1982) argued in support of the TJTC approach, where the employee initiates the action for certification, as a beneficial program. They suggested, however, that stigmatization of certified workers and resentment from co-workers are issues that may have to be addressed. Given these considerations, it can reasonably be assumed that the TJTC program has benefited some handicapped persons in obtaining employment.

The Vocationally Handicapped Worker Certificate (VHWC) program is directed at removing the disincentives usually attached to hiring certain groups of handicapped workers. While the VHWC is established through legislation in Michigan (P.A. 183 of 1971), similar programs exist in most other states. The program covers handicapped individuals with heart, back, epileptic, or diabetic conditions. Employers who hire individuals certified under one of these conditions receive a reduction in their workers compensation liability to 104 weeks as opposed to a lifetime. The workers compensation cost for certified workers who become reinjured is picked up through a fund derived from assessments to all employers. The VHWC program is targeted at the perception of increased workers compensation risk

when hiring certain classes of disabled workers. Again, it is difficult to assess the effectiveness of the program, although 74 persons were certified to employers in 1985, and 34,727 disabled workers have been hired through this program since its inception in 1972. The fact that the number of claims against the fund has been fewer than 100, or less than 3/10 of 1% of those certified, since its inception attests to a low rate of injury to disabled workers. Much like the TJTC, it is difficult to determine the extent to which this program actually influences an employer's decision to hire.

Philosophical issues surround this program, as well. For example, workers must disclose their disability and certification status prior to hire in order for the employer to request certification eligibility. Thus stigmatization and possible employer rejection may occur. On the other hand, employers may refuse to hire unless the applicant becomes certified, suggesting discriminatory practices in conflict with civil rights statutes. More significant, however, is whether or not special funds can be justified, based on experiences that do not substantiate increased cost and risk.

Employer-Directed Education and Awareness Approaches

The other major inducement strategy is efforts designed to alter employer attitudes and practices through educational and awareness methods. This strategy is most often used by agencies charged with the placement of handicapped individuals or advocate organizations

promoting particular disability groups. The focus of such efforts is the alteration of prejudice, stereotypes, and mythologies surrounding the handicapped worker.

While there is little in the way of substantive evidence to support the overall effectiveness of this strategy, there is consensus in the field that lack of employer awareness is a major issue. Pati, Adkins, and Morrison (1981), in their book Managing and Employing the Handicapped, stated that common employer misperceptions exist with regard to increased insurance rates, increased accidents on the job, higher absenteeism, and concerns that handicapped workers will not be accepted by co-workers or that accommodating such workers will involve considerable expense. The authors also cited two major studies, the President's Committee on Employment of the Handicapped (1976) and the Canadian Chamber of Commerce Study (1976), which concluded, respectively, that there is a tremendous need to educate employers and that employers are uninformed about what the handicapped can do.

Nathanson (1977) also discussed the common myths surrounding the disabled employee and the need to dispel them. He surfaced the traditional myths in insurance cost, dependability, productivity, cost of accommodation, and perceptions that the disabled employee will have to be treated differently. Jamero (1979), in challenging these employer misperceptions, concluded that "increasing the employment opportunities for handicapped workers is a question of changing attitudes, not cost or technology" (p. 33). Ashcroft (1979), as well

as many others, have added to the literature challenging the legitimacy of these common beliefs surrounding handicapped workers.

Most of the researchers who have looked at the issue of employer attitudes toward the disabled have concluded that employer education must occur. Johnson and Heal (1976) concluded that efforts must be made to educate employers and employment (agency) counselors to the capabilities of the handicapped. Similar recommendations were made by Bragman and Cole (1983); Florian (1978); Fugua et al. (1983); Mithaug (1979); Smith, Edwards, Heinemann, and Geist (1985); and many others.

By implication, the large number of writers who have addressed the subject of dispelling myths attests to the belief that education and information are important. For example, Pati et al. (1981) cited some eight major studies that served to refute the myths and misperceptions surrounding handicapped workers. The E. I. du Pont (1982) study showed, for the substantial majority of handicapped workers, no increase in lost time, average or better safety records, average or better attendance, average or better job performance, and no increase in insurance cost. The other studies reported similar findings, including the refutation of the perception of the high cost of accommodating handicapped employees. Berkley Planning Associates (1982) conducted a survey of 2,000 federal contractors on the subject of accommodations and found that in 51% of the accommodations made there was no cost; 30% cost less than \$500; and in only 8% of the cases did cost exceed \$2,000. They also found that the blind and wheelchair

users tended to require more expensive accommodations and that work-site accommodations and adaptive equipment were more likely to be provided to higher-skill workers than lower-skill workers.

Clearly, the literature provided sufficient information, based on employer experiences, to counter the most prevalent misperceptions regarding handicapped workers. There is also a belief among researchers and practitioners that this information must be shared to alter employer attitudes and behavior. Little research exists, however, that has documented how effective employer education efforts are in altering employer misperceptions and stereotypes. The literature that discussed ingredients for attitude change also appears relevant here. This would suggest that employer education is important but that it must be used in combination with opportunities for increased contact and interaction with the disabled in order to be effective.

Compliance Approaches

The major employment compliance strategies for the handicapped reside in Sections 501, 503 and 504 of the Rehabilitation Act of 1973. Section 501 of the Act prohibits discriminating and requires that the federal government take affirmative action to employ and advance qualified handicapped individuals. Section 503 includes non-discrimination and affirmative action requirements for government contractors whose contracts are in excess of \$2,500. Section 504 requires nondiscrimination in federal programs and activities,

including recipients of federal funds (President's Committee on Employment of the Handicapped, 1983). Collectively, these three portions of Title V of the Rehabilitation Act represent the first major piece of national civil rights employment protection for persons with handicaps.

There are several unique aspects of this legislation that distinguish it from other major civil rights legislation. These differences incorporate issues of definition, coverage, application, and employer responsibilities. Under the law, a handicapped person is defined as one who (a) has a physical or mental impairment that substantially limits one or more major life activities, (b) has a record of such impairment, or (c) is regarded as having such an impairment (President's Committee on Employment of the Handicapped, 1983). Johnson (1981) suggested that this definition is a radical departure from other statutes by defining handicap partly as a function of perception, attitudes, and interaction. Gittler (1978), an advocate for the definition, pointed out that the definition recognizes that the distinction between real and perceived handicaps is artificial and formalistic. Others have argued that the definition is too broad to be meaningful (Guy, 1978; Pati et al., 1981). Also significant is the fact that the law distinguishes between the characteristic (disability) and the functional limitation derived from it. The U.S. Commission on Civil Rights (1983) thus emphasizes that "this contrasts sharply with race and sex, which are based on the

characteristics of skin color and gender, not functional limitation" (p. 143).

One of the most significant differences in the Act is the requirement that an employer make reasonable accommodation to the physical and mental limitations of an employee or applicant. Reasonable accommodation is required for otherwise qualified handicapped individuals and includes facility alteration, job restructuring, adaptive equipment, or other means to enable the handicapped worker to perform essential job duties. The law requires reasonable accommodation unless it poses an undue hardship on the employer, considering size of the employer operation, type of business, and cost and nature of accommodation needed. The issue of reasonableness has proven most difficult to interpret and apply (U.S. Commission on Civil Rights, 1983). The law in this sense requires unequal treatment in the case of handicap, a major departure from nondiscrimination provisions based on sex or race. This difference is justified based on the need to assure equality of opportunity.

Finally, unlike other protected groups, differences occur in the application of affirmative action principles. Traditional law requires neutrality of treatment in nondiscrimination provisions but requires that race and sex be recognized in affirmative action. Handicap law requires acknowledgement of the characteristic, both in nondiscrimination and affirmative action provisions. Thus, nondiscrimination provisions, which require reasonable accommodation, are often confused with affirmative action requirements, which are

intended to address outreach and recruitment. In addition, Title VII of the Civil Rights Act of 1964 established goals and timetables as a part of its affirmative action provisions. These are absent in Title V of the Vocational Rehabilitation Act of 1973.

The report of the U.S. Commission on Civil Rights (1983) noted other differences as well. The use of statistics to establish a basis for underutilization is virtually absent in handicapped civil rights law. Concerns have stemmed from problems of definition, debates over whether only the handicapped as a group or also subclasses of the handicapped must be considered, and the lack of agreement over a basis to establish expected levels in the work force. According to the authors, the courts have also differed in their opinion on whether statistics can be legitimately used to establish a basis of discrimination. Differences in coverage have also been noted. Title VII of the Civil Rights Act of 1964 provided coverage to most employers in the private sector, state and local government, and the federal executive branch. Title V coverage under the Rehabilitation Act of 1973 is extended only to employers who receive some form of federal financial assistance. Other distinctions exist in terms of recourse under the law. In the case of Section 504, a private right of action has been established. Such provisions have not been established under Section 503 for employment in the private sector. In a statement before the U.S. Commission for Civil Rights (1981), Drew S. Days, an Assistant Attorney General for Civil Rights,

argued for the necessity of assuring private enforcement of civil rights.

These distinctions in the legislation have caused some to advocate for inclusion of the handicapped in the protections of the Civil Rights Act of 1964. According to Milk (1981), "This would achieve three important goals: expansion of employment rights, clarification of judicial rights, and recognition of the human rights of handicapped people" (p. 124). Adequate enforcement of the federal statute may also be an issue. Hahn (1983) cited a 1978 survey, which found that 90% of the firms covered under Section 503 were not in compliance.

From a review and analysis of present civil rights employment legislation, several conclusions may be drawn. First, the concept of handicap has forced a distinction between this legislation and that which applies to race and sex. This distinction has created problems in the interpretation and application of the legislation. Second, the protection afforded under this legislation, especially with reference to affirmative action, covered employers, and access to private right of action, is narrower than parallel legislation for other protected groups. Finally, these differences, combined with the comparatively recent passage of the legislation, make it difficult to assess its actual or potential impact.

There appears to be little disagreement over the necessity for civil rights protection for the handicapped. Most also agree that affirmative action has helped in increasing the representation of

protected-group members in the work force. Dometrius and Sigelman (1984), for example, reported significant gains in the employment of minorities and women since the passage of the Equal Employment Opportunity Act of 1972. They also found that black males experienced the greatest gains and that the employment rate of minorities and women was higher in state and local government than in the private sector. The passage of national and state employment civil rights legislation for the handicapped is testimony to its felt need. In a survey of over 300 companies, 95% of the respondents felt that affirmative action had helped women and minorities (Barnhill-Hayes, 1981). Hahn (1983) suggested that more emphasis in public policy needs to be placed on changing factors such as discrimination that are external to the handicapped individual rather than on programs such as counseling and job training to change the individual. DeJong and Lifchez (1983), also proponents of civil rights protection, suggested that the regulatory approach must not be the sole public policy approach. "When this approach is not accompanied by incentives and inducements, it becomes inherently adversarial; it eventually pits one group against another" (p. 49).

Roth (1983) contended that the administrative climate is less supportive of civil rights intervention. He suggested, therefore, that the handicapped challenge private industry directly and that government's role be in providing tax incentives. Johnson and Lambrinos (1983) argued that present civil rights legislation for the handicapped will be largely ineffective because of the vague

definitions in the statutes and the failure to incorporate issues of wage differentials. They recommended that current policies be modified to recognize wage-rate discrimination and include strategies to reduce the economic disincentives of affirmative action. The authors' three-pronged approach includes a modified civil rights statute, public information to correct misperceptions, and incentives to include tax credits and direct subsidies.

A derivative of the affirmative action approach can be found in the quota-levy system used in other countries. In the Federal Republic of Germany (FRG), Great Britain, and Japan, quotas are established by government for employment of the handicapped. Firms that do not meet these quotas are assessed fines. The amount of the fine is determined by the extent that they are under the established quotas. In FRG and Japan, the fines are used as incentives for firms that do meet their quotas or to support employment opportunities and businesses for handicapped workers. Kulkarni (1984), in an analysis of the experiences of the quota system in these countries, concluded that a legislated quota system, used in combination with other approaches, could effectively address the employment problems of disabled persons.

Summary of Employment Solutions

The literature in this section seems to support further development of three broad policy approaches to effecting increased employment of the handicapped--incentives that incorporate both financial

inducements and public information efforts; compliance and regulatory measures of the kind found in nondiscrimination and affirmative action laws; and publicly funded employment and training programs. While there appears to be a consensus on the need for all three, differences do exist on the perceived viability and effectiveness of each of the approaches. The most controversy surrounds the compliance approach, not in terms of need but in terms of efficacy, especially in the area of affirmative action. It would appear that in order for civil rights laws to become more effective for the handicapped, certain procedures in the law must be clarified, and the provisions must be expanded to afford the same broad coverage that exists in other civil rights statutes. The present national climate for affirmative action may make such changes extremely difficult to accomplish. However, no major political official has suggested that the compliance approach ought to be abandoned. As Allport (1954) suggested,

Outward action, psychology knows, has an eventual effect on inner habits of thought and feeling. And for this reason, we list legislative action as one of the major methods of reducing, not only public discrimination, but private prejudice as well. (p. 477)

CHAPTER III

METHODOLOGY

Introduction

This chapter provides the theoretical framework for the research. In addition, a rationale is provided for the use and selection of particular barriers, employment solutions, protected-group categories, and survey respondents. Information is also presented on how the data were collected and analyzed. The chapter proceeds from the broad to the specific, as it describes the theoretical framework, the study design, the survey methodology, and the data-analysis format.

This chapter will provide the reader with an understanding of the basis and process for testing the major research hypotheses. Restated in simple terms, the hypotheses are that: (a) persons with handicaps face different employment barriers than do other protected groups and (b) therefore they need different employment solutions.

Theoretical Framework

The designation of a group or class of individuals as protected-group members carries with it a recognition that such individuals have been disadvantaged in certain aspects of society. The disadvantage derives from individual perceptions and attitudes, as well as collective reactions to their shared characteristic. Employers, as

members of society, reflect those commonly held beliefs and perceptions toward those with discernible differences. Societal perceptions, be they based on sex, race, or handicap, carry over into the employment arena and influence decisions regarding the capabilities and desirability of the protected group member for employment. Barriers to employment are thus created for the protected-group members, based on these perceptions. While civil rights legislation and empirical evidence attest to the existence of these perceptions as barriers to employment for all classes of protected groups, some groups may be more affected than others. The extent to which a given protected-group class is discriminated against in access to employment opportunities is based on the strength, type, and number of barriers perceived to exist for that particular protected group by employers.

Rationale for Barrier Selection

From an employment perspective, barriers can be grouped within three broad categories--those based on attitude (i.e., prejudice, stereotype), those based on ability to perform (i.e., skill level, physical or mental abilities), and those based on cost/benefit (i.e., worker's compensation risk, dependability, and cost of employment). The barriers operate individually and in combination to influence the desirability of a given protected-group member for employment. The strength as perceived by an employer of a given barrier confronting a candidate for employment will determine that individual's access to

employment. The strength of a barrier is defined as the extent to which a particular factor operates as a disincentive to hire for the protected-group member being considered. For example, visual appearance may be perceived as a major barrier for the physically disabled, but less severe for the mentally ill. Further, the more barriers that are perceived to exist for a given applicant, the less likely that individual is to be employed. Intuitively, it may be argued that an additional factor--the importance of a given type of barrier to the employer--exists in the employment equation. It becomes difficult, however, to discern the significance of this factor because: (a) it is difficult to determine any objective ranking of the relative importance of different barriers to employers; (b) the barriers are interdependent; and (c) different employers place different values on the same barriers.

An assumption is made that the three major subcategories that result in a barrier--attitude, cost, and ability to perform--operate in combination to affect a hiring decision. The more barriers that exist for a given protected group, and the greater the strength with which they are perceived to exist, the less likely the group member is to be employed. While no assumption is made regarding the relative importance of the three barrier categories, an assumption is made that all of them operate to affect hiring decisions of protected-group members.

Attitudinal Barriers

For the purpose of this research, 13 barriers were identified across the three categories. In the attitudinal area, such barriers are presumed to operate for all protected groups: stereotypes and prejudice. Protected groups are defined as women, blacks, Hispanics, and persons with handicaps. Within the handicapped group are several subgroups--the mentally ill, mentally retarded, those with hidden disabilities, the physically disabled, the blind, and the deaf. Comparison of these groups and subgroups should demonstrate the relative effect of stereotypes and prejudices on the groups identified. A third barrier in the attitudinal area, acceptance by co-workers, serves as a more subtle measure of discrimination. The reason often verbalized for employer rejection of a protected-group member is that the "majority" workforce members will not accept a new member who is different. This phenomenon may be influenced by the more favorable attitudes toward certain disabilities, as noted by Tringo (1970), and the greater aversion to certain disabling conditions, as validated by Siller (1967). Projecting from Siller's research, it would be expected, for example, that deafness and blindness would be better accepted by co-workers than other disabling conditions. Finally, a fourth assessment of attitude is based on the visibility of the differentness that the protected-group member possesses and the extent of desirability of that differentness. This barrier, visual appearance, should enable that comparative assessment to occur across groups. The assumption is thus tested that those

groups that have more discernible differences that are less desirable are more subject to employer rejection based on this attitudinal dimension. Johnson and Lambrinos (1983) and several others have suggested that more visible impairments are more stigmatizing and, therefore, greater barriers to employment.

Ability Barriers

A second set of barriers, ability to perform, contains a variety of factors that are perceived to affect the hiring decisions for all job applicants--both majority and protected-group members. These perceived barriers--skill level, limitation in jobs the individual can perform, physical capability, mental capability, communication skill, and dependability--were selected because they have traditionally been influenced strongly by stereotypes held about protected-group members (U.S. Commission on Civil Rights, 1981).

They have each been listed separately as barriers even though it is recognized that they do not operate completely independently of each other. For example, a limitation in mental ability may be related to an actual or perceived barrier in skill level or communication skill or a limitation in jobs that an individual can perform. Similarly, assumptions may be made on skill level based on physical limitations. Thus, while some relationships may exist between these barriers, it is inappropriate to assume cause and effect. An assumption of cause and effect is itself a measure of stereotyping or "devaluative spread," as suggested by Wright (1960). A listing of

these barriers separately is thus designed to achieve two objectives: (a) factors that have all been identified separately by employers as barriers can each be measured for all protected groups, and (b) the extent to which barriers in one area are generalized to another area can also be addressed. An identification of the types and number of barriers which operate for various groups should provide a measure of the extent to which barriers are generalized. This may be tested as a second-level hypothesis.

At least three of these barriers--communication skill, mental capability, and physical capability--were identified because they represent characteristics that are highly valued in American culture (Albrecht, 1976; Vash, 1981). Thus, to the extent stereotypes operate to disassociate these characteristics with certain groups, those groups are especially disadvantaged because of the cultural weight given to the characteristic.

Cost-Related Barriers

The third set of variables, those related to cost of employment, is included based on the assumption that actual and potential costs are an important consideration in the hiring decision. If additional cost is associated with hiring certain types of individuals, then a financial disincentive for the employer becomes a barrier for the applicant. While the factors of perceived worker's compensation risk, employment-related cost, and accessibility of the work site are obviously more likely to affect persons with handicaps than other

protected groups, they must be identified as barriers if, in fact, they operate as employment deterrents.

Worker's compensation risk, for example, has long been associated, albeit erroneously, with hiring handicapped workers (Ashcroft, 1979; Fugua et al., 1983; Nathanson, 1977; Pati et al., 1981). Similarly, civil rights statutes require that the cost of accommodating a handicapped worker, including making the facility accessible, be borne by the employer. While the reality of additional cost is, in most cases, limited or nonexistent, the perceptions of these cost barriers are uniquely associated with persons with handicaps (Mithaug, 1979; Nagi et al., 1972). If employers perceive these factors as barriers for the handicapped, and not for other protected groups, then clearly they represent an additional set of barriers the handicapped must face. It must also be noted that the perception of the existence of cost-related variables may be based on stereotypes regarding handicapped employees, not based on experience.

Employment Policy Solutions

Variants of employment and training programs and civil rights protection represent the public policy alternatives that can affect the employment of certain disadvantaged groups. Civil rights solutions exist in state and federal nondiscrimination and equal employment opportunity laws, with affirmative action reflecting the more proactive remedy for employment problems. Employment and training

policy has incorporated a wide variety of solutions--subsidies to employers, tax credits, employability and skills training, and special appeals to and education of employers. In general, these solutions can be classified as either employer-directed or applicant-directed approaches. Collectively, these solutions represent the range of options available to facilitate employment: Prepare the applicant (training), prepare the employer (employer education), ask the employer (appeal to sense of public responsibility), regulate the employer (civil rights and affirmative action), or financially induce the employer (subsidies and tax credits). Each solution reflects a different public policy emphasis, value system, and resource-allocation strategy.

These employment "solutions" have historically resulted in both different levels of success and acceptability for different protected groups by the employer community. Their viability as employment solutions may be expected to differ for the handicapped as a protected group, as well as for the various subgroups of the handicapped. An assessment of their perceived viability should provide information on the utility of the solution in general, and indicate with which specific populations each solution is viewed to be the most effective.

Selection of Protected Groups

The selection of the other protected groups--females, Hispanics, blacks, and handicapped--for purposes of comparison in the study was based on those groups' meeting all of the following conditions:

1. Employment discrimination protection under both federal and Michigan civil rights statutes;
2. An identification as protected groups for affirmative action purposes in both federal and state guidelines;
3. A sufficiently large statewide population so that employers have had a sufficient base of experience with and exposure to them on a statewide basis;
4. A commonly understood definition of who they are;
5. Large representation among the protected groups when considering the Michigan workforce; and
6. A disadvantage resulting from strong cultural stereotypes.

Certain other groups, such as Native Americans, older workers, Asians, and Jews, have also been subject to discrimination but do not meet all of these six criteria. Native Americans, for example, do not have a commonly understood definition, nor are they represented in significant numbers in the workforce. Neither older workers nor Jews are mandatory groups for state and federal affirmative action statutes. Similarly, the definition of older worker varies between 40 and 60, depending on program and statute. Asians as a protected group represent only a small proportion of the Michigan population. Thus, the inclusion of these other protected groups would neither

provide a valid comparison, nor would it be necessary in order to test the comparative hypothesis.

Handicapped Subpopulations

The handicapped, although designated as a single protected group category, in reality represent a large and heterogeneous mixture of distinct subpopulations with varying characteristics. Each characteristic presents a unique set of handicapping conditions for the individuals; arouses a distinct set of stereotypes, prejudices, and attitudinal response from the general population; and creates its own set of problems or barriers in an employment situation. For example, the functional limitations, barriers, and work restrictions resulting from sensory loss are much different from those derived from physical conditions, both of which differ from those imposed by mental retardation or mental illness. Important differences in attitudinal dimensions and reaction patterns are also noted, which are specific not only to the type of disability but are also influenced by its severity and visibility. Siller (1967), cited earlier, has written on these differing societal reactions based on the type of disability.

Earlier literature has supported the existence of a hierarchy of acceptability among the various disability groups (Tringo, 1970). Other research has also substantiated employer preferences for certain types of disabilities. To treat the handicapped as a single homogeneous group would overlook these blatant differences that exist

in attitudinal and employment barriers among the subgroups and the differing employment-policy solutions that, therefore, may be necessary. To illustrate this heterogeneity, an analogy can be made between, on the one hand, the handicapped and their subpopulations, and, on the other, minority groups and the subset of different racial and ethnic groups. In each case, discrimination exists as a common thread; yet, the basis and nature of the stereotypes differ from one group to another. The methodology for this study was therefore designed to enable an assessment of these differential employment-barrier effects across the handicapped subgroups.

The handicapped subgroups were identified to represent the dominant, commonly agreed upon categories of characteristics--mental, physical, sensory, and nonvisible physical conditions. All disabling conditions can be subsumed under these four broad categories. The six subgroups selected for the study--deaf, blind, mentally ill, mentally retarded, physically disabled, and persons with hidden disabilities--not only represent these four major categories but also identify specific disability groups with which the general population and employer community are familiar. In addition, the six selected subgroups represent a substantial majority of all existent disabling conditions. Finally, these groups allow inferences to be made regarding the acceptability of disability in relation to dominant American cultural values, such as beauty, intellect, communication skills, strength, and health. Each of the disability groups can be

identified with perceived limitations in one or more of these highly valued areas, as shown in Table 1.

Study Design

The method chosen was designed to provide information to test the four primary research hypotheses:

1. Persons with handicaps face more and different employment barriers than do women, blacks, and Hispanics;

1a. Some disability groups face more and different employment barriers than do others.

2. Persons with handicaps need more and different employment solutions than do women, blacks, and Hispanics.

2a. Some disability groups need more and different employment solutions than do others.

Several alternative methodological approaches exist which might be used to test the hypotheses. For example, an experimental design method using experimental and control groups as raters to test hypothetical barriers of simulated applicants represents one option. In addition, a data-based approach which examines actual employer hiring practices for the groups identified could also have been used. Both of these methods were considered and discarded in favor of the survey research method chosen.

The two principal reasons for electing the written survey design were the nature of the topic and the efficiency of the method. Given that the study focus is on attitudinal issues concerning protected

Table 1

Stereotypical Deficits^a in Highly Valued Cultural Characteristics for Six Disability Groups

Disability Groups	Desired Characteristics ^b					Total Deficits ^c
	Beauty	Intellect	Communi- cation Skill	Strength	Health	
Deaf			x			1
Blind			x			1
Physically disabled	x			x	x	3
Hidden disabilities					x	1
Mentally ill		x	x		x	3
Mentally retarded	x	x	x		x	4

^aThe stereotypical deficit areas are hypothesized by the author.

^bThe desired characteristics represent a combination of those suggested in theories by Vash (1981) and Albrecht (1976).

^cx = Perceived deficit exists in this characteristic for the group identified.

groups, it seems especially appropriate to assess perceptions as measured by questionnaire responses. After all, it is most likely the perceptions of protected groups that have the greatest impact on their employment potential. Second, the written questionnaire has certain advantages of convenience and uniformity that are not available in either telephone or face-to-face interviews. In terms of convenience, the written survey is much easier to plan, less time consuming, and enables the surveyor to reach a much larger sample. Bailey (1978) also listed greater assurance of anonymity, the ability to standardize wording, and eliminating interviewer bias as several other advantages of the mailed questionnaire. Because of the sensitive nature of the topic, the ability to eliminate interviewer bias and to maximize anonymity of respondents was felt to be especially important.

The survey questionnaire approach was chosen to identify employer community perceptions of barriers and solutions for the handicapped in comparison to other protected-group categories. For purposes of this study, the employer community was defined as public- and private-sector employers and public and private employment agencies. The division of the employer community into four distinct groups was done to enable a comparison of both public- and private-sector perceptions, and to test certain secondary research hypotheses. Both public and private employment agencies and employers were included in the survey. A similarity in response between those who refer persons for employment and those who hire would suggest that

those perceptions have been institutionalized or at least that employment agencies have adopted the perceptions of employers. Research by Johnson and Heal (1976), for example, found that private employment agencies treated disabled applicants much differently than able-bodied persons.

Grouping the sample in public- and private-sector subsamples also enabled a comparison of perceptions of individual barriers and solutions between the two groups. If employers simply represent larger societal attitudes, then no major differences in perceptions between the public and private sectors would be found. On the other hand, evidence exists which suggests that affirmative action gains for women and minorities have been greater in the public sector than in the private sector (Dometrius & Sigelman, 1984). If similar differences exist for the handicapped in this and other employment-solution areas, it has important implications for policy and practice.

Barriers represent those factors that operate as disincentives to hire, based on actual or perceived characteristics associated with the individual protected-group member. Stated differently, a barrier may be any factor associated with an individual that places that individual at a competitive disadvantage in the employer's selection process. For purposes of this research, barriers are those identified with certain groups or classes which share common characteristics. As stated earlier, barriers were classified as relating to attitude, ability to perform, and cost. Because barriers are defined and assessed by virtue of group or class affiliation, not on the basis of

an individual, they require the generalization of attitudes to the group as a whole.

Solutions are defined as alternative program or policy strategies designed to increase the likelihood of employment of protected-group members. As suggested earlier, employment solutions may be viewed in two broad areas: (a) those targeted toward changing the condition of the applicant, such as work experience, training, and education; and (b) those directed to changing the condition of the employer, such as civil rights, financial incentives, or increased awareness. While some of these solutions have been used for all populations collectively, they have only been applied to protected groups.

For purposes of the study, the handicapped are treated both as a single protected-group category and as a series of specifically identified subcategories. As a single group, the handicapped category includes all individuals with physical or mental disabling conditions. The use of the single category of-handicapped in the study design allows a direct comparison with other protected groups. The handicapped subcategories enable a comparison of these discrete disability groups to discern if, in fact, they are viewed differently with regard to barriers and policy solutions.

An analysis of barriers and solutions collectively, considering both number and mix for each group, will suggest the problems, options, and ultimate feasibility of employment for each protected group and subgroup category. The analysis will identify the number and type of barriers and solutions proposed for each group, and enable

a comparison between disability groups on these factors. The "feasibility of employment" analysis will compare the ratio of barriers to solutions. The analysis involved a three-stage process. First, mean ratings were determined for the 10 protected groups for each of the 13 barriers. The same process was followed with regard to each of the six proposed employment solutions. Second, mean scores for each variable were compared against the criterion value to determine if the barrier was perceived as significant, and if the proposed solution was perceived to be effective. Finally, the number of significant barriers and effective solutions was determined for each group. In addition, the comparison of mean ratings for each variable enabled an analysis of the relative importance of the barrier, or the relative viability of the solution across protected-group categories. This same analysis provided a basis for comparing the viability of certain solutions in general, irrespective of the group considered.

Survey Methodology

Random samples were selected from the four populations defined as the employment community. The employment community selected for the study included the following sample sizes: 200 private-sector employers, 200 public-sector employers, 100 public employment agencies, and 100 private employment agencies. The sample size was based on a projected 30% to 50% return rate, which would provide a sufficient response in each of the subpopulations to test the research hypotheses. Larger sample sizes were chosen for the public and

private employers because their responses were viewed as more important to the study design. They are more important in that they reflect the perceptions of those who actually hire individuals.

Employer Community Sample

The private sector sample was drawn from a printout of a computer tape supplied by the Michigan Employment Security Commission (MESC). It included all employers with 25 or more employees who do business in Michigan and are registered for unemployment insurance purposes. A random-number table was used to select 200 employers from the state-wide list of slightly more than 5,000 employers.

The public-sector employers included those Michigan municipalities listed in the 1983 Municipal Year Book (International City Management Association). Each of the cities listed in the Year Book was numbered; then, the survey sample was drawn by using a random-number table.

Attitudes in the public employment agency were studied by surveying employment interviewers working for the MESC. A stratified random sample was drawn of 100 persons using the agency personnel printout. The stratified sample was used to assure an appropriate geographic representation from the MESC local offices throughout Michigan.

The Michigan Department of Commerce provided a list of all businesses registered as employment agencies as of January 1984. Again,

the list was numbered, and 100 of the agencies were selected through use of a random-number table.

Survey Mailings

The survey questionnaires were mailed to potential respondents during April 1984. A follow-up letter was sent in September 1984 to all persons included in the initial survey mailing. Of the 600 questionnaires mailed, 124 were returned. The return distribution from the four groups was as follows:

	N	% Return
Private employers	16	8
Public employers	44	22
Public employment agencies	51	51
Private employment agencies	13	13

The overall 20.6% return rate was much lower than the 50% rate sought. The return rate in the private sector was also much lower than that in the public sector. The low return rate can probably be accounted for by two major factors: (a) the sensitive nature of the questionnaire and (b) the length of the questionnaire. Bailey (1978) in his book on survey research discussed the negative effect of these factors on response rate. It is expected that these factors had a much more significant effect on private-sector respondents, where affirmative action is an especially sensitive topic. Methods employed

in the survey design and statistical analysis to counter some of these aspects are discussed below.

The smaller return rate led to certain adjustments in the statistical analysis of the data. Blalock (1979) has assessed the influence of the number of cases in drawing conclusions on tests of significance. This factor is especially important in analyzing the results from the private-sector employer subsample. For this reason there are some limits on projecting from the obtained sample for this group to the larger population. Specifically, chi-square comparisons of the four employer community groups could not be used because of the inadequate cell count (Blalock, 1979). Adjustments were made by using chi-square comparisons as indicators for further analysis. In lieu of chi-square analysis, means and confidence intervals were established to enable a comparison of subgroup response. This method allows for the comparison of the total group size and accommodates for the measurement errors in each subsample. Results must be reported, however, in terms of strong inferences rather than of statistical significance.

Survey Questionnaire

The survey instrument was designed to obtain perceptions from the employment community on two main themes: (a) the assessment of barriers as they relate to the identified protected groups and (b) the utility of alternative solutions for these same populations. The survey instrument contained a brief cover letter, which outlined the purpose of the study, stressed that responses were anonymous, and

offered respondents an opportunity to request copies of the study findings. Because the survey questionnaire was rather lengthy, the cover letter stressed that it should take no longer than 30 to 45 minutes to complete. This time estimate was based on pilot testing the survey with several respondents. The opportunity to receive results was used as a method to increase the response rate and show appreciation to the respondents. In addition, the cover letter identified the potential value of survey findings to respondents. A copy of the full survey instrument is included in Appendix A.

Barrier Assessment

The assessment of barriers was addressed in two separate sections of the survey instrument. In Section II, respondents were asked to rate the effect of the 13 barriers for the protected-group category identified in the question. To restate, the 13 barriers were: visual appearance, communication skills, prejudice, worker's compensation risks, skill level, physical capability, acceptance by co-workers, employment-related cost, mental ability, accessibility of the work site, stereotypes, limitation in jobs they can perform, and dependability. Each of the barriers could receive a rating of 1 to 5, with a value of 1 indicating that the barrier was perceived to have a highly significant effect for the group in question.

This approach was followed for each of the 10 protected-group categories. The barriers were listed in different order for each of the protected-group categories to minimize the opportunity for

patterned responses or a response set by the individual completing the question (Blalock, 1978). An "other" category was listed, which provided the respondents an opportunity to identify a fourteenth barrier that was felt to be relevant for the group in question.

Forced-Ranking Questions

Section III of the survey listed each of the 13 barriers and asked the respondents to rank 1 through 3 the protected groups most affected by the barrier. The section required a forced-choice comparison among the 10 protected-group categories against the barrier in question. Section III thus allowed a validation of the responses contained in the previous section and provided a forced comparison of the relative effect of various barriers across the 10 protected-group categories.

In addition to the 13 barriers listed in Section II, three other forced-ranking questions were included in Section III. Respondents were asked to rank from 1 to 3 "the groups most affected by discrimination" and to "identify the groups least likely to be hired in a tight labor market." They were also asked to "describe the groups that would most likely be hired through an appeal to civic responsibility." The discrimination question represented a synthesis of the attitudinal-barrier questions contained in Part I and, in effect, allowed a validation of this dimension, which had been assessed by separate barrier questions earlier. The tight labor market question was included to serve as a validation of the collective effect of all

13 barriers and, at the same time, ask a question that had not been asked before, namely, of all the groups listed, which one is least likely to be hired.

The appeal to civic responsibility question was later repeated in the employment-solutions section of the survey. It was included here to obtain a forced comparison of the utility of this persuasive approach for the 10 groups. The inclusion of the "appeal to civic responsibility" item as a separate question in Part III recognizes the continuing debate surrounding the use of the "appeal" approach. This controversy has been especially prevalent with regard to placement of the handicapped. Earlier literature has discussed the multiple and sometimes conflicting response to disability, including the reactions of patronization and pity (Siller, 1967; U.S. Commission on Civil Rights, 1983). The "appeals" approach acknowledges the existence of these public attitudes and seeks to take advantage of, rather than change, them. The inclusion of this question, therefore, provides both a measure of its utility as an approach and an indicator of employer attitudes toward persons with handicaps.

Employment Solutions

Part IV requested that the respondent rate from 1 to 5 the six employment solutions in terms of their perceived effectiveness for meeting the needs of the 10 protected groups identified. A rating of 1 meant that the listed employment solution was perceived to be "most effective" for the group identified. The seven solutions listed

were: tax credits and financial incentives, affirmative action, government subsidy, job training, increased employer awareness, public responsibility, and "other." The "other" category enabled respondents to list another employment approach and to rate its effectiveness.

The Questionnaire's Introductory Section

The introductory part of the questionnaire requested information about both the respondent's organization and the individual who completed the instrument. The respondents were asked to identify their job duties, job title, job functions, and years of experience in their current positions. Responses in these categories were obtained to allow for testing of the relationships between the responses to Sections II, III, and IV based on these job factors. The existence of relationships or differences in response patterns could then be analyzed based on job title, job responsibilities, and years of experience. In addition, descriptive information could be provided that summarized the characteristics of the survey sample.

The coding key used for converting questionnaire responses is included as Appendix B. Job-title responses were coded into eight categories: president/owner, personnel director, equal employment opportunity (EEO) officer, employment interviewer, placement specialist, administrator/manager, employment specialist, and city manager. Respondents were asked to identify whether they had responsibilities in the hiring process for pre-screening, initial selection, final

selection, and the development of selection criteria. An optional "other" category was listed in the job-responsibilities questions to allow respondents to describe any other responsibilities they had in the hiring process. Individuals were also asked to report, in years and months, the amount of time that they had worked in their present job. These data were later converted into months to facilitate grouping of data and statistical applications.

Respondents were also asked to provide data on the type of organization in which they were employed and the number of employees they had. "Type of business" responses were converted into two-digit Standard Industrial Code (SIC) designations. SIC identifiers are used by the United States Department of Labor to classify all public and private businesses, industries, and places of employment. The SIC coding of responses was included to allow for comparison of responses by type of business, especially in regard to the private employer subsample.

The series of questions at the beginning of the survey was placed so as to enable respondents to begin the survey with questions that were both easy to respond to and noncontroversial.

The final portion of the questionnaire sought demographic information specific to the person completing the instrument. He or she was asked to report on his or her race, sex, and whether or not he or she had a handicapping characteristic. Collection of these data would also allow for an analysis of responses to Parts II, III, and IV with respect to these three demographic variables. These three

personal identifiers were placed at the end of the questionnaire in recognition of the fact that they are viewed as more sensitive areas. Their completion was also not deemed critical to the research design and data analysis. If placed at the beginning, these three questions might have discouraged respondents from completing the more important parts of the survey.

Questionnaires were also coded so that they could be identified by the employer community subsample to which they belonged. All subsample questionnaires had identical questions in identical order but were distinguished in the following ways:

1. Private-sector employer respondents were coded by use of a gray cover letter sheet.
2. Public-sector employer respondents were coded by use of a white cover letter sheet.
3. For MESOC respondents, Question 6 ("number of employees in company") was crossed out before distribution.
4. For private employment agencies, the upper right-hand corner of the cover sheet was cut off.

This approach was used to allow questionnaires to be grouped by subsample upon return since all questionnaires were returned anonymously. More conventional methods such as numerical or letter coding might have been perceived by the respondent as an attempt to trace his or her specific identity, thereby decreasing the response rate.

Response Coding

All survey variables were translated into numerical responses. A coding key (Appendix B) was developed so that each answer could be translated into a one- to five-digit number. Yes/no responses were coded as a 1 or 2. The nine (9) - (99999) convention was used to code nonresponses. Answers to questions in Sections II, III, and IV were already in numerical form and needed no recoding. All returned survey questionnaires were assigned numbers in sequential order (001 to 124). Subsample employment community groups were assigned identifying numbers of 1 (private employer), 2 (public-sector employer), 3 (MESC), or 4 (private employment agency). Numerical values for each survey were transferred onto computer-readable sheets. Each survey response required the completion of two computer records: 196 responses on Record 1 and 133 responses on Record 2. Statistical Package for the Social Sciences (SPSS) files were established to record the raw data and to format the data for computerized statistical analysis.

Data Analysis

The data-analysis process included a delineation both of the respondent and employer demographic information; a test of significance for both barriers and employment solutions; and an analysis of response patterns based on sex, race, and employer community subgroup. Frequency distributions were run for each of the 268 variables coded in the survey questionnaire. The SPSS program also

provided descriptive statistics for each variable contained in the five sections of the questionnaire. The five questionnaire sections were: information on respondents (Section I), barrier ratings (Section II), forced-choice rankings of barriers (Section III), solution ratings (Section IV), and personal identifiers, i.e., sex, race, and handicap status (Section V).

Analysis of Employment-Related Information

The analysis of the employment-related data was completed to provide a description of the characteristics of the survey sample as a whole, and each of the employer community subgroups. The composition of the four employer communities could be compared and response patterns analyzed in terms of similar characteristics. Frequency distributions were constructed for the following variables: the number of respondents in each of the four employment community subpopulations, the number and distribution of the nine job-title categories, the types of responsibilities in the hiring process, and the types of businesses represented. Using the SPSS cross-tabs instruction, this same information was provided for each of the four employment community subpopulations. Descriptive statistics were used to provide measures of central tendency and dispersion for summarizing the variables of "length of time in current position" and "number of employees in the company/agency."

Analysis of Barriers and Solutions

The barriers and solutions analysis described below was designed in order to test the following research hypotheses: (a) More and different barriers exist for the handicapped than for women, blacks, and Hispanics; (b) more and different barriers exist for some disability groups than others; (c) more and different employment solutions are proposed for the handicapped than for women, blacks, and Hispanics; and (d) more and different employment solutions are proposed for some disability groups than others.

Descriptive statistics were also used to establish mean scores and to report the standard error of the mean for the 13 barriers for each of the 10 protected groups identified in Section II of the questionnaire. The barrier identified as "other" in the survey was not included in the data analysis because it had no common meaning across respondents. The mean scores and standard error of the mean were used to establish 95% confidence intervals for each of the 130 variables contained in Section II. Each barrier could receive a mean score ranging from 1 to 5 based on the questionnaire rating system. Lower ratings meant the item was seen as a greater barrier for the group in question; higher scores meant the barrier was perceived as less significant. An average score of 3 was used as the cutoff point for determining whether the potential barrier, as represented by the mean score, was viewed as important for the particular protected group. The upper end of the confidence interval was compared against the score of 3 to determine if the barrier was perceived to exist for

the group being rated. Where the derived score fell below 3, the barrier was viewed to exist; where the score was greater than 3, the potential barrier was defined as not significant for the protected group being analyzed.

The 95% confidence interval around the mean was also used to compare different barriers within the same protected-group category and to compare the same barriers across different protected groups. This process enabled the testing for significant differences between barrier scores at the .05 significance level. For example, use of the 95% confidence interval enabled not only a determination of whether or not "communication skill" and "dependability" were viewed as major barriers for the mentally retarded, but also if "communication skill" was viewed as a much greater barrier for the mentally retarded than was "dependability." Through this method the hypothesis could be tested that the same barrier may have a significantly greater effect on certain groups than others. Similarly, solutions could be evaluated based on their perceived effectiveness between groups.

This same approach was used in the analysis of the data in Section IV for employment solutions. Three was again used as the cutoff score for determining whether the employment solution was viewed as effective for the group in question.

In addition, five numerical ranges were established for the responses in both the barriers and solutions sections so that the findings could be reported in narrative terms. The midpoints between

whole numbers were used as the cutoff points for defining the five categories. For the barriers section, the ranges were defined as follows:

<u>Average Score</u>	<u>Degree of Barrier Effect</u>
1.0-1.5	Major effect
1.6-2.5	Strong effect
2.6-3.5	Some effect
3.6-4.5	Limited effect
4.6-5.0	No effect

For the classification of solutions, responses were defined as:

<u>Average Score</u>	<u>Effectiveness of Solution</u>
1.0-1.5	Most effective
1.6-2.5	Effective
2.6-3.5	Moderately effective
3.6-4.5	Limited effect
4.6-5.5	Not effective

Rank Order Comparisons

In Section II (barriers) and Section IV (employment solutions), the mean scores were also used to establish the relative rankings of barriers and solutions across protected groups. This method was used as a basis to further test the hypothesis that a different set of barriers or solutions existed for the 10 protected groups. Within

each protected group, the barriers were rank ordered from 1 to 13 based on the mean score for each barrier. The rankings of barriers between the various protected groups were then compared to determine whether they were significantly different. Comparisons of rankings were made establishing coefficients of concordance (χ^2 scores) for use with such multiple rankings. χ^2 scores are tested at the .05 significance level. This approach allowed the testing of whether certain barriers were consistently rated as more severe, irrespective of the protected group being rated. Similarly, employment solutions could be compared on the basis of their relative rankings across protected-group categories. For analysis of both barrier and employment solutions, χ^2 scores were derived comparing the rankings of the handicapped category with women, blacks, and Hispanics. In addition, the relative rankings of barriers and solutions for the physically disabled, blind, deaf, mentally ill, mentally retarded, and persons with hidden disabilities were compared by this method. Thus, for both Sections II and IV, two sets of χ^2 scores were derived. χ^2 scores for Section IV enabled a determination as to whether certain employment solutions were consistently favored, irrespective of the protected-group category being assessed.

Analysis of Employer Community Group, Sex, and Race

The data were also analyzed by employer community group, sex, and race. Data in these three demographic areas were analyzed to determine if differences in the assessment of barriers and solutions

existed based on employer community subgroups, sex, or race. No analysis was made based on the handicapping status of the questionnaire respondents because of the small number of respondents with handicapping characteristics included in the sample.

For the variable race, mean scores for the items in Sections II and IV were created separately for the white respondent group and the nonwhite (blacks, Native Americans, Asians, and Hispanics) respondent group. The nonwhite respondent groups were combined and reported as a single group. It was necessary to group the individual nonwhite racial categories into a single nonwhite grouping to create a sufficiently large sample for statistical analysis. Confidence intervals around these means were established at the 95% level for each group and compared to see if response patterns differed between the white and nonwhite respondents.

For the employer community, the cross-tabulation SPSS instruction was used to derive chi-square scores for the variables in Section II (barriers) and Section IV (solutions), as well as two questions in Section III, those referring to "tight labor market" and "discrimination." This procedure was repeated to derive chi-square scores for the sex variable. Chi-square scores in both cases were tested at the .05 level of significance.

CHAPTER IV

SUMMARY AND ANALYSIS OF FINDINGS

This chapter reports the findings of the survey in four major parts: a description of the survey sample; an analysis of employment barriers for the handicapped and the subpopulations of the handicapped; a separate analysis of responses to the forced-choice questions on "discrimination" and "tight labor market" impacts on protected groups; and an analysis of employment solutions responses for both the handicapped and handicapped subpopulations. An additional analysis compares respondent answers by race and sex.

Demographic information is provided which gives a summary of the characteristics of the respondent group at both the individual and organizational levels. This demographic information is also broken down by the four subsamples which compose the employer community: the public employment agency (MESCO), the private employment agencies, public-sector employers, and private-sector employers.

Two separate analyses of barriers and solutions are made. First, the major protected groups--women, blacks, Hispanics, and the handicapped--are compared. Second, the six disability groups are compared on perceived barriers and proposed solutions. Also, for both barriers and solutions, comparisons are made between the responses of the four employer community groups.

The statistical analysis of barriers and solutions was completed using the means and 95% confidence intervals for each of the variables. Section II (barriers) contained 130 variables (13 barriers times 10 protected groups). Section IV (employment solutions) contained 60 variables (6 solutions times 10 protected groups). Only two questions, comprising three variables each, were analyzed from the forced-ranking questions in Section III.

The analysis of responses by employer community group, sex, and race of respondents used both a chi-square analysis and confidence interval comparisons. All findings reported in this chapter as significant attained a statistical significance level of .05 or less.

Description of Survey Sample

The survey sample consisted of 124 respondents from the initial 600 who were sent questionnaires. The implications of the 20.6% return rate are discussed later in this chapter. The characteristics of the survey sample are discussed in the following paragraphs.

Employer Community Groups

Of the four subgroups, the public-sector employment agency was the largest group with 51 (41.1%) respondents. Private employment agencies with 16 (12.9%) represented the smallest subsample. The public sector (employers and employment agencies) constituted the largest portion of the sample with 76.6% of the total. The distribution is shown in Table 2.

Table 2
Distribution of Sample

		Public	Private	Total
Employers	N	44	16	60
	%	35.5	12.9	48.4
Employment agencies	N	51	13	64
	%	41.1	10.5	51.6
Total	N	95	29	
	%	76.6	23.4	

Sex Distribution

Males constituted 64.9% of the survey respondents. The largest percentage of females occurred in the public employment agency subsample at 57.4%. A chi-square analysis of the distribution of male and female questionnaire respondents by employer community group showed differences significant at the .01 level ($\chi^2 = 19.165$, $df = 6$). The male-female distribution of the four employer community subpopulations is reflected in Table 3.

Race Distribution

Of the five racial/ethnic groups represented, whites constituted the largest group with 81.7%, followed by blacks at 13%. The largest

Table 3
Sex Distribution by Employer Community Group

Sex		Employer Community Groups				Total
		Private Employers	Public Employers	Public Employment Agency	Private Employment Agency	
Male	N	12	32	20	10	74
	%	80.0	78.0	42.6	90.9	64.9
Female	N	3	9	27	1	40
	%	20.0	22.0	57.4	9.1	35.1
Not reported		1	3	4	2	10
Total		16	44	51	13	

Table 4
Race Distribution by Employer Community Group

Race		Employer Community Groups				Total
		Private Employers	Public Employers	Public Employment Agency	Private Employment Agency	
Black	N	2	3	10	0	15
	%	13.3	7.1	21.3	0	13.0
White	N	12	37	34	11	94
	%	80.0	88.1	72.3	100.0	81.7
Native American	N	1	0	1	0	2
	%	6.7	0	2.1	0	1.7
Asian	N	0	1	0	0	1
	%	0	2.4	0	0	0.9
Hispanic	N	0	0	2	0	2
	%	0	0	4.3	0	1.7
Not reported		1	3	4	2	10
Total	N	16	44	51	13	124
	%	13.0	35.0	41.0	11.0	100.0

percentage of nonwhite respondents (27.7%) was represented in the public employment agency subsample.

Handicap Distribution

Respondents who reported themselves as having a physical or mental handicapping characteristic constituted only 11.4% of the sample. The Michigan Employment Security Commission (MESC) subsample contained the largest number (9) and percentage (18.8%) of the four employer community groups (see Table 5).

Work Characteristics of Respondent Sample

The responsibilities of the respondents were recorded and classified under three job title (functional responsibilities) areas: administrators--including city managers, owners, and company presidents; personnel officers--including personnel directors and affirmative action officers; and employment specialists--including employment interviewers and placement specialists. The distribution of job titles was as follows:

Title	Number of Respondents
Administrators	57
Personnel officers	15
Employment specialists	47

Under the question addressing job responsibilities in the selection process, 84.7% reported responsibilities for pre-screening of

Table 5
Handicap Status of Respondents by Employer Community Group

		Employer Community Groups				Total
		Private Employers	Public Employers	Public Employment Agency	Private Employment Agency	
Handicapped	N	0	4	9	0	13
	%	0	9.5	18.8	0	11.4
Not Handicapped	N	15	37	38	11	101
	%	100.0	88.1	79.2	100.0	87.1
Not reported	N	0	1	1	0	2
	%	0	2.4	2.1	0	1.7

candidates, 71% listed a responsibility for initial selection, 50.8% for final selection, and 56% indicated a responsibility for developing the selection criteria. Eighty-six percent also listed other responsibilities in the selection process. A majority of the respondents listed responsibilities in two or more of the areas identified. Clearly the respondent sample indicated that a substantial majority of those who completed the survey questionnaire were persons with a direct responsibility in the personnel-selection process.

The respondents' average (mean) length of time in their position was 8.47 years, with a range from a month to 34 years. Eighty-two percent of the respondent sample had been employed at least 2 years in their current position.

The number of employees in the organizations represented in the survey ranged from 1 to 21,000, with an average of 437. Seventy-five percent of the organizations represented had 20 or more employees. These data did not include the respondents from the MESC subsample. This question was omitted from the surveys sent to MESC because MESC is a statewide public organization and the responses to this question would not be comparable to those of the other three employer subsample groups.

The types of businesses represented fell into 14 different Standard Industrial Code (SIC) two-digit code groups as shown in Table 6.

Table 6
Distribution of Respondents by Type of Business

Type of Business	Number
Agricultural production	2
Construction	1
Food and kindred products	1
Printing, publishing	2
Fabricated metal products	1
Miscellaneous manufacturing industries	1
Communication	1
Retail trade--general	1
Furniture, home furnishings	2
Eating and drinking places	1
Credit agencies	1
Miscellaneous business services ^a	15
State government	51
Local government	44
Total	124

^aPrimarily private employment agencies.

As demonstrated in the table, the private-sector subsample is dispersed over 11 different SIC areas. The limited number in each of these areas makes it difficult to make any generalizations about

particular types of industries or the representativeness of the private-sector subsample as a whole. In general the findings of this research with reference to private-sector employers can only be described in terms of those employers who responded to the survey.

The state government and local government categories represent, respectively, the MESG and public-sector employer groups. Each of these is of sufficient size to assume representativeness and support research generalizations.

Analysis of Barriers

This section represents an analysis of the data from Sections II (barriers) and III (forced rankings) of the questionnaire which reports the rated impact of the 13 barriers for each of the 10 protected groups identified. Section III, which asks the respondent to rank the groups affected against each of the identified barriers, is used as a cross-validation against the responses in Section II.

For example, in Section II respondents are asked to rate from 1 to 5 the effect of the barrier "mental ability" on the employment of the mentally retarded. An average rating of 1.5 for this barrier would mean that respondents viewed this factor as a major barrier for the mentally retarded. Assuming the 95% confidence interval, based on the standard error of the mean, was $\pm .40$, (95% CI = 1.10-1.90), ** this factor still falls below the cut-off point of 3. In this example, "mental ability" is thus defined by respondents as an obvious barrier for the mentally retarded. This process was followed

for the analysis of each of the 10 designated groups, against each of the 13 barriers.

In Section III, respondents are asked to rank from 1 to 3 the groups most affected by the specified barrier. Using the same barrier, "mental ability," for example, we would expect that the mentally retarded would be identified by respondents as one of the top three groups most affected by this barrier. This finding would validate the finding from Section II, that mental ability is indeed a major barrier for the mentally retarded. It would also support a conclusion that mental ability is presumed as a greater barrier for the mentally retarded than, say, for persons with hidden disabilities.

Two separate comparisons are made in order to test the research hypotheses. First, the protected-group category "handicapped" is compared to the categories of "women," "blacks," and "Hispanics" to determine the differential impact of barriers. Second, the six subcategories of the handicapped--physically disabled, deaf, blind, mentally ill, mentally retarded, and those with hidden disabilities--are compared with each other to assess the relative impact of the 13 barriers on the different types of handicaps.

Three research questions are being tested with each of the two comparisons:

1. Do the handicapped face more barriers than do the other protected groups?

1a. Similarly, do some disability categories face more barriers than do other disability categories?

2. Do the handicapped face different barriers than do women, blacks, and Hispanics?

2a. Do certain disability categories of the handicapped face different barriers than do others?

3. Do the handicapped face more severe barriers than do women, blacks, and Hispanics?

3a. Do certain disability categories of the handicapped face more severe barriers than do others?

As suggested in the earlier example, a barrier was defined to exist if the mean (average) rating of the barrier fell below a score of 3. To allow for the standard error of the mean, 95% confidence intervals are established. Therefore, an identified barrier is one in which the mean rating, plus the standard error of the mean, provided a combined score of below 3, or $M - (1.96) SEM < 3 = \text{barrier}$. The use of 3 as the point for determining the existence of a barrier coincides with the midpoint of the rating scale used. In the scale, respondents rated the most severe barriers as 1 and the least significant barriers as 5. An average score of 3 therefore represents both the median of the rating scale and the arithmetic average (mean).

The use of mean scores and the 95% confidence intervals is also used to operationally define significant differences between the effects of barriers. Where there is no overlap between the

confidence interval ranges of two barrier ratings, those barriers are defined to be significantly different. For example, if the mean and confidence interval for the perceived effect of prejudice on the employment of women were 2.95 and 2.50-3.40, respectively, while the corresponding scores for prejudice as a barrier for the handicapped were 2.05 and 1.65-2.45, then prejudice would be classified as a significantly greater, or more severe, barrier for the handicapped than for women. This analysis is used to compare the perceived effect of different barriers within the same group, and the same barriers across groups.

Barriers of the Handicapped Versus Women, Blacks, and Hispanics

Section II Responses

This section reports the findings of the barriers rated for women, blacks, Hispanics, and the handicapped as perceived by respondents in Section II of the questionnaire. The purpose of this analysis is to compare the rated effect of the 13 barriers for each of the four major protected-group categories.

Of the 13 barriers identified, four were rated as significantly below the mean for the handicapped protected-group category. None was significantly below the mean for women, blacks, or Hispanics. The barriers identified as significantly below the mean for persons with handicaps were "workers' compensation risk," "physical capability," "accessibility of the work site," and "limitation in

jobs they can perform." Of these four barriers, "physical capability" was rated as the most severe. The mean scores and confidence intervals for these four barriers compared to those for women, blacks, and Hispanics are depicted in Table 7.

The scores in Table 7 should also be viewed in the context of the original questionnaire rating scale where respondents were asked to rate the effect of the barrier on employment of the protected group as follows:

- 1 = Major Effect
- 2 = Strong Effect
- 3 = Some Effect
- 4 = Limited Effect
- 5 = No Effect

A comparison of the means and confidence interval ranges as shown in Table 7 indicates that the respondents viewed these four barriers as significant for the handicapped. Furthermore, they saw them as greater barriers than for women, blacks, and Hispanics. The four barriers identified in reference to the scale were collectively perceived to have either a strong effect or between a strong effect and some effect on employment of the handicapped.

Although not rated as significant barriers, skill level, employment-related cost, mental ability, and stereotypes were rated as having some effect on the employment of the handicapped. On 8 of the 13 barriers, persons with handicaps were viewed as more adversely affected than were women, blacks, or Hispanics. For four of the

Table 7
Comparison of Protected Groups on Barriers

Group	Mean	Confidence Interval	Effect on Employment
Workers' Compensation Risk			
Handicapped	2.390	2.16-2.63	Strong
Women	4.363	4.19-4.54	Limited
Blacks	4.340	4.17-4.52	Limited
Hispanics	4.328	4.13-4.52	Limited
Physical Capability			
Handicapped	2.048	1.91-2.25	Strong
Women	3.081	2.87-3.29	Some
Blacks	3.846	3.60-4.09	Limited
Hispanics	4.000	4.07-4.45	Limited
Accessibility of Work Site			
Handicapped	2.636	2.40-2.87	Some
Women	4.331	4.15-4.51	Limited
Blacks	4.276	4.08-4.47	Limited
Hispanics	4.238	3.15-3.65	Limited
Limitations in Jobs Can Perform			
Handicapped	2.168	1.99-2.35	Strong
Women	3.195	2.98-3.41	Some
Blacks	3.650	3.40-3.89	Limited
Hispanics	3.940	3.71-4.17	Limited

barriers there was no significant difference between the ratings of the handicapped and one or more of the other protected groups. Only in the case of one barrier, "prejudice," was one of the protected groups (blacks) perceived to be affected more greatly than were the handicapped.

Rank Order Comparison

Two separate analyses compared the rankings of all barriers for the handicapped against those of women, blacks, and Hispanics. Using mean scores, barriers were ranked from 1 to 13 for each group, going from the lowest average score (mean) to the highest. The handicapped were first compared individually with each of the other protected groups to establish rank order correlation coefficients. Second, the rankings of all four groups were compared simultaneously to establish coefficients of concordance. These correlations are reported as χ scores, which are used with multiple-ranking comparisons.

The comparison of rankings is used to determine if the four groups--women, blacks, Hispanics, and the handicapped--face a different set of barriers. A significant positive correlation would support a finding that the groups face a similar set of barriers, even though the severity of the barriers may differ between groups.

Table 8 shows the comparative barrier rankings for the handicapped with blacks, women, and Hispanics. Comparing women to the persons with handicaps group for $N = 13$, the computed value of the rank order correlation coefficient (Rho) is .206 ($r_s = .206$).

Table 8
Comparison of Rankings of Barriers for Protected Groups

Barrier	Ranks by Groups			
	Handicapped	Women	Blacks	Hispanics
Physical capability	1	1	10	10
Limitation in jobs	2	2	9	9
Workers' comp. risks	3	13	13	13
Accessibility of work site	4	12	12	11
Skill level	5	3	1	2
Employment-related cost	6	11	11	12
Mental ability	7	5	8	7
Stereotypes	8	7	3	4
Communication skills	9	8	6	1
Visual appearance	10	4	5	6
Dependability	11	5	4	3
Prejudice	12	9	2	5
Appearance by co-workers	13	10	7	8

Testing the derived value of Rho at the .05 level of significance for a one-tailed test indicates there is no significant relationship between the barrier rankings of women and the handicapped. Stated differently, the results indicated that the barriers that are viewed

as most significant for the handicapped have only a limited relationship to those that are viewed as most important for women. Both groups are, however, most severely affected by "physical capability" and "limitations in the jobs they can perform" as their number one and two barriers, respectively. The handicapped are perceived to face a different set of barriers than are women.

Comparing the handicapped group to blacks provides a computed value for Rho of $-.264$ ($r_s = -.264$). Testing at the .05 confidence level indicates that there is no significant relationship between the barrier rankings of these two groups. The negative correlation coefficient value indicates a very slight inverse relationship in the barrier rankings. The data indicate, therefore, that the barriers which are most important for the handicapped tend to be less important for blacks and vice versa.

The rank order comparison of the handicapped group with Hispanics indicates a significant inverse relationship of barrier importance. The computed value of Rho for $N = 13$ is $-.547$, which defines a significant relationship when tested at the .05 significance level for a one-tailed test. Compared to the other groups, Hispanics have the least commonality with the handicapped in the relative effect of the 13 barriers. There is a strong tendency for the barriers which are most important in affecting the employment of persons with handicaps to be least important in the employment of Hispanics. In assessing the impact of the different barriers with regard to the four groups, women are most similarly affected, and

Hispanics are most different. Blacks and Hispanics appear to be most similar to each other in the types of barriers faced.

A comparison of the rankings of all four groups simultaneously yielded a χ^2 score of .346 and a derived chi-square value of 16.608 ($df = 12$). When tested at the .05 level of significance, the chi-square value indicated no significant relationship between the rankings of barriers of the four protected groups.

These data tend to support a view that the 13 barriers are seen as having different impacts on the employment of each of the four protected-group categories. Stated differently, when considering each of the barriers, persons with handicaps, blacks, Hispanics, and women differ from each other as to which barriers operate as deterrents to employment. It appears that the importance of the barriers, individually and collectively, is specific to the identified protected-group category and does not operate independently of that consideration. This means that the types of individual barriers faced, the severity of the barriers, and the set of barriers faced are specific to the protected-group category being considered. The data further substantiate that the handicapped face a different set of barriers than do the other protected groups identified.

Comparison of Employer Community Subgroups on Barriers

This section reports the response patterns on the perception of barriers as rated by public- and private-sector employers and public- and private-sector employment agencies. A determination of

significant difference was made when: (a) chi-square analysis identified differences in employment community subgroup ratings significant at the .05 level and (b) those differences could be validated by a comparison of the subgroup mean and confidence interval with those of the total employer community group.

Taken as a whole, the four subsamples which compose the total employer community were more similar than different in the perception of barriers for the handicapped, women, blacks, and Hispanics. An analysis of the 13 barrier ratings for women, blacks, Hispanics, and the handicapped group revealed that there were significant differences between the ratings of the four employer community subgroups in 9, or 17%, of the 52 barrier ratings. The 52 potential responses reflect the sum of the 13 potential barriers times each of the four protected groups. In reviewing the responses of public-sector employers, private-sector employers, the public-sector employment agency (MESC), and private-sector employment agencies, it was the MESC which differed most often from the total group norms. Significant differences in barrier ratings from the total group norm were noted in five out of nine cases by MESC; four out of nine cases by private-sector employers; three out of nine cases by private-sector employment agencies; and in one out of nine cases by public-sector employers. In several of the above cases, two of the employer community subgroups differed from the group norm in rating the same barrier variable.

The analysis of subgroup responses was completed in a two-stage process: (a) Chi-square values were identified which were significant at the .05 level, and (b) subgroup means were calculated and compared using 95% confidence interval ranges to determine significantly different response patterns. Chi-square scores could not be used as the sole criterion because the sample sizes of the private-sector employers and private employment agencies subgroups were not large enough to provide adequate cell counts. Where the subgroup mean fell beyond the upper or lower end of the total group confidence interval, the subgroup response was defined as significantly different.

For the handicapped protected-group category, differences between employer community subgroup ratings existed for 3 of the 13 barriers. The three barriers were "workers' compensation risk," "stereotypes," and "prejudice." The private-sector subsample mean ($M = 3.00$) was significantly higher than the mean ($M = 2.39$, 95% CI = 2.16-2.63) for the total group on the variable workers' compensation risk. This means that the private-sector employer respondents saw workers' compensation risk as a substantially less severe barrier for the handicapped than did the other three employer community groups. Based on the criterion of mean scores falling below 3.00, private-sector respondents did not identify workers' compensation risk as a definitive barrier for the handicapped.

For the barrier labeled "stereotypes," the MESOC respondent group saw this as a significantly more severe barrier for the handicapped

than did the other three employer community groups. The MESC group mean rating for stereotypes as a barrier for the handicapped ($\bar{M} = 2.79$, $N = 49$) was substantially below the mean rating and confidence interval range ($\bar{M} = 3.20$, $CI = 2.96-3.44$, $N = 118$) for the total group on this variable. The MESC group identified stereotypes as a potential barrier for the handicapped; the other three representatives of the employer community subgroup did not. The mean rating ($\bar{M} = 3.49$, $N = 69$) of the public- and private-sector employers and the private employment agency indicated they saw stereotypes as having between "some effect" and "limited effect" on the employment of the handicapped. MESC respondents rated this factor as having between "strong effect" and "some effect."

The private-sector employer respondents and MESC respondents also varied significantly from the group norm ($\bar{M} = 3.529$, $CI = 3.29-3.79$, $N = 119$) in the rating of prejudice as a barrier to employment of the handicapped. MESC ($\bar{M} = 2.95$, $N = 49$) respondents rated this variable as having "some effect." The private-sector employers' ($\bar{M} = 4.26$, $N = 15$) mean rating on this variable equated to a "limited effect" to "no effect" on employment. The total group mean translated to a rating of between "some effect" and "limited effect."

With regard to blacks, the MESC respondents ($\bar{M} = 2.50$, $N = 50$) saw "stereotypes" as a significantly greater barrier than did the total group ($\bar{M} = 3.08$, $N = 122$, $CI = 2.84-3.33$). "Communication skills" as a barrier for blacks was viewed by MESC respondents ($\bar{M} = 3.64$, $N = 50$) as a less severe barrier than by the total group ($\bar{M} =$

3.32, $CI = 3.10-3.54$, $N = 122$) while private employment agencies ($M = 2.15$, $N = 13$) identified this as a definite barrier. MESC respondents also saw "prejudice" as a greater barrier for blacks ($M = 2.42$, $N = 50$) than did the other three employer community groups ($M = 3.45$, $N = 71$).

Two employer community group differences were identified in the identification of barriers for women. The total group viewed "accessibility" as having a very insignificant impact on the employment of women ($M = 4.33$, $CI = 4.15-4.51$, $N = 124$). While none of the subgroups rated this as a significant barrier, MESC respondents rated it as having virtually no impact ($M = 4.54$, $N = 51$); private-sector respondents ($M = 3.81$, $N = 16$) and private employment agencies ($M = 3.92$, $N = 13$) rated accessibility as having a limited effect. Significant differences were also noted in the evaluation of "communication skills" for women. Private employment agencies identified communication skills as a significant barrier for women ($M = 2.76$, $N = 13$), while MESC respondents rated it as having only a limited effect ($M = 3.94$, $N = 51$).

"Prejudice" was the only variable where significant differences existed in the ratings of barriers for Hispanics. The total group identified prejudice as an insignificant barrier, having between "some effect" and "limited effect" on the employment of Hispanics ($M = 3.426$, $CI = 3.19-3.67$, $N = 122$). MESC respondents rated it as a significant barrier ($M = 2.82$, $N = 50$), while public-sector employers rated it as having only a limited effect ($M = 3.77$, $N = 44$).

Comparison of Disability Groups on Barriers

Identification of Individual Barriers

Major differences were found in the number, type, and severity of barriers perceived to exist for the six disability groups. No disability group was rated as facing fewer than 3 nor more than 10 of the potential barriers. Some commonalities seem to exist between two or three of the disability groups in terms of the types of barriers faced. Only the mentally retarded are perceived to face certain employment barriers which were not identified for any of the five other disability groups.

The mentally retarded, blind, physically disabled, persons with hidden disabilities, those with a history of mental illness, and the deaf were each rated against the 13 barriers. Of the six disability groups, the mentally retarded were rated as facing the most barriers (10), while the deaf faced the fewest number (3). Of the 13 barriers, "limitation in jobs they can perform" was the only barrier rated as significant for all six disability groups. "Stereotypes" and "employment-related cost" were the only two barriers that were not identified as significant for any of the disability groups. Table 9 identifies the employment barriers rated as important for each of the six groups. A disability-group barrier is identified if the upper end of the 95% confidence interval surrounding the mean rating falls below the criterion value of 3.

Table 9
Significant Barriers by Disability Group

Barrier	Disability Group ^a					
	M. R.	M. I.	P. D.	H. D.	Deaf	Blind
Communication skills	x	x			x	
Visual appearance	x					
Prejudice	x					
Workers' comp. risks	x	x	x	x		
Skill level	x	x				x
Physical capability	x		x	x		x
Acceptance by co-workers	x					
Employment-related cost						
Mental ability	x	x				
Accessibility of work site			x			x
Stereotypes						
Limitation on jobs can perform	x	x	x	x	x	x
Dependability	x	x				
Total	10	6	4	3	2	4

^aM. R. = mentally retarded, M. I. = mentally ill, P. D. = physically disabled, H. D. = hidden disabilities.

Analysis of Barriers by Disability Group

The mentally retarded were rated by respondents as the disability group facing the largest numbers of barriers. The 10 factors identified as barriers were: communication skills, visual appearance, prejudice, workers' compensation risk, skill level, physical capability, acceptance by co-workers, mental ability, limitation in jobs the person can perform, and dependability. Three of these factors--mental ability, limitation in jobs a person can perform, and skill level--were rated as the most important barriers. Each of these three factors was rated as having a "strong effect" on the employment of the mentally retarded. Three factors--employment-related cost, accessibility, and stereotypes--were not rated as barriers for the mentally retarded. Accessibility of the work site was rated as the least important barrier. Table 10 identifies the rankings of the barriers for the mentally retarded from those having the greatest impact to those having least.

On 7 of the 13 barriers, the mentally retarded were rated as more severely affected than any of the other five disability groups. Those barriers were mental ability, limitation in jobs a person can perform, skill level, visual appearance, acceptance by co-workers, prejudice, and stereotypes. Visual appearance, prejudice, and acceptance by co-workers were also barriers which were identified as barriers for the mentally retarded but not for any of the other disability groups. Two barriers--skill level and mental ability--were rated as having a greater impact on the mentally retarded than

Table 10
Ranking of Each Employment Barrier's Effect for
the Mentally Retarded

Rank ^a	Name of Barrier	Average Rating	95% CI	Rated Effect
1	Mental ability	1.719	1.56-1.88	Strong to major
2	Limitation on job can perform	1.868	1.68-2.05	Strong to major
3	Skill level	1.975	1.79-2.16	Strong
4	Communication skill	2.025	1.86-2.19	Strong
5	Physical capability	2.496	2.28-2.71	Some to strong
6	Workers' comp. risks	2.573	2.32-2.83	Some to strong
7	Visual appearance	2.579	2.37-2.78	Some to strong
8	Acceptance by co-workers	2.645	2.45-2.84	Some to strong
9	Dependability	2.744	2.50-2.99	Some to strong
10	Prejudice	2.744	2.50-2.99	Some to strong
11	Employment-related cost	2.901	2.67-3.13	Some
12	Stereotypes	2.908	2.67-3.15	Some
13	Accessibility of work site	3.322	3.09-3.55	Some to limited
Average all barriers		2.500		Some to strong

^aRanked from most severe barrier to least severe barrier.

on any other disability group. The next comparison involved the mean and 95% confidence interval of the mentally retarded on "mental ability" ($M = 1.719$, $CI = 1.56-1.88$, $N = 122$) and "skill level" ($M = 3.221$, $CI = 1.797-2.16$, $N = 122$) to that of the next most severely affected group (mentally ill) on these same factors, respectively ($M = 2.133$, $CI = 1.96-2.31$, $N = 120$) and ($M = 2.378$, $CI = 2.16-2.59$, $N = 119$). This comparison supports the much greater rating of these factors as barriers for the mentally retarded.

Six factors were rated as significant barriers for the mentally ill. Communication skills, workers' compensation risks, skill level, mental ability, limitation in jobs a person can perform, and dependability were all identified as barriers, with mental ability rated as the most severe barrier of the six. "Accessibility of the work site" was identified as the least important barrier for the mentally ill. On the barrier labeled "dependability," the mentally ill were rated as the most severely affected of all of the disability groups. The ranking of barriers for the mentally ill is described in Table 11.

Four factors for the physically disabled--workers' compensation risk, physical capability, accessibility of work site, and limitation in jobs a person can perform--were rated as barriers to employment. Of the four, physical capability was rated as the most severe barrier. "Mental ability" was rated as the barrier with the least effect on employment of the physically disabled. "Physical

capability" was rated as a more severe barrier for the physically disabled than for any of the other disability groups (see Table 12).

Table 11
Ratings of Each Employment Barrier's Effect for
the Mentally Ill

Rank ^a	Name of Barrier	Average Rating	95% CI	Rated Effect
1	Mental ability	2.133	1.96-2.31	Strong
2	Dependability	2.339	2.12-2.56	Strong to some
3	Skill level	2.378	2.16-2.59	Strong to some
4	Communication skills	2.458	2.26-2.65	Strong to some
5	Limitation on jobs can perform	2.512	2.31-2.72	Strong to some
6	Workers' comp. risks	2.661	2.45-2.87	Some to strong
7	Physical capability	2.850	2.64-3.06	Some to strong
8	Visual appearance	2.900	2.68-3.12	Some
9	Prejudice	2.980	2.76-3.20	Some
10	Stereotypes	3.000	2.78-3.22	Some
11	Acceptance by co-workers	3.025	2.86-3.19	Some
12	Employment-related cost	3.281	3.08-3.47	Some to limited
13	Accessibility	3.570	3.33-3.81	Limited to some
Average all barriers		2.780		Some to strong

^aRanked from most severe barrier to least severe barrier.

Table 12
Ratings of Each Employment Barrier's Effect for
the Physically Disabled

Rank ^a	Name of Barrier	Average Rating	95% CI	Rated Effect
1	Physical capability	2.074	1.89-2.26	Strong
2	Limitation on jobs can perform	2.091	1.91-2.27	Strong
3	Accessibility	2.148	1.94-2.35	Strong
4	Workers' comp. risk	2.496	2.25-2.74	Strong to some
5	Skill level	2.877	2.63-3.13	Some to strong
6	Visual appearance	2.951	2.74-3.16	Some
7	Employment-related cost	2.950	2.72-3.18	Some
8	Dependability	3.248	2.97-3.53	Some to limited
9	Stereotypes	3.281	3.03-3.53	Some to limited
10	Mental ability	3.352	3.08-3.89	Some to limited
11	Communication skills	3.372	3.11-3.63	Some to limited
12	Acceptance by co-workers	3.571	3.36-3.78	Limited to some
13	Prejudice	3.587	3.33-3.84	Limited to some
Average all barriers		2.920		Some

^aRanked from most severe barrier to least severe barrier.

The blind were tied with the physically disabled in terms of the number of significant barriers (4). From the most important to the least important, the four barriers were: limitation on jobs a person can perform, accessibility of work site, skill level, and physical capability. Of the 13 factors, prejudice was rated as the least problematic for the blind (see Table 13).

Workers' compensation risk, physical capability, and limitation on jobs a person can perform were rated as the three barriers affecting the employment of those with hidden disabilities. Of the three barriers, "physical capability" was rated as having the greatest impact on employment of persons with hidden disabilities. For the perceived barrier, "workers' compensation risks," persons with hidden disabilities were rated as more severely affected than any of the other disability groups (see Table 14).

Only two factors were identified as significant barriers for the deaf: "communication skills" and "limitation on jobs a person can perform." As expected, communication skills was rated as the more severe of the two. Communication skills was also rated as a more severe barrier for the deaf than for any of the other disability categories (see Table 15).

Rank Order Comparison of Barriers by Disability Groups

An analysis was completed to compare the relative impact of barriers across groups. A comparison of the rankings of barrier effects across disability groups was made to determine if the same

Table 13
Ratings of Each Employment Barrier's Effect
for the Blind

Rank ^a	Name of Barrier	Average Rating	95% CI	Rated Effect
1	Limitation on jobs can perform	1.966	1.79-2.14	Strong
2	Accessibility	2.508	2.27-2.74	Some to strong
3	Skill level	2.602	2.37-2.84	Some to strong
4	Physical capability	2.602	2.37-2.84	Some to strong
5	Workers' comp. risk	2.786	2.55-3.02	Some
6	Employment-related cost	3.153	2.91-3.40	Some
7	Stereotypes	3.162	2.92-3.41	Some
8	Communication skills	3.239	2.99-3.49	Some to limited
9	Visual appearance	3.347	3.13-3.56	Some to limited
10	Dependability	3.410	3.12-3.70	Some to limited
11	Mental ability	3.466	3.19-3.74	Some to limited
12	Acceptance by co-workers	3.542	3.35-3.74	Limited to some
13	Prejudice	3.821	3.60-4.04	Limited to some
Average all barriers		3.040		Some

^aRanked from most severe barrier to least severe barrier.

Table 14
Ratings of Each Employment Barrier's Effect
for Persons With Hidden Disabilities

Rank ^a	Name of Barrier	Average Rating	95% CI	Rated Effect
1	Physical capability	2.082	1.88-2.28	Strong
2	Workers' comp. risks	2.156	1.94-2.37	Strong
3	Limitation on jobs can perform	2.325	2.12-2.52	Strong to some
4	Employment-related cost	2.876	2.64-3.10	Some
5	Dependability	2.924	2.65-3.19	Some
6	Skill level	3.364	3.10-3.63	Some to limited
7	Mental ability	3.475	3.21-3.74	Some to limited
8	Stereotypes	3.628	3.40-3.85	Limited to some
9	Communication skills	3.636	3.39-3.89	Limited to some
10	Accessibility	3.645	3.44-3.85	Limited to some
11	Visual appearance	3.844	3.62-4.07	Limited to some
12	Acceptance by co-workers	3.951	3.75-4.15	Limited
13	Prejudice	3.959	3.74-4.18	Limited
Average all barriers		3.210		Some to limited

^aRanked from most severe barrier to least severe barrier.

Table 15
Ratings of Each Employment Barrier's Effect
for the Deaf

Rank ^a	Name of Barrier	Average Rating	95% CI	Rated Effect
1	Communication skills	1.803	1.63-1.97	Strong
2	Limitation on jobs can perform	2.500	2.30-2.70	Strong to some
3	Workers' comp. risks	2.909	2.66-3.16	Some
4	Skill level	3.221	2.97-3.47	Some to limited
5	Physical capability	3.282	3.04-3.53	Some to limited
6	Employment-related costs	3.369	3.13-3.60	Some to limited
7	Dependability	3.533	3.27-3.80	Limited to some
8	Stereotypes	3.545	3.30-3.78	Limited to some
9	Visual appearance	3.582	3.34-3.82	Limited to some
10	Acceptance by co-workers	3.656	3.45-3.86	Limited to some
11	Mental ability	3.664	3.40-3.93	Limited to some
12	Prejudice	3.744	3.51-3.98	Limited to some
13	Accessibility	4.074	3.87-4.28	Limited
Average all barriers		3.298		Some to limited

^aRanked from most severe barrier to least severe barrier.

barriers were consistently ranked as more significant, irrespective of disability-group category. A strong positive correlation in the rankings between groups by disability would suggest that all disability groups face the same barriers, although the impact of the barrier may vary from one disability category to another. Conversely, a significant disparity in rankings, evidenced by a weak correlation, would support the affirmative interpretation that the various disability groups each face a different set of barriers.

A comparison of the rankings of the effect of barriers for each disability group produced a coefficient of concordance (κ score) of .513 and a chi-square value of 36.936 with 12 df. The derived chi-square value is significant at the .001 level, indicating that the various disability groups are affected similarly by the identified barriers. While the data do support a significant positive relationship between rankings of the six groups, the κ score of .513 defines only a moderately strong coefficient of concordance. Thus, as can be seen in Table 16, there are tendencies for certain barriers to be more important for all groups. Yet, substantial variation also exists when comparing barrier rankings between certain disability groups. While the deaf, blind, mentally retarded, mentally ill, physically disabled, and persons with hidden disabilities are each affected differently by the same barrier, they appear to each be affected somewhat similarly by the barriers as a whole. This provides some evidence that the handicapped are perceived as a

homogeneous group, at least when the relative impact of all barriers is considered.

Table 16
Comparison of Rankings of Barriers Across Disability Groups

Barrier	Disability Group ^a					
	M.R.	M.I.	P.D.	H.D.	Deaf	Blind
Mental ability	1	1	10	7	11	11
Limitations on jobs can perform	2	5	2	3	1	2
Skill level	3	3	5	6	3	4
Communication skill	4	4	11	9	8	1
Physical capability	5	7	1	1	4	5
Workers' comp. risk	6	6	4	2	5	3
Visual appearance	7	8	6	11	9	9
Acceptance by co-workers	8	11	12	12	12	10
Dependability	9	2	8	5	10	7
Prejudice	10	9	13	13	13	12
Employment-related cost	11	12	7	4	6	6
Stereotypes	12	10	9	8	7	8
Accessibility to work site	13	13	3	10	2	13

^aM.R. = mentally retarded, M.I. = mentally ill, P.D. = physically disabled, H.D. = hidden disabilities.

While the disability groups as a whole face somewhat similar barriers, the rankings indicate that some of the disability groups are very similar to each other. A comparison of the barrier rankings of the mentally ill and mentally retarded shows a strong positive relationship ($r_s = .785$) significant at the .01 level. A comparison of the physically disabled and blind also shows a strong positive relationship ($r_s = .879$) significant at the .01 level. Lesser positive relationships exist between those with hidden disabilities and the physically disabled ($r_s = .692$), and the blind and deaf ($r_s = .472$), significant at the .02 and .05 levels, respectively. Conversely, a comparison of the mentally retarded with the physically disabled indicates no significant relationships ($r_s = .159$) in the ranking of barriers between the two groups. It would appear that there is a distinct difference in the barriers faced between those disability groups with mental characteristics (the mentally retarded and the mentally ill) and those with physical characteristics (those who are blind, physically disabled, or have hidden disabilities). The deaf appear to represent a third distinct group, facing barriers unlike either of the other two categories.

Comparison of Employer Community Groups' Ratings of Barriers for Disability Groups

Considered as a whole, the four employer community subgroups were similar in their perception of barriers for the six disability groups. The 13 barriers for each of the six disability groups

provided a total of 78 variables on which the four employer community subgroups were compared.

In total, differences in employer-subgroup ratings were identified in 14 out of 78 or 18% of the potential variables. Of the four employer community subgroups, the MESC differed most frequently from the total group rating. In 10 of the 14 cases where differences in subgroup ratings existed, the MESC rated the barrier as more severe than did the other three subgroups.

The four employer community subgroups differed most significantly in their assessment of the extent to which "prejudice" existed as a barrier for the disability groups. Chi-square values, significant at the .05 level, and a comparison of 95% confidence intervals for each mean, identified differences in subgroups' assessments of prejudice as a barrier for all disability groups except for the deaf. With regard to barrier assessment for the different disability groups, differences in subgroup ratings occurred most frequently for the mentally retarded and the physically disabled. With both disability groups, differences in employer community subgroup ratings of barriers were identified for 4 of the 13 barriers.

An analysis of the differences in employer community subgroup ratings by disability group follows. A significantly different variable rating for a given subgroup was defined as existing where the subgroup average rating (mean score) fell above or below the 95%

confidence interval range of the total employer community group rating.

For the mentally ill, differences in subgroup ratings occurred in the perception of prejudice, skill level, and stereotypes as barriers. Both the MESC ($M = 2.59$) and private employment agencies ($M = 2.69$) identified prejudice as a barrier for the mentally ill, while the public- ($M = 3.43$) and private-sector ($M = 3.20$) employers did not. The total group rating ($M = 2.98$, $CI = 2.76-3.20$) identified this factor as a barrier with some effect on the employment of the mentally ill.

The total group identified "skill level" as a significant barrier ($M = 2.38$, $CI = 2.16-2.59$) for the mentally ill. MESC respondents, though, saw it as less severe ($M = 2.63$), while private employment agencies saw it as far more severe ($M = 2.00$).

In the assessment of stereotypes as a barrier for the mentally ill, a clear difference was reflected in the ratings by employers and employment agencies. Both the MESC ($M = 2.62$) and private employment agencies ($M = 2.82$) identified this factor as a barrier. Public- ($M = 3.36$) and private-sector ($M = 3.33$) employers did not rate stereotypes as a barrier.

Two barriers for the blind were rated significantly differently by the four employer community subgroups. The subgroups differed in their ratings of both "prejudice" and "accessibility of the work site."

Prejudice was not rated as a barrier for the blind by the total group ($\bar{M} = 3.82$, $CI = 3.60-4.04$) or by any of the subgroups. MESC respondents, however, saw this barrier as having more impact ($\bar{M} = 3.29$) than did public-sector employers ($\bar{M} = 4.09$), private-sector employers ($\bar{M} = 4.26$), or private employment agencies ($\bar{M} = 4.30$).

"Accessibility of the work site" was rated as a barrier by the total group ($\bar{M} = 2.51$, $CI = 2.27-2.74$) and by each of the subgroups. MESC respondents rated it as more severe ($\bar{M} = 2.15$), while public-sector employers saw accessibility as a barrier for the blind as much less severe ($\bar{M} = 2.97$).

Visual appearance, prejudice, physical capabilities, and accessibility of the work site as barriers for the physically disabled were rated significantly differently by the four employer community subgroups. Visual appearance was rated by the total group as a barrier with "some effect" ($\bar{M} = 2.95$, $CI = 2.74-3.16$) on the employment of the physically disabled. Both the MESC and private employment agencies rated visual appearance as a distinct barrier, while both public and private employers did not rate it as a significant barrier.

Prejudice was not identified by the total group as a barrier affecting the employment of the physically disabled. Private and public employers and private employment agencies all rated prejudice as having only a limited effect on employment of the physically disabled. MESC respondents rated this factor as a significant barrier ($\bar{M} = 2.80$).

Collectively, "physical capability" was identified as a barrier with a "strong effect" on employment of the physically disabled ($\bar{M} = 2.07$, $CI = 1.89-2.26$). Major differences occurred between MESC respondents, who rated the barrier as more severe ($\bar{M} = 1.78$), and private-sector employers, who saw it as a less severe barrier ($\bar{M} = 2.60$).

As expected, all groups rated "accessibility" as a barrier affecting employment of the physically disabled. Differences occurred, however, in the ratings of employers and employment agencies. Employment agencies rated accessibility as a much more severe barrier than did employers. MESC respondents ($\bar{M} = 1.82$) rated it most severe among the subgroups, while private-sector employers ($\bar{M} = 2.66$) rated it least severe.

In the ratings of barriers for the mentally retarded, differences in employer community subgroup ratings occurred in the assessment of "visual appearance," "prejudice," "employment-related cost," and "stereotypes."

Significant differences occurred in the assessment of "visual appearance" as a barrier for the mentally retarded between those representing employment agencies and those representing employers. Both private employment agencies ($\bar{M} = 2.07$) and the MESC ($\bar{M} = 2.16$) rated visual appearance as a barrier with a "strong effect" on employment, while public- ($\bar{M} = 2.97$) and private-sector ($\bar{M} = 3.06$) employers rated it as having only "some effect."

"Prejudice" was identified by the total group as a barrier for the mentally retarded. Both employment agency subgroups rated "prejudice" as a clear barrier, while neither of the employer groups identified it as a barrier. MESC respondents ($M = 2.06$) rated prejudice as having the strongest effect, and private-sector employers ($M = 3.50$) rated it as having the least effect.

In the assessment of "employment-related cost" as a barrier for the mentally retarded, employers rated this factor as having less impact than did employment agencies. Both private employment agencies ($M = 2.46$) and the MESC ($M = 2.71$) defined this factor as a barrier, while neither private-sector employers ($M = 3.06$) nor public-sector employers ($M = 3.18$) did so.

"Stereotypes" were also identified as barriers for the mentally retarded by employment agencies, but not by employers. The largest difference in the ratings occurred between the MESC ($M = 2.31$), which rated the barrier as having between a "strong effect" and "some effect," and public-sector employers ($M = 3.48$), whose rating fell in the "limited effect" to "some effect" range.

In the assessment of barriers for the deaf, the only significant difference in employer community subgroup ratings occurred in the case of the "communication skills" factor. All subgroups and the total group ($M = 1.80$, $CI = 1.63-1.97$) identified this factor as a significant barrier for the deaf. MESC respondents ($M = 1.44$) identified this factor as a far more severe barrier than did the other three subgroups. Private-sector employers ($M = 2.33$) rated

"communication skills" as less of a barrier than did the other three subgroups.

Summary of Forced-Ranking Responses

Section III of the questionnaire was used as a basis for validating the responses of perceived barriers contained in Section II. In Section III, respondents were asked to rank, from 1 to 3, the groups most affected by the listed barrier. A general consistency in responses should serve as a measure of the internal reliability of the survey instrument. If, for example, the mean rating in Section II for "mental ability" as a barrier for the mentally retarded was rated as more severe than for any other group, we would expect that the mentally retarded would be ranked as one of the top three groups most affected by "mental ability" as a barrier in Section III.

Operationally, a validation of Section II findings is defined as follows: The group for whom a particular barrier was defined as most severe among all groups in Section II should appear in Section III as one of the three groups most affected by the barrier. A perfect consistency would be if the same group and barrier appeared as number one in both sections. A perfect consistency was not expected, given the different format of the questions in the respective sections and the possible measurement errors.

The findings from the forced-ranking questions in Section III tended to validate the earlier findings of barriers as found in Section II of the questionnaire. In 11 of the 13 barriers rated, the

consistency criterion was met: Barriers rated as most severe in Section II were rated in the top three in Section III. In 7 of the 13 cases, the findings were identical. The identical findings occurred in the identification of: the deaf most affected by "communication skill"; the physically disabled most affected by "physical ability"; the mentally retarded most affected by "lack of skill level"; the physically disabled most affected by "accessibility of the work site"; the mentally retarded most affected by "stereotypes"; the mentally retarded most affected by "acceptance from co-workers"; and by "mental ability."

An inconsistency in responses was found in the group most affected by "employment-related cost" and the group most affected by "workers' compensation risks." In Section II, the group rated as most severely affected by employment-related cost was persons with hidden disabilities. In Section III, the groups ranked from 1 to 3 as most severely affected were the physically disabled, the handicapped, and the mentally retarded, respectively. Persons with hidden disabilities were ranked fifth in Section III.

In the forced-ranking question, the physically disabled, the mentally retarded, and the handicapped were ranked, respectively, as the three groups most affected by "workers' compensation risks." Persons with hidden disabilities were ranked fourth. In the barrier assessments contained in Section II, persons with hidden disabilities were rated as the group most affected by the barrier.

There are several factors which may account for this apparent incompatibility in responses from the two sections. Most likely, those differences can be accounted for in measurement errors, formatting of questions, and the inclusion of the larger category "handicapped" in the same forced-ranking questions as the six disability groups. For example, if we compare the 95% confidence interval ranges for the barriers identified in Section II, we find a degree of overlap in the variables in question. Those confidence interval ranges are displayed in Table 17.

Table 17
Comparison of Two Disability Groups on Two Barriers

EMPLOYMENT-RELATED COST			
	Mean	95% <u>CI</u> Range	
Hidden disabilities	2.88	2.64	3.10
Physically disabled	2.95	2.72	3.18
WORKERS' COMPENSATION RISKS			
	Mean	95% <u>CI</u> Range	
Hidden disabilities	2.16	1.94	2.37
Physically disabled	2.50	2.26	2.74

As reflected in Table 17, it is possible for the standard error of the means to account for differences from the computed mean to occur. Because we can only be 95% confident that the true mean will

fall in the confidence interval, it is possible that the true means are different from those found in our survey. For example, the true mean rating for the workers' compensation barrier could be as high as 2.37 for persons with hidden disabilities, and as low as 2.25 for the physically disabled.

It should also be noted that the questions in the two parts of the questionnaire are not identical. Section II requires no forced comparison. No relative assessment is required. Section III requires a consideration of the relative importance of a barrier to 10 separate groups. It is reasonable to expect some inconsistencies, although not direct contradictions. It is also likely that responses in Section II will shape or alter responses in Section III. It is unlikely, however, that questionnaire respondents will go back to the first section completed to make them consistent with those in later sections, even if they have changed their minds.

Finally, it is difficult to discern the effect of including the category handicapped in the same forced-ranking system with the six disability categories that compose the class. It is reasonable to assume that inclusion of the larger class influenced the number of votes given to the six disability groups, and ultimately the rankings. In summary, it can reasonably be concluded that the findings in Section II are supported by the forced ranking of barriers in Section III and reflect the true perception of the sample on employment barriers.

Analysis of Employment Solutions

Six employment solutions were rated by questionnaire respondents for their effectiveness in increasing the employment of the 10 populations identified. The six employment solutions were tax credits, affirmative action, government subsidy, job training, increased employer awareness, and appeal to sense of public responsibility. The questionnaire rating key used to rate the effectiveness of the six solutions was as follows:

- 1 = Most effective
- 2 = Effective
- 3 = Moderately effective
- 4 = Limited effect
- 5 = No effect

In the analysis of the data, a solution was regarded as effective for the group identified if the average rating was less than 3, using the upper end of the 95% confidence interval range surrounding the mean rating as the cutoff point.

Of the six proposed employment solutions, "job training" was the only one rated by respondents as effective for all 10 population groups. "Tax credits" was rated as the least effective solution, viewed as effective only for the protected-group category "handicapped." "Increased employer awareness" was rated as the second most effective solution, benefiting the blind, deaf, handicapped, mentally retarded, and the physically disabled. The protected-group categories "handicapped" and "physically disabled" were both rated as

benefiting from the greatest numbers of the proposed employment solutions. Four of the six employment solutions were rated as effective for these two population groups. Table 18 identifies the solutions rated as effective for each of the 10 population groups.

Comparison of the Handicapped With
Women, Blacks, and Hispanics

Four of the employment solutions were identified as effective for the handicapped, while two each were rated as effective for women, blacks, and Hispanics. "Job training" was identified as an effective solution for all four of the protected groups. Affirmative action was rated as an effective solution for women, blacks, and Hispanics, but not for the handicapped. Of the four protected groups, blacks were rated as benefiting most from affirmative action. The average score for blacks ($M = 2.584$) on the affirmative action solution equated to a rating of "effective" to "moderately effective," while that given to the handicapped ($M = 3.252$) equaled a "moderately effective" to "limited effect" score.

The handicapped was the only protected group for whom "tax credits and financial incentives," "increased employer awareness," and "government subsidy" were rated as effective solutions. "Appeal to sense of public responsibility" fell right on the borderline as an effective solution in the ratings at the 95% confidence interval. Using instead a 90% confidence interval range ($M = 2.769$, $CI = 2.54-2.99$), "appeal to sense of public responsibility" would also meet the

Table 18
Perceived Effective Employment Solutions by Group

Groups	Solutions ^a					
	Incentives and Tax Credits	Affirmative Action	Government Subsidy	Job Training	Increased Employer Awareness	Appeal to Sense of Public Responsibility
Women		x		x		
Hidden disabilities				x		
Blind				x	x	
Blacks		x		x		
Deaf				x	x	
Mentally ill				x		
Handicapped	x		x	x	x	
Hispanics		x		x		
Mentally retarded				x	x	x
Physically disabled			x	x	x	x ¹

^ax = Solution rated as effective in increasing employment of group identified.

criteria as a solution rated as effective for the handicapped. A comparison of the ratings assigned to each of the four protected groups translated from the numerical scores is shown in Table 19. The actual mean scores and confidence intervals for these same variables are reflected in Table 20.

Rank Order Comparison of Women, Blacks,
Hispanics, and Handicapped

A second analysis was completed to compare the rankings of the six solutions for each of the four protected-group categories. The solutions were ranked for each group from those rated most effective to those rated least effective. This analysis enabled a comparison of solutions across groups to determine if certain of the solutions were consistently more favored irrespective of the protected-group category. Conversely, a difference in rankings of solutions of the handicapped as opposed to the other three groups would provide further evidence that the handicapped are perceived to need different solutions than do women, blacks, and Hispanics.

Two tests were run on the data. The rankings of the solutions for the handicapped were first compared individually with those of women, blacks, and Hispanics using Spearman's coefficient of rank order correlation. Second, the rankings of all groups were compared at one time to establish a coefficient of concordance for multiple rankings. Table 21 displays the comparative rankings of the six solutions for the handicapped, women, blacks, and Hispanics.

Table 19

Effectiveness Ratings of Employment Solutions for the Handicapped, Women, Blacks, and Hispanics

Solutions	Protected Groups			
	Handicapped	Women	Blacks	Hispanics
Tax credits	Moderately effective to effective	Limited effectiveness to moderately effective	Moderately effective to limited effectiveness	Moderately effective to limited effectiveness
Affirmative action	Moderately effective to limited effectiveness	Moderately effective to effective	Moderately effective to effective	Moderately effective to effective
Government subsidy	Moderately effective to effective	Limited effectiveness	Moderately effective to limited effectiveness	Limited effectiveness to moderately effective
Job training	Effective	Effective to moderately effective	Effective	Effective
Increased employer awareness	Effective	Moderately effective	Moderately effective	Moderately effective
Appeal to sense of public responsibility	Moderately effective to effective	Moderately effective to limited effectiveness	Moderately effective to limited effectiveness	Moderately effective to limited effectiveness

Table 20

Mean Scores and Confidence Intervals for Solution Ratings of Four Protected Groups

Solutions		Protected Group			
		Handicapped	Women	Blacks	Hispanics
Tax credits & financial incentives	Mean	2.645	3.761	3.391	3.440
	95% <u>CI</u>	2.39-2.90	3.49-4.04	3.12-3.66	3.18-3.70
Affirmative action	Mean	3.252	2.739	2.586	2.739
	95% <u>CI</u>	2.99-3.51	2.49-3.09	2.34-2.83	2.47-3.01
Government subsidy	Mean	2.702	3.807	3.439	3.604
	95% <u>CI</u>	2.47-2.93	3.59-4.03	3.19-3.69	3.35-3.86
Job training	Mean	1.911	2.348	2.117	2.134
	95% <u>CI</u>	1.71-2.11	2.13-2.57	1.92-2.31	1.94-2.33
Increased employer awareness	Mean	2.464	2.983	3.092	3.018
	95% <u>CI</u>	2.24-2.69	2.72-3.25	2.83-3.35	2.77-3.27
Appeal to sense of public responsibility	Mean	2.769	3.434	3.495	3.440
	95% <u>CI</u>	2.51-3.03	3.19-3.68	3.25-3.74	3.20-3.68

Table 21
Rankings of the Rated Effectiveness of Solutions for
Handicapped, Women, Blacks, and Hispanics

Solutions	Protected Group Rankings			
	Handicapped	Women	Blacks	Hispanics
Job training	1	1	1	1
Increased employer awareness	2	3	3	3
Tax credits/ financial incentives	3	5	4	4.5
Government subsidy	4	6	4	6
Appeal to sense of public responsibility	5	4	6	4.5
Affirmative action	6	2	2	2

The respondents, as indicated in Table 21, consistently view job training as the most effective solution. The one major difference in solutions as they relate to women, blacks, and Hispanics is in the perceived desirability of affirmative action.

The rank order correlation coefficients (r_s) for women and handicapped ($r_s = .257$), Hispanics and handicapped ($r_s = .328$), and blacks and handicapped ($r_s = .428$) show that no significant correlation exists at the .05 level of significance for the one-tailed test. While the strongest positive correlation exists between the rankings of blacks and the handicapped, that relationship is significant only

at the .35 level. Thus, while a weak positive relationship appears to exist between the employment-solution rankings of the handicapped compared to women, blacks, and Hispanics, it is insufficient to support a finding of correlation. It appears, though, that the solutions ranked most effective in increasing the employment of the handicapped are different from those rated as effective for women, blacks, and Hispanics.

Comparing the rankings of women, blacks, Hispanics, and the handicapped simultaneously provided a coefficient of concordance (κ) value of .7089 and a computed chi-square statistic of 14.178. The computed chi-square score for $(N - 1) = 5$ df is significant at the .02 level, demonstrating a significant positive correlation of concordance for the collective solution rankings for the handicapped, women, blacks, and Hispanics. This finding suggests that respondents tend to rate certain employment solutions as more effective irrespective of the protected-group category.

Given the earlier finding which showed no strong positive correlation between the solution rankings of the handicapped when compared individually to each of the protected groups, a conclusion can be drawn that the rankings of employment solutions are most similar between women, blacks, and Hispanics. This conclusion is supported by a larger κ value of .926 and a derived chi-square value of 13.90, when the solution rankings of only women, blacks, and Hispanics are compared. This chi-square value is also significant at the .02 level.

Comparison of Disability Groups on Employment Solutions

Proposed employment solutions were found to differ in perceived effectiveness between the six disability groups. The number of solutions rated as effective also varied among groups. Of the six disability groups--blind, deaf, mentally ill, mentally retarded, those with hidden disabilities, and the physically disabled--more solutions were identified as effective for the physically disabled than for any of the other categories. Job training was rated as an effective employment solution for all six disability groups. Affirmative action was the only solution not rated as effective for any of the six groups. The tax credits and financial incentives response category was rated as the next least effective solution for all disability groups. In the case of the mentally ill and persons with hidden disabilities, the two disability groups with only one solution, job training was rated as effective for increasing their employment. Table 22 identifies the effectiveness ratings of the employment solutions, as translated from their numerical values.

Analysis of Solutions

Not only was job training the only solution rated as effective for all disability groups, but it was also rated as the most effective solution for each of these six groups. Of the six disability groups, job training was rated as most effective for the

Table 22
Effectiveness Ratings of Employment Solutions for Six Disability Groups

Solutions	Disability Groups					
	Blind	Deaf	Hidden Disabilities	Mentally Ill	Mentally Retarded	Physically Handicapped
Tax credits/financial incentives	Moderately effective	Moderately effective	Moderately effective to limited effectiveness	Limited effectiveness to moderately effective	Moderately effective	Moderately effective
Affirmative action	Limited effectiveness to moderately effective	Moderately effective to limited	Limited effectiveness	Limited effectiveness	Limited effectiveness to moderately effective	Moderately effective to limited effectiveness
Government subsidy	Moderately effective	Moderately effective	Moderately effective to limited effectiveness	Limited effectiveness to moderately effective	Moderately effective	Moderately effective to effective
Job training	Effective	Effective	Moderately effective to effective	Moderately effective to effective	Effective	Effective
Increased employer awareness	Effective to moderately effective	Moderately effective to effective	Moderately effective	Moderately effective	Moderately effective to effective	Moderately effective to effective
Appeal to sense of public responsibility	Moderately effective	Moderately effective	Limited effectiveness to moderately effective	Moderately effective	Moderately effective to effective	Moderately effective to effective

physically disabled ($M = 1.87$, $CI = 1.68-2.05$) and least effective for the mentally ill ($M = 2.61$, $CI = 2.36-2.86$).

Increased employer awareness was rated as an effective solution for four of the six disability groups. It was not perceived as effective for the mentally ill and for persons with hidden disabilities. Increased employer awareness was rated as a "moderately effective" solution for three of the six disability groups. Respondents also rated this solution as the most effective employment strategy for the blind, and the least effective for the mentally ill. Considering all disability groups, the mean rating on this solution ($M = 2.636$) placed it second behind job training in effectiveness for increasing the employment of the six handicapped subpopulations.

Appeal to sense of public responsibility as a strategy was rated an effective approach for the mentally retarded ($M = 2.652$, $CI = 2.39-2.91$) and the physically disabled ($M = 2.712$, $CI = 2.46-2.97$) and as moderately effective with the blind and deaf. It was seen as least effective for persons with hidden disabilities ($M = 3.407$, $CI = 3.16-3.66$). The mean rating for all disability groups ($M = 2.922$) placed this proposed solution in the "moderately effective" range.

Government subsidy was rated as an effective strategy only for the physically disabled ($M = 2.729$, $CI = 2.50-2.96$). It was rated on the borderline between effective and moderately effective for the blind ($M = 2.802$), the deaf ($M = 2.963$), and the mentally retarded

(\bar{M} = 2.954), but clearly not rated as effective for either the mentally ill (\bar{M} = 3.509) or persons with hidden disabilities.

Tax credits and financial incentives was not rated as an effective solution for any of the six groups. It was viewed as moderately effective for the blind (\bar{M} = 2.853, \bar{CI} = 2.59-3.12), the deaf (\bar{M} = 2.908, \bar{CI} = 2.65-3.16), and the physically disabled (\bar{M} = 2.908, \bar{CI} = 2.65-3.16), and least effective for the mentally ill (\bar{M} = 3.615, \bar{CI} = 3.37-3.86).

Affirmative action as a solution was not rated as effective or moderately effective for increasing the employment of any of the six disability groups. Of all the proposed solutions, it was viewed as the least effective in the case of all of the handicapped subpopulations. Of the six groups, it was rated most effective for the deaf (\bar{M} = 3.39, \bar{CI} = 3.13-3.66) and least effective for persons with hidden disabilities (\bar{M} = 3.86, \bar{CI} = 3.63-4.09). The mean rating for all disability groups (\bar{M} = 3.62) placed this solution in the "limited effectiveness" to "moderately effective" range.

Comparison of Rankings of Employment Solutions for Handicapped Subpopulations

A comparison of the relative rankings of the proposed employment solutions across the six disability groups disclosed that certain solutions tend to be consistently rated as more effective irrespective of the disability group considered. Job training was rated as the most effective solution for all groups. Increased employer awareness was rated as the second most effective solution for all

groups except the mentally retarded, where it was rated as third. For all six disability groups, affirmative action was rated as the least effective solution.

The coefficient of concordance for comparison of multiple rankings provided a χ^2 score of .95 and a converted chi-square value of 28.50 ($df = 5$), which is significant at the .001 level. This analysis supports a strong positive correlation among the rankings of proposed solutions across disability groups. Table 23 displays the rankings of solutions for each of the six disability groups, ranked from most effective to least effective.

Table 23

Rankings of the Rated Effectiveness of Solutions for the Deaf, Blind, Physically Disabled, Mentally Ill, Mentally Retarded, and Persons With Hidden Disabilities

Employment Solution	Disability Group ^a					
	P.D.	M.R.	Deaf	Blind	M.I.	H.D.
Job training	1	1	1	1	1	1
Increased employer awareness	2	3	2	2	2	2
Appeal to sense of public responsibility	3	2	3	3	3	4
Government subsidy	4	4	5	4	4	3
Tax credits/financial incentives	5	5	4	5	5	5
Affirmative action	6	6	6	6	6	6

^aP.D. = physically disabled, M.R. = mentally retarded, M.I. = mentally ill, H.D. = hidden disabilities.

These rank order correlations may be viewed in combination with the earlier analysis of individual-solution effectiveness by disability groups. Together, these two approaches support a finding that the effectiveness of an individual solution will be dependent on the disability group considered, but that certain solutions will be consistently viewed as more effective than others irrespective of the particular disability group. Furthermore, there is at least one proposed solution, affirmative action, that is consistently viewed as ineffective for all disability groups.

Comparison of Employer Community Subgroup Differences
in the Ratings of Employment Solutions

The four employer community subgroups were generally similar in their ratings of barrier effectiveness for the identified populations. Of the 60 potential ratings (6 solutions x 10 groups), significant differences occurred in only 8 or 13% of the cases. Four differences occurred in the rating of tax credits; two differences occurred in the rating of appeal to sense of public responsibility; and one difference in employer community subgroup rating occurred in the job training and affirmative action categories. In the eight cases where differences are found, the differences can most often be explained by the tendency of MESC respondents to rate the solutions as more effective than the other three groups.

Differences among the four employer community subgroup ratings are found in the effectiveness of tax credits and financial incentives as a solution for women, persons with hidden disabilities,

blacks, and the mentally ill. For tax credits as a solution for women, MESC respondents rated it in the "moderately effective" range ($\bar{M} = 3.10$), while the other three groups viewed tax credits as having a limited effect to no effect. Of the four groups, private employment agencies rated tax credits ($\bar{M} = 4.63$) as the least effective solution, seeing it as having virtually no effect on increasing the employment of women.

Tax credits as a solution for effecting the employment of persons with hidden disabilities was rated as effective only by MESC respondents ($\bar{M} = 2.85$). All other respondent groups rated it in the limited to moderate effect range. Public-sector employers rated tax credits for persons with hidden disabilities as the least effective ($\bar{M} = 4.06$) of the four groups, seeing it as having only a limited effect.

MESC respondents also differed significantly from the other three employer community groups in the rating of tax credit effectiveness for blacks. MESC respondents rated this factor as effective to moderately effective ($\bar{M} = 2.75$), while the average rating of private- and public-sector employers and private employment agencies ($\bar{M} = 3.90$) identified tax credits as having a limited effect on the employment of blacks.

Collectively, the employer community rated tax credits as a solution for the mentally ill as having limited effectiveness to being moderately effective ($\bar{M} = 3.62$, $CI = 3.37-3.86$). MESC respondents rated it as a moderately effective solution ($\bar{M} = 2.91$),

while private-sector employers ($M = 3.54$), private employment agencies ($M = 3.25$), and public-sector employers ($M = 4.16$) all saw it as an ineffective solution.

The four employer groups differed in their ratings of the effectiveness of affirmative action as a solution for increasing the employment of persons with hidden disabilities. None of the four groups rated affirmative action as an effective solution for this disability group. Private-sector respondents collectively rated it in the limited to no-effect range ($M = 4.55$), while public-sector respondents rated it in the limited to moderate effect range ($M = 3.59$). MESC respondents rated it the most effective ($M = 3.38$), and private employment agencies rated it as the least effective solution ($M = 4.80$).

All groups rated job training as an effective solution for increasing the employment of the blind. MESC respondents rated this solution as more effective ($M = 1.72$) than did the other three groups.

As a total group, the employer community felt that appeal to a sense of public responsibility would be an effective strategy for increasing the employment of the handicapped ($M = 2.769$, $CI = 2.51$ - 3.03). Major differences existed between private employment agencies, which rated it as an ineffective strategy ($M = 3.50$), and public-sector employers, who rated it in the effective to moderately effective range ($M = 2.44$).

In rating appeal to a sense of public responsibility as a strategy for the physically disabled, the major differences in employer community subgroup ratings occurred between public-sector employers and private employment agencies. Public-sector employers rated this as an effective strategy ($M = 2.43$), while private employment agencies did not ($M = 3.16$). As a group, the two public-sector respondents rated this solution as more effective ($M = 2.62$) than did their private-sector counterparts ($M = 3.04$).

Analysis of Questions on the Impact of "Discrimination"
and "Tight Labor Market" as Barriers to Employment

Part III of the questionnaire asked the respondents to identify, from the 10 listed groups, the three groups "most affected by discrimination in employment" and the three groups "least likely to be hired in a tight labor market."

Impact of Discrimination

Respondents identified the mentally retarded as the group most affected by discrimination in employment, followed by blacks and then by the physically disabled. The deaf were rated as the group least affected by discrimination. The number of first, second, and third place votes is reflected in Table 24.

The identification of the mentally retarded as the group most affected by discrimination is consistent with their identification as the group facing the largest number of barriers. The identification of blacks as the second group most affected by discrimination seems

to contradict no barriers' being identified for blacks in Section II of the questionnaire. It would appear that respondents saw discrimination as representing something different from the collective effect of barriers. This would appear to be true not only for blacks, but for all 10 of the protected-group categories rated.

Table 24

Ranking of Groups Perceived as Most Affected by Discrimination

Protected Groups	Most Affected	2nd Most Affected	3rd Most Affected	1st, 2nd, or 3rd Place Votes Total
Mentally retarded	43	17	13	73
Blacks	30	18	11	59
Physically disabled	3	17	26	46
Mentally ill	10	17	11	38
Women	17	8	12	37
Handicapped	4	12	15	31
Hispanics	2	16	8	26
Blind	6	9	9	24
Hidden disabilities	3	3	5	11
Deaf	1	3	6	10
Total	119	120	116	355

Tight Labor Market

Of the 10 disability and protected groups listed, the mentally retarded were identified as the group "least likely to be hired in the absence of a tight labor market." This correlates with their identification as the group facing the most barriers and most affected by discrimination. This was also the group for whom the most employment solutions were recommended. The physically disabled were identified as the next group least likely to be hired, followed by the handicapped. The deaf appeared to be in the most favored position, followed by women and persons with hidden disabilities. Comparing only the four major protected-group categories suggests that the handicapped is the most disadvantaged in a tight labor market, followed by blacks, Hispanics, and women. The ratings of the most affected groups are shown in Table 25.

The rankings in this question support the earlier identification of barriers. The four groups identified as least likely to be hired--mentally retarded, physically disabled, handicapped, and mentally ill--were also the four populations for whom the most barriers were identified. The one notable difference was the mentally ill, who ranked second in the number of barriers faced but ranked fourth in the groups least likely to be hired.

Table 25

Ranking of Groups Perceived as Least Likely to Be Hired
in a Tight Labor Market

Protected Groups	Least Likely	2nd Least Likely	3rd Least Likely	Totals of 1st, 2nd, and 3rd Place Votes
Mentally retarded	62	14	15	91
Physically disabled	6	35	20	60
Handicapped	13	12	34	59
Mentally ill	3	20	13	36
Blind	10	10	12	32
Blacks	16	10	3	29
Hispanics	3	10	5	18
Hidden disabilities	6	4	4	14
Women	1	4	7	12
Deaf	1	2	7	10
Total	121	121	120	362

Comparison of Responses by Race and Sex

Race

A comparison of answers to the questionnaire by white and nonwhite (blacks, Hispanics, Native Americans, and Asians) respondents was made to determine if significant differences existed.

As a group, nonwhite respondents rated each of the 13 barriers for the handicapped as more severe than did their white counterparts. A comparison of the mean ratings of nonwhites ($N = 20$) to the total group ($N = 124$) mean and 95% confidence interval range showed that nonwhites rated 10 of the 13 barriers significantly more severely. Nonwhites rated visual appearance, prejudice, workers' compensation risk, skill level, physical capability, acceptance by co-workers, employment-related cost, accessibility of work site, stereotypes, limitation in jobs that the disability group can perform, and dependability as greater barriers for the handicapped than did whites.

In the identification of employment solutions, nonwhite respondents differed significantly from the total group in the rating of tax credits, affirmative action, and government subsidy as effective for the handicapped. In each case, nonwhites tended to view these solutions as more effective than did the total group. The most significant difference occurred in the rating of affirmative action, where nonwhites rated it as a clearly effective solution ($M = 2.278$), while the total group saw it as less than moderately effective ($M = 3.252$).

Sex

A chi-square analysis was performed on males' and females' questionnaire responses on the identification of employment solutions for the handicapped. It identified only one difference in ratings significant at the .05 level. Of the six proposed solutions, male

and female respondents differed significantly only in their assessment of the effectiveness of affirmative action as a solution ($\chi^2 = 9.518$, $df = 4$). On this variable, female respondents rated it as an effective solution ($M = 2.63$), while male respondents did not. Female respondents consistently rated the other five solutions as slightly more effective.

An analysis of the responses of females and those of nonwhites in the area of affirmative action suggest certain similarities. Both females and nonwhites represent existing protected-group classes. Both groups also are supportive of affirmative action as a solution for the handicapped. An inference can be made that existing protected groups are more supportive of affirmative action as an effective solution for other protected groups than are nonprotected-group classes.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

Introduction

This chapter presents the conclusions based on the principal and secondary research hypotheses addressed in the study. The conclusions derive from data gathered in this study and are integrated with relevant literature and related research. The conclusions address barriers to the handicapped and their subpopulations, employment solutions for the handicapped and their subpopulations, and the different response patterns based on employer community group, race, and sex. The appropriate research hypothesis is restated where the conclusion is presented.

Recommendations are also presented as a separate section in this chapter. The recommendations incorporate the research findings, relevant literature, and the writer's own experience and knowledge of the topic. The intent of the recommendations is to address policy and programmatic issues which will positively influence the employment problems of the handicapped.

The limitations of the research are discussed before the presentation of conclusions and recommendations. They are presented in order to provide the reader with a context for understanding the conclusions and to help identify areas where further research may be

needed. The limitations discussed address issues of research design, structure, and scope.

The chapter concludes with a section on implications for further research. The research areas identified derive in part from the limitations noted in this research, and in part other areas which were simply beyond the scope of this research. In either case, the research areas identified are intended to address information voids which may help resolve the employment problems of the handicapped.

Limitations of the Study

It is recognized that survey research, especially that which addresses a sensitive area like attitudes, has some significant limitations. There is the potential for individuals to give the "right" answer as opposed to an honest one. Therefore, the conclusions are based on the assumption that respondents reflected accurately their true perceptions. The research design provided no vehicle to validate the authenticity of responses.

Other research has also shown that people's attitudes do not always reflect their behavior (Nagi et al., 1972). There is therefore the potential that the respondents' actual behavior in employment practices may be either more favorable or less favorable than that represented in their answers.

The low response rate in the survey sample, especially in the two private-sector subsamples, also places some limits on the research findings. While attempts have been made in the statistical

analysis to address the problem of sample size, it cannot be concluded that the private-sector subsamples are necessarily representative of their respective populations. The findings must therefore be viewed as tendencies based on the sample drawn.

These survey limitations are in part compensated for by other research and data that have demonstrated similar findings in barriers for the handicapped. Certainly, however, additional research is necessary that examines the actual practices of the employer community with respect to the handicapped.

In the construction of the survey, certain assumptions were made with regard to the perceived barriers to employment. It is not known if the factors included in the study represent the real barriers or the most significant ones and how much weight each of them ultimately has in the hiring decision. Research by Fugua, Rathburn, and Gade (1983), for example, found that productivity, accident rates, and workers' compensation issues were the major concerns of employers for handicapped workers. Ten other work traits were not found as important. Their research also was limited only to factors believed to be important for handicapped workers and not to workers in general. Further studies should be directed at identifying and validating those factors that employers view as major disincentives for all applicants in general and how they affect the handicapped, particularly.

The survey was also limited by virtue of the number of employment solutions which could be rated. This is of greater concern in

the applicant-directed solutions, where job training was the only one listed. Because of this it is difficult to determine the viability of other strategies directed at altering the condition of the applicant, such as education, work experience, or employability orientation. Thus, there may be other solutions that are perceived to be more viable than job training. In addition, by including job training as the only solution in this category, the conclusion that client-directed approaches are preferred may be erroneous. The most obvious omission in the employer-directed approach area was a solution addressing enforcement of present nondiscrimination laws. While the climate for affirmative action has changed, it cannot be assumed that the same is true for nondiscrimination.

Other assumptions have been made with regard to the level of knowledge and enforcement of present civil rights legislation for the handicapped. An analysis should be made to determine the present level of enforcement of such laws and the extent of employer understanding and compliance. In addition, it would be informative to determine the extent to which knowledge of laws and compliance activities have altered employer practices, especially with regard to the handicapped. Finally, it is known that civil rights legislation has an effect on behavior over time. It is not known if the civil rights laws for the handicapped have simply not been in effect long enough to affect employer behavior significantly. An analysis should be undertaken that looks at civil rights legislation for other

protected groups, identifies the extent of its effect and period of time necessary, in comparison to the handicapped.

Conclusions

Barriers

The two major research hypotheses with regard to barriers were as follows: (a) The handicapped are perceived to face more and different barriers to employment than are women, blacks, and Hispanics; and (b) some disability groups face more and different employment barriers than others. Both hypotheses were substantiated by the research.

In comparison to other protected groups, namely blacks, Hispanics, and women, the handicapped are perceived by employers and employment agencies to face more and different barriers to employment. Of the 13 potential barriers identified in the survey, four were considered significant for the handicapped category, whereas none of the barriers was identified for any of the other three protected groups. The four barriers identified for the handicapped were rated as more severe barriers for the handicapped than for women, blacks, and Hispanics. In only one case--blacks with respect to "prejudice"--was another protected group perceived to be more severely affected by one of the listed barriers.

It is also evident that the handicapped face a different set of barriers than do the other protected groups. The factors that are most important in affecting the employment of the handicapped tend to

be the least important for the other three protected groups. Of the other three groups, the barriers facing the handicapped seem to be most similar to those facing women. Even here, however, the relationship is minimal. By and large, the barriers facing women, blacks, and Hispanics bear much more similarity to one another than they do to the handicapped. Thus, with regard to employment barriers, it appears that the handicapped represent a unique protected group class.

There is other evidence that the barrier severity is specific to the protected-group category being considered. Thus while persons with handicaps were rated as facing four barriers, and women, blacks, and Hispanics none, the handicapped were not always the most severely impacted by all barriers. As can be seen in Table 26, the perceived severity of the barrier is dependent on the protected group. Table 26 ranks the four groups based on the average (mean) rating of the protected group on the barrier.

The four barriers identified for the handicapped--physical capability, limitation in jobs the worker can perform, worker's compensation risk, and accessibility of the work site--are all associated with perceptions based on the effect of physical conditions. Two relate to an assessment of the physical ability to perform work tasks, and two address the perception of additional costs that result from the physical condition. The most severe barriers facing the handicapped appear to be those based on either the perception of

Table 26
Comparative Effect of Barriers on Protected Groups

	Group Rank ^a on Barrier			
	1	2	3	5
Communication skill	Hispanics (3.132) ^b	Handicapped (3.218)	Blacks (3.32)	Women (3.691)
Visual appearance	Blacks (3.23)	Handicapped (3.25)	Women (3.33)	Hispanics (3.63)
Prejudice	Blacks (3.025)	Hispanics (3.43)	Handicapped (3.53)	Women (3.85)
Workers compensation risk	Handicapped (2.39)	Hispanics (4.33)	Blacks (4.34)	Women (4.36)
Skill level	Handicapped (2.88)	Blacks (2.96)	Hispanics (3.25)	Women (3.31)
Physical capability	Handicapped (2.08)	Women (3.08)	Blacks (3.85)	Hispanics (4.00)
Acceptance by co-workers	Blacks (3.45)	Handicapped (3.60)	Hispanics (3.885)	Women (4.02)
Employment-related cost	Handicapped (3.00)	Women (4.195)	Blacks (4.23)	Hispanics (4.26)
Mental ability	Handicapped (3.14)	Blacks (3.53)	Women (3.615)	Hispanics (3.70)
Accessibility of work site	Handicapped (2.64)	Hispanics (4.24)	Blacks (4.28)	Women (4.33)
Stereotypes	Blacks (3.08)	Handicapped (3.20)	Hispanics (3.40)	Women (3.62)
Limitations in jobs can perform	Handicapped (2.17)	Women (3.195)	Blacks (3.65)	Hispanics (3.94)
Dependability	Blacks (3.17)	Hispanics (3.31)	Handicapped (3.38)	Women (3.55)

^aRanking based on mean barrier rating score. Column 1 reflects the group most severely impacted by the barrier.

^bNumber in parentheses indicates mean barrier rating.

limitations that result from the disability or an assumption that the disability will engender additional cost to employers.

The factors rated as the least important barriers for the handicapped are also noteworthy. The least important barriers were perceived as acceptance by co-workers, prejudice, and dependability. Two of these represent attitudinal dimensions, and the third relates to the ability to perform. It would appear that some of the more traditional attitudinal barriers for protected-group members are not the most critical issues facing the handicapped. If stereotypes, prejudice, and acceptance by co-workers do not operate as the primary employment deterrents for the handicapped, it would also suggest that the associated behavioral manifestations of avoidance, fear, rejection, and dislike are not as operative in the work place for the handicapped. Coupled with the other findings on significant barriers noted previously, this would support a conclusion that the employment problems of the handicapped have more to do with perceptions of inability and cost than they do with dislike.

There are clear distinctions in the number and types of barriers perceived, based on the type of disability. Those persons with mental characteristics are said to face more barriers than are other disability categories. Persons with mental retardation are perceived to face the largest number of barriers, followed by the mentally ill. Among those with disabilities, the deaf appear to be in the most favored position, followed closely by persons with hidden disabilities.

The identified disability groups can be classified into three major groupings based on the number of barriers faced. The largest number of barriers are said to be confronted by persons with mental characteristics, followed by the physically disabled and blind, and, finally, by persons with hidden disabilities and the deaf. This suggests that, in terms of employment, mental disabilities are considered a greater handicap than physical conditions, and the more visible disabilities are perceived to be more disabling than less visible ones.

The collective effect of the barriers appears to be directly related to decisions to hire. In the comparison of the handicapped category to other protected groups and in the comparison among disability groups, those groups who faced the largest number of barriers were also rated as the groups least likely to be hired. This relationship is most evident in the case of the mentally retarded and the deaf who represent, respectively, the groups most and least disadvantaged in obtaining employment. In addition, the severity and number of barriers facing the mentally retarded, supported by their rating as the group least likely to be hired, indicates that the mentally retarded are substantially more disadvantaged in employment than the other disability groups. This finding would appear to support previous studies that have indicated employer preference for certain types of disabilities. Most studies, including a recent one by Fugua et al. (1983), have consistently shown the disfavor in which the mentally retarded, as compared to other disability groups, are held

by employers. The research of Fugua et al., as well as that by Mithaug (1979) and others, is consistent with the findings here in showing preferences for the deaf and persons with hidden disabilities (e.g., epilepsy).

Even more important is a consistency between employer preference for certain disability types and general societal preferences toward various disability groups. Tringo's work (1970) and other research have demonstrated a hierarchy of societal preference that ranks first the physically disabled, second the sensory disabled, and third the brain injured. In addition, he found that in social preference scales, the disabilities of mental retardation and mental illness were consistently ranked the lowest. Notwithstanding the additional considerations of cost and physical capability, it seems that employers tend to mirror general societal preferences toward various disability categories in their hiring practices.

These parallels in societal preferences and employer preferences appear also to be validated in the findings of this research. Table 27 compares Tringo's (1970) rankings of societal preferences with the results of this survey research. The rankings used for computing the correlation coefficient from this research are those based on the question concerning "groups least likely to be hired in a tight labor market."

Although the rank order correlation coefficient is not significant at the .05 level ($p = .657$, $N = 6$), the rankings are strikingly similar considering that the disabilities used in the two studies

were not identical, and the time period difference (1970 versus 1984) between the respective research studies. There is a sufficient commonality to infer a similarity between societal and employer preference. This would appear to be most true in the case of mental characteristics (mental retardation and mental illness).

Table 27

Comparison of Tringo's Social Preference Scale With Preferences
Based on Employer Community Group Sample

Group	Rankings		
	Tringo a	Employer Community Group b	c
Hidden disabilities (heart, diabetes)	1	2	2
Deaf	3	1	1
Blind	2	3	3
Physically disabled (paraplegic)	4	5	4
Mental retardation	5	6	6
Mental illness	6	4	5

^aTringo's study ranked 21 categories. Only those groups common to both studies are compared in this table.

^bReflects rankings based on tight labor market question.

^cReflects rankings based on average barrier ratings.

The differences which do occur in the rankings are probably explained by the differences noted above, and the fact that other

factors enter into the employment equation that are not considered in social preference. Thus, a disability which evokes high public support and sympathy may receive low consideration in employment. Siller's (1967) studies on reaction to disability, for example, found that while blindness was one of the disabilities most favorably reacted to by the public, it was also perceived to be the worst disability one could suffer, and believed to impose the most severe limitations. Similar dual reactions may exist in considering certain disability groups for employment. It would appear, therefore, that while general societal preferences toward disabilities carry over into the employment arena, they are tempered somewhat by considerations unique to the employment situation.

It would appear that in the case of certain disability categories there is a tendency to generalize barriers beyond the problems directly related to the disability. This seems most evident in the case of the mentally retarded, where "physical capability" and "dependability" were identified as barriers and yet have no consistent relationship to the functional limitations associated with mental retardation. This phenomenon is also seen in the listing of "lack of skill level" as a barrier for the blind and the mentally ill. The classic concept of labels, which colors perceptions in other areas (Allport, 1954), appears to generalize to the employment arena and is most prevalent for persons with mental disabilities. Wright's (1960) contention of devaluative spread--the tendency to generalize disability to all aspects of the individual--would also

appear to be substantiated by this research, as evidenced by the additional limitations perceived by the employer community.

Discrimination, according to these respondents, appears to (a) represent something different from the collective effect of barriers and (b) not to operate as a major factor in hiring decisions. Both women and blacks were rated by respondents as being more affected by discrimination than the handicapped. Yet neither group was rated as facing any barriers, nor were women or blacks seen to fare worse in a tight labor market than the handicapped. The only situation in which there is consistency between barrier effect, likelihood of hiring, and discrimination occurs in the case of the mentally retarded.

Not all disability groups are perceived to be more disadvantaged in employment than are women, blacks, and Hispanics. If the respondents' ratings reflect actual behavior, it would appear that the deaf are less affected by discrimination and more likely to be hired than are women, blacks, and Hispanics. Persons with hidden disabilities are also less affected by discrimination and more likely to be hired than all other major protected groups except women. This again reaffirms that barriers, hiring decisions, and discrimination are specific to the disability and not generalized to the class "handicapped."

The one barrier perceived to exist consistently for the handicapped category and for all disability groups is that of "limitation in jobs can perform." The common ingredient for all disability groups in the employment arena is the perception that the disability

restricts the variety of tasks the individual can perform. Although there is no way to determine the weight that this barrier has in the overall hiring decision, it is significant that the handicapped are perceived by the employer community as being suited for only certain types of jobs. It may be that the connotation of disability places an undue restriction in the employer's mind, which extends beyond that actually imposed by the disability.

Employment Solutions

It was hypothesized that more and different employment solutions would be supported for the handicapped than for women, blacks, and Hispanics; similarly, it was proposed that more and different employment solutions would be supported for some disability groups than others. These hypotheses were substantiated by the research findings, namely: (a) More and different employment solutions were identified for the handicapped category than were recommended for the other three major protected groups, and (b) similarly, more and different solutions were supported for some disability groups than for others.

Four solutions were proposed as effective for the handicapped category, whereas only two each were recommended for women, blacks, and Hispanics. Job training exists as the single solution that is felt to be effective for all four groups. Affirmative action is rated as an effective solution for women, blacks, and Hispanics but not for the handicapped or for any of the disability groups.

Conversely, tax credits, government subsidy, and increased employer awareness are felt to be effective solutions for the handicapped but not for the other three major protected groups.

Three conclusions are suggested by these findings: First, employment solutions already established and associated with certain protected groups are identified as effective for those designated groups but not for others. This is most evident in the case of job training, which has a long-term historical basis in employment and training policy for all protected groups. Similarly, affirmative action is well established as policy for women, blacks, and Hispanics but not yet for the handicapped. Tax credits also exist in federal law as a special incentive to hire the handicapped but not specifically for women, blacks, or Hispanics. This may suggest that policy dictates practice and acceptance of certain employment approaches with regard to disadvantaged groups.

Second, in the case of the handicapped, there is support for those solutions that address cost issues, such as tax credits and government subsidy, and those that educate the employer, such as increased employer awareness. Coupled with the earlier findings on barriers, this finding suggests that cost is a real issue in the eyes of the employer that must be addressed. Unlike the other protected groups, there is also an apparent belief that if employers were more knowledgeable about the handicapped, they would be more likely to hire them.

Finally, for the most established protected groups, such as women, blacks, and Hispanics, there is support for the more traditional approaches. There is also an apparent recognition that the handicapped require additional and different approaches than do other protected groups. It is significant that identical solutions are proposed for women, blacks, and Hispanics but that different ones are suggested for the handicapped.

There is a tendency to support more solutions for those groups which face more barriers. This is clear in the case of the handicapped category as compared to women, blacks, and Hispanics. In examining barriers and solutions, respondents identified four barriers and solutions for the handicapped, whereas no barriers and two solutions were listed for the other three groups. This relationship is not as consistent when disability groups are compared. For example, the mentally ill and the blind, who had four or more barriers identified, received support for only one and two employment solutions, respectively. Yet the physically disabled had a high number of barriers (four), and received support for a high number of solutions (four). Few barriers and few solutions were found also for persons with hidden disabilities. The mentally ill would appear to represent a unique case in which six barriers were identified and yet only one solution was rated as effective. Table 28 compares each of the six disability groups on barriers and solutions. The net gain/loss column provides a rough indicator of the employability potential

for each group. Negative numbers reflect lower employability potential.

Table 28

Comparison of Number of Barriers and Solutions by Disability Group

	Groups	Barriers	Solutions	Difference
Disability Subgroups	Mentally retarded	10	3	-7
	Mentally ill	6	1	-5
	Blind	4	2	-2
	Physically disabled	4	4	0
	Hidden disabilities	3	1	-2
	Deaf	2	2	0

The number and types of proposed solutions were also specific to the disability group. Aside from job training, no single solution is perceived to be effective with all disability groups. There is at least one group, the mentally ill, for whom a number of barriers are identified. Yet, it is felt that virtually no employment strategy will help them. This may suggest that the prognosis for placement of persons who have a history of mental illness is the poorest of all disability groups. Conversely, considering the number and types of solutions deemed effective for the physically disabled, they may well be in the most favored position with regard to employment potential.

With the exception of the mentally ill, increased employer awareness is rated as an effective strategy for those disability groups who faced the most barriers. This would seem to lend support to a willingness in the employer community to be educated and potentially to hire the handicapped subpopulations. There is also support for appeal to a sense of public responsibility as an effective solution for two of the three groups (the physically disabled and mentally retarded) who faced the largest number of barriers. Taken together, these factors would seem to indicate for the physically disabled and blind a potential willingness to hire, a sense of public obligation to do so, and a perception that increased knowledge will help to achieve that end. Unlike the mentally ill, there apparently are perceptions that certain measures can be taken to compensate for the effects of these disabilities in the employment arena.

There is a tendency to support certain solutions over others, irrespective of the group considered. Job training is consistently rated as the most effective solution for all major protected groups and all disability categories. There is wide public support for and an intensity of belief in job training as a general employment and training strategy for all groups.

In a comparison of the handicapped with other protected groups, there is a consistency of preferred solutions across groups, with the exception of affirmative action. Affirmative action, for women, blacks, and Hispanics, represents the second most preferred solution behind job training. Conversely, for the handicapped, affirmative

action was the least preferred solution. However, if we delete affirmative action from consideration, then the two most preferred solutions--job training and increased employer awareness--are identical for the four protected groups. Further, the rankings of preferred solutions for blacks and persons with handicaps are the same. Table 29 shows the comparative rankings of preferred solutions for the four protected groups with the affirmative action option deleted.

Table 29

Rankings of Preferred Employment Solutions for Protected
Groups Excluding Affirmative Action

Solutions	Groups			
	Handicapped	Women	Blacks	Hispanics
Job training	1	1	1	1
Increased employer awareness	2	2	2	2
Tax credits and financial incentives	3	4	3	3.5
Government subsidy	4	5	4	5
Appeal to sense of public responsibility	5	3	5	3.5

This would suggest that in the consideration of employment solutions, the handicapped are most like blacks and least like women.

In addition, this similarity may reflect the perceived disadvantage-ness of the four groups; the handicapped perceived as most disadvantaged, followed by blacks, then Hispanics, and finally women. It appears, therefore, that there is a general tendency to support certain types of solutions for all protected groups, and the more disadvantaged in employment the groups are perceived to be, the more similar their preferred solutions. The lack of support for affirmative action for the handicapped may stem from: (a) the fact that it has not been traditionally applied to this group; (b) the changing public climate with regard to affirmative action, including the reaction to the number of groups already included; and (c) the definitional problems which make it difficult to apply affirmative action to the handicapped.

Across disability groups, the most preferred and least preferred employment solutions are nearly identical. When disability groups are considered, there is a strong tendency to favor certain solutions over others, irrespective of the disability category. Job training is viewed as the most effective, and affirmative action as the least effective for all groups. While the effectiveness of a given solution is specific to the disability group, the order of preference for the six solutions is the same for the handicapped category and all disability categories.

There would appear to be a general employer community standard of acceptability of employment solutions that consistently affects all disability groups. In general, that standard from most to least

preferred is: (a) job training, (b) increased employer awareness, (c) appeal to sense of public responsibility, (d) government subsidy, (e) tax credits and financial incentives, and finally (f) affirmative action. Considering the types of solutions preferred, it seems that the most desirable are those directed at the individual (job training), followed by strategies to convince the employer (increased awareness, appeal to sense of public responsibility), then methods to induce the employer financially (government subsidy, tax credits) and last, approaches which mandate the employer (affirmative action). Another way of viewing the order of preference is that as the responsibility increasingly shifts to the employer, the solution diminishes in desirability.

The solutions identified as effective for the physically disabled are most similar to those identified as effective for the handicapped category. Coupled with a similarity in barriers identified for these two groups, this finding suggests that the handicapped are most commonly perceived as persons with physical disabilities by the employer community. Thus, solutions identified as effective for the handicapped are often generalized to the physically disabled and vice versa. No similar assumption can be made, however, in generalizing solutions from the handicapped category to other disability groups.

Respondent Group Differences

Employer community

The perceptions of barriers and solutions for the handicapped tend to be consistent across the four components of the employer community. Private- and public-sector employers and employment agencies showed rating differences in only 18% of the barriers and differed only 13% of the time in the ratings of solutions. By and large, perceptions regarding protected groups are institutionalized within the employer community. Employment agencies appear to mirror the attitudes of employers, and for the most part, the employer community often reflects the values, attitudes, and perceptions of the larger society.

Of the four segments of the employer community, the public employment agency, MESC, most often differed in its assessment from the others both in terms of solutions and barriers. In the assessment of barriers for the handicapped, MESC tended to rate them as more severe than did the other three groups. The area where MESC differed is also noteworthy. In the assessment of barriers, MESC respondents differed in the perception of the effects of stereotypes and prejudice on the handicapped, the mentally ill, and the physically disabled. This difference may in part be explained by MESC's greater exposure to a more representative population. For example, in their respondent sample, MESC had the highest representation of minorities, women, and handicapped individuals of the four employer

community subpopulations. Similarly, by virtue of their being a statewide public employment agency, they have a mandate to serve all segments of the population. These two factors may make MESC respondents more sensitive and perceptive to the attitudinal barriers facing the handicapped.

Similarly, MESC respondents saw solutions as more effective than did public and private employers and private employment agencies. MESC respondents most frequently saw tax credits as a more effective solution for the handicapped and various disability groups. As the agency responsible for administering the federal Targeted Jobs Tax Credit (TJTC) program, this difference is not surprising. Most likely their increased exposure has given them a better opportunity to see the effectiveness of the tax credit program. One of several conclusions can be made: (a) MESC attitudes do not reflect those of the larger employer community, (b) MESC respondents were more honest in their responses, or (c) their increased exposure to barriers and solutions has made their perceptions more accurate. In either case, the public employment agency clearly reflects a different perspective.

Other than the general tendency for similar ratings between public and private employers and private employment agencies, there is no consistent pattern of agreement between any two of the four employer community groups. There is no evidence to support the view that there is a consistent employer attitude, or employment agency

attitude, or public-sector attitude, or private-sector attitude with respect to either barriers or solutions.

Public-sector attitudes do not appear to be significantly different from those in the private sector. Neither do employment agencies differ significantly from employers. The one area where public-sector employers differed significantly was in the rating of appeal to a sense of public responsibility as a solution. Public-sector employers saw this approach as viable for the handicapped and the physically disabled. It may well be that the public sector feels a greater sense of public obligation to employ persons with handicaps. Conversely, it is significant that not even the public-sector employers supported affirmative action for the handicapped.

Race

Nonwhite questionnaire respondents differed significantly from white respondents both in the ratings of barriers and in policy solutions for the handicapped. It would appear that race of the respondent is a significant factor in the perception of barriers that the handicapped face and in the determination of viable solutions. Nonwhites tended to rate more factors as barriers, and overall rated all barriers more severely than did whites.

Solutions for the handicapped were rated as more effective by nonwhites. Nonwhites saw affirmative action as a viable solution, whereas whites did not. Thus, while nonwhites perceived the handicapped as facing more numerous and more severe barriers than did

whites, they also saw additional and more effective solutions than did whites. It is also significant that nonwhites, who represent an existing protected group, saw affirmative action as benefiting the handicapped.

Sex

The sex of the respondent does not appear to be a significant factor in the perception of barriers or the rated effectiveness of solutions for the handicapped. Of the six potential solution ratings for the handicapped, male and female respondents differed only in their assessment of the viability of affirmative action, where female respondents rated it as effective and male respondents did not.

In the case of both sex and race, existing protected-group members believe that affirmative action will assist in affecting the employment of the handicapped. It appears that those groups who have benefited from affirmative action are more likely to support it as viable for others. Conversely, those who have not benefited directly are less likely to be supportive and will reject the inclusion of additional groups in affirmative action strategies. There is no way to discern from the data if this rejection of affirmative action by nonprotected-group members is a rejection of affirmative action for the handicapped or simply a rejection of the inclusion of any additional groups under this policy.

Recommendations

The perception of barriers facing the handicapped and the sub-populations of the handicapped dictate that a variety of approaches targeted to the perceived barrier and to the disability category will be necessary to bring about their employment. These approaches will be most effective if they are directed at the specific disability category in each case and not at the broad class of "the handicapped."

While a variety of employment approaches must be used, the largest area of common need rests in the area of employer education and awareness. Substantial misperceptions and mythology still exist with regard to such issues as workers' compensation cost, accommodation cost, the real versus perceived functional limitations of handicapped persons, and the range of jobs that handicapped individuals can perform. Sufficient data and information exist to refute these misperceptions and dispel the myths. The du Pont study (1982) is just one of several reports available which can be used for this purpose. That information must be packaged and made available to employers, employment agencies, and others involved in the training and placement of handicapped persons.

The dissemination of such information must also take advantage of a large variety of vehicles, include information that is specific to the disability category, and be in the hands of those who actually have an effect on the hiring process. Vehicles should be utilized such as employer seminars, enlisting employers who have successfully

employed handicapped workers, and business journals, newsletters, and newspapers.

Information should be published and made available that is specific to the disability category, covering such issues as range of jobs performed, employment performance records, and accommodation methods specific to the disability. Practitioners must have this information available and must themselves be available as resource persons to employers in this area. Key people in the placement process in business, industry, and in both public and private employment agencies should have this information made readily available to them.

Civil rights and affirmative action programs have a record of proven effectiveness for other protected groups, and must be used to address the employment of the handicapped (Barnhill-Hayes, 1981; Dometrius & Sigleman, 1984). Although there does not appear to be a supportive climate for affirmative action for the handicapped, this strategy should not be abandoned. It would appear from the data, however, to be most feasible for those disability groups such as the physically disabled, deaf, blind, and persons with hidden disabilities where there appears to be a level of public acceptance and support for the disability.

Certain adjustments in the legislation are also necessary if affirmative action is to be workable for the handicapped. The problem in identifying who the handicapped are, for purposes of affirmative action, must be overcome. The proposal offered by Johnson

(1981) seems to be needed, namely, that the civil rights statutes adopt separate definitions of the handicapped for nondiscrimination and affirmative action purposes. For purposes of affirmative action, the handicapped must be defined either in terms of discernible functional limitations, or by identifying specific disability categories.

From an employer perspective, affirmative action programs for any group have never enjoyed wide support. To counter this reality, it will be necessary to follow certain principles in the application of this approach for the handicapped. The approach should avoid the establishment of quotas unless the employer voluntarily chooses to select them. Affirmative action must be used in combination with a variety of financial incentives available to the employer, including tax credits for hire, tax credits for workplace accessibility modification and individual accommodation, and preferences in government contracts. This appears to be consistent with the survey findings where tax credits, financial incentives, and government subsidy were supported as effective strategies for employment of the handicapped. Similarly, practitioners, such as those employed by state vocational rehabilitation agencies, must be available on a proscribed basis to employers not only at the point of hire, but also during the initial stages of employment.

Sufficient civil rights legislation exists at both the federal level and in most states with respect to employment discrimination against the handicapped. It is important that existing legislation is more ambitiously enforced so that presently qualified handicapped

individuals are not screened out of the labor force. This will require that employers be better educated with regard to present laws, that employment agencies better understand present laws, that civil rights enforcement agencies be adequately trained in both state and federal laws, and that adequate resources be allocated to assure timely and appropriate enforcement. This may require that handicapped civil rights be given a temporary priority of attention within civil rights enforcement and compliance agencies.

Research has indicated that information and exposure can have some effect on attitude and behavior change (Anthony, 1972). This rationale supports the necessity of a dual approach that takes into account both information and compliance, and argues for the use of civil rights and affirmative action to assure that employers are exposed to handicapped individuals. The compliance activities, by forcing behavioral change, will likely have an effect on attitudinal change, as well.

Job training should be continued and expanded for handicapped individuals. Employers should be more closely linked to the training process. This emphasis argues for increased use of employers as trainers, expanded use of on-the-job training, the use of employers as consultants to training programs, and the housing of training programs within business and industry. This approach should assist in increasing employer awareness while also assuring that training is relevant to employer needs.

Training resources should be expanded to provide more training for handicapped persons. Resources should be expanded to programs already charged with the training of the handicapped, such as Vocational Rehabilitation. In other employment and training programs, the handicapped should be designated as a target group and appropriate resources allocated to meet those needs.

For example, recently in Jobs Training Partnership Act (JTPA) programs in Michigan local private industry councils (PICs) have been requested to set their own goals for the percentage of handicapped to be served. This would appear to be a step in the right direction. This approach should be expanded with minimum percentage penetration standards established nationally for all local programs. The 9.7% figure used for affirmative action goals in state government would appear to be a reasonable standard for JTPA programs also. To be most effective, program funding must be linked to achievement of these performance standards. Similar approaches must be applied for all publicly funded employment and training programs. In some cases it may be appropriate to pinpoint additional training resources for those disability groups, such as the mentally ill and mentally retarded, who are most disadvantaged in the workplace. Target goals and funding formulas will likely need to be established at the national level using unemployment data, wage rates, and other indicators.

Given the level of public support and belief in job training as a solution, the placement of handicapped workers should stress,

whenever possible, that trained individuals are being referred. In addition, placement strategies should capitalize on the positive perceptions that exist about handicapped individuals. These perceptions are tied to specific disabilities and should be marketed by the practitioner to the employer on that basis.

Approaches that provide incentives to employers and address cost considerations must be continued and expanded. Because misperceptions do exist with regard to cost, and because in some cases additional costs are incurred, approaches that provide inducements to employers must be continued. The potential of additional cost to employers, which may operate as a disincentive to hire, cannot be ignored.

While the whole array of financially based incentives should be available for all disability categories, the number of those incentives should be expanded, particularly for those disability groups most disadvantaged in the employment market. For example, larger tax credits should be available to employers hiring the mentally ill and mentally retarded, or for persons defined as "severely handicapped in employment."

Comprehensive financially based incentives for hiring the handicapped should at some point be discontinued. Over the long term, financial incentives for hiring any designated group of qualified individuals cannot be justified. Such programs should continue in existence only until they have met their objectives, which can be defined as follows: (a) bringing a representative number of

handicapped individuals into the work force and (b) assuring employer exposure to handicapped persons so as to provide a basis for work-related judgments on capabilities. Once those objectives have been achieved, only those incentives that address any additional real cost to employers should be continued.

Different approaches at both the policy and practitioner levels may be necessary for certain disability groups who are more difficult to place. Government subsidy to employers, for example, could be justified for those hiring the mentally retarded. At the practitioner level, appeals to employers to hire the blind, physically disabled, mentally retarded, and mentally ill should be used. Because these approaches are based on sympathy and employer ignorance, they should be continued only until the ignorance and misinformation are dispelled.

At the broader policy level, a comprehensive approach to the employment of the handicapped must incorporate and integrate training initiatives, efforts to educate employers, compliance initiatives, and financial incentives. The achievement of full integration of the handicapped into the labor market dictates not only that all approaches be used and that they complement each other, but also that they be addressed consciously in the context of employment and training policy. In addition, employment and training policy at the national level must consciously incorporate the handicapped as a significant segment of the unemployed and underemployed population. In light of the estimated two-thirds unemployment rate among the

handicapped (Wolfe, 1980), this approach seems well justified. Thus, while the needs of the handicapped must be recognized and addressed, they should be addressed in the context of a comprehensive national employment and training policy for all persons and not as segmented programming for the handicapped. Over the long term, policy that is good for increasing employment opportunities for all people will also be good for persons with handicaps.

Implications for Further Research

Several limitations in the research have been identified earlier in this chapter, and recommendations made to address them in subsequent research. To repeat, some of the major ones include:

1. An analysis which compares the employment gains of the handicapped since the passage of their civil rights legislation to the employment gains of other protected groups for comparable periods of time.
2. An examination of actual employer practices with regard to interviews, hiring practices, and the basis for rejection of handicapped workers.
3. The use of larger private-sector subsamples to validate the findings of this research. This will require some modification in the research design in order to increase the sample size. First, it will be necessary to reduce the length of the questionnaire as a method to increase response rate. This can be accomplished specifically by: (a) eliminating the barrier questions which are repeated in

Section III of the questionnaire, (b) eliminating the optional choice questions in Sections II and IV, and (c) eliminating some of the employer identifying questions which are contained in Section I. Collectively, these omissions will reduce the length of the questionnaire by about five pages and the number of responses required by 21%. In addition, the number of questionnaires mailed will need to be increased to at least 400, as opposed to the 200 used in this study. Finally, a third follow-up letter will need to be used. The time between the initial mailing, second follow-up letter, and final follow-up letter should be reduced from the five-month span used in this study to a period of three to four weeks. An application of these techniques should serve both to strengthen and validate the research findings and enable generalizations to the larger Michigan and national private-sector employer community.

4. A survey of enforcement practices with regard to federal and state civil rights statutes concerning employment of the handicapped. The survey would address complaints filed, ratio of discrimination findings to complaints filed, and types of disabilities included. The ratio of success should be compared with other groups.

In addition, there are several other areas where research seems warranted based on the findings in this research. One of the most significant may be the opposition to affirmative action for the handicapped. Research should be directed at the cause of this present attitude. Some of the issues which should be addressed are: (a) whether the opposition is predominantly from those not presently

included in affirmative action (i.e., nonprotected-group members), (b) whether the opposition is unique to certain types of organizations or businesses, (c) whether similar feelings exist outside the employer community (i.e., the general public), and (d) whether companies that have effectively implemented affirmative action for other protected groups are also more supportive of affirmative action for the handicapped. In addition, the problems with the law itself will need to be examined to discern employer attitudes toward the present legislation. Given the known problems in defining the handicapped, employers need to be surveyed to identify their understanding of the present law, their understanding of who is covered, and the basis for their opposition to affirmative action. Each of these issues will probably require separate research but should be addressed given the effectiveness affirmative action has achieved for other protected groups.

Research should also focus on the success side of the equation. For example, there are a number of companies that have been extremely progressive in bringing handicapped individuals into the workforce. An analysis of those companies which examined such variables as organization philosophy, organization structure, type of business, company size, attitudes toward the handicapped, previous contact with handicapped persons, and types of disability groups employed would provide a body of knowledge which would assist practitioners and policy makers.

Similarly, research should be directed at those individual factors which appear to compensate for the perceived barriers that handicapped persons face. For example, some research has shown that perceived competence can compensate for the usual barriers that handicapped persons face (Thomas & Thomas, 1984). Further research along this line is necessary. In addition to perceived competence, the specific effects of education, work experience, communication skill, and type and extent of job training should be assessed for their influence as factors compensating for disability. All of these areas represent strategies which could be employed by practitioners if they are found to be effective in overcoming traditional barriers. It is hoped that these areas will provide further building blocks in the construction of sound employment and training policy for persons with handicaps.

One additional area appears in need of further research. Given the findings of this research which substantiate the differences in perceptions of employability based on disability type, further research in this area also seems necessary. This appears particularly true with the category defined as persons with hidden disabilities. For purposes of this research, this category of nonvisible characteristics was specifically defined to include heart, back, diabetes, and epilepsy. While these specific disabilities share in common their nonvisibility, it may be erroneous to assume a commonality in barriers, perceptions, and employer reactions. If, in fact, barriers and solutions are disability specific, then a testing of the

similarities and differences among these various types of hidden disabilities needs to occur in further research. It is recommended that further research, modeled after this study, be carried out with the total spectrum of disabilities included under the hidden-disability label. Such research should help to validate whether policy solutions are appropriately addressed to the generic class of hidden disabilities, or whether solutions must be focused on specific disabilities within the class.

APPENDIX A

Cover Letter and Questionnaire



Western Michigan University
Kalamazoo, Michigan 49008

Center for Public
Administration Programs
(616) 383-1937

Dear Respondent:

I am a doctoral student in public administration conducting research at Western Michigan University in the area of employment practices as they relate to various groups. The study is designed to solicit your identification of the barriers and problems these groups may encounter in seeking employment and your recommendations on means to overcome these barriers. Your responses will be extremely useful in making recommendations which are both responsive to the employer and beneficial to job applicants. The questionnaire should take between 30 and 45 minutes to complete.

You and your organization have been selected as part of a representative sample. If it important, therefore, that using your own experience and knowledge, you answer as candidly as possible as a representative of your organization. There are no right or wrong answers to the questions asked. The answers you provide are completely confidential. It is also important that you return the survey in the stamped, self-addressed envelope provided.*

Thank you for taking the time to complete the survey. If you would like a copy of the survey results, please check the appropriate box at the end of the questionnaire and provide your name and address.

Sincerely,

L. Robert McConnell

* It would be helpful to have you
respond within the next 10 days.

PLEASE COMPLETE THE FOLLOWING DEMOGRAPHIC INFORMATION:

1. What is your job title? _____
2. What are your job duties? _____

3. What is your role in the hiring process (check all that apply)?
 Prescreening of applicants _____
 Initial selection _____
 Final selection _____
 Develop selection criteria _____
 Other (specify) _____
4. How long have you been in your current position?
 Years _____ Months _____
5. What is your type of business? _____
6. What is the number of employees in your company or agency? _____

* * * * *

THE FOLLOWING SERIES OF QUESTIONS (7-16) IS DESIGNED TO MEASURE THE IMPACT OF CERTAIN BARRIERS TO EMPLOYMENT ON VARIOUS GROUPS. YOU ARE ASKED TO RATE THE BARRIERS ON A SCALE FROM ONE TO FIVE AS TO WHETHER YOU PERCEIVE THEM TO HAVE A MAJOR EFFECT OR NO EFFECT AT ALL. THERE ARE NO RIGHT OR WRONG ANSWERS TO THE QUESTIONS.

7. Please rate the following barriers affecting the employment of those with a history of mental-illness.

	Major Effect	Strong Effect	Some Effect	Limited Effect	No Effect
	1	2	3	4	5
(1) Visual Appearance	-	-	-	-	-
(2) Communication Skills	-	-	-	-	-
(3) Prejudice	-	-	-	-	-
(4) Workers' Compensation Risks	-	-	-	-	-
(5) Skill Level	-	-	-	-	-
(6) Physical Capability	-	-	-	-	-
(7) Acceptance by Co-Workers	-	-	-	-	-
(8) Employment Related Cost	-	-	-	-	-
(9) Mental Ability	-	-	-	-	-
(10) Accessibility of the Work Site	-	-	-	-	-
(11) Stereotypes	-	-	-	-	-
(12) Limitation in Jobs They Can Perform	-	-	-	-	-
(13) Dependability	-	-	-	-	-
(14) Other (specify) _____	-	-	-	-	-

8. Please rate the following barriers affecting the employment of blacks.

	<u>Major Effect</u>	<u>Strong Effect</u>	<u>Some Effect</u>	<u>Limited Effect</u>	<u>No Effect</u>
	1	2	3	4	5
(1) Stereotypes	-	-	-	-	-
(2) Workers' Compensation Risks	-	-	-	-	-
(3) Communication Skills	-	-	-	-	-
(4) Prejudice	-	-	-	-	-
(5) Accessibility of the Work Site	-	-	-	-	-
(6) Acceptance by Co-Workers	-	-	-	-	-
(7) Skill Level	-	-	-	-	-
(8) Limitation in Jobs They Can Perform	-	-	-	-	-
(9) Visual Appearance	-	-	-	-	-
(10) Employment Related Cost	-	-	-	-	-
(11) Dependability	-	-	-	-	-
(12) Mental Ability	-	-	-	-	-
(13) Physical Capability	-	-	-	-	-
(14) Other (specify) _____	-	-	-	-	-

9. Please rate the following barriers affecting the employment of the blind.

	<u>Major Effect</u>	<u>Strong Effect</u>	<u>Some Effect</u>	<u>Limited Effect</u>	<u>No Effect</u>
	1	2	3	4	5
(1) Stereotypes	-	-	-	-	-
(2) Skill Level	-	-	-	-	-
(3) Accessibility of the Work Site	-	-	-	-	-
(4) Workers' Compensation Risks	-	-	-	-	-
(5) Communication Skills	-	-	-	-	-
(6) Physical Capability	-	-	-	-	-
(7) Acceptance by Co-Workers	-	-	-	-	-
(8) Employment Related Cost	-	-	-	-	-
(9) Prejudice	-	-	-	-	-
(10) Visual Appearance	-	-	-	-	-
(11) Dependability	-	-	-	-	-
(12) Mental Ability	-	-	-	-	-
(13) Limitation in Jobs They Can Perform	-	-	-	-	-
(14) Other (specify) _____	-	-	-	-	-

10. Please rate the following barriers affecting the employment of women.

	<u>Major Effect</u>	<u>Strong Effect</u>	<u>Some Effect</u>	<u>Limited Effect</u>	<u>No Effect</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
(1) Visual Appearance	-	-	-	-	-
(2) Limitation in Jobs They Can Perform	-	-	-	-	-
(3) Accessibility of the Work Site	-	-	-	-	-
(4) Workers' Compensation Risks	-	-	-	-	-
(5) Skill Level	-	-	-	-	-
(6) Physical Capability	-	-	-	-	-
(7) Employment Related Cost	-	-	-	-	-
(8) Acceptance by Co-Workers	-	-	-	-	-
(9) Prejudice	-	-	-	-	-
(10) Stereotypes	-	-	-	-	-
(11) Communication Skills	-	-	-	-	-
(12) Dependability	-	-	-	-	-
(13) Mental Ability	-	-	-	-	-
(14) Other (specify) _____	-	-	-	-	-

11. Please rate the following barriers affecting the employment of the physically disabled.

	<u>Major Effect</u>	<u>Strong Effect</u>	<u>Some Effect</u>	<u>Limited Effect</u>	<u>No Effect</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
(1) Accessibility of the Work Site	-	-	-	-	-
(2) Mental Ability	-	-	-	-	-
(3) Visual Appearance	-	-	-	-	-
(4) Workers' Compensation Risks	-	-	-	-	-
(5) Skill Level	-	-	-	-	-
(6) Physical Capability	-	-	-	-	-
(7) Employment Related Cost	-	-	-	-	-
(8) Communication Skills	-	-	-	-	-
(9) Stereotypes	-	-	-	-	-
(10) Prejudice	-	-	-	-	-
(11) Dependability	-	-	-	-	-
(12) Limitation in Jobs They Can Perform	-	-	-	-	-
(13) Acceptance by Co-Workers	-	-	-	-	-
(14) Other (specify) _____	-	-	-	-	-

12. Please rate the following barriers affecting the employment of those with known hidden disabilities (heart, back, epilepsy, diabetes, etc.).

	<u>Major Effect</u>	<u>Strong Effect</u>	<u>Some Effect</u>	<u>Limited Effect</u>	<u>No Effect</u>
	1	2	3	4	5
(1) Physical Capability	-	-	-	-	-
(2) Communication Skills	-	-	-	-	-
(3) Employment Related Cost	-	-	-	-	-
(4) Acceptance by Co-Workers	-	-	-	-	-
(5) Workers' Compensation Risks	-	-	-	-	-
(6) Stereotypes	-	-	-	-	-
(7) Skill Level	-	-	-	-	-
(8) Prejudice	-	-	-	-	-
(9) Accessibility of the Work Site	-	-	-	-	-
(10) Visual Appearance	-	-	-	-	-
(11) Mental Ability	-	-	-	-	-
(12) Limitation in Jobs They Can Perform	-	-	-	-	-
(13) Dependability	-	-	-	-	-
(14) Other (specify) _____	-	-	-	-	-

13. Please rate the following barriers affecting the employment of the mentally retarded.

	<u>Major Effect</u>	<u>Strong Effect</u>	<u>Some Effect</u>	<u>Limited Effect</u>	<u>No Effect</u>
	1	2	3	4	5
(1) Prejudice	-	-	-	-	-
(2) Dependability	-	-	-	-	-
(3) Skill Level	-	-	-	-	-
(4) Communication Skills	-	-	-	-	-
(5) Physical Capability	-	-	-	-	-
(6) Acceptance by Co-Workers	-	-	-	-	-
(7) Employment Related Cost	-	-	-	-	-
(8) Visual Appearance	-	-	-	-	-
(9) Stereotypes	-	-	-	-	-
(10) Accessibility of the Work Site	-	-	-	-	-
(11) Limitation in Jobs They Can Perform	-	-	-	-	-
(12) Mental Ability	-	-	-	-	-
(13) Workers' Compensation Risks	-	-	-	-	-
(14) Other (specify) _____	-	-	-	-	-

14. Please rate the following barriers affecting the employment of the deaf.

	<u>Major Effect</u>	<u>Strong Effect</u>	<u>Some Effect</u>	<u>Limited Effect</u>	<u>No Effect</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
(1) Communication Skills	-	-	-	-	-
(2) Visual Appearance	-	-	-	-	-
(3) Limitation in Jobs They Can Perform	-	-	-	-	-
(4) Workers' Compensation Risks	-	-	-	-	-
(5) Dependability	-	-	-	-	-
(6) Physical Capability	-	-	-	-	-
(7) Stereotypes	-	-	-	-	-
(8) Skill Level	-	-	-	-	-
(9) Accessibility of the Work Site	-	-	-	-	-
(10) Employment Related Cost	-	-	-	-	-
(11) Prejudice	-	-	-	-	-
(12) Acceptance by Co-Workers	-	-	-	-	-
(13) Mental Ability	-	-	-	-	-
(14) Other (specify) _____	-	-	-	-	-

15. Please rate the following barriers affecting the employment of hispanics.

	<u>Major Effect</u>	<u>Strong Effect</u>	<u>Some Effect</u>	<u>Limited Effect</u>	<u>No Effect</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
(1) Dependability	-	-	-	-	-
(2) Mental Ability	-	-	-	-	-
(3) Prejudice	-	-	-	-	-
(4) Employment Related Cost	-	-	-	-	-
(5) Communication Skills	-	-	-	-	-
(6) Accessibility of the Work Site	-	-	-	-	-
(7) Stereotypes	-	-	-	-	-
(8) Physical Capability	-	-	-	-	-
(9) Visual Appearance	-	-	-	-	-
(10) Skill Level	-	-	-	-	-
(11) Acceptance by Co-Workers	-	-	-	-	-
(12) Workers' Compensation Risks	-	-	-	-	-
(13) Limitation in Jobs They Can Perform	-	-	-	-	-
(14) Other (specify) _____	-	-	-	-	-

16. Please rate the following barriers affecting the employment of the handicapped.

	<u>Major</u> <u>Effect</u>	<u>Strong</u> <u>Effect</u>	<u>Some</u> <u>Effect</u>	<u>Limited</u> <u>Effect</u>	<u>No</u> <u>Effect</u>
	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5</u>
(1) Workers' Compensation Risks	-	-	-	-	-
(2) Communication Skills	-	-	-	-	-
(3) Stereotypes	-	-	-	-	-
(4) Mental Ability	-	-	-	-	-
(5) Employment Related Cost	-	-	-	-	-
(6) Skill Level	-	-	-	-	-
(7) Prejudice	-	-	-	-	-
(8) Dependability	-	-	-	-	-
(9) Acceptance by Co-Workers	-	-	-	-	-
(10) Limitation in Jobs They Can Perform	-	-	-	-	-
(11) Physical Capability	-	-	-	-	-
(12) Accessibility of the Work Site	-	-	-	-	-
(13) Visual Appearance	-	-	-	-	-
(14) Other (specify) _____	-	-	-	-	-

* * * * *

QUESTIONS 17-32 ARE DESIGNED TO IDENTIFY HOW CERTAIN COMMON BARRIERS MAY EFFECT THE DIFFERENT GROUPS LISTED. PLEASE IDENTIFY THE THREE GROUPS MOST EFFECTED BY THE BARRIER IN QUESTION, AND THEN RANK THE THREE YOU HAVE IDENTIFIED. A RANK OF "1" EQUALS THE GROUP MOST EFFECTED BY THE BARRIER. THERE ARE NO RIGHT OR WRONG ANSWERS.

17. For which of the following groups do you think that stereotypes operate as the greatest barrier to employment. (Please rank 3 in order of priority; 1 = biggest barrier.)

- (a) _____ Hispanics
- (b) _____ Handicapped
- (c) _____ Women
- (d) _____ Physically Disabled
- (e) _____ Deaf
- (f) _____ Blacks
- (g) _____ Those with history of Mental Illness
- (h) _____ Blind
- (i) _____ Persons with Hidden Disabilities
- (j) _____ Mentally Retarded

18. Which of the following groups will co-workers be the least likely to accept.
(Please rank 3 in order of priority; 1 = least accepted.)

- (a) _____ Mentally Retarded
- (b) _____ Blacks
- (c) _____ Handicapped
- (d) _____ Physically Disabled
- (e) _____ Women
- (f) _____ Blind
- (g) _____ Hispanics
- (h) _____ History of Mental Illness
- (i) _____ Persons with Hidden Disabilities
- (j) _____ Deaf

19. For which of the following groups will visual appearance provide the greatest employment barrier. (Please rank 3 in order of priority; 1 = greatest barrier.)

- (a) _____ Physically Disabled
- (b) _____ Deaf
- (c) _____ Hispanics
- (d) _____ Blacks
- (e) _____ History of Mental Illness
- (f) _____ Mentally Retarded
- (g) _____ Women
- (h) _____ Persons with Hidden Disabilities
- (i) _____ Blind
- (j) _____ Handicapped

20. For which of the following groups does workers' compensation risk provide the greatest barrier to employment. (Please rank 3 in order of priority; 1 = greatest barrier.)

- (a) _____ Mentally Retarded
- (b) _____ Persons with Hidden Disabilities
- (c) _____ Women
- (d) _____ Handicapped
- (e) _____ History of Mental Illness
- (f) _____ Blacks
- (g) _____ Hispanics
- (h) _____ Deaf
- (i) _____ Blind
- (j) _____ Physically Disabled

-

21. For which of the following groups do communication skills present the largest barrier to employment. (Please rank 3 in order of priority.)

- (a) _____ Blacks
- (b) _____ Deaf
- (c) _____ Women
- (d) _____ Physically Disabled
- (e) _____ Handicapped
- (f) _____ Mentally Retarded
- (g) _____ Hispanics
- (h) _____ Persons with Hidden Disabilities
- (i) _____ Blind
- (j) _____ History of Mental Illness

22. For which of the following groups does prejudice operate as the greatest barrier to employment. (Please rank 3 in order of priority; 1 = greatest barrier.)

- (a) _____ Handicapped
- (b) _____ Blind
- (c) _____ History of Mental Illness
- (d) _____ Mentally Retarded
- (e) _____ Hispanics
- (f) _____ Blacks
- (g) _____ Persons with Hidden Disabilities
- (h) _____ Women
- (i) _____ Deaf
- (j) _____ Physically Disabled

23. For which of the following groups does lack of skill level provide the greatest barrier to employment. (Please rank 3 in order of priority; 1 = greatest barrier.)

- (a) _____ Persons with Hidden Disabilities
- (b) _____ Blacks
- (c) _____ Mentally Retarded
- (d) _____ Deaf
- (e) _____ Handicapped
- (f) _____ Hispanics
- (g) _____ Blind
- (h) _____ Physically Disabled
- (i) _____ Women
- (j) _____ History of Mental Illness

24. For which of the following groups does lack of physical capability provide the greatest barrier to employment. (Please rank 3 in order of priority; 1 = greatest barrier.)
- (a) _____ History of Mental Illness
 - (b) _____ Deaf
 - (c) _____ Women
 - (d) _____ Handicapped
 - (e) _____ Physically Disabled
 - (f) _____ Persons with Hidden Disabilities
 - (g) _____ Hispanics
 - (h) _____ Mentally Retarded
 - (i) _____ Blind
 - (j) _____ Blacks
25. For which of the following groups does employment related cost provide the greatest barrier to employment. (Please rank 3 in order of priority; 1 = greatest barrier.)
- (a) _____ Persons with Hidden Disabilities
 - (b) _____ Handicapped
 - (c) _____ Women
 - (d) _____ Blind
 - (e) _____ Deaf
 - (f) _____ Mentally Retarded
 - (g) _____ Hispanics
 - (h) _____ Blacks
 - (i) _____ Physically Disabled
 - (j) _____ History of Mental Illness
26. For which of the following groups does accessibility of the work site provide the greatest barrier to employment. (Please rank 3 in order of priority; 1 = greatest barrier.)
- (a) _____ Physically Disabled
 - (b) _____ Blacks
 - (c) _____ Persons with Hidden Disabilities
 - (d) _____ History of Mental Illness
 - (e) _____ Mentally Retarded
 - (f) _____ Women
 - (g) _____ Blind
 - (h) _____ Deaf
 - (i) _____ Hispanics
 - (j) _____ Handicapped

27. For which of the following groups does lack of dependability provide the greatest barrier to employment. (Please rank 3 in order of priority; 1 = greatest barrier.)

(a) _____ Deaf
(b) _____ Hispanics
(c) _____ Handicapped
(d) _____ Physically Disabled
(e) _____ Blacks
(f) _____ Persons with Hidden Disabilities
(g) _____ History of Mental Illness
(h) _____ Mentally Retarded
(i) _____ Women
(j) _____ Blind

28. For which of the following groups does limitation on jobs they can perform provide the greatest barrier to employment. (Please rank 3 in order of priority 1 = greatest barrier.)

(a) _____ Deaf
(b) _____ Women
(c) _____ Physically Disabled
(d) _____ Hispanics
(e) _____ Persons with Hidden Disabilities
(f) _____ Handicapped
(g) _____ Mentally Retarded
(h) _____ Blacks
(i) _____ Blind
(j) _____ History of Mental Illness

29. For which of the following groups does mental ability provide the greatest barrier to employment. (Please rank 3 in order of priority; 1 = greatest barrier.)

(a) _____ Mentally Retarded
(b) _____ Women
(c) _____ Blind
(d) _____ Hispanics
(e) _____ Deaf
(f) _____ Handicapped
(g) _____ Physically Disabled
(h) _____ Blacks
(i) _____ Persons with Hidden Disabilities
(j) _____ Those With History of Mental Illness

30. Which of the following groups is most affected by discrimination in employment.
(Please rank 3 in order of priority; 1 = most affected.)

- (a) _____ Women
- (b) _____ History of Mental Illness
- (c) _____ Blacks
- (d) _____ Deaf
- (e) _____ Handicapped
- (f) _____ Persons with Hidden Disabilities
- (g) _____ Mentally Retarded
- (h) _____ Hispanics
- (i) _____ Physically Disabled
- (j) _____ Blind

31. In a tight labor market which of the following groups is least likely to be hired. (Please rank 3 in order of priority; 1 = least likely.)

- (a) _____ Handicapped
- (b) _____ Blacks
- (c) _____ Persons with Hidden Disabilities
- (d) _____ History of Mental Illness
- (e) _____ Women
- (f) _____ Blind
- (g) _____ Mentally Retarded
- (h) _____ Deaf
- (i) _____ Hispanics
- (j) _____ Physically Disabled

32. A sense of civic responsibility will be most helpful in increasing employment of which of the following groups. (Please rank 3 in order of priority; 1 = most helpful.)

- (a) _____ History of Mental Illness
- (b) _____ Hispanics
- (c) _____ Blind
- (d) _____ Blacks
- (e) _____ Handicapped
- (f) _____ Persons with Hidden Disabilities
- (g) _____ Women
- (h) _____ Mentally Retarded
- (i) _____ Physically Disabled
- (j) _____ Deaf

* * * * *

33. Please rate each alternative from 1-5 as a potential solution to increase the employment of the group identified.
(1 = most effective, 2 = effective, 3 = moderately effective, 4 = limited effect, 5 = no effect.)

	Tax Credits and Financial Incentives	Affirmative Action	Government Subsidy	Job Training	Increased Employer Awareness	Appeal to Sense of Public Responsibility	Other (Specify)
Example: Vietnam Veteran	5	2	3	3	5	1	(Work Experience) 1
Women							
Hidden Disabilities							
Blind							
Blacks							
Deaf							
History of Mental Illness							
Handicapped							
Hispanics							
Mentally Retarded							
Physically Disabled							

34. What is your sex:

M _____ F _____

35. What is your racial/ethnic group:

Black _____

White _____

Native American _____

Asian _____

Hispanic _____

Other _____

36. Do you have a physical or mental handicapping characteristic?

Yes _____ No _____

Detach Here Return In Separate Envelope.

I would like a copy of the survey results. Yes _____ No _____

Please mail survey results to:

APPENDIX B

Questionnaire Coding Key

QUESTIONNAIRE CODING KEY

<u>ANSWER SHEET NUMBER</u>	<u>QUESTION NUMBER</u>	<u>QUESTION CATEGORY</u>	<u>RESPONSE KEY</u>
1		Group No.	1 = Private sector 2 = Public sector 3 = MESC 4 = Private employment agency 9 = Unknown
2-4		Survey No.	3-digit survey number
5	Question #1	Job Title	1 = President/owner 2 = Personnel director 3 = EEO officer 4 = Employment interviewer 5 = Placement specialist 6 = Admin./Mgr. 7 = E.S. Specialist 8 = City Mgr. 9 = No response
6-10	Question #3	Role in Hiring Process	
6	Question #3-A	Prescreening of applicants	1 = Checked 2 = Non-checked
7	Question #3-B	Initial selection	1 = Checked 2 = Non-checked
8	Question #3-C	Final selection	1 = Checked 2 = Non-checked
9	Question #3-D	Develop selection criteria	1 = Checked 2 = Non-checked
10	Question #3-E	Other	1 = Checked 2 = Non-checked
11-13	Question #4	How long have you been in your current position?	(Converted into months) 999 = No response
14-15	Question #5	What is your type of business?	2-digit S.I.C. code 99 = No response
16	Question #6	What is the number of employees in your company or agency?	No. of employees 99999 - No response
17	"	"	"
18	"	"	"
19	"	"	"
20	"	"	"

<u>ANSWER SHEET NUMBER</u>	<u>QUESTION NUMBER</u>	<u>QUESTION CATEGORY</u>	<u>RESPONSE KEY</u>
21-34	Question #7	Rate following barriers affecting employment of those with history of <u>mental illness</u> .	
21	Question #7(1)	Visual Appearance	1, 2, 3, 4, 5 9 = No response
22	Question #7(2)	Communication Skills	1, 2, 3, 4, 5 9 = No response
23	Question #7(3)	Prejudice	1, 2, 3, 4, 5 9 = No response
24	Question #7(4)	Workers' Compensation Risks	1, 2, 3, 4, 5 9 = No response
25	Question #7(5)	Skill Level	1, 2, 3, 4, 5 9 = No response
26	Question #7(6)	Physical Capability	1, 2, 3, 4, 5 9 = No response
27	Question #7(7)	Acceptance by Co-Workers	1, 2, 3, 4, 5 9 = No response
28	Question #7(8)	Employment Related Cost	1, 2, 3, 4, 5 9 = No response
29	Question #7(9)	Mental Ability	1, 2, 3, 4, 5 9 = No response
30	Question #7(10)	Accessibility of Work Site	1, 2, 3, 4, 5 9 = No response
31	Question #7(11)	Stereotypes	1, 2, 3, 4, 5 9 = No response
32	Question #7(12)	Limitation in Jobs They Can Perform	1, 2, 3, 4, 5 9 = No response
33	Question #7(13)	Dependability	1, 2, 3, 4, 5 9 = No response
34	Question #7(14)	Other	1, 2, 3, 4, 5 9 = No response
35-48	Question #8	Rate following barriers affecting employment of <u>blacks</u> .	
35	Question #8(1)	Stereotypes	1, 2, 3, 4, 5 9 = No response
36	Question #8(2)	Workers' Compensation Risks	1, 2, 3, 4, 5 9 = No response

<u>ANSWER SHEET NUMBER</u>	<u>QUESTION NUMBER</u>	<u>QUESTION CATEGORY</u>	<u>RESPONSE KEY</u>
37	Question #8(3)	Communication Skills	1, 2, 3, 4, 5 9 = No response
38	Question #8(4)	Prejudice	1, 2, 3, 4, 5 9 = No response
39	Question #8(5)	Accessibility of Work Site	1, 2, 3, 4, 5 9 = No response
40	Question #8(6)	Acceptance by Co-Workers	1, 2, 3, 4, 5 9 = No response
41	Question #8(7)	Skill Level	1, 2, 3, 4, 5 9 = No response
42	Question #8(8)	Limitation in Jobs They Can Perform	1, 2, 3, 4, 5 9 = No response
43	Question #8(9)	Visual Appearance	1, 2, 3, 4, 5 9 = No response
44	Question #8(10)	Employment Related Cost	1, 2, 3, 4, 5 9 = No response
45	Question #8(11)	Dependability	1, 2, 3, 4, 5 9 = No response
46	Question #8(12)	Mental Ability	1, 2, 3, 4, 5 9 = No response
47	Question #8(13)	Physical Capability	1, 2, 3, 4, 5 9 = No response
48	Question #8(14)	Other	1, 2, 3, 4, 5 9 = No response
49-62	Question #9	Rate following barriers affecting employment of the <u>blind</u> .	
49	Question #9(1)	Stereotypes	1, 2, 3, 4, 5 9 = No response
50	Question #9(2)	Skill Level	1, 2, 3, 4, 5 9 = No response
51	Question #9(3)	Accessibility of Work Site	1, 2, 3, 4, 5 9 = No response
52	Question #9(4)	Workers' Compensation Risks	1, 2, 3, 4, 5 9 = No response
53	Question #9(5)	Communication Skills	1, 2, 3, 4, 5 9 = No response

<u>ANSWER SHEET NUMBER</u>	<u>QUESTION NUMBER</u>	<u>QUESTION CATEGORY</u>	<u>RESPONSE KEY</u>
54	Question #9(6)	Physical Capability	1, 2, 3, 4, 5 9 = No response
55	Question #9(7)	Acceptance by Co-Workers	1, 2, 3, 4, 5 9 = No response
56	Question #9(8)	Employment Related Cost	1, 2, 3, 4, 5 9 = No response
57	Question #9(9)	Prejudice	1, 2, 3, 4, 5 9 = No response
58	Question #9(10)	Visual Appearance	1, 2, 3, 4, 5 9 = No response
59	Question #9(11)	Dependability	1, 2, 3, 4, 5 9 = No response
60	Question #9(12)	Mental Ability	1, 2, 3, 4, 5 9 = No response
61	Question #9(13)	Limitation in Jobs They Can Perform	1, 2, 3, 4, 5 9 = No response
62	Question #9(14)	Other	1, 2, 3, 4, 5 9 = No response
63-76	Question #10	Rate following barriers affecting employment of <u>women.</u>	
63	Question #10(1)	Visual Appearance	1, 2, 3, 4, 5 9 = No response
64	Question #10(2)	Limitation in Jobs They Can Perform	1, 2, 3, 4, 5 9 = No response
65	Question #10(3)	Accessibility of Work Site	1, 2, 3, 4, 5 9 = No response
66	Question #10(4)	Workers' Compensation Risks	1, 2, 3, 4, 5 9 = No response
67	Question #10(5)	Skill Level	1, 2, 3, 4, 5 9 = No response
68	Question #10(6)	Physical Capability	1, 2, 3, 4, 5 9 = No response
69	Question #10(7)	Employment Related Cost	1, 2, 3, 4, 5 9 = No response
70	Question #10(8)	Acceptance by Co-Workers	1, 2, 3, 4, 5 9 = No response

<u>ANSWER SHEET NUMBER</u>	<u>QUESTION NUMBER</u>	<u>QUESTION CATEGORY</u>	<u>RESPONSE KEY</u>
71	Question #10(9)	Prejudice	1, 2, 3, 4, 5 9 = No response
72	Question #10(10)	Stereotypes	1, 2, 3, 4, 5 9 = No response
73	Question #10(11)	Communication Skills	1, 2, 3, 4, 5 9 = No response
74	Question #10(12)	Dependability	1, 2, 3, 4, 5 9 = No response
75	Question #10(13)	Mental Ability	1, 2, 3, 4, 5 9 = No response
76	Question #10(14)	Other	1, 2, 3, 4, 5 9 = No response
77-90	Question #11	Rate following barriers affecting employment of <u>physically disabled.</u>	
77	Question #11(1)	Accessibility of Work Site	1, 2, 3, 4, 5 9 = No response
78	Question #11(2)	Mental Ability	1, 2, 3, 4, 5 9 = No response
79	Question #11(3)	Visual Appearance	1, 2, 3, 4, 5 9 = No response
80	Question #11(4)	Workers' Compensation Risks	1, 2, 3, 4, 5 9 = No response
81	Question #11(5)	Skill Level	1, 2, 3, 4, 5 9 = No response
82	Question #11(6)	Physical Capability	1, 2, 3, 4, 5 9 = No response
83	Question #11(7)	Employment Related Cost	1, 2, 3, 4, 5 9 = No response
84	Question #11(8)	Communication Skills	1, 2, 3, 4, 5 9 = No response
85	Question #11(9)	Stereotypes	1, 2, 3, 4, 5 9 = No response
86	Question #11(10)	Prejudice	1, 2, 3, 4, 5 9 = No response
87	Question #11(11)	Dependability	1, 2, 3, 4, 5 9 = No response

<u>ANSWER SHEET NUMBER</u>	<u>QUESTION NUMBER</u>	<u>QUESTION CATEGORY</u>	<u>RESPONSE KEY</u>
88	Question #11(12)	Limitation in Jobs They Can Perform	1, 2, 3, 4, 5 9 = No response
89	Question #11(13)	Acceptance by Co-Workers	1, 2, 3, 4, 5 9 = No response
90	Question #11(14)	Other	1, 2, 3, 4, 5 9 = No response
91-104	Question #12	Rate following barriers affecting employment of those with known hidden disabilities (<u>heart, back, epilepsy, diabetes, etc.</u>)	
91	Question #12(1)	Physical Capability	1, 2, 3, 4, 5 9 = No response
92	Question #12(2)	Communication Skills	1, 2, 3, 4, 5 9 = No response
93	Question #12(3)	Employment Related Cost	1, 2, 3, 4, 5 9 = No response
94	Question #12(4)	Acceptance by Co-Workers	1, 2, 3, 4, 5 9 = No response
95	Question #12(5)	Workers' Compensation Risks	1, 2, 3, 4, 5 9 = No response
96	Question #12(6)	Stereotypes	1, 2, 3, 4, 5 9 = No response
97	Question #12(7)	Skill Level	1, 2, 3, 4, 5 9 = No response
98	Question #12(8)	Prejudice	1, 2, 3, 4, 5 9 = No response
99	Question #12(9)	Accessibility of Work Site	1, 2, 3, 4, 5 9 = No response
100	Question #12(10)	Visual Appearance	1, 2, 3, 4, 5 9 = No response
101	Question #12(11)	Mental Ability	1, 2, 3, 4, 5 9 = No response
102	Question #12(12)	Limitation in Jobs They Can Perform	1, 2, 3, 4, 5 9 = No response
103	Question #12(13)	Dependability	1, 2, 3, 4, 5 9 = No response
104	Question #12(14)	Other	1, 2, 3, 4, 5 9 = No response

<u>ANSWER SHEET NUMBER</u>	<u>QUESTION NUMBER</u>	<u>QUESTION CATEGORY</u>	<u>RESPONSE KEY</u>
105-118	Question #13	Rate following barriers affecting employment of <u>mentally retarded</u> .	
105	Question #13(1)	Prejudice	1, 2, 3, 4, 5 9 = No response
106	Question #13(2)	Dependability	1, 2, 3, 4, 5 9 = No response
107	Question #13(3)	Skill Level	1, 2, 3, 4, 5 9 = No response
108	Question #13(4)	Communication Skills	1, 2, 3, 4, 5 9 = No response
109	Question #13(5)	Physical Capability	1, 2, 3, 4, 5 9 = No response
110	Question #13(6)	Acceptance by Co-Workers	1, 2, 3, 4, 5 9 = No response
111	Question #13(7)	Employment Related Cost	1, 2, 3, 4, 5 9 = No response
112	Question #13(8)	Visual Appearance	1, 2, 3, 4, 5 9 = No response
113	Question #13(9)	Stereotypes	1, 2, 3, 4, 5 9 = No response
114	Question #13(10)	Accessibility of Work Site	1, 2, 3, 4, 5 9 = No response
115	Question #13(11)	Limitation in Jobs They Can Perform	1, 2, 3, 4, 5 9 = No response
116	Question #13(12)	Mental Ability	1, 2, 3, 4, 5 9 = No response
117	Question #13(13)	Workers' Compensation Risks	1, 2, 3, 4, 5 9 = No response
118	Question #13(14)	Other	1, 2, 3, 4, 5 9 = No response
119-132	Question #14	Rate following barriers affecting employment of <u>deaf</u> .	
119	Question #14(1)	Communication Skills	1, 2, 3, 4, 5 9 = No response
120	Question #14(2)	Visual Appearance	1, 2, 3, 4, 5 9 = No response

<u>ANSWER SHEET NUMBER</u>	<u>QUESTION NUMBER</u>	<u>QUESTION CATEGORY</u>	<u>RESPONSE KEY</u>
121	Question #14(3)	Limitation in Jobs They Can Perform	1, 2, 3, 4, 5 9 = No response
122	Question #14(4)	Workers' Compensation Risks	1, 2, 3, 4, 5 9 = No response
123	Question #14(5)	Dependability	1, 2, 3, 4, 5 9 = No response
124	Question #14(6)	Physical Capability	1, 2, 3, 4, 5 9 = No response
125	Question #14(7)	Stereotypes	1, 2, 3, 4, 5 9 = No response
126	Question #14(8)	Skill Level	1, 2, 3, 4, 5 9 = No response
127	Question #14(9)	Accessibility of Work Site	1, 2, 3, 4, 5 9 = No response
128	Question #14(10)	Employment Related Cost	1, 2, 3, 4, 5 9 = No response
129	Question #14(11)	Prejudice	1, 2, 3, 4, 5 9 = No response
130	Question #14(12)	Acceptance by Co-Workers	1, 2, 3, 4, 5 9 = No response
131	Question #14(13)	Mental Ability	1, 2, 3, 4, 5 9 = No response
132	Question #14(14)	Other	1, 2, 3, 4, 5 9 = No response
133-146	Question #15	Rate following barriers affecting employment of <u>hispanics</u> .	
133	Question #15(1)	Dependability	1, 2, 3, 4, 5 9 = No response
134	Question #15(2)	Mental Ability	1, 2, 3, 4, 5 9 = No response
135	Question #15(3)	Prejudice	1, 2, 3, 4, 5 9 = No response
136	Question #15(4)	Employment Related Cost	1, 2, 3, 4, 5 9 = No response
137	Question #15(5)	Communication Skills	1, 2, 3, 4, 5 9 = No response

<u>ANSWER SHEET NUMBER</u>	<u>QUESTION NUMBER</u>	<u>QUESTION CATEGORY</u>	<u>RESPONSE KEY</u>
138	Question #15(6)	Accessibility of Work Site	1, 2, 3, 4, 5 9 = No response
139	Question #15(7)	Stereotypes	1, 2, 3, 4, 5 9 = No response
140	Question #15(8)	Physical Capability	1, 2, 3, 4, 5 9 = No response
141	Question #15(9)	Visual Appearance	1, 2, 3, 4, 5 9 = No response
142	Question #15(10)	Skill Level	1, 2, 3, 4, 5 9 = No response
143	Question #15(11)	Acceptance by Co-Workers	1, 2, 3, 4, 5 9 = No response
144	Question #15(12)	Workers' Compensation Risks	1, 2, 3, 4, 5 9 = No response
145	Question #15(13)	Limitation in Jobs They Can Perform	1, 2, 3, 4, 5 9 = No response
146	Question #15(14)	Other	1, 2, 3, 4, 5 9 = No response
147-160	Question #16	Rate following barriers affecting employment of <u>handicapped</u> .	
147	Question #16(1)	Workers' Compensation Risks	1, 2, 3, 4, 5 9 = No response
148	Question #16(2)	Communication Skills	1, 2, 3, 4, 5 9 = No response
149	Question #16(3)	Stereotypes	1, 2, 3, 4, 5 9 = No response
150	Question #16(4)	Mental Ability	1, 2, 3, 4, 5 9 = No response
151	Question #16(5)	Employment Related Cost	1, 2, 3, 4, 5 9 = No response
152	Question #16(6)	Skill Level	1, 2, 3, 4, 5 9 = No response
153	Question #16(7)	Prejudice	1, 2, 3, 4, 5 9 = No response
154	Question #16(8)	Dependability	1, 2, 3, 4, 5 9 = No response

<u>ANSWER SHEET NUMBER</u>	<u>QUESTION NUMBER</u>	<u>QUESTION CATEGORY</u>	<u>RESPONSE KEY</u>
155	Question #16(9)	Acceptance by Co-Workers	1, 2, 3, 4, 5 9 = No response
156	Question #16(10)	Limitation in Jobs They Can Perform	1, 2, 3, 4, 5 9 = No response
157	Question #16(11)	Physical Capability	1, 2, 3, 4, 5 9 = No response
158	Question #16(12)	Accessibility of Work Site	1, 2, 3, 4, 5 9 = No response
159	Question #16(13)	Visual Appearance	1, 2, 3, 4, 5 9 = No response
160	Question #16(14)	Other	1, 2, 3, 4, 5 9 = No response
161-166	Question #17	For which of following groups do you think <u>stereotypes</u> operate as greatest barrier to employment.	
161-162	Question #17(01)	#1 Priority	2-digit codes of groups as follows: 01 - Hispanics 02 - Handicapped 03 - Women 04 - Physically Disabled 05 - Deaf 06 - Blacks 07 - Those with history of Mental Illness 08 - Blind 09 - Persons with Hidden Disabilities 10 - Mentally Retarded 99 - No Response
163-164	Question #17(02)	#2 Priority	See above.
165-166	Question #17(03)	#3 Priority	See above.
167-172	Question #18	Which of following groups will <u>co-workers be the least likely</u> <u>to accept.</u>	
167-168	Question #18(01)	#1 Priority	2-digit codes of groups as follows: 01 - Hispanics 02 - Handicapped 03 - Women 04 - Physically Disabled 05 - Deaf 06 - Blacks

<u>ANSWER SHEET NUMBER</u>	<u>QUESTION NUMBER</u>	<u>QUESTION CATEGORY</u>	<u>RESPONSE KEY</u>
			07 - Those with history of Mental Illness
			08 - Blind
			09 - Persons with Hidden Disabilities
			10 - Mentally Retarded
			99 - No response
169-170	Question #18(02)	#2 Priority	See above
171-172	Question #18(03)	#3 Priority	See above
173-178	Question #19	For which of following groups will <u>visual appearance</u> pro- vide greatest employment barrier.	
173-174	Question #19(01)	#1 Priority	2-digit codes of groups as follows: 01 - Hispanics 02 - Handicapped 03 - Women 04 - Physically Disabled 05 - Deaf 06 - Blacks 07 - Those with history of Mental Illness 08 - Blind 09 - Persons with Hidden Disabilities 99 - No response
175-176	Question #19(02)	#2 Priority	See above.
177-178	Question #19(03)	#3 Priority	See above.
179-184	Question #20	Which of following groups does <u>workers' compensation</u> risk provide greatest barrier to employment.	
179-180	Question #20(01)	#1 Priority	2-digit codes of groups as follows: 01 - Hispanics 02 - Handicapped 03 - Women 04 - Physically Disabled 05 - Deaf 06 - Blacks 07 - Those with history of Mental Illness 08 - Blind 09 - Persons with Hidden Disabilities 10 - Mentally Retarded 99 - No Response

<u>ANSWER SHEET NUMBER</u>	<u>QUESTION NUMBER</u>	<u>QUESTION CATEGORY</u>	<u>RESPONSE KEY</u>
181-182	Question #20(02)	#2 Priority	See above.
183-184	Question #20(03)	#3 Priority	See above.
185-190	Question #21	For which of following groups do <u>communication skills</u> pre- sent largest barrier to employment.	
185-186	Question #21(01)	#1 Priority	2-digit codes of groups as follows: 01 - Hispanics 02 - Handicapped 03 - Women 04 - Physically Disabled 05 - Deaf 06 - Blacks 07 - Those with history of Mental Illness 08 - Blind 09 - Persons with Hidden Disabilities 10 - Mentally Retarded 99 - No response
187-188	Question #21(02)	#2 Priority	See above.
189-190	Question #21(03)	#3 Priority	See above.
191-196	Question #22	For which of following groups does <u>prejudice</u> operate as greatest barrier to employment.	
191-192	Question #22(01)	#1 Priority	See above.
193-194	Question #22(02)	#2 Priority	See above.
195-196	Question #22(03)	#3 Priority	See above.
<u>ANSWER SHEET #2</u>			
1-6	Question #23	For which of following groups does <u>lack of skill level</u> pro- vide greatest barrier to employment.	
1-2	Question #23(01)	#1 Priority	See above.
3-4	Question #23(02)	#2 Priority	See above.
5-6	Question #23(03)	#3 Priority	See above.

ANSWER SHEET #2 (Continued)

<u>ANSWER SHEET NUMBER</u>	<u>QUESTION NUMBER</u>	<u>QUESTION CATEGORY</u>	<u>RESPONSE KEY</u>
7-12	Question #24	For which of following groups does lack of <u>physical capability</u> provide greatest barrier to employment.	
7-8	Question #24(01)	#1 Priority	See above.
9-10	Question #24(02)	#2 Priority	See above.
11-12	Question #24(03)	#3 Priority	See above.
13-18	Question #25	For which of following groups does <u>employment related cost</u> provide greatest barrier to employment.	
13-14	Question #25(01)	#1 Priority	See above.
15-16	Question #25(02)	#2 Priority	See above.
17-18	Question #25(03)	#3 Priority	See above.
19-24	Question #26	For which of following groups does <u>accessibility of the work site</u> provide greatest barrier to employment.	
19-20	Question #26(01)	#1 Priority	See above.
21-22	Question #26(02)	#2 Priority	See above.
23-24	Question #26(03)	#3 Priority	See above.
25-30	Question #27	For which of following groups does <u>lack of dependability</u> provide greatest barrier to employment.	
25-26	Question #27(01)	#1 Priority	See above.
27-28	Question #27(02)	#2 Priority	See above.
29-30	Question #27(03)	#3 Priority	See above.
31-36	Question #28	For which of following groups does <u>limitation on jobs they can perform</u> provide greatest barrier to employment.	

<u>ANSWER SHEET NUMBER</u>	<u>QUESTION NUMBER</u>	<u>QUESTION CATEGORY</u>	<u>RESPONSE KEY</u>
31-32	Question #28(01)	#1 Priority	See above.
33-34	Question #28(02)	#2 Priority	See above.
35-36	Question #28(03)	#3 Priority	See above.
37-42	Question #29	For which of following groups does <u>mental ability</u> provide greatest barrier to employment.	
37-38	Question #29(01)	#1 Priority	See above.
39-40	Question #29(02)	#2 Priority	See above.
41-42	Question #29(03)	#3 Priority	See above.
43-48	Question #30	Which of following groups is most affected by <u>discrimina- tion in employment</u> .	
43-44	Question #30(01)	#1 Priority	See above.
45-46	Question #30(02)	#2 Priority	See above.
47-48	Question #30(03)	#3 Priority	See above.
49-54	Question #31	In a <u>tight labor market</u> which of following groups is least likely to be hired.	
49-50	Question #31(01)	#1 Priority	See above.
51-52	Question #31(02)	#2 Priority	See above.
53-54	Question #31(03)	#3 Priority	See above.
55-60	Question #32	A sense of <u>civic responsi- bility</u> will be most helpful in increasing employment of which of the following groups.	
55-56	Question #32(01)	#1 Priority	See above.
57-58	Question #32(02)	#2 Priority	See above.
59-60	Question #32(03)	#3 Priority	See above.

<u>ANSWER SHEET NUMBER</u>	<u>QUESTION NUMBER</u>	<u>QUESTION CATEGORY</u>	<u>RESPONSE KEY</u>
61	33. A-1	Tax Credits and Financial Incentives/Women	Single Digit Rating 1, 2, 3, 4, 5
62	33. A-2	Affirmative Action/Women	See above.
63	33. A-3	Government Subsidy/Women	See above.
64	33. A-4	Job Training/Women	See above.
65	33. A-5	Increased Employer Awareness/Women	See above.
66	33. A-6	Appeal to Sense of Public Responsibility/Women	See above.
67	33. A-7	Other/Women	See above.
68	33. B-1	Tax Credits and Financial Incentives/Hidden Disabilities	See above.
69	33. B-2	Affirmative Action/Hidden Disabilities	See above.
70	33. B-3	Government Subsidy/Hidden Disabilities	See above.
71	33. B-4	Job Training/Hidden Disabilities	See above.
72	33. B-5	Increased Employer Awareness/Hidden Disabilities	See above.
73	33. B-6	Appeal to Sense of Public Responsibility/Hidden Disabilities	See above.
74	33. B-7	Other/Hidden Disabilities	See above.
75	33. C-1	Tax Credits and Financial Incentives/Blind	See above.
76	33. C-2	Affirmative Action/Blind	See above.
77	33. C-3	Government Subsidy/Blind	See above.
78	33. C-4	Job Training/Blind	See above.
79	33. C-5	Increased Employer Awareness/Blind	See above.
80	33. C-6	Appeal to Sense of Public Responsibility/Blind	See above.
81	33. C-7	Other/Blind	See above.

<u>ANSWER SHEET NUMBER</u>	<u>QUESTION NUMBER</u>	<u>QUESTION CATEGORY</u>	<u>RESPONSE KEY</u>
82	33. D-1	Tax Credits and Financial Incentives/Blacks	Single Digit Rating 1, 2, 3, 4, 5
83	33. D-2	Affirmative Action/Blacks	See above.
84	33. D-3	Government Subsidy/Blacks	See above.
85	33. D-4	Job Training/Blacks	See above.
86	33. D-5	Increased Employer Awareness/Blacks	See above.
87	33. D-6	Appeal to Sense of Public Responsibility/Blacks	See above.
88	33. D-7	Other/Blacks	See above.
89	33. E-1	Tax Credits and Financial Incentives/Deaf	See above.
90	33. E-2	Affirmative Action/Deaf	See above.
91	33. E-3	Government Subsidy/Deaf	See above.
92	33. E-4	Job Training/Deaf	See above.
93	33. E-5	Increased Employer Awareness/Deaf	See above.
94	33. E-6	Appeal to Sense of Public Responsibility/Deaf	See above.
95	33. E-7	Other/Deaf	See above.
96	33. F-1	Tax Credits and Financial Incentives/History of Mental Illness	See above.
97	33. F-2	Affirmative Action/History of Mental Illness	See above.
98	33. F-3	Government Subsidy/History of Mental Illness	See above.
99	33. F-4	Job Training/History of Mental Illness	See above.
100	33. F-5	Increased Employer Awareness/History of Mental Illness	See above.
101	33. F-6	Appeal to Sense of Public Responsibility/History of Mental Illness	See above.
102	33. F-7	Other/History of Mental Illness	See above.

<u>ANSWER SHEET NUMBER</u>	<u>QUESTION NUMBER</u>	<u>QUESTION CATEGORY</u>	<u>RESPONSE KEY</u>
103	33. G-1	Tax Credits and Financial Incentives/Handicapped	Single Digit Rating 1, 2, 3, 4, 5
104	33. G-2	Affirmative Action/Handicapped	See above.
105	33. G-3	Government Subsidy/Handicapped	See above.
106	33. G-4	Job Training/Handicapped	See above.
107	33. G-5	Increased Employer Awareness/Handicapped	See above.
108	33. G-6	Appeal to Sense of Public Responsibility/Handicapped	See above.
109	33. G-7	Other/Handicapped	See above.
110	33. H-1	Tax Credits and Financial Incentives/Hispanics	See above.
111	33. H-2	Affirmative Action/Hispanics	See above.
112	33. H-3	Government Subsidy/Hispanics	See above.
113	33. H-4	Job Training/Hispanics	See above.
114	33. H-5	Increased Employer Awareness/Hispanics	See above.
115	33. H-6	Appeal to Sense of Public Responsibility/Hispanics	See above.
116	33. H-7	Other/Hispanics	See above.
117	33. I-1	Tax Credits and Financial Incentives/Mentally Retarded	See above.
118	33. I-2	Affirmative Action/Mentally Retarded	See above.
119	33. I-3	Government Subsidy/Mentally Retarded	See above.
120	33. I-4	Job Training/Mentally Retarded	See above.
121	33. I-5	Increased Employer Awareness/Mentally Retarded	See above.
122	33. I-6	Appeal to Sense of Public Responsibility/ Mentally Retarded	See above.
123	33. I-7	Other/Mentally Retarded	See above.

<u>ANSWER SHEET NUMBER</u>	<u>QUESTION NUMBER</u>	<u>QUESTION CATEGORY</u>	<u>RESPONSE KEY</u>
124	33. J-1	Tax Credits and Financial Incentives/Physically Disabled	Single Digit Rating 1, 2, 3, 4, 5
125	33. J-2	Affirmative Action/ Physically Disabled	See above.
126	33. J-3	Government Subsidy/Physically Disabled	See above.
127	33. J-4	Job Training/ Physically Disabled	See above.
128	33. J-5	Increased Employer Awareness/Physically Disabled	See above.
129	33. J-6	Appeal to Sense of Public Responsibility/Physically Disabled	See above.
130	33. J-7	Other/Physically Disabled	See above.
131	34.	Sex	1 = M 2 = F 9 = No response
132	35.	What is your racial/ethnic group	1 = Black 2 = White 3 = Native American 4 = Asian 5 = Hispanic 6 = Other 9 = No response
133	36.	Do you have a physical or mental handicapping characteristic?	1 = Yes 2 = No 9 = No response

APPENDIX C

Mean Scores and 95% Confidence Interval Ranges
of 13 Barrier Ratings by Protected-
Group Category

Barrier		Protected Group									
		Mentally ill	Blacks	Blind	Women	Physically Disabled	Hidden Disabilities	Mentally Retarded	Deaf	Hispanics	Handicapped
Communication skill	\bar{X} <u>CI</u>	2.458 2.26-2.65	3.32 3.10-3.54	3.239 2.99-3.49	3.691 3.42-3.96	3.372 3.11-3.63	3.636 3.39-3.89	2.025 1.86-2.19	1.803 1.63-1.97	3.132 2.31-3.43	3.218 2.99-3.44
Visual appearance	\bar{X} <u>CI</u>	2.90 2.68-3.12	3.23 3.01-3.45	3.35 3.13-3.56	3.33 3.10-3.55	2.95 2.74-3.16	3.84 3.62-4.07	2.58 2.37-2.78	3.58 3.34-3.82	3.63 3.42-3.84	3.25 3.04-3.46
Prejudice	\bar{X} <u>CI</u>	2.98 2.76-3.20	3.025 2.79-3.26	3.82 3.60-4.04	3.85 3.62-4.07	3.59 3.33-3.84	3.96 3.74-4.18	2.74 2.50-2.99	3.74 3.51-3.98	3.43 3.19-3.67	3.53 3.29-3.79
Workers' compensation risk	\bar{X} <u>CI</u>	2.66 2.45-2.87	4.34 4.17-4.52	2.79 2.55-3.02	4.36 4.19-4.54	2.50 2.25-2.74	2.16 1.94-2.37	2.57 2.32-2.83	2.91 2.66-3.16	4.33 4.13-4.52	2.39 2.16-2.63
Skill level	\bar{X} <u>CI</u>	2.38 2.16-2.59	2.96 2.70-3.22	2.60 2.37-2.84	3.31 3.03-3.58	2.88 2.63-3.13	3.36 3.10-3.63	1.98 1.79-2.16	3.22 2.97-3.47	3.25 2.99-3.51	2.88 2.64-3.14
Physical capability	\bar{X} <u>CI</u>	2.85 2.64-3.06	3.85 3.60-4.09	2.60 2.37-2.84	3.08 2.87-3.29	2.07 1.89-2.26	2.08 1.88-2.28	2.50 2.28-2.71	3.29 3.04-3.53	4.00 4.07-4.45	2.08 1.91-2.25
Acceptance by co-workers	\bar{X} <u>CI</u>	3.025 2.86-3.19	3.45 3.24-3.66	3.54 3.35-3.74	4.02 3.83-4.20	3.57 3.36-3.78	3.95 3.75-4.15	2.645 2.45-2.84	3.66 3.45-3.86	3.885 3.69-4.08	3.60 3.40-3.79
Employment-related cost	\bar{X} <u>CI</u>	3.28 3.08-3.47	4.23 4.03-4.42	3.15 2.91-3.40	4.195 4.00-4.39	2.95 2.72-3.18	2.88 2.64-3.10	2.90 2.67-3.13	3.37 3.13-3.60	4.26 2.91-3.35	3.00 2.77-3.23
Mental ability	\bar{X} <u>CI</u>	2.13 1.96-2.31	3.53 3.28-3.78	3.47 3.19-3.74	3.615 3.33-3.89	3.35 3.08-3.89	3.475 3.21-3.74	1.72 1.56-1.88	3.66 3.40-3.93	3.70 3.45-3.95	3.14 2.90-3.39
Accessibility of work site	\bar{X} <u>CI</u>	3.57 3.33-3.81	4.28 4.08-4.47	2.51 2.27-2.74	4.33 4.15-4.51	2.15 1.94-2.35	3.645 3.44-3.85	3.32 3.09-3.55	4.07 3.87-4.28	4.24 4.05-4.43	2.64 2.40-2.87
Stereotypes	\bar{X} <u>CI</u>	3.00 2.78-3.22	3.08 2.84-3.33	3.16 2.92-3.41	3.62 3.38-3.87	3.28 3.03-3.53	3.63 3.40-3.85	2.91 2.67-3.15	3.545 3.30-3.78	3.40 3.15-3.65	3.20 3.00-3.40
Limitations in job can perform	\bar{X} <u>CI</u>	2.51 2.31-2.72	3.65 3.40-3.89	1.97 1.79-2.14	3.195 2.98-3.41	2.09 1.91-2.27	2.325 2.12-2.52	1.87 1.68-2.05	2.50 2.30-2.70	3.94 3.71-4.17	2.17 1.99-2.35
Dependability	\bar{X} <u>CI</u>	2.34 2.12-2.56	3.17 2.90-3.44	3.41 3.12-3.70	3.55 3.27-3.83	3.25 2.97-3.53	2.92 2.65-3.19	2.74 2.50-2.99	3.53 3.27-3.80	3.31 3.05-3.57	3.38 3.10-3.66
Average rating		2.78	3.55	3.04	3.70	2.92	3.21	2.50	3.29	3.46	2.95

APPENDIX D

Mean Scores and 95% Confidence Interval Ranges
for Six Employment Solutions by
Protected-Group Category

Protected Group		Employment Solution					
		Tax Credits	Affirmative Action	Government Subsidy	Job Training	Employer Awareness	Public Responsibility
Women	\bar{X} <u>CI</u>	3.761 3.487-4.035	2.739 2.488-3.090	3.807 3.582-4.032	2.348 2.130-2.565	2.983 2.72-3.245	3.434 3.19-3.68
Hidden disabilities	\bar{X} <u>CI</u>	3.445 3.17-3.715	3.861 3.63-4.09	3.377 3.13-3.63	2.550 2.29-2.81	2.826 2.56-3.096	3.407 3.16-3.66
Blind	\bar{X} <u>CI</u>	2.853 2.59-3.12	3.567 3.32-3.81	2.802 2.57-3.035	1.91 1.71-2.11	2.438 2.21-2.67	2.775 2.53-3.02
Blacks	\bar{X} <u>CI</u>	3.391 3.12-3.66	2.584 2.34-2.83	3.439 3.19-3.69	2.117 1.92-2.31	3.092 2.83-3.35	3.495 3.25-3.74
Deaf	\bar{X} <u>CI</u>	2.908 2.65-3.16	3.394 3.13-3.66	2.963 2.73-3.196	1.938 1.74-2.14	2.598 2.36-2.84	2.894 2.63-3.17
Mental illness	\bar{X} <u>CI</u>	3.615 3.37-3.86	3.858 3.64-4.08	3.509 3.27-3.75	2.611 2.36-2.86	2.855 2.50-3.11	3.093 2.85-3.34
Handicapped	\bar{X} <u>CI</u>	2.645 2.39-2.90	3.252 2.99-3.51	2.702 2.47-2.93	1.911 1.71-2.11	2.464 2.24-2.69	2.769 2.51-3.03
Hispanic	\bar{X} <u>CI</u>	3.44 3.18-3.70	2.739 2.47-3.01	3.604 3.35-3.86	2.134 1.94-2.33	3.018 2.77-3.27	3.44 3.20-3.68
Mentally retarded	\bar{X} <u>CI</u>	3.161 2.90-3.42	3.606 3.35-3.86	2.954 2.71-3.20	2.097 1.88-2.31	2.732 2.48-2.98	2.652 2.39-2.91
Physically disabled	\bar{X} <u>CI</u>	2.908 2.66-3.16	3.438 3.19-3.69	2.729 2.50-2.96	1.866 1.68-2.05	2.573 2.33-2.82	2.721 2.46-2.97
Average rating		3.21	3.29	3.19	2.15	2.76	3.07

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