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Personnel staff attitudes toward the employment of persons with physical disability, mental retardation, or mental illness

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Personnel Staff Attitudes Toward the Employment of Persons with Physical Disability, Mental Retardation, or Mental Illness

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by
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ABSTRACT

This thesis describes a measurement of personnel staff attitudes and perceptions toward the employability of disabled job applicants. More specifically, direct comparisons among three types of disability categories were made using Osgood's Semantic Scaling Method.

Sixty employment professionals of the Lincoln Human Resources Management Association rated a job applicant with physical disability, with mental retardation, and one with mental illness on the basis of 15 paired opposite adjectives. These adjectives described a variety of attributes which could be grouped into evaluative, potency, and activity dimensions of semantic space.

Respondents completed a four-page questionnaire which rated physically disabled, mentally retarded, and mentally ill job applicants and included a personal data sheet. The data from the 60 completed questionnaires were tabulated and compared in the evaluative, potency, and activity dimensions using a standard two-tailed *t* test. Significant differences were discovered among selected groups.

CHAPTER I

THE PROBLEM

INTRODUCTION

Many individuals, disabled or not, experience employment and career challenges at some point in their lives. However, people with disabilities may be more limited in their employment opportunities by the attitudes and perceptions held by potential employers (Burton, Chavez, & Kokaska, 1987). Employers with preconceived attitudes and biases may not be familiar with the capabilities and work traits of this segment of the work force and thereby deny employment to disabled workers (Condon, 1987). A nationwide Lou Harris poll (1987) reported that one out of seven Americans age 16 and over were prevented from participating fully in work or education due to a disability. Labor force statistics compiled by the U.S. Census Bureau showed that as of 1988, 18.2% of the disabled population was employed full time, 8.9% was employed part-time, and 72.9% was unemployed (Kiernan & Schallock, 1989). The 1990 President's Committee on Employment of People with Disabilities estimated that there are 43 million Americans with some type of disability (Bush, 1990).

Prior to the rehabilitation legislation in 1973, efforts had been undertaken to develop greater employment opportunities for the disabled which included revolutionary legislation at local, state, and national levels. Financial incentives have been created for small as well as large companies; and numerous private and public organizations have developed national

advertising campaigns to heighten public awareness and encourage the employment of disabled Americans.

Since the enactment of the Rehabilitation Act of 1973, additional legislation has been drafted to improve the educational and employment opportunities for disabled children and adults. These changes have offered new opportunities to integrate disabled Americans into a very challenging and competitive workforce. Legislative milestones passed in this time period have included:

* **Rehabilitation Act of 1973** (PL 93-112).
  Sections 502, 503, and 504 required equal opportunity for handicapped persons in the areas of employment, education, transportation, housing, and accessibility.
* **Education of All Handicapped Children Act of 1975** (PL 94-142).
  States were mandated to provide education for all handicapped children.
* **Individuals with Disabilities Education Act of 1990** (PL 101-476).
  The Act is a reauthorization of funds to provide education for all handicapped children from birth through 21 years of age.
* **Americans with Disabilities Act of 1990** (PL 101-336).
  The Act prohibits discrimination on the basis of disability in the areas of employment, public accommodation, transportation, telecommunications, and the activities of state and local government.

To supplement this legislation, companies have been encouraged to offer employment opportunities to the disabled through several innovative

economic incentives (Hollmann, 1979). The Targeted Jobs Tax Credit bill, enacted in 1978, offers employers significant tax deductions in employing specifically targeted groups, including disabled individuals. Other incentives have been offered by state vocational rehabilitation agencies offering on-the-job training wages to employers willing to train handicapped employees in particular positions. These funds help to defray the cost of training a person who may require more of the employer's time and effort while training the person to be a valued employee.

To improve accessibility for the disabled public, the United States government has also offered a tax deduction for the removal of architectural barriers, such as stairs, narrow doorways, and others. Section 502 of the Rehabilitation Act of 1973 mandated this action. Up to $35,000 in tax deductions were allowed for qualified architectural and transportation barrier removal expenses under this plan (Hollmann, 1979).

To further prohibit discrimination and bias toward people with disabilities, the Americans with Disabilities Act (ADA) was signed into law in July, 1990. Individuals who qualify as disabled are those with physical or mental impairments that substantially limit one or more major life activities, or with a record of, or who has been regarded as having such an impairment. The ADA prohibits discrimination on the basis of disability in the areas of employment, public accommodation, transportation, telecommunications, and the activities of state and local governments. The goals of the ADA are to protect individuals with disabilities against discrimination, bring these individuals into the economic and social mainstream of American life, and

provide enforceable standards which will be monitored by the Federal government.

The ADA requires employers to make reasonable accommodations for known physical and mental limitations of a qualified applicant or employee. Exceptions may be made if such an accommodation would make an undue hardship on the employer. Only employment tests or criteria shown to be job-related may be used in the selection process. Medical exams may be required after a job offer has been made, if all persons offered employment are required to take the exam, with the results being kept confidential and not used to discriminate. Employers are permitted, at any time, to inquire about the ability of a job applicant or employee to perform job-related functions (Wodatch, 1990),

While legislation and economic incentives have provided the legal and financial groundwork for employing the disabled, the public's perception of the capabilities of the disabled work force has been a major obstacle to overcome. In 1947, the "Hire the Handicapped, It's Good Business" campaign set the early stage for future promotional efforts (Jamero, 1979). Today many companies have included disabled individuals in their general market strategies, such as AT&T, Apple Computer, IBM, Scott Paper, Mobil, Anheuser-Busch, Citicorp, Chrysler, McDonalds, and Du Pont. The message being sent is that the public will eventually perceive them as equals (Feldman, 1987).

With the passage of legislation for the disabled, the creation of economic incentives, and the promotional efforts to encourage the employment of the disabled, employer attitudes have grown moderately more positive toward

disabled applicants. However, these more positive perceptions may not be reflected in an actual willingness to hire disabled job applicants (Colorez & Geist, 1987).

BACKGROUND OF THE PROBLEM

One of the leading reasons for the breakdown of the efforts to hire the disabled has been in the preconceived perceptions and attitudes of employers toward employing those with disabilities (Burton et al., 1987). Employers are concerned about productivity, accident rates, and workman compensation problems, thus bringing out the overall fear that employing disabled workers will increase the cost of operation (Parent & Everson, 1986). Contrary to employers' beliefs, premiums paid to insurance carriers do not increase when disabled workers are employed (Condon, 1987). Workman's compensation insurance rates are determined by the relative hazards involved in the company's work and the company's track record of accidents (Webb, Horn, & Flitner, 1990). Second-injury protection has come about to protect the liability of an employer. In Nebraska, should a disabled worker receive an injury, the employer is not responsible for the total liability, but only those conditions incurred beyond the initial stated condition (NE Law Section 48-128).

Fortune 500 companies such as American Express, Proctor & Gamble, Eastman Kodak, Westinghouse, IBM, and Du Pont have documented high productivity and excellent job safety records of their employees with disabilities. Records of the same workers also show low absenteeism and low turnover rates (Bauer & Green, 1988).

IBM and Du Pont have conducted extensive studies of their disabled employees and have published the results. Du Pont surveyed its employees

with disabilities beginning in 1958, with follow up surveys in 1973, 1981, and 1990.

In 1973 Du Pont estimated having 1,452 disabled employees (Hollmann, 1979). That figure has doubled to the 1990 estimation of 3,000 such employees among the 120,500 total Du Pont employees. Comparisons between disabled and nondisabled employees in safety on the job showed identical ratings of 97% average or above. In attendance, 86% of disabled employees and 95% of nondisabled employees were rated at average or above. Job duty performance rated disabled employees at 90% and nondisabled employees at 95% or above. These findings confirm that Du Pont employees with disabilities can be safe, productive, and dependable workers (Drach, 1990).

Advocates for disabled workers hope that all job applicants, disabled or not, will be evaluated on their individual abilities and productivity rather than on the perception of limitation. An unbiased evaluation is not only fair to all job applicants and employees but shows the competence and problem solving abilities of managers and personnel staff members.

Acknowledgement of applicant and employee abilities, together with the appropriate work accommodations and innovative job modifications, represents an employer and company that has respect for all individuals (Condon, 1987).

STATEMENT OF THE PROBLEM

There is substantial evidence which suggests that employers are influenced by the potential employee's disability (Burton et al., 1987). This survey is an attempt to evaluate attitudes of personnel staff in three categories of disability. The primary question addressed is "Do the attitudes of personnel staff differ

toward the employability of persons with physical disability, mental retardation, or mental illness?"

PURPOSE OF THE STUDY

Because persons with disabilities have experienced difficulty securing employment, this study is an attempt to measure perceptions of employment personnel toward job applicants with physical disability, mental retardation, or mental illness. By understanding the perception of employment personnel, the rehabilitation community may gain insight into employers' views toward persons with different disabilities. The rehabilitation community may also gain information which could be shared with disabled job applicants about how employers view them.

HYPOTHESIS

During the course of this study, the general hypothesis will be that there are no significant differences among personnel attitudes toward job applicants with physical disability, mental retardation, or mental illness across evaluative, potency, and activity dimensions.

DEFINITION OF TERMS

Physical disability: Characterized by incoordination; limitation of stamina; difficulty in lifting and reaching with arms, using upper extremities or lower extremities. Use of adaptive equipment, wheelchairs, braces, or prosthesis (Johnson, Greenwood, & Schriner, 1988).

Mental retardation: Significantly subaverage general intellectual functioning, also existing concurrently with deficits in adaptive behavior and is manifested during the developmental period, which adversely affects a person's development or educational performance (DSM-III, 1987).

Mental illness: A behavioral or psychological syndrome that is associated with distress or disability, with manifestation resulting in behavioral, psychological, or biological dysfunction (DSM-III, 1987).

Personnel: Business management responsible for manpower planning, recruitment, selection, placement and termination of employment, terms of employment, methods and standards of compensation, and employee benefits; as well as employee training, safety regulations, company communication, and industrial relations (Pratt & Bennett, 1985). (Interchangeable term with Human Resources Management. Oftentimes in small companies the owner/manager is responsible for personnel duties as well.)

Semantic differential scale: A scaling instrument which gives representation to the major dimensions with respect to meaningful reactions or judgement vary (Osgood & Tannenbaum, 1957).

Evaluative dimension of the semantic differential scale: Words which describe, determine or fix the value or worth of an object by careful appraisal and study (Webster, 1990).

Potency dimension of the semantic differential scale: Words which describe the ability or capacity to have or wield force, authority, or influence (Webster, 1990).

Activity dimension of the semantic differential scale: Words which describe the quality or state of being active (Webster, 1990).

Understandability dimension of the semantic differential scale: Words which describe the ability to grasp the nature, significance, or explanation of an object (Webster, 1990).

CHAPTER II

REVIEW OF LITERATURE

INTRODUCTION

Labor statistics show that 27.1% of the disabled population is involved in the national workforce, either part or full time (Kiernan & Schallock, 1989). Therefore, many employers have had some work experience with disabled workers. Supported Employment and Project With Industry programs have begun cooperative partnerships to assist disabled job applicants with securing employment. These programs, as well as employer attitudes toward disabled workers and their expectations of employee work skills will also be reviewed.

Businesses operate to make profits. Companies hire employees that can most likely produce at a level which exceeds the employee cost to the company. Responsibility for this selection process rests with the personnel department. Personnel staff members accept and screen applications, interview, and in some instances are responsible for the actual hiring of job applicants. Should the personnel staff member choose to screen out particular applicants, these persons no longer are vying for company jobs. The importance of the personnel role will be reviewed.

REHABILITATION EMPLOYMENT PROGRAMS

Inasmuch as companies prefer to hire job-ready employees, many individuals, particularly individuals with mental retardation or mental illness, may not be able to achieve competitive employment without assistance (Wehman, 1981; Anthony, Howell, & Danley, 1984). Formerly, sheltered workshops and day activity programs were some of the few alternatives for disabled people, paying workers little, if anything for work

production (Gold, 1980). Innovative vocational training programs have been developed to assist special needs students in their transition from school to work with community-based training (Will, 1984).

One such program, the Supported Work Model, teaches workers with mental retardation to perform the actual work skills within a work environment (Wehman, 1981). The Supported Work Model can be effectively utilized to gain competitive employment, as it incorporates advocacy, job coordination, and job site training (Rusch, 1986).

Training of the employee takes place at the job site with the assistance of a job coach, who provides behavioral or skill training, as well as acting as an advocate at the job site. As the employee learns job skills, the job coach fades assistance, while continuing to monitor the work performance and record evaluation data. When the employee is able to work independently, follow up on work performance with the employer is very important. Regular visits to job sites, telephone calls, periodic review of supervisor evaluation, employee progress reports, and parent evaluations are informative to job stability and work to promote employee retention (Wehman, 1981).

Some employers have hired disabled workers. Johnson, Greenwood and Schriner (1988) surveyed 100 employers about the work performance and work personality of employees with physical, mental, emotional, and communication disorders. Workers with physical disabilities were rated as having the most positive work performance, those with communication disabilities were rated as moderately positive, and workers with mental and emotional disabilities were rated the least favorably in both areas.

Food service managers completed a questionnaire regarding their hiring practices and attitudes toward mentally retarded workers. Seventy-three percent of the 152 food service managers surveyed found the job performance of these workers to be satisfactory or above. Work skills that were cited as unsatisfactory by 27% of the polled employers were: employee's need for supervision, 24%; slow work pace, 22%; poor memory, 13%; poor communication skills, 13%; poor attendance, 12%; and poor quality of work 10% (Marcouiller, Smith, & Bordieri, 1987).

Mellberg (1984) found three main factors that affect employers' decisions to hire or not hire individuals with mental retardation. These factors were: 1) employers generally feel that the training and employment of mentally retarded individuals is the responsibility of someone other than employers; 2) employers would rather contribute money or contract work than employ mentally retarded individuals; and 3) altruism is not a primary factor in hiring mentally retarded individuals. Mellberg concluded that the biggest concern employers have about hiring mentally retarded individuals is the actual cost-effectiveness of these employees.

Employers expect disabled job applicants to possess employability skills, which are skills required to get and maintain employment. One hundred thirty-three employers representing areas of food service, custodial/ maintenance, stock/construction, and miscellaneous jobs were surveyed to rank the most important employability skills. For a majority of jobs, employers expected disabled people to possess basic academic skills, to move quickly, to be physically coordinated, and to display proper grooming. Differences did appear among the employer groups which suggested that

specific demands and responsibilities are required for various positions (Burton et al., 1987).

Employers may be interested in Supported Employment because much of their responsibility is removed by having individuals screened and trained at the time and expense of the placement agency (Berkell & Brown, 1989). Continued follow-up can assist the employer in management matters including reviewing performance standards, behavior problems, or job termination.

Vocational training for people with mental illness has also incorporated the Supported Work Model, wherein an individual is placed in a job, then trained to perform the job duties with the assistance of a job coach. The job coach provides support for the worker as long as it is needed for the worker to successfully sustain employment (MacDonald-Wilson, Mancuse, Danley, & Anthony, 1989).

The "Choose-Get-Keep" approach to supported employment is an attempt to integrate the philosophy of supported employment with tested psychiatric vocational rehabilitation practices for job training for people with mental illness (MacDonald-Wilson et al., 1989). The three phases of this model focus on the disabled individual and his/her personal involvement in choosing, getting, and keeping a job.

The object of the Choose phase is for the individuals to select an employment goal compatible with personal values and qualifications. The Get phase includes the job search and concludes with the acceptance of a job offer from an employer in a desired job. The final phase, the Keep phase,

continues with support and skill development provided as needed to help the new employee be successful in his/her chosen job (Anthony et al., 1984).

People with mental illness have existing skills or can learn skills on the job, however they often need assistance to overcome barriers in using their skills in a particular job and sustaining these skills on an ongoing basis. Within the Keep phase, a job coach is utilized at the job site to help the employee to overcome personal and environmental impediments by using personal coping skills (Danley & Anthony, 1987). The job coach also acts as a role model for the employee, provides feedback on job performance, and works as a liaison for the employee with the employer and other staff.

Another program to promote employment of disabled individuals is the Projects With Industry program (PWI), established by Congress in 1968, which promotes partnerships between business and industry. This partnership has helped to provide training, services, and competitive employment for workers with disabilities.

Employment Specialists from 102 PWI programs were asked to anticipate the probable reaction of a typical employer to the employment of workers with disabilities in their particular locale. These PWI practitioners responded that applicants and employees with physical disabilities are viewed more favorably than those with mental, emotional, or communication disabilities on almost every aspect of recruitment, selection, acceptance, and performance expectation (Greenwood, Schriner, & Johnson, 1991).

Rehabilitation services have been actively involved in assisting persons with disabilities to become gainfully employed. A study conducted by Greenwood, Johnson, and Schriner (1987) surveyed 100 employers who

indicated that they were interested in developing partnerships with rehabilitation organizations that could meet their needs for qualified, disabled job applicants, technical assistance, incentives, and the retention of employees who become disabled in mid-career.

These employers expressed greater concern about hiring workers with mental, emotional, and communication disabilities than workers with physical disabilities. Employers had a more positive perception of workers with physical disability, while being reluctant to consider workers with mental or emotional disabilities for jobs in which these workers were perceived as being successful.

BUSINESS PERSPECTIVE OF EMPLOYEES

Business organizations are traditionally comprised of four levels of employees including top management, middle management, first-line supervision, and the rank and file employees. The rank and file employees represent the largest grouping of employees and are primarily responsible for actually producing the product or providing the service. Employees at every level must possess certain skills that would enable them to perform their tasks successfully to contribute to the cost effectiveness and profitability of the company.

Cost effectiveness is figured into all aspects of business, including the employees hired (Martin & Vieceli, 1988). An employer factors human resource inputs into a basic cost/benefit equation and generally hires a person if convinced that the benefits exceed and/or equal the human resources input. Competitive work skills, job readiness, and productivity are paramount to employers (Greenwood & Johnson, 1987). Some employers

may have doubts about the ability of workers with disabilities to be productive, particularly if they have emotional or mental disabilities. Concerns about the amount of training time and supervision and their ensuing costs make employers hesitant to hire mentally ill or mentally retarded workers (Greenwood & Johnson, 1987).

The prospect of hiring disabled persons initially seems to undermine the cost effectiveness of such employees, with concerns about increased insurance, training, turnover, absenteeism, facilities modifications, and productivity costs (Martin & Vieceli, 1988). Harris (1987) polled 920 employers of disabled workers who rated these workers as hard working, reliable, and productive. Worker safety, attendance, turnover, and workman's compensation had no negative impact on the company costs.

Employers rated job applicants with physical disabilities easier to accommodate than job applicants with mental illness or mental retardation (Comb & Omvig, 1986). The cost of accommodation for a physically disabled worker is seen as a one time cost. By investing in a particular piece of equipment, or making an initial modification, the employee can begin working and keep working independently and productively, without the need of ongoing accommodations. Applicants with mental retardation or mental illness are seen as having ongoing needs for training or supervision, which are viewed as a continual cost to the company in dollars and productivity (Comb & Omvig, 1986).

Unfortunately a large percentage of people with disabilities have never held a job or have had only limited work experiences. As a member of the disadvantaged minority population, these people may be less knowledgeable

than other job applicants about the job market and the networking that could lead to employment. Personnel staff may have to actively recruit and screen for disabled job applicants (Hopkins, Nestleroth, & Bolick, 1991).

CHAPTER III

METHODOLOGY

OVERVIEW

This survey was an attempt to evaluate attitudes of personnel staff toward the three categories of disability: physical disability, mental retardation, and mental illness. The respondents rated 15 criteria using a semantic differential scaling method for a job applicant within each of the three categories. Respondent choices were tabulated and the resulting data were analyzed to test the hypotheses.

HYPOTHESES

The hypotheses to be tested in this study were:

1. Personnel staff members will rate persons with physical disability no more positively than persons with mental retardation.
2. Personnel staff members will rate persons with physical disability no more positively than persons with mental illness.
3. Personnel staff members will rate persons with mental retardation no more positively than persons with mental illness.
4. Personnel staff members will rate persons with physical disability no more potent than persons with mental retardation.
5. Personnel staff members will rate persons with physical disability no more potent than persons with mental illness.
6. Personnel staff members will rate persons with mental retardation no more potent than persons with mental illness.
7. Personnel staff members will rate persons with physical disability no more active than persons with mental retardation.

8. Personnel staff members will rate persons with physical disability no more active than persons with mental illness.
9. Personnel staff members will rate persons with mental retardation no more active than persons with mental illness.

DESCRIPTION OF INSTRUMENT

Based on the nature of this study, usage of the semantic differential scaling method was determined to be the most effective method for completing this project. A semantic differential scale consists of a set of opposite terms of phrases separated by a rating scale used to measure relative intensity between the opposite terms. Each pair of opposites describes an attribute of the object to be rated. Respondents would be instructed to place an "X" in the box that most closely represents their feelings for each pair of opposites. (See Appendix A)

Osgood (1957) developed the seven step semantic differential scale as a continuum between polar terms and as a tool used to quantify expressions of a subjective nature. Positive/negative paired adjectives are randomly placed in the left or right position to guard against pattern responses.

Osgood and Suci developed a list of 50 paired opposites in which tests among 2,000 respondents were conducted to establish cross products, means, variances, and intercorrelations. Thurston's Centroid Factor Method (5) was applied to the matrix of correlation. From factor analysis, four factors were structured: evaluative, potency, activity, and understandability. Paired opposites are loaded in all four dimensions by percentage variance. The highest percentage variance indicates into which dimension the pair is categorized (Snider, 1969).

The 50 paired opposite terms were grouped into these four dimensions based on their semantic similarity. This similarity, or semantic space dimension, accounts for the variances in semantic judgements.

The evaluative dimension is a group of words that appraise the worth or value of an object. The potency dimension consists of words which describe the ability to influence or authoritate power. The activity dimension uses words which describe the quality or state of being active. Words in the understandability dimension describe the ability to comprehend the nature, significance, or explanation of an object.

For purposes of this study, only the evaluative, potency, and activity dimensions from Osgood's research were utilized. The fourth dimension, understandability, was not included in this research since the percentage variances are not at highly reliable levels (Snider, 1969). A four page questionnaire was developed which contained 15 paired opposites on separate pages for each respective disability category. Between the disability categories, the paired opposites were randomly distributed and positive/ negative polar terms were alternated to avoid response bias.

Respondents also completed a personal data sheet which included demographic and disability experience information. A brief set of directions preceded the actual instrument and completed the survey. (See Appendix B)

POPULATION AND SAMPLE

The population surveyed included sixty human resources personnel in the Lincoln, Nebraska metropolitan area. To ensure an effective representation of this population, respondents were selected from those belonging to the Lincoln Human Resources Management Association

(hereafter referred to as LHRMA). LHRMA represents a wide variety of employers in the Lincoln market based on employment size, industry diversification, and employee skill levels.

According to the demographic information collected from the personal data sheets, the sample included 16 males (26.7%) and 44 females (73.3%). Among the respondents, 19 (31.7%) had completed some college, 24 (40.0%) were college graduates, 16 (26.7%) had completed some postgraduate studies, while one (1.7%) had a high school diploma but no college training.

The respondent age group distribution was as follows: 1 (1.7%) in the 18-24 age group; 25 (41.7%) in the 25-34 age group; 19 (31.7%) in the 35-44 age group; 13 (21.7%) in the 45-54 age group; and 2 (3.3%) in the 55 and over age group.

Respondents were employed by companies of varying sizes including: 11 (18.3%) in the 0-49 employees category; 12 (20.0%) in the 50-199 employees category; and 36 (60.0%) in the 200+ employees category.

Fifty-three respondents (88.3%) had work-related contact with a person with a disability. Several respondents had either interviewed (65.0%) or hired (46.7%) physically disabled job applicants. Few respondents reported having had contact with mentally ill job applicants (33.3% had interviewed, 21.7% had hired), and yet fewer had contact with retarded job applicants (26.7% had interviewed, 16.7% had hired). Finally, 36 respondents (60.0%) reported awareness training about disabled workers in their professional backgrounds. (For complete demographics, see Appendix C)

DATA COLLECTION PROCEDURE

Survey respondents were members of LHRMA who attended its December, 1990 general meeting. A four-page questionnaire was distributed to members

for their completion. A brief introduction of the instrument and instructions to complete the survey were presented. Respondents completed the questionnaire by marking first impression responses. All surveys were then later collected and sorted for data interpretation.

TREATMENT OF THE DATA

Using Osgood's rating scale, the raw data were tabulated. The positive adjective side of the continuum scored seven points, with point value descending by one point for each step along the continuum. The negative adjective side of the continuum scored as one point. Each respondent's survey was tabulated according to the step marked on the scale. A higher mean score for each independent subgrouping indicates a more positively perceived value.

Scores for each paired opposite were grouped according to their respective dimension of semantic space and then totaled. Therefore, each of the three disability categories had group totals for evaluative, potency, and activity semantic space dimensions. The mean, standard deviation of the mean differences, and mode for each of the nine subgroupings were calculated. To meaningfully measure and compare the statistical differences between the three disability categories, a standard two-tailed *t* test was conducted for each of the nine subgroupings.

In completing the questionnaire, respondents were asked to score their perceptions of each disability category along a continuum between a variety of paired opposites terms. Responses to each paired opposite term were individually and independently selected and were not dependent upon the scoring of any other paired opposite term, nor did these responses affect the

probability of the occurrence of other responses. Subsequently, each subgrouping was considered statistically independent.

The statistical independence of the each subgrouping required the formulation of nondirectional hypotheses. These types of hypotheses state that there merely exists the potential for a difference between the subgroupings being compared; not so much as one is more positive, potent, or active than the other. Therefore, statistically independent means between nondirectional subgroupings require the use of a two-tailed *t* test for making statistically significant comparison measurements (Runyon & Haber, 1982).

All *t* tests were calculated at the five percent (0.05) or the one percent (0.01) alpha level of significance to ensure a high degree of reliability. These levels of significance, or probability level, affirm that if an identical study were conducted among 100 groups fitting the same selection criteria, statistically significant differences between subgroupings identified by this research project would also occur in at least 95 of the 100 groups, or in at least 99 of the 100 groups (Runyon & Haber, 1982).

ASSUMPTIONS

After receiving information on how to complete the survey, it is assumed that respondents understood the directions and completed the forms correctly. Answers are assumed to be initial attitudes that are true and unbiased responses. There is also the assumption that respondents have a consistent measure of equitability. That is, the score of "six" to one individual respondent is equitable to the identical score by a different individual respondent. Also, this study operates under the assumption that attitudes can be quantitatively measured.

LIMITATIONS

There may be some limitations to this study with regard to sample size and respondent group. Lincoln has over 170 manufacturers, as well as many medical, educational, professional, and governmental employers in the community. The sample size of 60 respondents from a variety of employers may not fully reflect personnel attitudes in the entire Lincoln metropolitan area.

CHAPTER IV

DATA ANALYSIS

The 60 individual scores of the three categories of disability (physical disability, mental retardation, and mental illness) were figured according to Osgood's three dimensions of semantic space: evaluative, potency, and activity. (See Appendices D-F for frequencies and ranges) These scores were then totaled and the group responses to each category were compared using nine *t* tests. Tables 1-9 summarize the results of these tests.

Table 1

t Test Comparison of Physical Disability and Mental Retardation Means (Evaluative Dimension)

	Mean	N	Standard Deviation
Physical Disability	23.43	60	3.82
Mental Retardation	22.70	60	3.93

t statistic = 1.0367

Degrees of Freedom = 119

p = NS

Table 2

t Test Comparison of Physical Disability and Mental Illness Means (Evaluative Dimension)

	Mean	N	Standard Deviation
Physical Disability	23.43	60	3.82
Mental Illness	21.07	60	4.49

t statistic = 3.1081

Degrees of Freedom = 119

$p < 0.01$

Table 3

t Test Comparison of Mental Retardation and Mental Illness Means (Evaluative Dimension)

	Mean	N	Standard Deviation
Mental Retardation	22.70	60	3.93
Mental Illness	21.07	60	4.49

t statistic = 2.1195

Degrees of Freedom = 119

$p < 0.05$

Note: A review of the evaluative dimension of the three disability categories revealed physical disability had a range of scores of 18 to 35, with a mean score of 23.43. Mental retardation had a lower mean score of 22.70, with scores ranging from 17 to 35. Mental illness had the lowest mean score of 21.07, and scores ranged from 12 to 32. All three disability categories shared a mode of 20.

Table 4

t Test Comparison of Physical Disability and Mental Retardation Means (Potency Dimension)

	Mean	N	Standard Deviation
Physical Disability	18.93	60	3.17
Mental Retardation	19.10	60	3.31

t statistic = 0.2817

Degrees of Freedom = 119

p = NS

Table 5

t Test Comparison of Physical Disability and Mental Illness Means (Potency Dimension)

	Mean	N	Standard Deviation
Physical Disability	18.93	60	3.17
Mental Illness	19.12	60	3.39

t statistic = 0.3063

Degrees of Freedom = 119

p = NS

Table 6

t Test Comparison of Mental Retardation and Mental Illness Means (Potency Dimension)

	Mean	N	Standard Deviation
Mental Retardation	19.10	60	3.31
Mental Illness	19.12	60	3.39

t statistic = 0.0273

Degrees of freedom = 119

p = NS

Note: Within the potency dimension, physical disability had a mean score of 18.93, with scores ranging from 9 to 28. Both mental retardation and mental illness had means of 19.10 and 19.12 respectively and had an identical range of scores, 8 to 25. Once again, all three modes were 20.

Table 7

t Test Comparison of Physical Disability and Mental Retardation Means (Activity Dimension)

	Mean	N	Standard Deviation
Physical Disability	19.95	60	3.26
Mental Retardation	17.80	60	3.77

t statistic = 3.3405

Degrees of Freedom = 119

$p < 0.01$

Table 8

t Test Comparison of Physical Disability and Mental Illness Means (Activity Dimension)

	Mean	N	Standard Deviation
Physical Disability	19.95	60	3.26
Mental Illness	19.07	60	3.66

t statistic = 1.3964

Degrees of Freedom = 119

p = NS

Table 9

t Test Comparison of Mental Retardation and Mental Illness Means (Activity Dimension)

	Mean	N	Standard Deviation
Mental Retardation	17.80	60	3.77
Mental Illness	19.07	60	3.66

t statistic = 1.8671

Degrees of Freedom = 119

p = NS

Note: In measuring the activity dimension for physical disability, the mean score was 19.95. The scores ranged from 11 to 30, and were bi-modal, with modes of 19 and 20. Mental retardation had the lowest mean of this grouping at 17.80, scores that ranged from 8 to 26, and a mode of 20.

These results confirmed six of the original nine hypotheses and the remaining three hypotheses found statistically significant difference between the variables being tested.

Hypothesis 1: Personnel staff members will rate persons with physical disabilities no more positively than persons with mental retardation. Research results: An analysis between these two disability categories revealed no statistically significant difference. There was evidence to support the original hypothesis, with a *t* test value of 1.0367.

Hypothesis 2: Personnel staff members will rate persons with physical disabilities no more positively than persons with mental illness.

Research results: Respondents indicated there was a statistically significant difference between physical disability and mental illness. The *t* test value of 3.1081 is above the range for statistical significance at $p < 0.01$ and therefore refuted the null hypothesis.

Hypothesis 3: Personnel staff members will rate persons with mental retardation no more positively than persons with mental illness.
Research results: The *t* test value in comparing mental retardation and mental illness was above the range for statistical significance at 2.1195. The original hypothesis was refuted as a null hypothesis because of the statistically significant difference recorded at the $p < 0.05$.

Hypothesis 4: Personnel staff members will rate persons with physical disability no more potent than persons with mental retardation.
Research results: Physical disability and mental retardation in comparison computed a *t* test value of 0.2817, as evidence to support the original hypothesis.

Hypothesis 5: Personnel staff members will rate persons with physical disability no more potent than persons with mental illness.
Research results: An analysis between these two categories showed no statistically significant difference. With a *t* test value of 0.3063, there was evidence to support the original hypothesis.

Hypothesis 6: Personnel staff members will rate persons with mental retardation no more potent than persons with mental illness.
Research results: A comparison of mental retardation and mental illness had a *t* test value of 0.0273, which supported the original hypothesis.

Hypothesis 7: Personnel staff members will rate persons with physical disability no more active than persons with mental retardation.
Research results: Physical disability compared with mental retardation at a *t* test value of 3.3405, which scored above the range for statistical significance at $p < 0.01$, and therefore refuted the null hypothesis.

Hypothesis 8: Personnel staff members will rate persons with physical disability no more active than persons with mental illness.
Research results: The *t* test comparison of physical disability and mental illness scored a *t* test value of 1.3964, providing evidence to support the original hypothesis.

Hypothesis 9: Personnel staff members will rate persons with mental retardation no more active than persons with mental illness.
Research results: The comparison between mental retardation and mental illness calculated a *t* test score of 1.8671, thereby giving evidence to support the original hypothesis.

CHAPTER V

SUMMARY, DISCUSSION AND CONCLUSIONS

SUMMARY

A growing number of individuals with disabilities have become more active in their pursuit of employment within today's job market. A 1990 President's Committee on Employment of People with Disabilities estimated there are 43 million Americans with some type of disability. However, one of the major limitations to achieving competitive employment is the employers' preconceived perceptions of the skills and abilities of disabled job applicants.

To measure these attitudes, a questionnaire was developed utilizing Osgood's Semantic Differential Scaling method. Three attitude scales were developed representing each disability category. Each scale consisted of 15 paired opposite adjectives which could be grouped into evaluative, potency, and activity dimensions of semantic space. These attitude scales contained the identical 15 paired opposite adjectives but were randomly distributed to avoid respondent pattern bias.

T value comparisons of the nine hypotheses disclosed three statistically significant differences. Within the evaluative dimension, statistically significant differences were measured between physical disability and mental illness at the 0.01 level, and between mental retardation and mental illness at the 0.05 level. In the activity dimension, a statistically significant difference was measured between physical disability and mental retardation at the 0.01 level. There were no differences within the potency dimension. As a result, the tests conducted to measure statistical significance provided evidence to

support six of the original hypothesis. Three original hypotheses were refuted as null hypotheses.

DISCUSSION

Some practical implications can be drawn from the results of this study. These findings may be particularly useful to Employment Specialists, as they interact with employers and personnel staff members, promoting the work skills of disabled job applicants.

Within the evaluative dimension, individuals with physical disability and mental retardation were rated more positively than persons with mental illness. There was no significant difference in the rating between persons with physical disability and mental retardation.

Therefore, employers will have the most apprehension when considering an applicant with mental illness. Intervention by the Employment Specialist may be necessary to promote the skills of these applicants. Also, work training programs could be suggested to the employer for hiring incentives. Focus should be placed on actual work skills of the applicant rather than the initial negative appraisal of this particular disability by employers.

Apparently, individuals with physical disability and mental retardation are perceived similarly by employers. Employment Specialists can communicate to employers the skills and abilities of these particular workers. Since the initial employer reaction is not negative, Employment Specialists may have more opportunity to convey the applicant's work abilities. In this manner, competitive employment or possible training positions may be promoted.

Within the activity dimension, physically disabled individuals are seen as more active than persons with mental retardation. This perception may be derived from the fact that physically disabled persons may not have impaired judgement skills, and therefore are able to follow logical steps to activities, in work and other situations. Employers have indicated that workers with mental retardation require more supervision (Johnson et al., 1988; Marcouiller et al., 1987), possibly because their judgement skills may not function in logical step by step actions.

Persons with physical disability have problem solving skills that may be used to modify their worksite. Often these individuals recognize the need for job accommodation, and have the knowledge of what equipment or alternative techniques may be needed.

To assist workers with mental retardation to be more active and work more independently, Employment Specialists may be able to provide on-site job assessments to help establish training techniques within the worksite. Work prompting techniques, such as picture board cues, may assist the mentally retarded worker in learning work routines. These techniques may also be effective for workers with mental illness.

As buildings and transportation have become more accessible, more people with physical disabilities have become more active in their communities. Having independent access to their community and homes, people with physical disabilities differ from persons with mental retardation or mental illness. Often, these two segments of the population reside in supervised living environments or even institutions that remove them from the

activities in their communities. Having to be dependent on staff supervision and transportation may lead to the attitude that such persons are less active.

CONCLUSIONS

Based on the findings of this study, there is evidence that supports the idea that attitudinal differences do exist among the disability categories. Physically disabled job applicants were viewed more positively and more actively when compared with mentally retarded or mentally ill applicants. Mentally retarded job applicants were viewed more positively than applicants with mental illness.

According to the results of this study, individuals with a physical disability may have a greater opportunity for achieving competitive employment in comparison to individuals with either mental retardation or mental illness disabilities, which substantiates research conducted by Greenwood and Johnson (1987) and Johnson et al. (1988).

RECOMMENDATIONS FOR FURTHER RESEARCH

The discoveries revealed by this study can motivate additional research activities. Now that several conclusions have been made regarding the perception levels of employers toward disabled job applicants, the next step might be to determine how these perception levels were developed. Once this is measured, steps can be taken to develop techniques to modify current perception levels and also to learn how to influence the development of positive perception levels among employment personnel entering the workforce.

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Appendix A

Semantic Differential Scale of Paired Opposites

Evaluative Dimension		Potency Dimension		Activity Dimension	
good	bad	heavy	light	sharp	dull
nice	awful	rugged	delicate	hot	cold
fragrant	foul	large	small	angular	rounded
beautiful	ugly	strong	weak	active	passive
honest	dishonest	hard	soft	fast	slow

Appendix B

SURVEY INSTRUCTIONS

The purpose of this study is to measure the meanings of certain things to various people by having them judge them against a series of descriptive scales. In taking this test, please make your judgments on the basis of what these things mean to you. On each page you will find a different concept to be judged and beneath it a set of scales. You are to rate the concept on each of these scales in order.

Here is how you are to use these scales:
If you feel that the concept at the top of the page is very closely related to one end of the scale, you should place your check-mark as follows:

fair X:___:___:___:___:___:___ unfair

or

fair ___:___:___:___:___:___:X unfair

If you feel that the concept is quite closely related to one or the other end of the scale (but not extremely), you should place your check-mark as follows:

strong ___:X:___:___:___:___:___ weak

or

strong ___:___:___:___:___:X:___ weak

If the concept seem only slightly related to one side as opposed to the other side (but is not really neutral), then you should check as follows:

active ___:___:X:___:___:___:___ passive

or

active ___:___:___:___:X:___:___ passive

If you consider the concept to be neutral on the scale, both sides of the scale equally associated with the concept, or if the scale is completely irrelevant, unrelated to the concept, then you should place your check-mark in the middle space:

safe ___:___:___:X:___:___:___ dangerous

IMPORTANT: (1) Place your check-marks in the middle of the spaces, not on the boundaries:

This Not this

___:___:___:X:___:___X__

(2) Be sure you check every scale for every concept - do not omit any.
(3) Never put more than one check-mark on a single scale.

Sometimes you may feel as though you've had the same item before on the test. This will not be the case, so do not look back and forth through the test. Make each item a separate and independent judgement. Work at fairly high speed through this Test. Do not worry or puzzle over individual items. It is your first impressions, the immediate "feelings" about the items, that we want. On the other hand, please do not be careless, because we want your true impressions.

Instructions taken from: Osgood, Suci & Tannenbaum (1957). The Measurement of Meaning. Urbana: University of Illinois Press, 82-84.

Job Applicant
with
PHYSICAL DISABILITY

1.	heavy	___:___:___:___:___:___:___	light
2.	passive	___:___:___:___:___:___:___	active
3.	nice	___:___:___:___:___:___:___	awful
4.	sharp	___:___:___:___:___:___:___	dull
5.	small	___:___:___:___:___:___:___	large
6.	fragrant	___:___:___:___:___:___:___	foul
7.	cold	___:___:___:___:___:___:___	hot
8.	weak	___:___:___:___:___:___:___	strong
9.	ugly	___:___:___:___:___:___:___	beautiful
10.	fast	___:___:___:___:___:___:___	slow
11.	dishonest	___:___:___:___:___:___:___	honest
12.	hard	___:___:___:___:___:___:___	soft
13.	good	___:___:___:___:___:___:___	bad
14.	delicate	___:___:___:___:___:___:___	rugged
15.	angular	___:___:___:___:___:___:___	rounded

Job Applicant
with
MENTAL RETARDATION

1.	weak	___:___:___:___:___:___:___	strong
2.	fragrant	___:___:___:___:___:___:___	foul
3.	fast	___:___:___:___:___:___:___	slow
4.	ugly	___:___:___:___:___:___:___	beautiful
5.	heavy	___:___:___:___:___:___:___	light
6.	dishonest	___:___:___:___:___:___:___	honest
7.	small	___:___:___:___:___:___:___	large
8.	hard	___:___:___:___:___:___:___	soft
9.	passive	___:___:___:___:___:___:___	active
10.	good	___:___:___:___:___:___:___	bad
11.	sharp	___:___:___:___:___:___:___	dull
12.	angular	___:___:___:___:___:___:___	rounded
13.	cold	___:___:___:___:___:___:___	hot
14.	nice	___:___:___:___:___:___:___	awful
15.	delicate	___:___:___:___:___:___:___	rugged

Job Applicant
with
MENTAL ILLNESS

1.	dishonest	___:___:___:___:___:___:___	honest
2.	angular	___:___:___:___:___:___:___	rounded
3.	heavy	___:___:___:___:___:___:___	light
4.	delicate	___:___:___:___:___:___:___	rugged
5.	ugly	___:___:___:___:___:___:___	beautiful
6.	hard	___:___:___:___:___:___:___	soft
7.	fragrant	___:___:___:___:___:___:___	foul
8.	cold	___:___:___:___:___:___:___	hot
9.	sharp	___:___:___:___:___:___:___	dull
10.	small	___:___:___:___:___:___:___	large
11.	fast	___:___:___:___:___:___:___	slow
12.	passive	___:___:___:___:___:___:___	active
13.	nice	___:___:___:___:___:___:___	awful
14.	good	___:___:___:___:___:___:___	bad
15.	weak	___:___:___:___:___:___:___	strong

Appendix C

PERSONAL DATA SHEET
RESPONDENT SUMMARY

Number of Respondents: 60

Demographic Information

Age	#	%
18-24	1	1.7
25-34	25	41.7
35-44	19	31.7
45-54	13	21.7
55+	2	3.3
TOTAL	60	100.0

Sex	#	%
Male	16	26.7
Female	44	73.3
TOTAL	60	100.0

Education	#	%
Below High School Level	0	0.0
High School Graduate	1	1.7
Some College	19	31.7
College Graduate	24	40.0
Post-Graduate Studies	16	26.7
TOTAL	60	100.0

Size of Employer	#	%
0-49 Employees	11	18.3
50-199 Employees	12	20.0
200+ Employees	36	60.0
No response	1	1.7
TOTAL	60	100.0

Experience Level

Have Had Work-Related Contact with a Disabled Person

	#	%
Yes	53	88.3
No	7	11.7
TOTAL	60	100.0

Have Had Disability Awareness Training about Disabled Workers in the Workforce

	#	%
Yes	36	60.0
No	24	40.0
TOTAL	60	100.0

JOB APPLICANT	YES		NO		TOTAL	
Level of Contact with Disabled	#	%	#	%	#	%
Interviewed - Physical Disability	39	65.0	21	35.0	60	100.0
Hired - Physical Disability	28	46.7	32	53.3	60	100.0
Interviewed - Mental Retardation	16	26.7	44	73.3	60	100.0
Hired - Mental Retardation	10	16.7	50	83.3	60	100.0
Interviewed - Mental Illness	20	33.3	40	66.7	60	100.0
Hired - Mental Illness	13	21.7	47	78.3	60	100.0

Appendix D

Range and Frequency of Scores for "Evaluative Dimension" of Semantic Space

	FREQUENCY		
Range	Physical Disability	Mental Retardation	Mental Illness
12	0	0	1
13	0	0	2
15	0	0	1
16	0	0	2
17	0	2	0
18	4	3	4
19	2	7	5
20	11	10	17
21	4	9	1
22	7	4	2
23	7	3	3
24	5	4	2
25	4	3	4
26	3	5	1
27	5	3	0
28	2	1	4
29	1	2	2
30	2	1	2
31	0	2	0
32	2	0	1
35	1	1	0

Appendix E

Range and Frequency of Scores for "Potency Dimension" of Semantic Space

	FREQUENCY		
Range	Physical Disability	Mental Retardation	Mental Illness
8	0	1	1
9	1	0	0
11	0	2	3
12	2	1	0
13	0	0	2
14	0	2	0
15	1	1	0
16	6	0	2
17	10	5	5
18	4	7	5
19	10	10	8
20	12	17	17
21	5	4	6
22	2	2	4
23	4	3	4
24	0	2	0
25	1	3	3
26	1	0	0
28	1	0	0

Appendix F

Range and Frequency of Scores for "Activity Dimension" of Semantic Space

	FREQUENCY		
Range	Physical Disability	Mental Retardation	Mental Illness
6	0	1	0
8	0	0	1
10	0	2	2
11	1	1	0
12	0	1	1
13	1	3	1
14	1	0	3
15	0	5	0
16	3	6	2
17	4	6	2
18	7	9	6
19	11	6	10
20	11	10	19
21	5	3	2
22	5	1	2
23	6	2	3
24	0	0	3
25	1	4	0
26	1	0	3
37	2	0	0
30	1	0	0