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UNIVERSITY OF NORTHERN COLORADO

Greeley, Colorado

The Graduate School

TAIWANESE MASTER OF BUSINESS ADMINISTRATION
(MBA) STUDENTS' ATTITUDES TOWARD
PEOPLE WITH DISABILITIES

A Dissertation Submitted in Partial Fulfillment
of the Requirements for the Degree of
Doctor of Philosophy

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College of Natural and Health Sciences
School of Human Sciences
Human Rehabilitation

May 2012

This Dissertation by: Ying-Ting Huang

Entitled: *Taiwanese Master of Business Administration (MBA) Students' Attitudes
Toward People with Disabilities*

has been approved as meeting the requirement for the Degree of Doctor of Philosophy in
College of Natural and Health Sciences, School of Human Sciences, Program of Human
Rehabilitation

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ABSTRACT

Huang, Ying-Ting. *Taiwanese Master of Business Administration (MBA) Students' Attitudes Toward People with Disabilities*. Published Doctor of Philosophy dissertation, University of Northern Colorado, 2012.

The main objective of this study was to examine general and employability attitudes toward people with disabilities (PWDs) held by Taiwanese business graduate students (MBA) who were regarded as the potential and next generation of business representatives. Understanding Taiwanese MBA students' attitudes toward PWDs helped related vocational rehabilitation professionals to obtain a better understanding of how Taiwanese business graduate students were trained and educated in their employment and educational settings regarding PWDs. In addition, conducting this study allowed relevant specialists to examine Taiwanese business graduate students' future employment decisions regarding job applicants with disabilities.

The data were obtained from 116 Taiwanese business graduate students. The findings of the study demonstrated that the research participants' general and employability attitudes toward PWDs were both positive. However, the results also indicated that Taiwanese business graduate students received limited disability knowledge from their curricula or the workplace. This study presented valuable and rich information for Taiwanese vocational rehabilitation professionals who provide related services for PWDs. Finally, recommendations for future practice and research were discussed in further detail.

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CHAPTER I

INTRODUCTION

Employment is a central part of humans' lives. Having the opportunity to be employed is an important issue for almost everyone in today's society. Many themes related to employment have been studied for a long period of time. For example, some researchers have examined the meanings and definitions of employment, job, occupation, and work (Super, 1976; Szymanski et al., 2003). They agreed that these terms share similar concepts and some of these concepts overlap. Other researchers have studied whether the meanings of employment vary depending on individuals from particular cultural backgrounds (Szymanski et al., 2003) or whether employment opportunity can be influenced by different factors such as age, race, and gender (Gilbride & Hagner, 2005). Furthermore, some experts have examined methods that can be implemented to assist individuals with disabilities (Ryan, 2004) and without disabilities (Bolles, 2005) to identify their strengths, explore career options, and develop job and interview skills for future employment opportunities.

While many employment-related topics have been studied, the benefits of employment have also been recognized as one of the most important issues in this area. For example, researchers have agreed that employment allows people to obtain financial resources, gain health care benefits, promote self-esteem, build friendships, and establish social networks (Lin, 1998; Mitchell, Adkins, & Kemp, 2006; Racino, 1998). Since the

results of various studies have demonstrated that people can benefit from employment, other researchers have investigated the meanings as well as positive impacts of employment for people with disabilities (PWDs), especially in the field of vocational rehabilitation (Conyers, Koch, & Szymanski, 1998; Hawkins, 2004; Wehman, Brooke, & Revell, 2007; Wu, 1999).

In fact, related studies have pointed out that employment plays a significant role in assisting PWDs to live independently, gain financial stability, and establish social networks. For example, Priebe, Warner, Hubschmid and Eckle (1998) found that employment has significant advantages for people with schizophrenia in terms of their quality of life including their ability to earn a living and their satisfaction with work and leisure. In addition, Robinson (2000) reported that paid employment allows individuals with disabilities to improve their self-esteem as well as the quality of their lives. Lam and Rosenheck (2000) also discovered that employment has a significant influence on the well-being of individuals who are homeless with mental illnesses. Furthermore, researchers recognized that employment not only helps PWDs to improve their skills in the areas of communication and socialization but also allows them to gain financial independence, enhance self-esteem, and be included in their communities (Wehman et al., 2007). The studies mentioned above are clear evidence that persons with disabilities can benefit from employment in a variety of ways.

Realizing the importance of employment for people with disabilities, the U.S. government has enacted several pieces of legislation to protect the employment rights of this population over the past few decades. For example, the Rehabilitation Act of 1973 coordinates vocational rehabilitation and independent living programs in order to enhance

employability and independence of Americans with disabilities (Bruyere & Brown, 2003). In addition, the passage of the Americans with Disabilities Act of 1990 (ADA) not only protects PWDs from job-related discrimination in the public and private sectors, it also requires employers to provide reasonable accommodations to meet the needs of jobs performed by their employees with disabilities including work environment and equipment (Yell, 2006). Furthermore, the Workforce Investment Act (WIA) of 1998 incorporates workforce preparation and employment services into a one-stop system to ensure the needs of clients, including the population of people with disabilities, are met in a more convenient manner (Patterson, Bruyere, Szymanski, & Jenkins, 2005).

Employment-related laws passed by the U.S. government to support PWDs have inspired professionals from different countries including Taiwan. Many Taiwanese researchers have tried to compare disability-related legislation between the United States and Taiwan to gain a better understanding of how to improve the transition and employment services for Taiwanese with disabilities (Lin, 1998, 2003). The efforts of parents of children with disabilities also prompted the Taiwanese government to realize the importance of employment for PWDs (Lin, 2007). As a result of the influences of U.S. legislation and disability awareness movements supported by Taiwanese parents of children with disabilities, several important pieces of employment-related legislation to protect PWDs in the area of employment rights and work opportunities have also been passed by the Taiwanese government.

First, the Employment Services Act was enacted in 1992 (Council of Labor Affairs, Republic of China, Taiwan, 2005) to prevent employers from discriminating against job applicants and current employees because of their race, class, marital status,

and disability. In addition, the Taiwanese government passed the Regulations of Reward for Outstanding Institutions (enterprises) Employing the Disabled in 2007 (Laws and Regulations Database of the Republic of China, 2010c) to encourage companies to recruit people with disabilities by providing the monetary incentive and the opportunity that has been praised through media broadcasting. Most significantly, the reauthorization of the People with Disabilities Rights Protection Act 2007 (Laws and Regulations Database of the Republic of China, 2010b) required public and private organizations to hire specific numbers of employees with disabilities. Government sectors or private companies that failed to conform to this law would have to pay a monthly fine equal to the minimum monthly wage of hiring an individual with a disability (Liu, 2001).

While several milestone pieces of legislation have been mandated over the past years, different studies have indicated that the passage of employment-related legislation for PWDs has not significantly improved workforce participation in both countries. According to Burkhauser and Houtenville (2003), the employment rate among men and women with disabilities in the United States dropped from 41.6% to 33.9% and 34.2% to 33.3% from 1992 to 1999, respectively. Other research (Riley, 2006; Szymanski & Hershenson, 2005) and data obtained from the U.S. Department of Labor (U.S. Bureau of Labor Statistics, 2010) also confirmed that the employment rate of Americans with disabilities is still relatively low even after entering the new millennium. Correspondingly, the employment rate among Taiwanese with disabilities over the age of 15 and capable of working was 22.8% in 2007 (Council of Labor Affairs, Republic of China, Taiwan, 2009). The above statistics clearly indicate that a lower employment rate among PWDs is a prevailing phenomenon in both the United States and Taiwan.

Researchers in the United States have investigated the reasons that may lead PWDs to be unemployed or underemployed. Results of different studies have verified several major but common factors why PWDs are excluded from employment: (a) employers' negative attitudes and stereotypes toward hiring people with disabilities (Lengnick-Hall, 2007), (b) supervisors' and employees' negative attitudes toward their co-workers with disabilities (Freedman & Fesko, 1996), (c) educational achievement (Fogg & Harrington, 2004), (d) parental concerns about children's abilities in the labor market (Seligman & Darling, 2007), and (e) lack of transportation (Murphy & Rogan, 1995).

A report completed by the Council of Labor Affairs in Taiwan (2009) also recognized quite a few factors that contribute to PWDs having limited employment opportunities or being excluded from the workforce. Some reasons are very similar to those opinions of the U.S. researchers identified above: (a) negative stereotypes held by the general public toward people with disabilities, (b) poor relationships with their co-workers without disabilities, (c) weak health conditions, (d) lack of competencies in the current workforce, (e) lack of transportation, and (f) lack of proper educational backgrounds (Council of Labor Affairs, Republic of China, Taiwan, 2009).

From the above descriptions, it is clear that several reasons have been identified as major causes that limit employment opportunities of PWDs. However, many researchers have mentioned that negative attitudes held by employers toward hiring workers with disabilities are considered the most significant reason. For instance, Lengnick-Hall and Gaunt (2007) pointed out several reasons why employers might not recruit workers with disabilities; they felt PWDs possessed lower job performance and

productivity rates as well as a possible lack of necessary knowledge, skills, and abilities. In addition, Peck and Kirkbride (2001) mentioned the high costs of providing reasonable accommodations and additional supervision as significant factors that lead employers to hesitate hiring PWDs.

Comparably, a negative attitude toward hiring PWDs has been recognized as the major reason resulting in lower employment rates among Taiwanese with disabilities (Gao & Ho, 2005). Although the People with Disabilities Rights Protection Act (2007) states that government agencies and private business organizations must employ specific numbers of PWDs, some private enterprises in Taiwan still choose to pay the fines rather than recruit workers with disabilities. For example, in 2005, a large and well-known Taiwanese high-tech company decided to pay a monthly fine of approximately \$64,500 (U.S. dollars), equal to hiring about 130 employees with disabilities, rather than follow the hiring requirement (Zheng, 2005). In fact, choosing to pay a fine instead of hiring an individual with a disability is a common practice in Taiwan (Gao, 2005; Gao & Ho, 2005).

Negative attitudes held by employers toward hiring PWDs have attracted attention of rehabilitation researchers (Chan, Strauser, Gerverey, & Lee, 2010). To gain a better understanding of this issue, it is necessary to examine the relationship between peoples' attitudes toward a particular issue and their subsequent behavioral reactions toward that particular subject.

According to Ajzen (1985), one's intention, action, or behavior can be influenced by three major factors: attitude toward the behavior (consequences of the behavior), the subjective norm (social pressure to make or not to make a specific behavior), and the

perceived behavioral control (whether resources are enough to take a particular action). Most importantly, Ajzen and Fishbein (1980) mentioned that it is important to realize people's attitudes toward particular issues before predicting their future behavior or action toward those issues.

When implementing the above concepts to investigate employers' attitudes toward hiring PWDs, it is understandable that employers may choose not to employ PWDs due to their particular concerns toward PWDs, e.g., job competence, accommodation, reactions and/or conflicts of co-workers with and without disabilities, problem-solving assistance, and limited knowledge to assist workers with disabilities (Bolles & Brown, 2001; Colella, 2001; Lengnick-Hall, 2007; Millington, Miller, Asner-Self, & Linkowski, 2003). Unfortunately, similar concerns held by employers toward the issue of hiring PWDs have been mentioned by researchers in Taiwan (Council of Labor Affairs, Republic of China, Taiwan, 2009) and in the United States (Ainsworth & Baker, 2004, Lengnick-Hall & Gaunt, 2007).

Due to the above reasons, many rehabilitation researchers believe that assisting employers in dealing with these concerns will enhance their hiring practices toward PWDs in a more positive direction, thus increasing employment opportunities for PWDs (Chan et al., 2010). As a result, relevant studies have been conducted to examine attitudes of employers toward employing PWDs and/or to explore what kinds of concerns employers may have toward current and/or future employees with disabilities (Fraser et al., 2009; Levy, Jessop, Rimmerman, & Levy, 1992; Olson, Cioffi, Yovanoff, & Mank, 2001). The major goals of these studies were to investigate what kinds of assistance

rehabilitation professionals could provide to facilitate and improve their services to meet the needs of employers while also increasing their willingness to hire PWDs.

Statement of Problem

Many rehabilitation professionals agree that employers' negative attitudes toward PWDs are one of the major factors that limits job opportunities among this population. However, other related researchers question whether employment decisions are truly made by employers themselves, e.g., owners and chief executive officers. For instance, Millington, Miller, Asner-Self, and Linkowski (2003) mentioned that staff in several management or human resource positions functioned in employers' roles in terms of selecting, recruiting, training, and supporting employees with or without disabilities in many business organizations. Those positions may include managers, department heads, and supervisors. Therefore, it is highly possible that attitudes toward PWDs held by those managerial professionals may also have significant influences on employment opportunities for individuals with disabilities.

This idea is supported by other rehabilitation researchers who have explored the issue of employers' attitudes toward workers with disabilities. For example, Copeland, Chan, Bezyak, and Fraser (2009) examined affective reactions of employers toward PWDs in the workplace. Their research participants were composed of business owners, presidents, chief executive officers (CEOs), human resource professionals, managers, supervisors, and other experts responsible for hiring and firing practices. Similarly, research participants from a U.S. national study conducted to examine employers' perceptions of their employees with mental retardation were not only from owners, CEOs, and presidents but also from human resource personnel, managers, and board

members (Olson et al., 2001). Furthermore, in a study conducted to explore the attitudes of Fortune 500 executives toward individuals with severe disabilities and their employability, questionnaires were distributed to vice presidents of human resources, personnel directors, human resources managers, or other equivalent officers in those enterprises (Levy et al., 1992).

Since persons in those managerial positions might have control in making employment decisions, their attitudes toward PWDs might be better predictors of their hiring preferences toward job applicants with disabilities (Brostrand, 2006). As a result, some researchers examined the attitudes of undergraduate human resource management students, the future generation of management representatives, toward persons with disabilities (Satcher & Dooley-Dickey, 1992). Several studies have examined the attitudes of undergraduate business students toward PWDs in order to predict their future employment decisions associated with job applicants with disabilities (Albritton, 2005; Hunt & Hunt, 2000). By examining attitudes of undergraduate business students toward human disability, researchers can gain a better understanding of the students' future decisions and behaviors in hiring and interacting with PWDs and also determine whether it is necessary to promote disability awareness among business students (Loo, 2001).

While examining the attitudes held by those future business professionals toward PWDs has been an important issue in the area of vocational rehabilitation, scarce research has been conducted to examine the attitudes held by Master of Business Administration (MBA) degree students toward similar or the same issues including Taiwanese MBA students. Unlike undergraduate business students who may change their career paths or need to obtain several years of work experience in order to become managers or related

professionals qualified for employment decision-making, graduate business students may already have or plan to pursue those managerial positions. Therefore, examining the general and employability attitudes toward PWDs held by MBA students would be more appropriate to predict the future hiring practices and interaction patterns toward the population of people with disabilities. It might also allow rehabilitation researchers to obtain information about how those future managerial professionals were trained and educated about people with disabilities in their employment and education settings.

Significance of the Study

Three major factors made this study necessary and significant. First, researchers have indicated that examining attitudes of business students toward PWDs might help rehabilitation and related professionals to obtain a better understanding of how they were trained and educated about people with disabilities in their workplaces or educational settings (Hunt & Hunt, 2000). It might also allow researchers to predict business students' future interactions and hiring patterns toward PWDs (Albritton, 2005; Satcher & Dooley-Dickey, 1992). However, the researcher in this study decided to examine attitudes toward PWDs held by graduate business students because they are the true representatives of future business leaders.

Unlike undergraduate business programs, the majority of master's degree programs in business administration (MBA) are specifically designed for training graduate students to be better managers and leaders; potential applicants must have at least several years of work experience before entrance into the program (Frank-Pedersen, 2000; Ng, Burke, & Fiksenbaum, 2008). Therefore, examining general and employability attitudes of business graduate students toward the issue of human disability

was a more appropriate method to predict interaction patterns and hiring practices of future business representatives toward PWDs since most MBA students are already or preparing to be in charge of making employment and related decisions.

Second, Western references have indicated that employers tend to have positive attitudes toward PWDs in general; however, limited actions have been taken during hiring practices (Hernandez, Keys, & Balcazar, 2000). Other researchers have also mentioned that general attitudes of employers toward PWDs are usually positive (Christman & Slaten, 1991) while their attitudes toward employing practices may not be as positive (Chan, Strauser, Maher, et al., 2010). This might be caused by concerns about job accommodation, work competence, and expenditures on health insurance of workers with disabilities (Hill, Livermore, & Houtenville, 2003; Lengnick-Hall & Gaunt, 2007). As a result, to obtain a better understanding of whether people tend to have varied attitudes toward PWDs in different situations, the researcher found it necessary to examine both general and employability attitudes toward PWDs held by Taiwanese MBA students. This allowed the researcher to determine whether the contradictory attitudes between general and employability outlooks toward PWDs existed but also examined whether this phenomenon could be found in different cultural contexts.

Finally, as mentioned previously, the Taiwanese government has passed several significant pieces of disability-related legislation to support the needs of PWDs in the areas of education, vocational rehabilitation, and employment (Bureau of Employment and Vocational Training, Republic of China, Taiwan, 2010; Kang, Lovett, & Haring, 2002; Ministry of Education, Republic of China, Taiwan, 1998). The main goals of the passage of the disability-related legislation were not only to assist PWDs in receiving

education and live and work in inclusive settings but also to enhance disability awareness among the public. However, it is unknown whether the passage of disability-related legislation has increased disability awareness and improved the attitudes of Taiwanese people toward PWDs due to having contact with PWDs in different settings. Therefore, investigating the general and employability attitudes toward PWDs held by Taiwanese MBA students provided the researcher with the opportunity to examine whether or not the attitudes of Taiwanese people toward PWDs have changed in a more positive direction and how they view individuals with disabilities in the workplace.

Purpose of Study

The focus of this study was to examine the attitudes of Taiwanese MBA students, the future generation of business representatives, toward people with disabilities (PWDs). Two major objectives of the study are discussed: (a) to examine the general attitudes of Taiwanese MBA students toward PWDs; this allowed the researcher to find out their current perspectives toward PWDs and (b) to explore employability attitudes of Taiwanese MBA students toward the same population. This helped the researcher obtain a better understanding of how they were trained and educated in their employment and educational settings regarding the employability of PWDs. The results of the study allowed the researcher to determine whether it is necessary to incorporate disability awareness programs into MBA curricula as well as in workplace settings.

Research Questions

Major research questions were designed to guide the purposes of this study. Several personal demographic characteristics (gender, age, and previous contact experience) were also utilized as independent variables to examine whether the attitudes

of Taiwanese MBA students differed due to those factors. The following research questions were asked in this study:

- Q1 How do the general attitudes of Taiwanese MBA students toward PWDs compare to their attitudes regarding employability of PWDs?
- Q2 How do age, gender, and previous contact experience of Taiwanese MBA students affect their attitudes regarding the employability of PWDs?

Delimitations

The primary intention of delimitation is to narrow the scope of a study including specifying the research participants and research methods (Rudestam & Newton, 2007). Several delimitations were developed due to the nature of this study. First, this study examined the general and employability attitudes of Taiwanese MBA students toward the population of people with disabilities. Thus, the research participants were all enrolled in MBA degree programs at universities in Taiwan when the study was conducted. Second, since students who enroll in MBA degree programs might come from different countries, people from varied cultural backgrounds might possess diverse attitudes toward PWDs and related issues (Lamorey, 2002; Liu, 2005; Sotnik & Jezewski, 2005). Therefore, the researcher recruited only Taiwanese MBA students for this study; their attitudes and opinions toward PWDs were truly based on general Taiwanese perspectives.

Finally, the researcher used two survey instruments as the major research methods to collect data in this study. The Scale of Attitudes Toward Disabled Persons (SADP; Antonak, 1982), one of the most widely used instruments to measure the general attitudes toward PWDs, was implemented to discover the general attitudes toward PWDs held by the research participants. In addition, the Attitudes Toward the Employability of Persons with Severe Handicaps Scale (ATEPSH; Schmelkin & Berkell, 1989) was utilized to

investigate the employability attitudes of research subjects toward the population of individuals with disabilities. These two scales were specifically used in the study because they were the most appropriate for the design of this research. Detailed information of these two survey instruments is discussed in Chapter III.

Assumptions of the Study

The primary underlying assumptions for this study were as follows:

1. The two instruments utilized in this research study accurately measured general and employability attitudes of Taiwanese MBA students, respectively, since both of these survey instruments were proven to be reliable, valid, and trustworthy.
2. The Taiwanese MBA students who participate in the study answered the survey questions honestly since they were not required to put their names on the survey sheets.
3. Although the research participants were recruited by professors or instructors, the students participated in the study voluntarily since their survey sheets indicated their right to withdraw from participation.

Definition of Terms

Attitude. Numerous definitions and concepts of attitudes can be found in various references. According to Noe (1999), attitude is defined as “a combination of beliefs and feelings that predispose a person to behave a certain way” (p. 79). Similarly, Ajzen (1993) describes attitude as an “individual’s disposition to react with a certain degree of favorableness or unfavorableness to an object, behavior, person, institution, or event” (p. 41). In this present study, examining general and employability attitudes toward PWDs held by Taiwanese MBA students was the main focus.

Disability. In the United States under the Americans with Disabilities Act (ADA; 1991), a person with a disability refers to any person who (a) has a physical or mental impairment that substantially limits one or more of the major life activities, (b) has a record of such an impairment, or (c) is considered as having such an impairment (Osborne & Russo, 2006). Major life activities might include breathing, seeing, walking, hearing, performing manual tasks, and caring for oneself (Daugherty, 2001).

In Taiwan under the People with Disabilities Rights Protection Act of 2007, PWDs refer to people who have at least one of the following losses due to their physical or mental impairments: (a) mental functions and structures of the nervous system; (b) sensory functions and pain involved in eye, ear, and related structures; (c) functions and structures of voice and speech; (d) functions and structures related to the cardiovascular, hematological, immunological, and respiratory systems; (e) functions and structures associated with the digestive, metabolic, and endocrine systems; (f) functions and structures related to the genitourinary and reproductive systems; (g) neuromusculoskeletal and movement related functions and structures; and (h) functions and related structures of the skin (Laws and Regulations Database of the Republic of China, 2010b).

Employer. Refers to “an individual, company, or government body that pays somebody wages to work for them” (Black, 1997, p. 145). In some studies with regard to employers’ attitudes toward PWDs, employers were human resource professionals, program directors, and/or managers responsible for employment decisions and recruitment (Levy et al., 1992; Millington et al., 2003).

Employment. When people spend a certain number of hours per week in a paid position, it is regarded as being employed (Super, 1976). Herr, Cramer, and Niles (2004) further described employment as “[an] occupational structure [in] which one’s employability potential can be realized” (p. 115).

Employment rate. According to Kaye (2003), the employment rate means “the ratio of the number of employed persons to the total population, with both numerator and denominator restricted to working-age adults” (p. 9).

MBA. This abbreviation represents the Master of Business Administration Degree. Basically, many MBA programs are specifically designed for people who plan to pursue a master’s degree in business, management, and/or related administration fields to succeed at managerial or executive levels. Several business foci under MBA programs meet interests of prospective students including international business, finance, management, marketing, accounting, and human resources (Baruch, 2009; Frank-Pedersen, 2000).

Reasonable accommodation. Under Title I of the ADA (1991), employers must provide reasonable accommodation for people with disabilities to help them successfully integrate into the process of employment. Providing PWDs with reasonable accommodation is regarded as a form of nondiscrimination but is determined on a case-by-case basis. According to Bruyere and Brown (2003), “reasonable accommodation is a modification or adjustment to a job, the work environment, or the way things usually are done that enables a qualified individual with a disability to enjoy an equal employment opportunity” (p. 36). Examples of reasonable accommodation may include restructuring the job, making the workplace accessible, and modifying work schedules and related

equipment (Inge & Targett, 2007). Reasonable accommodation was not addressed in Taiwan legislation.

Summary

Employment is an important issue for people with and without disabilities. In this chapter, the advantages of employment for PWDs were discussed in detail. Employment-related legislation passed by the United States and the Taiwanese governments to support PWDs in terms of their workforce participation was also presented. Although employment-related laws for supporting PWDs have been enacted, these laws have not significantly increased employment rates of Taiwanese with disabilities (Council of Labor Affairs, Republic of China, Taiwan, 2009). Negative attitudes held by employers toward PWDs are still regarded as one of the most important reasons causing lower employment rates among PWDs (Zheng, 2005). As a result, this investigation examined attitudes toward PWDs held by Taiwanese MBA students, the potential or future business representatives, to obtain a better understanding of how their views toward PWDs predicted their interaction patterns and hiring practices.

CHAPTER II

REVIEW OF THE LITERATURE

Introduction

In this chapter, a comprehensive literature review was conducted to help readers obtain a better understanding of how employment opportunities of people with disabilities (PWDs) are influenced by related legislation and social contexts. In addition, the importance of examining attitudes of employers and students toward PWDs is explained in detail to make readers aware of the necessity for this study. There were eight focus areas in this chapter: (a) employment legislation for PWDs in the United States, (b) employment legislation for PWDs in Taiwan, (c) common barriers of employment opportunities among PWDs, (d) employers' attitudes toward PWDs, (e) students' attitudes toward PWDs, (f) factors that influence attitudes toward PWDs, (g) instruments of attitude measurement toward PWDs, and (h) research framework.

Employment Legislation for People with Disabilities in the United States

Many researchers have mentioned that people with disabilities (PWDs) can benefit from employment. Several advantages of employment for PWDs have been identified: (a) being independent in the economy, (b) improving quality of life, (c) enriching self-esteem, and (d) building friendships (Berry & Hardman, 1998; King, 1993; Robinson, 2000; Wehman et al., 2007). Since employment can be a significant means to

assist PWDs to fully participate in the society in which they live, several pieces of legislation related to employment for PWDs have already been mandated by the U.S. government over the past few decades. The most prominent legislation for supporting employment rights and opportunities for PWDs include the Rehabilitation Act of 1973, the Individuals with Disabilities Education Act (IDEA), the Americans with Disabilities Act (ADA), the ADA Amendment Act of 2008, the Workforce Investment Act of 1998 (WIA), and state and federal Workers' Compensation (WC) laws. The primary intentions of those pieces of legislation were to provide PWDs and injured workers with proper vocational training and/or services, assist them to successfully integrate into the labor market, ensure their equal opportunities and rights in the area of employment, and provide protection from job discrimination (DeLeire, 2003; Yell, 2006).

The Rehabilitation Act of 1973 was one of the earliest pieces of legislation supporting PWDs in the area of employment. There are several sections under this legislation: Sections 501, 503, 504, and 508; each section was designed with specific functions for protecting PWDs. For example, Section 501 “requires affirmative action and nondiscrimination in employment by federal agencies of the executive branch” (Bruyere & Brown, 2003, p. 33). In addition, Section 503 “prohibits employment discrimination against PWD by federal government contractors and subcontractors with contracts of \$10,000 or more” (Patterson et al., 2005, p. 43).

While Sections 501 and 503 ensure equal employment opportunities for PWDs at the federal level, Section 504 is one of the most influential regulations under the Rehabilitation Act of 1973. For example, Section 504 sets the definitions of people with disabilities, which are now the fundamental criteria for PWDs under the ADA (Bruyere

& Brown, 2003). Section 504 also regulates that any programs or activities receiving federal financial assistance cannot discriminate against PWDs by excluding their participation (Jasper, 2004; Russo & Osborne, 2008).

Section 508 establishes requirements related to the rights of technology usage for PWDs. For instance, according to Ainsworth and Baker (2004), Section 508 regulates that “[any] federal electronic and information technology [must] be accessible to PWDs, including employees and members of the public” (p. 177). Thus, any type of technology available to the public must also be accessible to PWDs including copiers, phone systems, fax machines, and computer hardware and software (Bruyere & Brown, 2003). This ensures that PWDs can fully participate in their daily activities as can those without disabilities. From the descriptions above, it is clear that the major intentions of these regulations under the Rehabilitation Act of 1973 are to provide PWDs with equal employment opportunities in the labor market as well as to enhance their capacity to live independently (Bruyere & Brown, 2003).

Another law associated with employment for PWDs is the Individuals with Disabilities Education Act (IDEA). This law originated from the Education for All Handicapped Children Act (EAHCA) of 1975 and was renamed as IDEA in 1990 (Cronin, Patton, & Lock, 2004). Unlike the Rehabilitation Act of 1973, the purpose of the IDEA was to provide related support and assistance for PWDs, specifically in the area of education. However, under the requirement of the IDEA, students with disabilities must be provided an Individualized Education Program (IEP) in which their transitional needs, plans, and related services should be clearly written and outlined when they reach age 16 (Osborne & Russo, 2006).

According to Wehman (2006), those transitional plans should include several important services such as providing post-secondary education, offering vocational training, examining employment options, and providing training in independent living skills. The primary goals of this requirement under the IDEA were to equip students with disabilities to be well-prepared for their future lives after school. Most significantly, the U.S. government realized that providing early vocational services and training would be the most efficient method to assist students with disabilities in developing necessary skills for future employment and independent living abilities.

However, the most significant regulation for protecting PWDs from discrimination in employment is the Americans with Disabilities Act (ADA), which was mandated in 1990 (Hotchkiss, 2003). The ADA is comprised of five major titles and is considered a comprehensive law that supports PWDs in many areas:

- Title I rules that it is unlawful to discriminate against qualified PWDs in the area of employment and requires employers with 15 or more employees to provide reasonable accommodation for their workers with disabilities so they can perform their jobs (Bruyere & Brown, 2003).
- Title II regulates that state and local governments must provide PWDs with equal opportunities to access and benefit from programs or services such as public education, transportation, and social services (Latham, Latham, & Mandlawitz, 2008; Yell, 2006).
- Not only does the ADA provide equal opportunities in employment and social service programs for PWDs, it also requires that common services available to the general public must also be accessible to individuals with disabilities. For

example, Title III protects PWDs from discrimination in the areas of goods, services, or any types of public accommodation such as hotels, restaurants, theaters, etc. (Riley, 2006).

- Title IV requires that phone companies provide related telecommunication services for people with speech and hearing disabilities (Huefner, 2006; Patterson et al., 2005).
- Title V is involved in miscellaneous provisions for supporting PWDs, such as the issuance of guidelines for historical locations and a study of the wilderness (Patterson et al., 2005; Yell, 2006).

The ADA Amendment Act of 2008 has further provided increased protections from discrimination for PWDs (Job Accommodation Network, 2011). For example, while the new amendment maintains the ADA's basic definition of a disability, it has expanded the definition of major life activities to include "caring for oneself, performing manual tasks, seeing, hearing, eating, sleeping, walking, standing, lifting, bending, speaking, breathing, learning, reading, concentrating, thinking, communicating, and working" (U.S. Equal Employment Opportunity Commission, 2011, p. 1). In addition, the Act added major bodily functions as a new category under major life activities. These major bodily functions are defined as the "immune system, normal cell growth, digestive, bowel, bladder, neurological, brain, respiratory, circulatory, endocrine, and reproductive functions" (U.S. Equal Employment Opportunity Commission, 2011, p. 1). Related health professionals need to take into considerations these bodily functions when determining whether an individual has a disability.

Furthermore, the Act requires related professionals to ignore the beneficial effects of any mitigating measures when determining whether one has a disability that substantially limits major life activities. Most significantly, regardless of whether a person's disability condition is episodic or in remission, professionals need to determine one's limitations only when the condition is in an active situation. According to the U.S. Equal Employment Opportunity Commission (EEOC; 2011), "The definition of disability in this [Amendment] Act shall be construed in favor of broad coverage of individuals under this Act, to the maximum extent permitted under the terms of the Act" (para. 4a). Thus, more people with various levels of disabilities will be protected under the new amendment. The above descriptions of the ADA and its Amendment Act of 2008 show that the ADA is the most thorough legislation supporting and protecting employment rights, work opportunities, and related social services for PWDs in U.S. history.

In addition to the legislation mentioned above, the Workforce Investment Act of 1998 (WIA) is another related piece of legislation for PWDs in terms of their employment. The main concept of the WIA is to establish one-stop career centers that provide employment services and related programs for job seekers with and without disabilities (Patterson et al., 2005). One of the primary intentions of the WIA is to improve the collaboration between state vocational rehabilitation (VR) programs and other related local workforce services so clients can receive better information and proper services in a more effective way and in a more convenient location (Bruyere & Brown, 2003). Through participating programs specifically designed and established under the WIA, PWDs can obtain relevant employment services that allow them to acquire necessary information for rejoining the workforce.

Finally, state workers' compensation (WC) laws provide additional employment-related legislation for PWDs. Under this legislation, rehabilitation service and health care should be provided to employees who suffer from work-related injuries (Fabian & MacDonald-Wilson, 2005). In addition, injured workers are given relevant medical services and some reimbursement for lost wages (Bruyere & Brown, 2003; Fabian & MacDonald-Wilson, 2005; Patterson et al., 2005). Employers fund this program and the state distributes the benefits to those who qualify (Fabian & MacDonald-Wilson, 2005). Unlike state workers' compensation laws, people who work for the federal government or agencies are protected under the federal workers' compensation law--the federal employees' compensation act (FECA)--that ensures appropriate benefits if injured on duty (U.S. Department of Labor, 2011).

Employment Legislation for People with Disabilities in Taiwan

In the 1990s, the Taiwanese government began to protect individuals with disabilities from employment discrimination as compared to the U.S. government, which has been doing so since the early 1970s. The government has made numerous efforts to enable PWDs to live independently due to the inspiration of U.S. disability-related legislation and the disability awareness movement supported by parents of children with disabilities (Lin, 2003, 2007). As a result, several influential pieces of legislation to protect employment rights and opportunities for PWDs have been passed by the Taiwanese government.

The most significant ones include the People with Disabilities Rights Protection Act of 2007, the Enforcement Rules to the Act of Special Education of 2003, and Regulations of Reward for Outstanding Institutions (enterprises) Employing the Disabled.

Each of these pieces of legislation is designed with specific functions to protect PWDs with regard to their employment rights, opportunities, and related vocational services. The objectives of these laws are very similar to those passed by the U.S. government: ensuring equal employment rights and opportunities for PWDs, protecting PWDs from job-related discriminations, and assisting students with disabilities to receive appropriate job training and skills to prepare for independently living after graduation.

The People with Disabilities Rights Protection Act of 2007 (Laws and Regulations Database of the Republic of China, 2010b) is considered one of the most important laws in supporting PWDs with regards to employment. The original name of this law was the Protection Act for the Handicapped and Disabled of 1997; it has been amended several times and was renamed the People with Disabilities Rights Protection Act of 2007. One of the articles under this legislation illustrates how the government's regulations can promote employment opportunities for PWDs. According to Article 38 (Laws and Regulations Database of the Republic of China, 2010b), the law requires that

any given government department (agency/organization) of individual levels, public school, or public business agency/organization/institution whose total number of employees is no less than 34 shall employ people with disabilities with capability to work and the number of employees with disabilities shall be no less than 3 percent of the total number of the employees. Any given private school, association, or private business /agency/organization/institution whose total number of employees is no less than 67 shall employ people with disabilities with capability to work and the number of employees with disabilities shall be no less than 1 percent of the total number of the employees, and no less than 1 person.
(p. 14)

In addition to the above requirements, this legislation also stipulates that any agency or organization that does not employ the required number of PWDs must pay a monthly penalty equal to the monthly wage of employing a person without a disability

(Liu, 2001). The amount of the fine would be dependent on the differences in the number of employees with disabilities required to be hired and then multiplied by the monthly basic wage. Those collected fines are directly deposited in the Disabled Employment Funds, which subsidizes the organizations to purchase equipment and/or to modify facilities if they have hired PWDs and awards grants to organizations that employ PWDs over the requirement (Laws and Regulations Database of the Republic of China, 2010b). Passage of this law indicates that the Taiwanese government has endeavored to increase employment opportunities for PWDs.

Understanding the importance of early career exploration and job training, the Taiwanese government also enacted other significant legislation including the Enforcement Rules to the Act of Special Education (2008), which specifically focuses on providing employment skill training and transitional services for students with disabilities. This legislation was first passed in 1987 and has been revised several times; its updated version was promulgated in 2003 and enacted in 2008 (Laws and Regulations Database of the Republic of China, 2010a). The primary goal of the updated version is to include vocational services and programs in students' individual educational plans (IEPs). The main intentions are to help students with disabilities identify their career interests as early as possible and to assist them in obtaining related vocational services and training that can help them enter the labor market successfully after their graduation (Laws and Regulations Database of the Republic of China, 2010a).

For example, the legislation clearly states that IEPs should include services or programs that can assist students with disabilities in improving their communication, social, and self-help skills. In addition, transitional services and plans for students with

disabilities should be addressed in their IEPs with participation and agreement of paraprofessionals and parents. Most significantly, Article 18 under this act requires that transitional services must include counseling services to address several important issues: examine future opportunities to be admitted into higher education, improve basic independent living skills, identify career interests and abilities, explore future employment options, and locate related social services (Lin & Li, 2000). These requirements demonstrate that early vocational rehabilitation services and related programs have been offered to students with disabilities because of the amendment to the Enforcement Rules to the Act of Special Education in 2003.

Finally, another significant piece of legislation in supporting employment opportunities for Taiwanese with disabilities is Regulations of Reward for Outstanding Institutions (enterprises) Employing the Disabled (Laws and Regulations Database of the Republic of China., 2010c), which was promulgated in 2007. Similar to the People with Disabilities Rights Protection Act (Laws and Regulations Database of the Republic of China., 2010cb), the major purpose of this legislation was to encourage employers to hire PWDs. Under this legislation, enterprises that hire individuals with disabilities are rewarded by the government if at least 5% of their total employees consist of PWDs. Those awards might include a medal, a trophy, or additional monetary bonuses. In addition, the awarded enterprises are praised and recognized as national role models of outstanding enterprises (Laws and Regulations Database of the Republic of China, 2010c; Lin, 2007).

Common Barriers of Employment Among People with Disabilities

As mentioned previously, both the United States and the Taiwanese governments have passed several important pieces of employment-related legislation for protecting and supporting PWDs in terms of their employment rights and opportunities. However, the outcomes of enacting a series of employment-related legislation have not necessarily produced significant results in increasing employment participation among people with disabilities, both in the United States and Taiwan.

For example, the National Organization on Disability (NOD) and Harris Survey reported that the employment rate of Americans without disabilities in 2004 was 78% in comparison to the employment rate of 35% for the population with disabilities (National Organization on Disability, 2004). Unfortunately, recent studies have found that a low employment rate among Americans with disabilities is still a consistent phenomenon. According to the U.S. Bureau of Labor Statistics (2010), the employment rate of PWDs in the United States was 19.2% in 2009. Similarly, a low workforce participation rate among Taiwanese with disabilities has been recognized as a prevailing phenomenon by the Taiwanese government. For instance, a study conducted by the government showed that employment rates of Taiwanese with disabilities who reached age 15 and were able to work was about 19% in 2004 and 21% in 2006, slightly increasing to 23% in 2007 (Council of Labor Affairs, 2009).

Since passage of employment-related legislation has not effectively nor significantly increased employment rates among PWDs in both countries, researchers have tried to find out what kinds of factors prohibit PWDs from obtaining employment opportunities and accessing the labor market. Several factors that can explain the low

employment rates among PWDs include (a) employers' adverse hiring practices due to concerns of job accommodation, modification, and post-placement supervision (Ainsworth & Baker, 2004; Gilbride & Hagner, 2005; Lengnick-Hall & Gaunt, 2007; Murphy & Rogan, 1995; Peck & Kirkbride, 2001); (b) negative attitudes of nondisabled supervisors and employees toward their co-workers with disabilities (Council of Labor Affairs, 2009; Freedman & Fesko, 1996; Riches & Green, 2003); (c) educational achievements, age, and gender of PWDs (Cook, 2006; Fogg & Harrington, 2004); (d) the lack of transportation (Council of Labor Affairs, 2009; Murphy & Rogan, 1995); (e) negative stereotypes held by the general public toward PWDs (Council of Labor Affairs, 2009; Reid & Green, 2007; Turner, Barrett, & Webster, 1998); and (f) lack of job skills and competence of PWDs (Fabian, Luecking, & Tilson, 1994; Lengnick-Hall & Gaunt, 2007).

From the description above, it is understandable that several major factors might influence employment opportunities and outcomes of PWDs: negative attitudes of employers, supervisors, and employees without disabilities and the individual's job skills and competency, achievements, employment provisions, employability, and work environment. However, these barriers make passing employment-related legislation difficult for supporting PWDs in obtaining and maintaining jobs. As a result, some researchers have studied strategies that can be implemented to assist PWDs in improving their work competency and job seeking skills (Gilbride & Stensrud, 2003; Ryan, 2004).

In contrast, other researchers have focused their efforts on assisting employers in solving their concerns with regard to hiring PWDs, e.g., attitudes toward PWDs in the workplace, job accommodations, financial concerns, and conflicts between workers with

and without disabilities (Chan, Strauser, Gervev, et al., 2010; Copeland et al., 2009; Gilbride & Stensrud, 2003). Nevertheless, it is clear there is no single solution to assist PWDs in acquiring employment opportunities or helping them retain their jobs.

Employers' Attitudes toward PWDs

Employers have significant influence on hiring and supporting PWDs in terms of their work opportunities and related assistance, e.g., providing reasonable accommodations and job modifications (Olson et al., 2001). Researchers agree that negative attitudes held by employers toward PWDs can influence employment rates and opportunities for this population (McFarlin, Song, & Sonntag, 1991; Peck & Kirkbride, 2001; Zheng, 2005). Since employers' attitudes toward PWDs might influence workforce participation rates of this population, researchers have conducted relevant studies to ascertain the primary concerns influencing hiring practices of employers (Diksa & Rogers, 1996; Johnson, Greenwood, & Schriener, 1988; Levy et al., 1992).

Several issues need clarification when examining employers' attitudes toward hiring PWDs. The first issue is to understand the definition of attitudes. The second issue is to examine how attitudes might influence employers' decisions in supporting or hiring current and/or prospective workers identified with disabilities. The third issue is to study whether employment decisions toward PWDs are truly made by employers themselves or other professionals such as management and/or human resource professionals who make decisions in selecting, recruiting, training, and supporting future employees.

Over the past few decades, researchers have offered numerous definitions of attitudes. For example, an attitude can be explained as "an idea charged with emotion

which predisposes a class of actions to a particular class of social situations” (Triandis, 1971, p. 2). Similarly, McGuire (1985) described attitude as “a mediating process grouping a set of objects of thought in a conceptual category that evokes a significant pattern of responses” (p. 239). Eagly and Chaiken (1993) further defined attitude as “a psychological tendency that is expressed by evaluating a particular entity with some degree of favor or disfavor” (p. 1). Finally, some researchers who have specialized in attitude research have found complicated interrelationships between attitudes, opinions, values, and behaviors (Antonak & Livneh, 1988). Thus, it is difficult to examine those concepts individually. The description above implies that hundreds of explanations of attitudes may exist in varied references. As a result, a universal definition of attitude is not currently available.

In addition to definitions of attitudes, the origins of attitudes have been examined extensively by many researchers. For instance, some researchers have mentioned that an attitude can be formed through beliefs, learned from life experiences, or established through the interactions with other people, life events, or specific objects (Antonak & Livneh, 1991). Ajzen (1993) stated that people’s attitudes are formed by their beliefs and are consistent over time.

While explanations for the origins of attitude are different, some researchers have agreed that a specific attitude held by an individual may guide him/her to behave or to respond to particular situations or objects in specific ways (Albert, Aschenbrenner, & Schmalhofer, 1989). For instance, Albarracin, Johnson, Zanna, and Kumkale (2005) mentioned that attitudes can influence people’s beliefs, affect, and behavior. Other researchers have found that behavior can be an expressive function of latent attitudes held

by people (Roth & Upmeyer, 1989). Thus, it is clear that a specific attitude held by an individual might influence his/her opinions and/or behaviors toward particular objects, people, and events in specific situations. However, when examining employment opportunities among individuals with disabilities, it is not difficult to realize why some employers could be hesitant, might hold negative attitudes, or have negative hiring practices toward job seekers with disabilities.

Typically, the majority of employers are concerned about maximizing profits and minimizing costs (Millington et al., 2003). Unfortunately, hiring PWDs is considered one of the primary factors that could limit employers from making profits (O'Brien, 2001). For example, Lengnick-Hall (2007) mentioned that PWDs are usually considered by employers as workers who may cost more in insurance claims, have more casualties at work, be less productive, and have limited job skills and abilities when compared to others without disabilities. Similar concerns held by employers toward hiring PWDs can be found in several references (Johnson et al., 1988; McFarlin et al., 1991). Furthermore, some employers are especially worried about workers with psychiatric disabilities, e.g., symptoms of disabilities, behavior manifestations of such disabilities, and their medication effects (Diksa & Rogers, 1996).

These concerns held by employers toward PWDs are not limited to the workplace. Some researchers have indicated that PWDs are usually viewed by the general public or employers as less valued than persons without disabilities. PWDs are often stereotyped as dependent, isolated, depressed, and emotionally unstable (Chou & Palley, 1998; John & McLellan, 1988). Similarly, people with intellectual disabilities, such as mental retardation or mental illness, are considered to be less stable (Corrigan et al., 2000).

Thus, it is understandable that PWDs would be commonly viewed as individuals who are unable to function like other workers without disabilities. As a result, making decisions in recruiting or hiring job seekers with disabilities could be a potentially neglected or avoidance issue among employers.

While employers may view PWDs negatively, specifically in terms of their job competence, the results of many studies have indicated that concerns held by employers toward this population might not be correct. For example, research done by McFarlin and his colleagues (1991) found that attitudes of employers toward their workers with disabilities tended to be more positive, specifically on issues of work performances, low turnover rates, and regular attendance. Similarly, Morgan and Alexander (2005) conducted a study to investigate attitudes of employers toward their employees with developmental disabilities; the employers indicated that their workers with disabilities had consistent attendance, did high quality work, and were highly productive.

The conclusions of the above two studies illustrate that workers with disabilities can function well and are comparable to other workers without disabilities. However, for those employers who might not have interacted with workers with disabilities, their negative beliefs and attitudes toward PWDs in terms of lower job competence might not be easily changed. If most employers possess similar concerns about job seekers with disabilities regarding low job competency and low productivity, their negative stereotypes toward PWDs will hinder this population from obtaining employment opportunities.

While examining employers' attitudes concerning the issue of hiring PWDs is an important area of vocational rehabilitation, researchers have commonly agreed that their

research participants were not merely employers themselves but also managers, human resources professionals, or supervisors (Copeland et al., 2009). Researchers believe that people holding these positions serve in the role of the hiring authority (Millington et al., 2003); they not only make employment decisions but also have more close interaction opportunities with their co-workers and employees with and without disabilities.

Therefore, examining personal experiences of those business personnel would provide rich information for social service providers including rehabilitation practitioners.

This belief has led researchers to conduct relevant studies heavily based on the perspectives of those people who perform employers' roles and are responsible for recruiting and training future employees. For example, when Marcouiller, Smith, and Bordieri (1987) conducted research in the state of Minnesota to examine employers' attitudes and hiring practices toward workers with mental retardation among the foodservice industry, e.g., food manufacturers, restaurants, and drive-ins, they distributed relevant questionnaires mostly to the managers of the participating establishments instead of employers. Similarly, the research done by Johnson and her colleagues (1988) explored the concerns of employers regarding their workers with disabilities in the areas of work performance and work personality. They included research participants directly involved in hiring and supervision.

In addition, research participants from a study conducted to explore the attitudes of Fortune 500 employers toward their workers with disabilities and related hiring and accommodation practices were mainly from the executives of the personnel departments in those companies (McFarlin et al., 1991). Furthermore, Levy, Jessop, Rimmerman, Francis, and Levy (1993) conducted a large-scale study in the state of New York to

investigate employers' attitudes toward workers with severe disabilities in terms of their employability in competitive employment settings. Their survey respondents were primarily from personnel in charge of making hiring decisions. Finally, similar research studies that examined employers' attitudes toward hiring PWDs were conducted with executive officers, managers, supervisors, and human resource professionals into the new millennium (Copeland et al., 2009; Millington et al., 2003; Olson et al., 2001).

The above studies are examples from research associated with employers' attitudes toward hiring and supporting workers with disabilities. They are considered the most suitable samples to demonstrate why it is important to examine attitudes of supervisors, human resource professionals, and managers. The primary reasons for participant selections are that people who hold these positions are truly responsible for making decisions in hiring and are in charge of supporting current and future workers with or without disabilities. Therefore, their attitudes toward PWDs are considered key factors that might influence employment opportunities among this population; they also play important roles in assisting PWDs in dealing with difficulties encountered in the workplace.

Undergraduate Students' Attitudes Toward Persons with Disabilities

Examining attitudes of employers and/or related managerial professionals toward PWDs is an important issue in the area of vocational rehabilitation (Brostrand, 2006); it is regarded as a method to estimate employment opportunities and outcomes of a population of people with disabilities (Millington et al., 2003). However, investigating students' attitudes toward PWDs is also considered a significant subject for researchers from

relevant disciplines (Hunt & Hunt, 2000). Understanding students' attitudes toward PWDs can predict their future interactions with this population (Albritton, 2005).

As a result, researchers from different academic disciplines have conducted relevant studies to (a) discover whether students have biases against particular disability types (Wong, Chan, Cardoso, Lam, & Miller, 2004), (b) predict students' future interaction patterns with individuals with disabilities they might serve or work with after graduation (Brown et al., 2009), and (c) examine what kinds of strategies and training programs could be implemented to improve students' disability awareness (Horne, 1988; Hunt & Hunt, 2004). Researchers believed that getting a better understanding of these issues would allow them to develop pertinent curricula and educational plans to help their students build disability awareness and related knowledge so they could better work or serve their co-workers and/or clients with disabilities in the future. It was anticipated that the population of people with disabilities would ultimately be the beneficiaries from these related studies.

Tervo, Palmer, and Redinius (2004) studied whether undergraduate students from different health-related disciplines possessed diverse attitudes toward PWDs. In their study, research participants were from different programs including nursing, medical studies, audiology, physical therapy, and occupational therapy. Surprisingly, they discovered that nursing students had the most negative attitudes toward PWDs when compared to other participants from different disciplines. However, nursing students might have had to interact with PWDs more frequently due to the nature of their job requirements. Therefore, their negative attitudes against PWDs could have a significant impact on future service delivery.

Similarly, Hergenrather and Rhodes (2007) conducted a study to examine the attitudes of undergraduate students toward PWDs in three social contexts: dating, marriage, and work. Opinions were based on research participants who majored in public rehabilitation service. They found that students expressed the most comfortable feelings toward socializing with their future co-workers with disabilities in the workplace. However, establishing intimate relationships with PWDs, such as in marriage and dating, were ranked lower in the study.

The outcomes of this study have conveyed several important messages. First, building a close relationship with PWDs might be dependent on social contexts. Second, students might still perceive people with and without disabilities differently. Most significantly, it implied that friendships between persons with and without disabilities might be established in a superficial way. In fact, this phenomenon has already been recognized by researchers. For example, Clegg and Standen (1991) stated that individuals with developmental disabilities “who have a friend nevertheless experience a relatively superficial relationship [that is often deficient in intimacy and empathy]” (p. 668). Therefore, students who expressed the preference of establishing a work relationship with PWDs, rather than an intimate relationship, might have already suggested that they had negative attitudes and/or prejudice toward the population of individuals with disabilities.

Adverse stereotypes toward PWDs were also found in college students who enrolled in special education programs. For instance, Wang, Thomas, Chan, and Cheing (2003) conducted a cross-cultural study to examine disability preferences among American and Taiwanese students from special education programs. They investigated

whether those future special education teachers had biases toward people with particular disabilities. They found that mental illness was viewed as the most negative disability type held by both American and Taiwanese students, especially when compared to physical and developmental disabilities. This finding also implied that these prospective special education teachers possessed negative attitudes toward students identified with mental illness, which could ultimately influence their teaching and support of future students with related disabilities.

The above studies explain the importance of examining students' attitudes toward human disability. The results of these relevant studies allowed health care professionals, special education experts, and related researchers to obtain a better understanding of their students' attitudes and biases toward PWDs and/or someone with a particular disability. The outcomes of these studies could be used to investigate whether it is necessary to incorporate disability awareness programs or related projects into these disciplines to improve health care delivery skills and disability-related knowledge of these future service practitioners and teachers.

Apart from examining attitudes held by health and special education students toward PWDs, researchers have also been interested in studying whether students from business and related fields have biases toward people with disabilities (Albritton, 2005; Satcher & Dooley-Dickey, 1992). Researchers believe that undergraduate business students might be the future generation of human resource professionals or managers who have control in selecting and recruiting job applicants. Therefore, exploring their current attitudes toward human disability might predict future employment decisions associated with prospective job seekers identified with disabilities (Loo, 2001).

For instance, Hunt and Hunt (2000) examined attitudes toward PWDs held by students from both rehabilitation and business majors since they would have the greatest opportunities to interact with PWDs due to the nature of their future jobs. The results of their research indicated that rehabilitation major students had a more positive outlook toward human disability compared to business major students, implying that while rehabilitation students were trained to serve PWDs in locating employment opportunities, the chances of PWDs being successfully employed might already be limited because of adverse attitudes toward the population with disabilities by future business managers, supervisors, or related managerial professionals or personnel.

Correspondingly, Chan, Lee, Yuen, and Chan (2002) conducted a similar study to compare attitudes toward PWDs held by Hong Kong college students from occupational therapy and business programs. Similarly, they discovered that occupational therapy students had more positive attitudes toward PWDs when compared to business students. Results of their follow-up study indicated that occupational therapy students who finished their clinical placements and related programs had improved their attitudes toward PWDs. On the contrary, business major students still held negative perspectives toward PWDs and their awareness of human disability was still lower.

The researchers of the above study found that attitudes toward PWDs held by students could be influenced by their academic backgrounds and the curricula they had taken. They further explained that programs in occupational therapy might require students to focus on assisting PWDs in meeting their unique needs, while business programs might emphasize making and maximizing profits for their future organizations. As a result, researchers of this study concluded that it is necessary to incorporate

disability awareness curricula into business programs to enhance students' knowledge of disability as well as improve their attitudes toward PWDs. This was expected to be an alternative method to enhance employment opportunities among the population of individuals with disabilities.

In conclusion, the main purposes of the above research were to (a) examine whether students have varied preferences toward particular disability types, (b) discover whether attitudes of students toward PWDs might change in particular contexts, and (c) study attitudes toward PWDs of college students from different programs. These studies clearly demonstrated that students from different academic backgrounds have varied attitudes toward human disability and/or have specific biases toward particular disability types. However, since students from these academic domains are considered to be future healthcare practitioners, educators, human resource managers, and related professionals, they might have the greatest opportunities to interact with PWDs due to the nature of their future jobs. Therefore, their negative attitudes toward PWDs and/or preferences toward particular disability types might have significant influences on their future behavior toward PWDs and might be predictors of their decisions or service delivery style associated with this population.

Fortunately, the above studies are also valuable for researchers who educate their students to serve their future clients with disabilities. Results of these studies help researchers obtain a better understanding of the importance of exploring students' attitudes toward human disability but also serve as references to examine whether it is necessary to incorporate disability awareness programs in different academic disciplines. Most importantly, these studies can function as a guideline to assist related health

practitioners, educators, and human service specialists in developing adequate curricula for their prospective students in order to serve and/or to interact with PWDs in a positive manner in the future.

Factors That Influence People's General Attitudes Toward PWDs

As mentioned previously, people's attitudes toward individuals with disabilities can have significant impacts on PWDs (Chan et al., 2002; Lengnick-Hall, 2007; Peck & Kirkbride, 2001). While researchers have commonly agreed that attitudes toward PWDs may be formed through beliefs, life experiences, or interactions (Antonak & Livneh, 1991; Oppenheim, 1992), other researchers have focused their efforts in finding out whether various demographic variables (gender, age, contact experience, culture, and education) affect people's attitudes toward PWDs (Hall & Minnes, 1999; Hastings, Sjostrom, & Stevenage, 1998; Tervo, Azuma, Palmer, & Redinius, 2002; Yazbeck, McVilly, & Parmenter, 2004). Due to the nature of the present study, this section of the literature review examined research that studied the effects of three demographic factors on people's general attitudes toward PWDs: gender, age, and contact experience.

Gender is one of the major demographic factors researchers never neglect when studying people's attitudes toward PWDs (Hastings et al., 1998; Tervo et al., 2002). The results of different research have revealed that gender may influence people's attitudes toward PWDs in a positive direction. For example, Tang, Davis, Wu, and Oliver (2000) found that female Chinese children from 4 to 15 years old were more agreeable than male children in sharing social activities with their counterparts with mental retardation. Research conducted in the United States also demonstrated that female undergraduate students who enrolled in recreation and leisure services had more positive, general

attitudes toward PWDs than male students (Perry, Ivy, Conner, & Shelar, 2008). Similar studies also illustrated that female medical students (Tervo et al., 2002) and female Swedish and English adolescents (Hastings et al., 1998) tended to have a more favorable outlook toward PWDs than males in general.

Reasons that lead females to have a more positive and friendly attitude toward PWDs can vary. For instance, the difference in social interaction styles between females and males could be one factor (Tang et al., 2000). However, other researchers have suggested that it is important to examine other variables such as contact experience and one's knowledge of the disability before drawing a final conclusion (Hannah, 1988). Nevertheless, researchers agree that it is important to obtain a better understanding of how gender influences people's attitudes toward PWDs so that appropriate intervention programs can be created and implemented to facilitate a change of attitudes toward PWDs (Perry et al., 2008).

In contrast to the above studies that have showed that gender has influenced people's attitudes toward PWDs, the results of several studies indicated that there was no significant relationship between one's gender and his/her attitudes toward PWDs. For example, a study conducted to examine attitudes of Bhutan health professionals, both physicians and nurses, demonstrated that gender had no significant influence on their attitudes toward PWDs (Dorji & Solomon, 2009). A similar study investigated University of Sydney nursing students' attitudes toward working with clients with developmental disabilities and found that gender had no impact on students' attitudes toward PWDs (Johnston & Dixon, 2006). The outcomes of these two studies, which contradict previous findings, indicated that gender might not influence people's attitudes

toward PWDs in a clear direction. Therefore, researchers should be wary of making a final judgment that females have more favorable attitudes toward PWDs without considering other factors (Hannah, 1988).

Age is another common demographic variable that must be considered when examining people's general attitudes toward PWDs (Hannah, 1988). Some research studies have shown that age influences people's general attitudes toward PWDs. For example, Tang and her colleagues (2000) found that Chinese kindergartners had "the most positive attitudes on the overall perception of mental retardation and demonstrated the most positive feelings toward these individuals" compared with primary and secondary school children (p. 82). Correspondingly, Bakheit and Shanmugalingam (1997) discovered that older people in rural Indian villages tended to have more negative attitudes toward people with physical disabilities than younger individuals. Results of these studies demonstrate that age has a significant impact on one's attitudes toward PWDs. Possible explanations that might lead younger people to have more positive attitudes toward PWDs compared with older individuals include (a) social change in terms of human rights awareness (Tang et al., 2000) and (b) the lack of education of older persons with regard to disability awareness (Dorji & Solomon, 2009). Therefore, younger individuals might have a more positive outlook toward PWDs due to the influence of human rights and disability awareness movements.

However, other researchers who have examined similar issues found that there was no significant connection between age and people's attitudes toward PWDs. For instance, Perry et al. (2008) discovered no significant differences in recreation students' attitudes toward PWDs between two groups of students--ages 18 to 23 and 24 to 47 years

old. In addition, a study that examined nursing students' attitudes toward patients with acquired disabilities found no significant impact of age among research participants whose ages were from early twenties to mid-forties (Chenoweth, Pryor, Jeon, & Hall-Pullin, 2004). Comparable results were also found in a study that examined attitudes of Saudi Arabian health professionals toward people with physical disabilities (Al-Abdulwahab & Al-Gain, 2003). Results of the above studies evidently indicate that age is an insignificant factor in influencing people's attitudes toward PWDs.

Similar to the factor of gender, results of different studies have indicated that age might or might not influence one's attitudes toward PWDs (Chenoweth et al., 2004; Tang et al., 2000). The mixed results of similar research implied there was no universal conclusion about age's effect on people's outlook toward PWDs. As a result, the inconsistent findings on the effects of age on people's attitudes to PWDs also illustrate that researchers should be aware of this phenomenon when conducting related research.

Finally, contact experience has also been regarded as one of the important demographic factors when examining similar issues (Al-Abdulwahab & Al-Gain, 2003; Chenoweth et al., 2004). According to *contact hypothesis*, Allport (1954) mentioned that "[people's] knowledge about and acquaintance with members of minority groups make for tolerant and friendly attitudes [toward those target groups]" (p. 267). Based on the above concept, people's attitudes toward PWDs might change in a positive direction as long as interaction opportunities and related information of disability issues are provided and learned in a natural condition or through a particular arrangement.

Because of the influence of contact hypothesis, rehabilitation and related researchers have examined whether individuals' attitudes toward PWDs could be

different due to their contact experience with PWDs (Krahe & Altwasser, 2006). Several studies were also conducted to investigate whether people's attitudes toward PWDs changed due to their contact experience with this population; the results clearly indicated a positive correlation between contact experience and one's attitudes toward PWDs (Perry et al., 2008). For example, Perry et al. (2008) found that college students who interacted with PWDs on a weekly and daily basis had higher positive attitudes than those who interacted with PWDs on a monthly basis or less than six times a year.

A similar study was conducted by Favazza and Odom (1997) to examine whether kindergarten-age children's attitudes toward PWDs would be dissimilar due to the amount of contact with this population. Again, the results demonstrated that children who were provided with high contact opportunities with PWDs and who had received related information had higher acceptance levels toward PWDs than their peers who had lower and no contact experiences with PWDs. Most significantly, researchers discovered that people who had a relative with a disability tended to have more positive attitudes in supporting PWDs in terms of their education and employment rights than those who did not have a disabled relative (Bakheit & Shanmugalingam, 1997). Results of the above studies supported the contact hypothesis, which emphasized that contact experience could help people change their negative perceptions toward particular issues or outgroups.

While the above studies sustained the notion of contact hypothesis, other researchers hesitated to make the same conclusion (Chenoweth et al., 2004). For instance, Johnston and Dixon (2006) found that nursing students benefited from clinical placement where they could obtain valuable experiences in interacting with clients with disabilities. However, this would also lead those nursing students to have some negative

concerns such as worrying about behavior problems of clients with developmental and other disabilities and feeling a heavy responsibility. Correspondingly, an earlier study demonstrated that work contact experience did not promote nondisabled employees' attitudes toward their supported co-workers with mental retardation in terms of their social and vocational abilities in both positive and negative directions (Shafer, Rice, Metzler, & Haring, 1989). These examples illustrate that the contact hypothesis might not be completely accurate as was expected. Nevertheless, it provides researchers an opportunity to examine people's general attitudes toward PWDs through a different perspective.

In conclusion, researchers have examined several demographic factors that could possibly influence people's attitudes toward PWDs (Hall & Minnes, 1999; Tervo et al., 2002; Yazbeck et al., 2004). However, different studies have yielded inconsistent results, indicating that the demographic variables of gender, age, and contact experience might or might not have effects on individuals' perceptions toward PWDs (Chenoweth et al., 2004; Dorji & Solomon, 2009; Favazza & Odom, 1997; Perry et al., 2008; Shafer et al., 1989; Tang et al., 2000). Some researchers have pointed out that people's perceptions toward PWDs or toward related issues may not only be influenced by these demographic variables but also by their personality and the culture in which they are immersed (Kiger, 1997; Tang et al., 2000). Other researchers mentioned that several factors could also influence people's attitudes toward PWDs: types of disability (Corrigan et al., 2000), types and amount of contact experience with PWDs (Bakheit & Shanmugalingam, 1997; Favazza & Odom, 1997), different instruments used to measure attitudes toward PWDs (Stachura & Garven, 2003), and the social desirability tendency--the participants'

tendency to respond to questions to please researchers (Antonak & Livneh, 1988). Therefore, a worldwide assumption about which demographic variables influence people's attitudes toward PWDs cannot be easily made or explained.

Instruments of Attitude Measurement Toward PWDs

The Bogardus Social Distance Scale (Bogardus, 1954) can be regarded as one of the first statistical measurement tools used to measure social distance between different ethnic groups (Wark & Galliher, 2007). The original purpose of this scale was to examine the social distance between diverse ethnic and cultural groups. However, Bogardus further revised this scale to measure different attitudes specifically in the areas of racial, occupational, religious, political, and economic domains (Bogardus, 1954). This measurement tool has been modified by many researchers interested in examining attitudes toward particular issues including attitudes toward individuals with mental illness (Adewuya & Makanjuola, 2005; Wark & Galliher, 2007).

While the Bogardus Social Distance Scale is considered a ground-breaking statistical measurement tool that examines attitudes held by people toward specific subjects, other researchers created their own attitude measurement instruments that particularly focused on attitudes toward people with different disabilities (Diksa & Rogers, 1996; Shafer et al., 1989). For example, in *The Measurement of Attitudes toward People with Disabilities*, Antonak and Livneh (1988) introduced several major instruments that were developed by researchers to examine people's attitudes toward individuals with particular disabilities in different contexts. These disability types included physical disabilities, psychiatric disabilities, mental retardation, deafness, blindness, epilepsy, and mental illness.

From the above description, it is clear that various measurement instruments can be utilized to examine attitudes toward PWDs in different aspects depending on the purpose of research. Due to the nature of this study, several attitude measurement tools that were specifically developed with the intention of examining general and hiring/employability attitudes toward PWDs are examined and discussed. These measurement tools include the Attitude toward Disabled Persons Scale (ATDP), Attitudes Toward the Employability of Persons with Severe Handicaps Scale (ATEPSH), the Disability Questionnaire, and the SPR/nAblement Employer Survey. They are considered appropriate instruments that can be utilized by researchers to examine attitudes toward PWDs held by employers and related managerial professionals.

The Attitude toward Disabled Persons Scale (ATDP) is regarded as one of the most prevalent instruments implemented by many researchers to examine general attitudes of people without disabilities toward PWDs (Antonak & Livneh, 1988; Tervo et al., 2002). The original version of the ATDP, known as the ATDP-O, was developed by Yuker, Block, and Campbell in 1960. Later, Dr. Yuker and his associates developed the ATDP-A and then the ATDP-B in 1966 based on the original version (Yuker, Block, & Young, 1966). The major differences between these three versions include the numbers of items and the scoring methods (Antonak & Livneh, 1988). Although the ADTP has three formats, the main goal of these three attitude measurement tools is similar--to examine general attitudes toward PWDs held by the general public (Eichinger, Rizzo, & Sirotnik, 1992), employers (Marcouiller et al., 1987), and students with different academic backgrounds (Tervo et al., 2004).

These three formats of the ATDP have been utilized by researchers who are interested in studying attitudes toward PWDs. For example, the ATDP-A was used to compare the different attitudes toward PWDs held by students from occupational therapy and medical technology programs (Estes, Deyer, Hansen, & Russell, 1991). Similarly, it was utilized to study attitudes toward PWDs held by students from occupational therapy and business programs (Lyons, 1991). Researchers also used the ATDP-A to compare attitudes toward PWDs held by Dutch nursing students with a group of non-nursing students (Ten Klooster, Dannenberg, Taal, Burger, & Rasker, 2009). The major intentions of these studies were to examine and compare whether students from different academic domains had varied attitudes toward PWDs and whether it was necessary to have disability awareness sessions with students who had less favorable attitudes toward this population.

Besides the ATDP-A, the other two versions of the ATDP were also utilized by researchers for similar purposes. For instance, the ATDP-B was modified and used to study employers' general attitudes toward their current workers with mental retardation (Marcouiller et al., 1987). The ATDP-O was utilized to explore attitudes toward PWDs held by medical students from Canada and the United States (Tervo et al., 2002). The studies mentioned above indicate that the three versions of ATDP have been frequently adopted and administered by researchers to examine general attitudes toward PWDs; they are considered the most widespread measurement instruments for related studies.

The Attitudes toward the Employability of Persons with Severe Handicaps Scale (ATEPSH; Schmelin & Berkell, 1989) is a measurement instrument that primarily explores attitudes of employers toward their workers with disabilities (Levy et al., 1992).

ATEPSH was developed to study how educators viewed the employability of their students with disabilities (Schmelkin & Berkell, 1989). Later, this instrument was used in two studies that examined attitudes of employers from Fortune 500 corporations (Levy et al., 1992) and the state of New York (Levy et al., 1993) toward their current workers with disabilities, specifically in terms of their work competence.

The passage of the Americans with Disabilities Act (ADA; 1991) had significant impacts on individuals with disabilities, especially in terms of their employment opportunities (Bruyere & Brown, 2003; Hotchkiss, 2003). As a result, some researchers developed instruments to examine whether the ADA had influenced employers' hiring practice and attitudes toward PWDs. For instance, the Disability Questionnaire is one kind of ADA-related survey that was developed by Popovich, Scherbaum, Scherbaum, and Polinko (2003) through the participation of college students. The Disability Questionnaire has three subscales that were designed to examine related issues toward PWDs including beliefs about disabilities, affective reactions toward working with PWDs, and reasonable accommodations for PWDs in workplaces (Popovich et al., 2003). Copeland and her colleagues (2009) found the instrument could examine employers' knowledge of ADA, their attitudes toward their workers with disabilities, and their feelings about accommodations for PWDs. They also administered the Affective Reactions subscale of the Disability Questionnaire to study attitudes of employers toward PWDs with regard to issues of accommodations, equal treatment of PWDs in the workplace, and their reactions toward working with people with disabilities (Copeland et al., 2009).

A comparable instrument for examining employers' attitudes toward PWDs and related issues is the SPR/nAblement Employer Survey (Chan, Strauser, Maher, et al., 2010). Similar to the Disability Questionnaire, the major objectives of the SPR/nAblement Employer Survey were to study employers' knowledge of the ADA, attitudes toward workers with disabilities, and hiring and retention strategies toward individuals with disabilities.

Seven sections under the SPR/nAblement Employer Survey were designed to explore related issues toward workers with disabilities: (a) ADA and job accommodations, (b) concerns about disability management, (c) negative attitudes toward workers with disabilities, (d) positive perceptions toward workers with disabilities, (e) diversity climates of the company, (f) inclusion of disability in diversity efforts, and (g) commitment of the company and managers to hire people with disabilities (Chan, Strauser, Maher, et al., 2010). In a study, Chan and his associates used this instrument to examine factors that influenced hiring and retention of PWDs from the perspectives of HR managers and line managers. Although this instrument was developed recently, it can be regarded as a comprehensive measurement tool to study employers' attitudes toward PWDs, hiring practices of the company, and the work atmosphere of the company toward this population.

In summary, several major instruments discussed above are considered the most common and/or appropriate measurement tools to examine attitudes toward PWDs held by employers, managerial professionals, and students with business backgrounds. However, it must be noted that the latest attitude measurement instruments have been developed with new functions to explore varied issues due to the passage of related

legislation for supporting PWDs such as the ADA. The Disability Questionnaire and the SPR/nAblement Employer Survey are new survey instruments that reflect this trend. Nevertheless, people who are interested in studying the issue of attitudes toward PWDs can explore instruments other than those mentioned as long as they can be implemented to meet the objectives of their research.

Research Framework

As mentioned previously, numerous definitions of attitudes can be found from different sources (Ajzen, 2005; McGuire, 1985; Triandis, 1971). While researchers have provided varied definitions of attitudes, some have agreed that a specific attitude of an individual might guide his/her behavior and/or response to specific subjects and situations in particular ways (Albarracin et al., 2005; Albert et al., 1989). As a result of this belief, understanding employers' attitudes toward PWDs has become one of the significant issues in the domain of vocational rehabilitation (Ehrhart, 1994; Levy et al., 1992; Morgan & Alexander, 2005). It is expected that employers' attitudes toward PWDs might influence their hiring practice and support for this population, both in positive or negative ways (McFarlin et al., 1991; Peck & Kirkbride, 2001; Zheng, 2005).

Researchers have mentioned that human intention can be affected by three major factors: attitude toward the behavior, the subjective norm, and the perceived behavioral control (Ajzen, 1985, 1993; Eagly & Chaiken, 1993). Each of these factors not only influences one's intention but also has significant impact on his/her later behavior, decision, or action. However, when implementing this concept to examine employers' attitudes and hiring practice toward PWDs, it is not difficult to realize why many references have indicated that employing PWDs is not a preferable choice nor a specific

concern among employers and/or related managerial personnel such as human resource heads and managers (Council of Labor Affairs, 2009; Diksa & Rogers, 1996; Lengnick-Hall & Gaunt, 2007).

Ajzen (1991) described a person's attitude, more specifically one's *attitude toward the behavior*, as his/her positive or negative evaluation of the behavior under consideration. Ajzen (2005) also explained that attitude toward a behavior "is determined by accessible beliefs about the consequences of the behavior" (p. 123). To put it simply, one's behavioral beliefs about the consequence of his/her behavior will influence his/her attitudes, both in favorable or unfavorable directions, in determining whether he/she should take an action in a particular way. Therefore, if employers have concerns about the job competence of PWDs and believe that hiring them would increase their budget in the areas of accommodations and insurance claims rather than maximizing profits, recruiting job seekers with disabilities will not be their first choice (Hill et al., 2003; Lengnick-Hall, 2007; Millington et al., 2003). This concept is also mentioned by some rehabilitation researchers (Diksa & Rogers, 1996; Fraser et al., 2009). As a result, employment opportunities for PWDs are influenced negatively when this idea prevails among potential employers.

According to Ajzen (1993), *the subjective norm* can be explained as "the perceived social pressure to perform or not to perform the behavior" (p. 49). Basically, the subjective norm is based on an individual's normative belief--his/her idea of his/her important referents' (friends, family, spouse, co-workers, or supervisors) approval or disapproval of the behavior (Ajzen & Cote, 2008). In other words, one's intention to perform a behavior could be guided by others' feelings or opinions.

The above idea is also supported by many rehabilitation researchers. For instance, Colella (2001) noted that the attitudes of nondisabled employees toward the subject of fairness was a significant factor that influenced employers' decisions about whether they should provide work-related accommodations and/or support for workers with disabilities. In addition, Fraser et al. (2009) mentioned that nondisabled workers and line managers had particular worries about work competence and accommodations of job seekers with disabilities, thus resulting in employers having concerns about hiring PWDs.

These two examples indicate that employees without disabilities might have a significant influence on employers' decisions on whether they should recruit PWDs or whether they should provide reasonable accommodations for their workers with disabilities. Most importantly, this might imply that hiring intentions of employers toward job seekers with disabilities could be guided and influenced by the opinions of their present workers without disabilities.

Finally, *perceived behavioral control* is defined by Ajzen (1993) as "the perceived ease or difficulty of performing the behavior; it is assumed to reflect past experience as well as anticipated impediments and obstacles" (p. 49). However, the perceived behavioral control is also influenced by the control belief--one's perception of the resources and opportunities he/she currently has to perform the behavior (Eagly & Chaiken, 1993). Simply speaking, one's particular intention depends on what kinds of resources he/she has that allow him/her to made a decision about whether he/she should take a particular action.

When applying this concept to examine attitudes of employers toward the issue of hiring PWDs, it is understandable why many of them would have specific concerns about this subject. For example, Bolles and Brown (2001) mentioned that one of the major concerns of recruiting PWDs for employers was that they had limited knowledge to assist workers with disabilities in dealing with the difficulties they encountered in the workplace. This implied that employers might not hire PWDs if they thought receiving long-term appropriate and time-sensitive support and consultation services from related rehabilitation specialists was unlikely (Gilbride & Stensrud, 1992).

Similarly, other researchers have indicated that employers' willingness to hire PWDs was decreased if they felt rehabilitation agencies or employment specialists were not accessible or helpful for them to locate qualified employees with disabilities (Fraser et al., 2009). From these examples, employers' decisions about recruiting PWDs could be dependent on whether they had appropriate information to locate qualified job seekers with disabilities and whether long-term support from rehabilitation agencies or specialists was available. Without solving these concerns, hiring PWDs could be an avoidant choice for potential employers.

Thus, human intention to perform a behavior can be affected by three factors: attitude toward the behavior, subjective norm, and perceived behavioral control. Each factor has significant influences on one's intention and later behavior or action. Nevertheless, Ajzen and Fishbein (1977) noted "that a person's attitude toward an object influences the overall pattern of his responses to the object" (p. 888). Ajzen and Fishbein (1980) further mentioned that it is necessary to understand one's attitude toward a specific subject before predicting his/her later behavior or action toward that issue.

Therefore, examining attitudes toward PWDs of the future generation of business leaders is an essential task before predicting their hiring practices toward this population.

Summary

This chapter began with an overview of employment-related legislation that influences workplace participation rates among PWDs in the United States and Taiwan. Although related laws to support employment rights and opportunities for PWDs have been passed by both governments, lower employment rates among this population is a consistent phenomenon. Several major barriers that hinder PWDs from employment were identified and examined in detail. Negative attitudes and hiring practices toward PWDs by employers was considered a major barrier. As a result, the researcher investigated related issues such as definitions of attitude and the relationship between attitude and behavior. Since the main objective of this study was to explore the attitudes of Taiwanese MBA students (the future representatives of business leaders) toward PWDs, relevant studies and attitude measurement instruments were also introduced and discussed. The researcher hoped that readers would obtain a solid fundamental knowledge about this study through information provided in this chapter.

CHAPTER III

METHODOLOGY

Introduction

The primary intent of this present study was to examine general and employability attitudes toward people with disabilities (PWDs) held by Taiwanese business graduate students--the potential and next generation of business representatives. In this chapter, several themes related to research methods for this study are explained in detail: a description of sampling procedures and considerations, instruments, data collection procedures, and data analysis methods carried out in the study.

Sampling Procedures and Considerations

The primary objective of this study was to examine whether there was a difference between the general and employability attitudes of Taiwanese MBA students toward PWDs. In addition, another objective was to explore whether Taiwanese MBA students' age, gender, and prior contact experiences influenced their perceptions toward PWDs' employability. Therefore, it was necessary to first locate universities that provide MBA programs. Taiwan is an oceanic nation that consists of several major islands; its size (13,900 square miles) is slightly smaller than The Netherlands (Government Information Office, 2007). Consequently, narrowing down the universities that offer MBA programs was an essential requirement for this study.

The researcher has resided in the city of Taipei--the political and economic center of the country. As a result, recruiting research participants from the city of Taipei or nearby areas was a priority. Approximately a dozen public and private universities in the city of Taipei and nearby areas provide various part-time and/or full-time MBA programs for students who would like to pursue relevant degrees. Therefore, the directors of those MBA programs that serve in these universities were contacted via e-mail for permission to conduct the study. The researcher also provided a detailed explanation of the study through e-mail to business professors. Upon agreement, willing MBA programs professors and instructors contacted and recruited their students who volunteered to join this study. To avoid the survey instruments being completed by the same group of participants, the researcher asked the professors and instructors for assistance in administering the survey instruments to *different* cohorts. For example, the researcher asked the professors/instructors to recruit participants from one first year class and one second year class from each school.

To obtain proper information associated with the research topic and related issues, research participants in this present study had to meet three criteria. First, participants had to be native Taiwanese so they could provide information about their attitudes toward PWDs, which could possibly reflect common Taiwanese perspectives. Second, participants had to have been enrolled in a MBA program, either part-time or full-time basis, at those contacted universities when the study was conducted. This allowed the researcher to examine their current attitudes and future interaction patterns toward PWDs with regard to employment issues. Third, the recruited participants must have had at least two years of work experiences so they could answer particular questions addressed in the

study regarding whether they had learned disability knowledge or relevant information from their workplace. To estimate the number of participants for this study, G*Power, a software tool for general power analyses, was utilized (Erdfelder, Faul, & Buchner, 1996). As shown by the G*Power analysis, the researcher had to recruit a sample size of 77 for the medium effect size for this research.

Instruments

Many survey instruments have been developed and implemented by researchers interested in examining attitudes toward PWDs (Antonak & Livneh, 1988; Hernandez et al., 2000). In this study, two survey instruments were used: the Scale of Attitudes Toward Disabled Persons (SADP; Antonak, 1981) and the Attitudes Toward the Employability of Persons with Severe Handicaps Scale (ATEPSH; Schmelkin & Berkell, 1989). In addition, background information of participants was collected through a demographic information sheet to find out whether respondents' attitudes toward PWDs changed due to their backgrounds and contact experiences with PWDs. These two survey instruments and the demographic information sheet are described below.

The Scale of Attitudes Toward Disabled Persons (SADP)

The SADP was developed by Richard Antonak in 1981 to assess people's attitudes toward PWDs. According to the Antonak, the SADP was designed to be a contemporary, brief, and easy to administer instrument for measuring attitudes toward persons with disabilities as a whole. The SADP consists of 24 statements and is a self-administered scale widely utilized in attitudinal research (Ten Klooster et al., 2009; Tervo et al, 2002). The SADP contains 24 items that are also divided into three subscales to

examine people's attitudes toward PWDs: optimism-human rights, behavioral misconceptions, and pessimism-hopelessness.

Definitions of these three subscales were provided by Antonak (1982) in his published article; they are summarized as follows:

1. The first subscale--optimism-human rights--contains 11 statements that describe positive and optimistic outlooks toward PWDs as well as statements that affirm the rights of PWDs to live and work in mainstream society. Questions in this subscale include items 2, 5, 6, 11, 12, 13, 15, 16, 20, 23, and 24. The following is an example of a survey question in this subscale: *The disabled should be allowed to live where & how they choose.*
2. The second subscale--behavioral misconceptions--includes seven items that primarily depict people's common misconceptions about the behaviors of PWDs. Questions in this subscale include items 7, 9, 10, 14, 17, 18, and 21. The following is an example of a survey question in this subscale: *Simple repetitive work is appropriate for the disabled.*
3. The last subscale--pessimism-hopelessness--consists of six statements delineating negative beliefs of PWDs with respect to educability, maturity, and morality. Questions in this subscale include items 1, 3, 4, 8, 19, and 22. The following is an example of a survey question in this subscale: *The disabled are in many ways like children.*

The SADP, which uses a six-point rating scale, was designed to be administered to either groups or an individual with the objective of measuring respondents' attitudes

toward PWDs (Antonak & Livneh, 1988). Participants could express their agreement or disagreement on each of 24 items by rating them as follows: +3 (*I agree very much*), +2 (*I agree pretty much*), +1 (*I agree a little*), -1 (*I disagree a little*), -2 (*I disagree pretty much*), or -3 (*I disagree very much*). No neutral or undecided response categories were included. Of the 24 items, 12 items are worded positively so that an agree response indicated a favorable attitude toward PWDs; 12 other items were worded negatively so that a disagree response indicated favorable attitudes. The sign of the response was reversed before calculating the final score. The final score fell between 0 and 144. Participants who received scores close to 144 indicated they had favorable attitudes toward PWDs and vice versa.

The SADP has been utilized by many researchers and considered an instrument with acceptable reliability (Antonak, 1982). For example, Antonak and Livneh (1988) reported that the Spearman-Brown corrected reliability coefficients of the SADP ranged from .81 to .85, and alpha coefficients ranged from .88 to .91. For the three subscales, the Spearman-Brown corrected reliability coefficients were .71, .55, and .61, respectively. Alpha coefficients were .81, .77, and .82, respectively (Antonak, 1981).

Other researchers who have utilized the SADP also indicated that this instrument was a reliable tool that could be used to measure people's attitudes toward PWDs. For instance, Tervo and his colleagues (2002) used the SADP to investigate attitudes of 90 first-year medical students; they reported a Cronbach's alpha value of .81 in their study. Tervo et al. (2004) also utilized the SADP to examine attitudes toward PWDs among 338 health professional students including physical and occupational therapy, audiology, and psychology students. Their research produced a satisfactory Cronbach's alpha value of

.87. Another study that compared attitudes toward PWDs between Dutch nursing students and non-nursing students also produced a favorable Cronbach's alpha value of .86 (Ten Klooster et al., 2009).

The SADP was also implemented by researchers in societies where the Chinese culture is dominant. For instance, O'Donnell and McPherson (2002) used this instrument to measure attitudes of speech pathology students toward PWDs at the University of Hong Kong. Participants from each year of study in the same program were selected. Internal consistency of the SADP, as measured by Cronbach's alpha, was .62 for year one students, .70 for year two students, .63 for year three students, and .60 for year four students. In addition, Chan, McPherson, and Whitehill (2006) utilized the SADP to examine attitudes toward people with cleft lip and palate (CLP) among 39 parents of children with CLP, 27 teachers of students with CLP, and 37 employers of employees with CLP. The results of their research yielded Cronbach's alpha values of .69, .79, and .66, respectively, for each of the three participating groups.

Construct validity analyses conducted by the original author of the SADP indicated that there were three factors underlying this instrument with a sample of 225 American college students. These three factors included optimism-human rights, behavioral misconceptions, and pessimism-hopelessness (Antonak, 1982). Furthermore, Antonak (1982) examined the convergent validity of the SADP; he found that the SADP was moderately correlated with the Attitudes toward Disabled Persons Scale (ATDP) Form-O. The Pearson correlation coefficient between the two scales was .54. Ten Klooster and his colleagues (2009) also investigated the convergent validity of the SADP with 129 Dutch college students; they found that the SADP correlated with the ATDP

Form-A with a .49 Pearson correlation coefficient. Therefore, the SADP is regarded as a valid scale to assess people's attitudes toward PWDs.

Attitudes Toward the Employability of Persons with Severe Handicaps Scale

The Attitudes Toward the Employability of Persons with Severe Handicaps Scale (ATEPSH) was developed by Liora Schmelkin and Dianne Berkell in 1989 to measure educators' attitudes toward the issue of employability of PWDs. The original goal of developing this scale was to understand attitudes of school personnel toward students with disabilities. According to Schmelkin and Berkell, understanding educators' attitudes toward students with disabilities is an important issue because educators' negative attitudes could affect the services provided, the success of the services, and the ultimate employability of students with disabilities. As a result, a 36-item scale was developed to meet their research goal.

While the instrument was developed, Schmelkin and Berkell (1989) recruited participants from two different settings: (a) special education and rehabilitation university-based courses and (b) a special school that focused on providing training for children with disabilities. The final sample consisted of regular education teachers, special education teachers, school administrators, and college students who majored in special education or rehabilitation counseling programs. After factor analysis, 21 items remained and were loaded on three subscales, which constituted the final version of the scale.

Definitions of the three subscales were provided by Schmelkin and Berkell (1989) in their article; they are summarized as follows:

1. Appropriateness of competitive employment (ACE)--This subscale contains nine items that primarily deal with the appropriateness of providing training and competitive employment opportunities for PWDs. Some items are used to describe the potential benefits of this employment for PWDs. Questions in this subscale include items 1, 2, 4, 5, 6, 14, 15, 19, and 21. The following is an example of a survey question in this subscale: *In competitive employment, people with severe handicaps can learn appropriate social skills.*
2. Disadvantages of competitive employment (DCE): focus on others--This subscale includes five items that depict the potential negative effects competitive employment will have on employers and workers without disabilities. Questions in this subscale include items 9, 10, 12, 13, and 20. The following is an example of a survey question in this subscale: *The productivity of non-handicapped coworkers decreases when they work with individuals with severe handicaps.*
3. Disadvantages of competitive employment (DCE): focus on PWDs--This subscale consists of seven items that focus on the obstacles and drawbacks of competitive employment on PWDs. Questions in this subscale include items 3, 7, 8, 11, 16, 17, and 18. The following is an example of a survey question in this subscale: *The natural job setting provides too many distractions that impede the vocational training process for people with severe handicaps.*

The ATEPSH instrument uses a six-point scale to measure participants' degree of agreement or disagreement on each item by giving the following scores: +3 (*agree very strongly*), +2 (*agree strongly*), +1 (*agree*), -1 (*disagree*), -2 (*disagree strongly*), or -3 (*disagree very strongly*). However, the responses to each item are recorded from 1 (*disagree very strongly*) to 6 (*agree very strongly*). The scores of each subscale are calculated by finding the sum of all the items within a subscale and then dividing by the number of items within that subscale (Schmelkin & Berkell, 1989).

The ATEPSH was used by researchers in different studies. Their results indicated the instrument is reliable. For example, Levy and his colleagues (1992) utilized the 32-item version of the ATEPSH to examine attitudes of Fortune 500 corporate executives toward the employability of PWDs. Their data loaded on two factors: (a) the appropriateness of competitive employment for PWDs and (b) the disadvantages of competitive employment with a focus on others in the work setting. The Cronbach's alpha values for those two factors were .89 and .74, respectively. Schmelkin and Berkell (1989) used the ATEPSH to investigate 168 educators' attitudes toward opportunities for employment of PWDs; Cronbach's alpha values on the three subscales were .85, .60, and .68, respectively.

Finally, construct validity analyses conducted of the ATEPSH by Schmelkin and Berkell (1989) found there were three factors underlying this scale with a sample of 168 educators: (a) appropriateness of competitive employment for PWDs, (b) disadvantages of competitive employment: focus on others, and (c) disadvantages of competitive employment: focus on PWDs. In a cross-cultural study, Rimmerman (1998) used the ATEPSH to investigate attitudes of 120 Israeli corporate executives toward PWDs. He

further conducted a factor analysis of this instrument and found the items loaded on the three factors similar to those in the original study. As a result, the ATEPSH is regarded as a valid instrument to measure employers' attitudes toward the employability of PWDs.

Demographic Information Sheet

As discussed in Chapter II, some researchers indicated that people's attitudes toward PWDs could be influenced by their gender (Perry et al., 2008), age (Bakheit & Shanmugalingam, 1997), and contact experiences (Johnston & Dixon, 2006). In comparison, some researchers indicated that these demographic variables might or might not have affected people's attitudes toward PWDs (Chenoweth et al., 2004; Favazza & Odom, 1997). To obtain a better understanding of whether Taiwanese MBA students' attitudes toward PWDs changed due to their diverse backgrounds, a demographic information sheet was developed that requested demographic information about the research participants' gender, age, and their contact experiences with PWDs.

On the demographic information sheet, the researcher first asked participants to provide their gender and age information. The contact experiences section was categorized into four types based on research done by Krahe and Altwasser (2006). Participants were asked to choose what types of contact experiences they had had with PWDs from the following four domains: (a) I do not know anyone with a disability; (b) I have a classmate/coworker with a disability; (c) I have a friend with a disability, and (d) I have a family member with a disability. Additional questions were asked about how much contact and the types of disabilities to which participants had been exposed. Finally, several supplemental questions were added to the demographic information sheet to discover participants' knowledge with regard to disability issues. By requesting

related demographic information, the researcher was able to collect necessary data that could be used to examine the relationships between these demographic factors and respondents' attitudes toward PWDs.

Data Collection and Procedures

Several steps were conducted for this quantitative study. First, after the UNC Institutional Review Board (see Appendix A) granted permission to carry out this study in Taiwan, the researcher contacted directors of MBA programs located in Taipei city and nearby areas to ask for assistance with this study. Second, an informational letter (see Appendix B) describing the study goals was emailed to professors/instructors who accepted the invitation to recruit their students to participate. Third, the professors/instructors made an announcement to students in their classes about the objectives of the study and counted how many students were willing to join. Fourth, the professors/instructors decided when (either at the beginning or the end of their classes) the survey instruments would be administered; the surveys were completed by participating students. A voluntary consent form (see Appendix C), both in English and Chinese, was also distributed when the participants took the survey. Fifth, the researcher gave the participants 20 minutes to complete the demographic information sheet (see Appendix D), the SADP (see Appendix E), and the ATEPSH (see Appendix F). The researcher was present in the classes during the administration of the instruments to clarify questions brought up by the participating students. All survey sheets and related documents were collected by the researcher immediately after they were completed. Upon completion of the survey, the participants were given a NT\$100 (equal to about \$4US) convenience store gift card to thank them for their time and participation.

The research participants took both surveys in Chinese. Prior to data collection, the “back translation” technique (also known as the “double translation” method commonly used in cross-cultural research) was administered to ensure that the meanings of the two survey instruments were not lost and were accurately presented (Chen, Brodwin, Cardoso, & Chan, 2002). According to Brislin, Lonner, and Thorndike (1973), this technique requires people who are bilingual “to translate a variety of English passages into a target language, and then other bilinguals (working independently) [to translate] back to English” (p. 33). The researcher had these two survey instruments translated and proofread by professors in the United States who were from Taiwan and had backgrounds in both English and Chinese.

Finally, the researcher slightly modified the survey statements by using “people first” language in the SADP. For this research, the term of disabled people was changed to people with disabilities throughout the SADP. At the same time, the researcher used the phrase “with disabilities” to replace “with severe handicaps” in every statement in the ATEPSH to better reflect the objective of this study.

Apart from those procedures mentioned above, several important issues related to the rights of participants and confidentiality were also addressed by the researcher. First, professors and their students were notified beforehand that they had the right to withdraw from participation in this study at any time without penalty. This message was written and shown on the consent form. In addition, the researcher did not ask the participating students to put their names on the survey sheets. This ensured that the participants’ opinions toward PWDs were well protected and also guaranteed that their identities were not disclosed.

Analysis of the Data

The present study was designed to investigate whether there was a difference between the general and employability attitudes of Taiwanese MBA students toward PWDs. In addition, the effects of demographic factors on the attitudes of Taiwanese MBA students were assessed. Therefore, the purpose of the study was twofold. The following research questions and hypothesis guided this study:

- Q1 How do the general attitudes of Taiwanese MBA students toward PWDs compare to their attitudes regarding the employability of PWDs?

- H1 There is a negative relationship between Taiwanese MBA students' general attitudes and employability attitudes toward PWDs. Taiwanese MBA students have positive general attitudes toward PWDs while their employability attitudes toward PWDs are negative.

To answer the first question, the researcher calculated the composite scores for the SADP and the ATEPSH by adding all items for each individual scale separately. Next, the mean, median, and standard deviation for each of these two scales were computed and determined. In addition, the Pearson correlation coefficient was conducted for this research question to discover the relationship between the general and employability attitudes of Taiwanese MBA students toward PWDs. By implementing the Pearson correlation coefficient, the question of how Taiwanese MBA students viewed PWDs in general and their employability could be explored. Furthermore, a paired sample *t*-test was utilized to explore whether there was a difference between general and employability attitudes toward PWDs. Finally, the internal consistency reliability was computed and reported for the two survey instruments.

- Q2 How do gender, age, and previous contact experiences of Taiwanese MBA students affect their attitudes regarding the employability of PWDs?

To answer the second question, several data analyses were conducted. First, the researcher calculated the composite score of the ATEPSH by adding all items of the scale. Second, the mean, median, and standard deviation for the scale were computed and determined. Third, one-way ANOVA and independent sample *t*-tests were implemented to study whether each of the three demographic factors separately influenced employability attitudes toward PWDs held by the participants. Fourth, age was treated as a continuous variable and a Pearson correlation coefficient was utilized to re-examine whether age had an impact on the participants' employability attitudes toward PWDs. Finally, the researcher performed multiple regression to determine the impacts of these three demographic factors on employability attitudes toward PWDs held by the respondents simultaneously.

The basic assumptions under multiple regression included the following: (a) the ATEPSH scores were independent and normally distributed at each value of the independent variables (age, gender, and contact experience); (b) there was a linear relationship between independent variables and the dependent variable, and (c) the ATEPSH scores had equal variances at each value of the independent variables (age, gender, and contact experience; Kerlinger & Pedhazur, 1973). Glass and Hopkins (1996) also explained that multiple regression “[is the] most commonly employed for predicting [the dependent variable] from two or more independent variables” (p. 170).

Regarding participants' demographic information, the researcher reported related data through descriptive statistics. To help readers better understand the background of research participants, different tables were also utilized to illustrate and explain characteristics of participants.

Summary

This chapter provided readers with fundamental information about the research method of this study. It began with a description of the research participants and related considerations. In addition, the researcher introduced and explained two instruments used in this study: the SADP and the ATEPSH. The reliability and validity of these two instruments were also discussed. Finally, data collection procedures and data analysis methods implemented and utilized for this study were also presented.

CHAPTER IV

RESULTS

Introduction

Examining attitudes of employers toward the issue of hiring people with disabilities (PWDs) has been studied by rehabilitation-related professionals because heads of businesses play a key role in increasing employment rates and maintaining job retention rates of PWDs (Olson et al., 2001). The main objective of this study was to examine attitudes held by Taiwanese Master of Business Administration (MBA) students toward PWDs since MBA students are considered future representatives of business leaders. Understanding MBA students' attitudes toward PWDs allowed the researcher to obtain a better understanding of their perceptions toward PWDs in terms of employability as well as their knowledge of this population's employment rights.

In addition to the demographic information sheet created to collect background information of research participants, two survey instruments were chosen for this study to discover participants' general and employability attitudes toward PWDs. This chapter contains the results of the study and is divided into three parts: the description of the research participants, the reliability of two survey instruments, and the results of two research questions.

Research Participants

Data were obtained from 123 Taiwanese business graduate students enrolled in the MBA programs at two public and three private universities at the time the research was conducted. These five schools are all located in Taipei city and the nearby area. When completing the data collection process, the researcher sorted all data in Microsoft Excel 2010 and exported them to Statistical Package for the Social Science (SPSS) 18.0 for Windows. After reviewing the returned demographic information sheets and surveys from 123 participants, the researcher learned seven (6%) were unusable due to three or more items missing from the demographic sheets or surveys. The final sample for this study consisted of 116 participants or a final return rate of 94%, which still satisfied the required sample size of 77 calculated by G* Power software. Background information of the research participants is summarized in Table 1.

Of these 116 participants, 61 (53%) were male and 55 (47%) were female. Their ages ranged from 24 to 50 years with a mean age of 33.89 years. Among those participants, 30 (26%) MBA students reported they did not know anyone with a disability while 86 (74%) indicated they had varied contact experiences with PWDs. Among those 86 participants, 36 (41%) had family members with disabilities, 35 (40%) had friends with disabilities, 31 (36%) had classmates/co-workers with disabilities, and 7 (8%) had had occasional contact with PWDs in different settings such as a bakery.

Table 1

Description of Research Participants

Variables	N	Percent
Gender		
Male	61	53
Female	55	47
Age (Mean = 33.89 years old SD = 6.47 years old)		
Under 29	40	34
30-34	26	22
35-39	25	22
40 and above	25	22
Contact Experiences with PWDs		
No	30	26
Yes	86	74
I have a family member/relative with a disability	36	41
I have a friend with a disability	35	40
I have a classmate/co-worker with a disability	31	36
Others	7	8

N=116

The average years of work experience of the participants were 9.68. A majority (73%) of the participants was employed full-time in different workplace settings: service industry (24%), financial institution (21%), educational institution (16%), manufacturing (13%), insurance (8%), wholesale (8%), transportation (5%), real estate (4%), and others (2%). Seventy participants (60%) reported their companies did not hire PWDs at the time the study was conducted. The remaining 46 participants (40%) indicated their companies had hired PWDs.

Of those participants who mentioned that their companies had hired PWDs, 32 (70%) noted their companies hired people with physical disabilities, 8 (17%) stated their companies had workers with auditory impairments, and 3 (7%) indicated the companies hired workers with visual impairments. In addition, two participants (4%) reported their companies had workers with emotional disabilities. Finally, another two participants (4%) stated that they had workers with intellectual disabilities in their workplaces. Table 2 presents background information of research participants in terms of their job and the hiring practices of PWDs at the companies where they worked.

When all 116 participants were asked whether they received disability-related information about PWDs at their workplaces, 78 (67%) participants indicated they did not receive any information about PWDs. The remaining 38 (33%) reported they had received disability-related information in their work settings. Thus, the majority of companies where participants worked did not provide appropriate disability-related information to their employees without disabilities. However, since most participants mentioned that their companies did not hire PWDs, it is unlikely those companies would provide relevant information.

Table 2

Work Information of Research Participants

Categories	<i>N</i>	Percent
Type of Industry		
Service	28	24
Financial institution	24	21
Education	18	16
Manufacturing	15	13
Insurance	9	8
Wholesale and retail	9	8
Transportation	6	5
Real estate	5	4
Others	2	2
Has the company hired any PWDs?		
No	70	60
Yes	46	40
What disabilities do the employees with whom your company hire? (check all that apply)		
People with physical disabilities	32	70
People with auditory impairment	8	17
People with visual impairment	3	7
People with emotional disabilities	2	4
People with intellectual disabilities	2	4
Others	1	2
Type of job		
Full time	85	73
Part time	31	27

N=116

In terms of disability-related legislation knowledge, 78 (67%) participants had heard about the People with Disabilities Rights Protection Act of 2007. In addition, 52 (45%) participants knew the People with Disabilities Rights Protection Act of 2007

required that 3% of all Taiwanese government agencies' workforce must be people with disabilities when agencies have 34 employees or more. Moreover, 49 participants (42%) understood that all private business organizations with more than 67 employees were required to have at least 1% of their employees be people with disabilities (see Table 3). While the above information indicated that the majority of participants possessed some level of disability-related legislation knowledge, it also implied that one-third of participants still did not possess any disability-related legislation knowledge.

Table 3

Knowledge of Research Participants Regarding Disability Issues

Categories	<i>N</i>	Percent
Information about PWDs at your workplace:		
Yes	38	33
No	78	67
Type of information from the workplace:		
Information about PWDs in general	24	63
Information about co-workers with disabilities	14	37
Knowledge of the People with Disabilities Rights Protection Act of 2007:		
Yes	78	67
No	38	33
Are you aware that the People with Disabilities Rights Protection Act of 2007 regulates that 3% of all Taiwanese government agencies' workforce must be people with disabilities when the agencies have 34 employees or more? These government agencies include public schools.		
Yes	52	45
No	64	55
Are you aware that <i>the People with Disabilities Rights Protection Act of 2007</i> indicates that all private business organizations who have more than 67 employees are required to have at least 1 % of their employees be people with disabilities?		
Yes	49	42
No	67	58
Disability information from MBA courses:		
Yes	14	12
No	102	88

N=116

**Reliability of the Scale of Attitudes Toward Disabled Persons
and the Attitudes Toward the Employability of Persons
with Severe Handicaps Scale**

Various measurement instruments can be used to investigate attitudes toward PWDs depending on the purpose of the research (Antonak & Livneh, 1988). Due to the nature of this study, two survey instruments were chosen as the primary research tools to collect data. The first instrument was the Scale of Attitudes Toward Disabled Persons (SADP; Antonak, 1981), which included 24 items designed to measure general attitudes toward PWDs. These items were rated from -3 (*I disagree very much*) to + 3 (*I agree very much*). The original developers stated that “the sum of the responses to the 24 items is then calculated and a constant of 72 is added to the total” (Antonak & Livneh, 1988, p. 160). The researcher followed this instruction to compute the composite score of the SADP rated by the participants. As a result, these 24 items were recorded from 0 (*I disagree very much*) to 6 (*I agree very much*). In other words, the final score of the scale could fall between 0 and 144. Participants who received a final score close to 144 indicated they had positive attitudes toward PWDs and vice versa.

A 21-item instrument known as the Attitudes Toward the Employability of Persons with Severe Handicaps scale (ATEPSH; Schmelkin & Berkell, 1989) was selected as the second instrument to study employability attitudes toward PWDs held by research participants. Respondents expressed their degree of agreement or disagreement on each item by giving scores from -3 (*I disagree very much*) to + 3 (*I agree very much*). Based on the revised instructions provided by developers (Brown, Berkell, & Schmelkin, 1992), initial responses to each item of this scale were recorded from 1 (*I disagree very much*) to 6 (*I agree very much*). Therefore, the final score of the ATEPSH ranged from

21 to 126. Participants who received a final score approaching 126 indicated that they have positive attitudes toward PWDs in terms of their employability.

Prior to data collection, these two survey instruments were translated and proofread by professors who had knowledge of both Chinese and English through the “double translation” technique (Brislin et al., 1973). To ensure internal consistency of the survey instruments, Cronbach’s alpha of both instruments was computed during the data analysis.

The original developers mentioned that the internal consistency of the SADP ranged from .88 to .91 (Antonak & Livneh, 1988). In another study, O’Donnell (1993) implemented the Chinese-translated SADP for Hong Kong University students; it also yielded an acceptable Cronbach’s alpha value of .73. In the present study, the researcher produced an appropriate Cronbach’s alpha value of .75, which closely resembled the result of the above study conducted by O’Donnell when using the SADP in Chinese.

While the ATEPSH has been utilized in several studies, researchers only reported the Cronbach’s alpha value for each subscale (Rimmerman, 1998; Schmelkin & Berkell, 1989). Nevertheless, the Cronbach’s alpha value of the full scale was also computed in the present study and produced an appropriate internal consistent reliability value of .76.

To assure the survey was internally consistent, Nunnally (1978) suggested the Cronbach’s alpha value of the chosen instrument should be at least higher than .5. However, a Cronbach’s alpha value higher than .7 would be more appropriate to demonstrate that the instrument is reliable and internally consistent. In this study, both SADP and ATEPSH yielded appropriate reliability values at .75 and .76, respectively.

Therefore, these two surveys were considered valuable instruments that can be utilized to address the issues that were examined in the study.

Research Questions

Beyond the basic descriptive data of the research participants and the reliability of the two survey instruments, two research questions and a corresponding hypothesis were addressed in this study.

- Q1 How do the general attitudes of Taiwanese MBA students toward PWDs compare to their attitudes regarding employability of PWDs?
- H1 There is a negative relationship between Taiwanese MBA students' general attitudes and employability attitudes toward PWDs. Taiwanese MBA students have positive general attitudes toward PWDs while their employability attitudes toward PWDs are negative.

Composite scores were computed for the SADP and the ATEPSH by adding all items for each individual scale separately. Some negative statements were reverse-coded for scoring. The results of these two scales can be found in Appendices G and H.

In this study, the mean score of the SADP was 97.35 with a standard deviation of 13.61. This implied that the general attitude toward PWDs held by research participants was positive. The highest score on the SADP was 132 points and the lowest was 68 points (see Appendix G). Of the 24 items, question 16 was ranked the highest ($M = 5.37$) and question 2 was ranked the lowest ($M = 1.61$). The mean score across 24 items was 4.06 with a standard deviation of .57 (see Table 4).

As for the ATEPSH (see Appendix H), the highest score was 113 points and the lowest was 67 points. The mean of the composite score on this scale was 83.99 with a standard deviation of 7.64. Generally, the respondents had a positive attitude toward PWDs in terms of their employability. Of the 21 questions of the ATEPSH, question 1

was ranked the highest ($M = 4.81$) while the question 5 was ranked the lowest ($M = 2.37$). The mean score across 21 items was 4.00 with a standard deviation of .36 (see Table 4).

Table 4

Discrepancy Between the Scale of Attitudes Toward Disabled Persons and the Attitudes Toward the Employability of Persons with Severe Handicaps Scale

	SADP			ATEPSH			<i>r</i>
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>	
Composite Mean	116	97.35	13.61	116	83.99	7.64	.38*
Item Mean	116	4.06	0.57	116	4.00	0.36	.38*

* $p < .05$

In summary, the researcher calculated the composite scores for the SADP and the ATEPSH by adding all items across the scales. The means of the SADP composite ($M = 4.06$, $SD = .57$) and the ATEPSH composite ($M = 4.00$, $SD = .36$) were positive. In other words, the attitudes of participants toward PWDs in general and in terms of their employability were both positive. The researcher conducted a Pearson correlation coefficient to find out the relationship between the general and employability attitudes toward PWDs held by Taiwanese MBA students. The researcher found a positive correlation ($r = .38$, $p < .05$) between the two attitude scales (see Table 4).

Although the above information indicated a positive correlation between the two attitude scales, the results did not indicate which attitude the participants held was more positive toward PWDs. As a result, a paired sample t-test and a Pearson correlation coefficient were utilized to re-examine the mean and the relationship between the two

attitudes measured by the SADP and the ATEPSH. Since these two surveys had different numbers of items and scoring methods, the scoring method of the SADP was changed from (0, 1, 2, 4, 5, and 6) to (1, 2, 3, 4, 5, and 6) to match the ATEPSH. This allowed the researcher to equalize values of the two scales in order to conduct further analysis of whether there was a difference between general and employability attitudes toward PWDs held by the participants.

Again, the composite scores were calculated for the SADP and the ATEPSH for all items across the scales. For the second time, the item means of the SADP ($M = 4.33$, $SD = 0.47$) and the ATEPSH ($M = 4.00$, $SD = 0.36$) were positive. A positive correlation ($r = .39$) between the two attitudes scales was also found. The results demonstrated that when the participants held positive attitudes toward PWDs in general, their employability attitudes toward this population were also favorable. In addition, a significant difference between two scales was identified ($t = 7.54$, $p < .001$). Most notably, the participants' general attitudes toward PWDs were slightly higher than their employability attitudes toward the same population after applying an equal comparison technique mentioned above (see Table 5). As a result, the hypothesis for this research question was not significant because both general and employability attitudes toward PWDs held by the participants were found to be positive.

Table 5

Summary of Discrepancy Between the Scale of Attitudes Toward Disabled Persons and the Attitudes Toward the Employability of Persons with Severe Handicaps Scale After an Equal Comparison

	SADP			ATEPSH			<i>r</i>
	<i>N</i>	<i>M</i>	<i>SD</i>	<i>N</i>	<i>M</i>	<i>SD</i>	
Composite Mean	116	103.84	11.25	116	83.99	7.64	.39*
Item Mean	116	4.33	0.47	116	4.00	0.36	.39*

* $p < .05$

Q2 How do age, gender, and previous contact experience of Taiwanese MBA students affect their attitudes regarding the employability of PWDs?

To determine the results of the question, the researcher first evaluated demographic information of the participants. After reviewing background information, age was divided into four categories: (a) under 29 years, (b) 30-34, (c) 35-39, and (d) over 40 years. In addition, previous contact experiences were classified into four domains: (a) I do not know anyone with a disability, (b) I have a classmate/co-worker with a disability, (c) I have a friend with a disability, and (d) I have a family member with a disability.

After categorizing these demographic factors, different data analysis techniques, e.g., one-way ANOVA and multiple regression, were implemented to study the relationships between these three demographic factors and employability attitudes toward PWDs held by research participants. This helped the researcher to obtain a better understanding of the impacts these three demographic factors had on participants'

attitudes toward PWDs. The outcomes of the question were presented in three different parts to describe the different data analysis techniques.

Part One

Due to the attributes of variables of these three factors, one-way ANOVA was performed to examine the relationship between age and attitudes of Taiwanese MBA students toward PWDs in terms of their employability. The independent sample *t*-test was also implemented to study the effects of gender difference and contact experience on employability attitudes toward PWDs held by the participants.

First, since age had more than two categories, one-way ANOVA was chosen to explore whether age influenced participants' attitude toward PWDs in terms of their employability. Through the data analysis, age level was an insignificant ($F = 1.76, p = .159$) factor on participants' employability attitudes toward PWDs. In other words, participants' attitudes toward PWDs in terms of their employability were not influenced by different age groups among the participants in the study.

On the contrary, since gender and contact experiences only had two categories (female vs. male, contact vs. no contact), the independent sample *t*-test was selected to study whether these two factors influenced employability attitudes held by the participants toward PWDs. Through the independent sample *t*-test, gender was identified as an insignificant variable on the overall score of the ATEPSH ($t = -0.28, p = .781$). This result implied there was no difference in the employability attitudes between female and male participants.

When applying the independent sample *t*-test to examine whether contact experiences had influences on participants' employability attitudes toward PWDs, the

results suggested a significant influence on participants' attitudes toward PWDs in relation to their employability ($t = -2.11, p = .037$; see Table 6). This implied that participants who had contact experiences with PWDs tended to have more positive attitudes toward them especially in terms of their employability than others who had no contact experiences with PWDs.

Table 6

The Impact of Age, Gender, and Contact Experiences on the Attitudes Toward the Employability of Persons with Severe Handicaps

Variables	Category	N	M	SD	<i>t</i> / <i>F</i>	<i>p</i>
Age	(1) Under 29	40	82.00	7.54	1.76	.159
	(2) 30-34	26	83.85	7.14		
	(3) 35-39	25	85.40	7.19		
	(4) 40 and up	25	85.92	8.35		
Gender	(1) Male	61	83.80	8.68	-0.28	.781
	(2) Female	55	84.20	6.37		
Contact experiences with PWDs	(1) No	30	81.50	7.01	-2.11*	.037
	(2) Yes	86	84.86	7.70		

$N=116, *p < .05$

The type of having contact experience with PWDs in this study was defined within three domains: having a classmate/co-worker with a disability, a friend with a disability, and a family member with a disability. Therefore, it was difficult to find out which type of contact experience with PWDs influenced the participants' attitudes based on the information shown in Table 6. As a result, the independent sample *t*-test was utilized to inspect which type of contact experience influenced participants' attitudes toward PWDs in terms of their employability. After analyzing the data, the results

indicated that the research participants who had friends with disabilities tended to have positive attitudes toward PWDs in terms of their work competence ($t = 3.02, p = .003$) (see Table 7).

Table 7

The Impact of Different Contact Experiences on the Attitudes Toward the Employability of Persons with Severe Handicaps

Type of contact experiences	Category	N	M	SD	<i>t</i>	<i>p</i>
Having a classmate/ co-worker with a disability	(1) Yes	32	82.31	5.45	-1.76	.083
	(2) No	84	84.63	8.26		
Have a friend with a disability	(1) Yes	35	87.14	8.43	3.02*	.003
	(2) No	81	82.63	6.89		
Have a family member with a disability	(1) Yes	36	84.17	7.38	0.17	.869
	(2) No	80	83.91	7.80		

$N=116, *p < .05$

In conclusion, two different data analysis methods were implemented to examine the impact of each of the three demographic factor on the participants' attitudes toward PWDs regarding their employability. The results indicated that only the participants who had contact experience with PWDs tended to have positive attitudes in terms of their employability, especially for those who had friends with disabilities.

Part Two

As mentioned in Part One, there was no significant relationship between the age and employability attitudes toward PWDs held by participants when treating age as a categorical variable. In this part, age was treated as a continuous variable and a Pearson correlation coefficient was calculated to re-examine whether age was associated with participants' employability attitudes toward PWDs. Through data analysis, age was still identified as an insignificant ($p = .101$) factor that influenced participants' employability attitudes toward PWDs (see Table 8). This result was parallel to the outcomes of Part One.

Table 8

The Correlation Coefficient Between the Age and the Attitudes Toward the Employability of Persons with Severe Handicaps

ATEPSH	Age	
	<i>r</i>	<i>p</i>
Overall	.15	.101

$N=116, p < .05$

Part Three

As noted by Tabachnick and Fidell (2007), “[Multiple] regression is used to predict the score on the [dependent variable] from scores on several [independent variables]” (p. 18). Therefore, multiple regression was chosen and utilized in Part Three to examine how these three demographic factors (age, gender, and previous contact experience) explained the participants' attitudes toward PWDs in terms of their

employability. The method of stepwise forward regression was first used during data analysis to find out which factors influenced attitudes toward PWDs held by the participants.

Since gender (male vs. female) and contact experiences (contact vs. no contact with PWDs) were all categorical variables, the researcher changed them to dummy variables to perform multiple regression. A dummy variable was defined by Kerlinger and Pedhazur (1973) as “a vector in which members of a given category are assigned an arbitrary number, while all others [are] assigned another arbitrary number” (p. 105). Thus, stepwise forward regression was applied to examine the impacts of these three demographic factors on employability attitudes toward PWDs held by respondents simultaneously. Furthermore, *p*-value was set at .05 because this value is generally used in the field of education and/or social science domains (Gall, Gall, & Borg, 2007).

As shown in Table 9, the data analysis demonstrated that having contact experiences with PWDs was the only independent variable that stayed in the model ($t = 2.105, p = .037$). This indicated that participants who had contact experiences with PWDs scored higher in the overall ATEPSH compared to those without any contact experiences with PWDs. In other words, the results demonstrated that having contact experience with PWDs influenced participants' attitudes toward PWDs regarding their employability. The equation produced for the whole model follows: Employability attitude = 81.50 + 3.360 (having contact experiences). Furthermore, the outcomes yielded $R^2 = .04$, which implied that there was a 4% variability of a dependent variable (employability attitudes) explained by having contact experiences. The results also

showed a statistical meaning between the contact experience and overall scores of the ATEPSH.

Table 9

Relationships Among Three Demographic Factors and the Attitudes Toward the Employability of Persons with Severe Handicaps Using Stepwise Regression

Independent variable	Beta-coefficient(<i>B</i>)	Standard error (<i>E. R</i>)	Standardized beta-coefficient(β)	<i>P</i>
Constant	81.50	1.374	--	<.001
Have contact experiences with PWDs	3.360	1.596	.193	.037

Since the research participants were also asked what types of contact experience they had with PWDs, the researcher further examined which kinds of contact experiences influenced employability attitudes toward PWDs. As mentioned in Chapter III, the types of contact experiences with PWDs by respondents were classified as follows: (a) I have a classmate/co-worker with a disability, (b) I have a friend with a disability, and (c) I have a family member with a disability. The participants were allowed to choose all that applied

The researcher recorded each of these contact experiences as dummy variables and utilized stepwise forward regression to examine the impacts of age, gender, and the three types of contact experience on the overall score of the ATEPSH in combination. This allowed the researcher to re-examine the correctness of the results found in stepwise regression outlined in Table 9 and also to explore which types of contact experiences most influenced the employability attitudes toward PWDs.

As presented in Table 10, the outcomes of data analysis demonstrated that having a friend with a disability was the only variable kept in the model. This showed that having a friend with a disability was an important factor that influenced the overall scores of the ATEPSH ($t = 3.022, p = .003$). In other words, participants who had a friend with a disability scored higher in the overall ATEPSH than others who had different contact experiences with PWDs (Employability Attitude = $82.630 + 4.513[\text{having a friend with a disability}]$). Moreover, the results produced $R^2 = .074$, demonstrating slightly over a 7% variability of a dependent variable (employability attitudes) explained by an independent variable (having a friend with a disability).

Table 10

Impacts of Age, Gender, and Three Types of Contact Experiences (Stepwise Regression)

Independent variable	Beta-coefficient (<i>B</i>)	Standard error (<i>S.E.</i>)	Standardized beta- coefficient(β)	<i>p</i>
Constant	82.630	0.820		<.001
Have a friend with a disability	4.513	1.493	.272	.003

Finally, backward regression was utilized to verify the outcomes of the second research question found in the forward regression models. When using the stepwise forward regression, only one variable (having a friend with a disability) was found to significantly contribute to the model when the p -value was set at .05. This time, the researcher set the p -value at .10, utilizing the backward regression to discover whether participants' employability attitudes toward PWDs were influenced by other demographic

factors rather than just one variable found previously. The results again showed that having contact experiences ($t = 2.105, p = .037$) with PWDs predicted participants' employability attitudes toward PWDs (see Table 11). This clearly demonstrated that participants who had contact experiences with PWDs had favorable employability attitudes (Employability Attitudes = $81.500 + 3.360$ [having contact experiences]).

Table 11

Impacts of Age, Gender, and Contact Experiences on the Attitudes Toward the Employability of Persons with Severe Handicaps (Backward Regression)

Independent variable	Beta-coefficient (<i>B</i>)	Standard error (<i>S.E.</i>)	Standardized beta- coefficient(β)	<i>P</i>
Constant	81.500	1.374		<.001
Have contact experiences with PWDs	3.360	1.596	.193	.037

The results of backward regression showed that having contact experiences with PWDs affected the participants' employability attitudes toward them. Thus, backward regression was again performed with the addition of three different types of contact experiences with PWDs in combination (see Table 12). This helped the researcher discover whether having a friend with a disability was still the only factor that predicted employability attitudes toward PWDs identified in the forward regression models.

Table 12

Impacts of Age, Gender, and Three Types of Contact Experiences (Backward Regression)

Independent variable	Beta-coefficient (<i>B</i>)	Standard error (<i>S.E.</i>)	Standardized beta- coefficient(β)	<i>P</i>
Constant	75.910	3.640		<.001
Age	.219	.105	.186	.039
Have a classmates/co- worker with a disability	-2.939	1.511	-.173	.054
Have a friend with a disability	4.826	1.464	.291	.001

Findings of applying backward regression were obviously different from the previous results (see Table 12). First, the outcomes once again showed that having a friend with a disability influenced the participants' employability attitudes toward PWDs in a positive direction ($t = 3.296, p = .001$). Second, age became an important factor ($t = 2.094, p = .039$) that affected employability attitudes toward PWDs, which was never identified previously. That is to say, the participants who were older tended to have more favorable employability attitudes toward PWDs than younger participants. Third, having classmates/co-workers with disabilities seemed to be a noteworthy variable that had a negative impact on the participants' employability attitudes toward PWDs ($t = -1.946, p = .054$). In other words, participants who had classmates or co-workers with disabilities tended to have unfavorable perceptions regarding their employability. The equation generated for the whole model follows:

Employability attitudes = 75.910 + .219(age) -2.939 (having a
classmate/coworker with a disability + 4.826 (having a friend with a disability)

Results through the backward regression also produced $R^2 = .131$, illustrating about a 13% variability in employability attitudes explained by three independent variables: age, having a friend with a disability, and having a classmate/co-worker with a disability.

Summary

This chapter provided detailed descriptive information of the participants as well as the results of statistical data analyses of two research questions addressed in the study. The data were analyzed through the statistical software of SPSS 18.0 to examine two research questions that guided this study. Results of research question one demonstrated that when Taiwanese MBA students had positive general attitudes toward PWDs, their employability attitudes toward this population also tended to be favorable. Outcomes of research question two indicated that the contact experience, especially for those who had friends with disabilities, was a significant factor that influenced participants' attitudes toward PWDs in terms of their employability. In addition, age seemed to have some level of influence on participants' employability attitudes toward PWDs.

CHAPTER V

SUMMARY, DISCUSSION, AND RECOMMENDATIONS

Undergraduate business students are considered the future leaders of enterprises. As a result, several studies have been conducted to explore the attitudes of undergraduate business students toward people with disabilities (PWDs) to examine their future employment decisions regarding job applicants with disabilities (Albritton, 2005; Hunt & Hunt, 2000). In this study, the researcher investigated the attitudes toward PWDs held by Taiwanese business graduate students since they already had or planned to pursue managerial-related positions that gave them the authority to make hiring decisions.

In the present study, the researcher examined several themes. The primary objectives were to explore the general and employability attitudes toward PWDs held by Taiwanese Master of Business Administration (MBA) degree students. This allowed the researcher to discover how they viewed PWDs in general and how they perceived the work competence of this population. In addition to the major objectives, the researcher also examined the levels of disability knowledge held by the research participants and whether the participants could obtain disability information from their academic settings as well as their work environments.

In this chapter, a detailed discussion of the study is presented including findings of the two research questions, other significant discoveries, limitations of the study, and recommendations for future research.

Discussion of Findings

Two survey instruments were chosen to explore the attitudes, general and employability, toward PWDs held by research participants. Analysis of the survey results revealed several issues that are discussed in the following paragraphs, beginning with a discussion of the outcomes of the first research question.

Q1 How do the general attitudes of Taiwanese MBA students toward PWDs compare to their attitudes regarding employability of PWDs?

To answer this question, the researcher computed composite scores for both surveys and learned that the mean score of the SADP was 97.35 out of 144 while the mean score of the ATEPSH was 83.99 out of 126. In addition, the researcher found a positive correlation ($r = .39$) between two composites. Overall, survey respondents expressed positive attitudes toward PWDs in general ($M = 4.06$, $SD = .57$) and in terms of their employability ($M = 4.00$, $SD = .36$). After conducting an equal comparison, as mentioned in Chapter IV, the results still demonstrated participants held positive attitudes toward this population both in general ($M = 4.33$, $SD = .47$) and in employability ($M = 4.00$, $SD = .36$). However, the participants' general attitudes were somewhat better than their employability attitudes toward PWDs.

The results were encouraging. For example, when examining general attitudes toward PWDs through the SADP (see Appendix G), the participants ranked item 16--The opportunity for gainful employment should be provided to [PWDs] with the highest score. In addition, item 20--Equal employment opportunities should be available to [PWDs] was

ranked by the participants as the second highest. Similarly, items 21 and 23 related to employment rights of PWDs were also ranked in a positive direction. Furthermore, the participants expressed optimistic views on items 1 and 3 that were associated with the educability and morality of PWDs. In summary, the above findings indicated that the participants had positive perceptions regarding the inclusion of PWDs in ordinary workplaces and mainstream society, demonstrating their general attitudes toward PWDs were in a positive direction.

When examining the participants' employability attitudes toward PWDs through the implementation of the ATEPSH, findings were also positive (see Appendix H). First, the participants ranked item 1 with the highest scores, referring to participants who considered that PWDs could learn proper social skills in competitive work settings. In addition, items 2 and 4 were ranked by the participants with high scores, indicating they believed PWDs should be provided with equal competitive employment opportunities; they also considered PWDs as dependable workers. Except for the issue about providing equal employment opportunities for PWDs, the participants also highly ranked item 13, indicating PWDs should not cause the employers absence and punctuality problems. While the participants' general attitudes were better than their employability attitudes toward PWDs, the findings still indicated that PWDs were not only regarded as having the potential ability to learn proper work and social skills in ordinary worksites but were also considered reliable employees by research participants.

The results of the first research question rejected the previous beliefs that Chinese-culture-dominated societies, such as Taiwan, generally tend to view PWDs in a negative light (Chang & McConkey, 2008; Chou & Palley, 1998). The findings of the

present study demonstrated that the research participants' general and employability attitudes toward PWDs were both positive. Although the results were solely based on quantitative data, the possible explanation can be found in different references.

For example, the improvement of social and educational services for PWDs, e.g., passage of the People with Disabilities Rights Protection Act of 2007 and the Enforcement Rules to the Act of Special Education of 2003, may not have only promoted disability awareness among Taiwanese people but also changed their general attitudes toward PWDs (Huang, Ososkie, & Hsu, 2011).

In addition, 74% of the participants had different types of contact experiences with PWDs in this study. According to a study conducted by Huang, Fried, and Hsu (2009), a greater level of contact experiences with individuals with disabilities could change peoples' attitudes toward PWDs. Similarly, the results of different studies indicated that having real contact experiences with PWDs might influence people's attitudes toward this population in a positive direction (Belcher & Smith, 1994; Favazza & Odom, 1997). Therefore, passing disability-related legislation and having contact experiences with PWDs might have been two important factors that helped the participants be aware of human rights of PWDs and recognize the importance of social inclusion for this population. As a result, the participants' general attitudes toward PWDs were on a positive track.

The reasons that led research participants to have positive attitudes toward PWDs in terms of their employability could be similar as well. First of all, the efforts made by the Taiwanese government and nonprofit rehabilitation organizations to promote employment rights of PWDs through the passage of related legislation and providing

relevant vocational trainings might change people's attitudes toward PWDs in relation to their vocational competence and employability (Hsu, Ososkie, & Huang, 2009).

Promoting employment rights for PWDs publicly by the Taiwanese government and related rehabilitation agencies not only allows the participants to have more contact experience with PWDs in different settings, including the workplace, but also could change their perceptions regarding equal employment opportunities for PWDs that people without disabilities have taken for granted for a long period of time.

For instance, in the present study, 46 (40%) participants mentioned that their companies had hired people with disabilities. In addition, 86 out of 116 (74%) participants indicated they had had different types of direct contact experiences with PWDs, e.g., contact with their classmates/co-workers, friends, or family members with disabilities. Therefore, a possible explanation for participants who had positive outlooks toward PWDs in terms of their employability could be due to having real contact experiences with PWDs in different circumstances including the workplace.

Some researchers have indicated that having work contact experiences with PWDs might change people's attitudes toward their co-workers with disabilities in terms of their vocational competence (Belcher & Smith, 1994). Therefore, if the participants had positive direct or non-direct work contact experience with PWDs in their companies, they might have obtained disability knowledge and also opportunities to acquire better understanding of the work competence of PWDs in their companies. This might have changed their employability attitudes toward PWDs in a positive direction. For the participants who had contact experience with PWDs such as friends and family relatives, they might endorse their employment rights, thus improving their employability attitudes

toward PWDs (Horner-Johnson et al., 2002). Therefore, having different interaction opportunities with PWDs might be an important factor that leads participants to view work competence and employability of this population optimistically.

While the participants had positive attitudes toward PWDs in general and in terms of their employability, it should be noted that their general attitudes were slightly better than their employability attitudes toward PWDs. The possible explanations of this finding might be due to the participants' MBA curriculum wherein maximizing profits and minimizing costs were emphasized (Millington et al., 2003). In addition, safety concerns and negative attitudes toward workers with disabilities might also be factors leading participants to worry whether PWDs should or could work in competitive settings (Hsu et al., 2009). Nevertheless, the findings still demonstrated that PWDs were considered as people who had a potential ability to learn proper work and social skills in the workplace and reliable employees by the research participants.

In summary, the results of the first research question indicated that the participants held positive attitudes toward PWDs in general and in terms of their employability. The reasons to cause the participants to have positive attitudes toward PWDs could be various. All of the factors mentioned could affect the participants' outlooks toward PWDs in general and in relation to their employability. Even though the results indicated that the participants' general attitudes toward PWDs were slightly better than their employability attitudes toward the same population, they were both positive trends. These findings were not only encouraging but were important discoveries to point out that Taiwanese people might have already changed their attitudes toward PWDs.

Q2 How do age, gender, and previous contact experiences of Taiwanese MBA students affect their attitudes regarding the employability of PWDs?

Many researchers have agreed that attitudes toward PWDs and other related disability issues could be affected by people's cultural beliefs, life experiences, and contact experiences (Antonak & Livneh, 1991; Huang et al., 2009; Oppenheim, 1992). Therefore, Western researchers have conducted relevant studies to discover which demographic factors might influence one's attitudes toward PWDs (Tervo et al., 2002; Yazbeck et al., 2004). While the majority of related studies were done in Western societies, similar research was rarely conducted to explore whether Taiwanese people's perceptions toward PWDs were also influenced by their demographic backgrounds. As a result, the second objective of this research was to investigate whether age, gender, and previous contact experiences with PWDs influenced attitudes of Taiwanese MBA students toward people with disabilities, specifically in terms of their employability.

As mentioned in Chapter IV, due to the nature of variables, several data analysis methods were utilized to ensure the findings were accurate. First, after conducting the independent sample *t*-test, the results showed that only *contact experiences with PWDs* was a significant factor that influenced employability attitudes toward PWDs held by the participants in a positive direction. Similarly, when applying stepwise forward regressions, *contact experiences with PWDs* was also regarded as the only important demographic factor that affected attitudes toward PWDs' employability held by the participants.

However, the types of having contact experiences with PWDs were classified into three categories in this research: those having classmates/co-workers, friends, and family members with disabilities. As a result, forward regression was implemented again with

the addition of three types of contact experiences with PWDs in combination to determine which factors affected the participants' employability attitudes toward them. The results showed that *having friends with disabilities* was the major cause to influence perceptions toward PWDs in terms of their employability held by the participants. To be more specific, participants who had interacted with PWDs and whom they considered their friends showed the most positive attitudes toward their employability.

Finally, the results of applying backward regression showed that age, having a friend with a disability, and having a classmate/co-worker with a disability predicted participants' attitudes toward the employability of PWDs in different directions. To summarize, age and having a friend with a disability were two factors that positively influenced employability attitudes toward PWDs held by the participants. On the other hand, having classmates/co-workers with disabilities affected the participants' employability attitudes toward PWDs in a less than favorable direction. These findings were different from those found when using the forward regression. Nevertheless, the outcomes of the second research question clearly indicated that gender and having relatives with disabilities were not significant variables to influence employability attitudes toward PWD.

Other findings revealed several important issues. First, Taiwanese MBA students who were older had more positive viewpoints of PWDs regarding their employability. This discovery was contrary to the results of related research that indicated age was not a determining variable that affected employability attitudes toward PWDs held by corporate executives (Rimmerman, 1998). Possible explanations of older Taiwanese MBA students having positive employability attitudes toward PWDs varied. They might

have had positive interaction experiences with PWDs in the workplace or had more opportunities to interact with PWDs due to having longer work experiences. In addition, they might possess proper knowledge of employment rights of PWDs due to their positions' requirements.

Except for the above reasons, they might have also had experiences in working with employment specialists to modify or restructure job duties to meet particular abilities of workers with disabilities. Finally, they could be the early generation of Taiwanese workers who obtained knowledge of employment rights of PWDs promoted by the Taiwanese government through the passage of the Protection Act for the Handicapped and Disabled of 1997, also known as the People with Disabilities Rights Protection Act of 2007. More familiar with relevant issues, older participants have had long-term experiences supporting PWDs to accommodate their jobs and being knowledgeable of employment rights of PWDs. Thus, the reasons mentioned above might possibly have led Taiwanese MBA students who were older to have more positive employability attitudes toward PWDs.

Secondly, the results showed that the participants who had interacted with PWDs whom they considered their friends showed positive attitudes toward their employability. In fact, this finding was not uncommon. For instance, researchers have found that people who have a close friend with a disability tend to support the employment rights of PWDs (Horner-Johnson et al., 2002). A possible explanation of this finding could also be explained by Allport's "*contact hypothesis*," which indicates that people who have more contact experiences with a particular population of individuals may have more positive attitudes toward them (Allport, 1954; Krahe & Altwasser, 2006). Therefore, when natural

contact occurs regularly between two populations with equal status, these contact experiences may allow both parties to obtain a better understanding of each other, thus reducing prejudice or bias based on previous beliefs (Allport, 1954). It is highly possible that participants with positive employability attitudes toward their friends with disabilities believed this way because they might have acquired proper disability knowledge with regard to employment rights from their friends with disabilities. In addition, they might have obtained a better understanding of their work competence naturally due to frequent contact.

Yet, the notion of “*contact hypothesis*” (Allport, 1954) might not be applicable to all situations. For example, researchers found that nursing students who had more contact experiences with PWDs had some negative concerns about them due to feelings of heavy responsibility (Johnston & Dixon, 2006). Similarly, in the present study, participants who had classmates/co-workers with disabilities had less favorable attitudes toward their employability although their overall employability attitudes toward PWDs were still positive. While this finding was unpleasant, it seemed to be common and implied that PWDs might encounter increased challenges in the school setting or in the workplace.

In fact, related research has indicated that students with disabilities tended to be viewed as people who struggled with their academic performance, thus leading their non-disabled classmates to not want to interact with them on curriculum related tasks (Siperstein, Parker, Norins, & Widaman, 2011). When implementing this concept to explore reasons that could lead participants who had classmates with disabilities to have less favorable attitudes toward PWDs’ employability, the answers become clearer. That is

to say, the research participants might have negative stereotypes toward their classmates with disabilities in terms of their academic performance, which ultimately reflected their employability attitudes toward their classmates with disabilities. Moreover, Taiwanese people with disabilities are frequently perceived as dependent and emotionally unstable (Chang & McConkey, 2008; Chou & Palley, 1998). This negative stereotype might explain another reason participants have less favorable attitudes toward the employability of their classmates with disabilities.

The likely reasons participants had less favorable employability attitudes toward their co-workers with disabilities can also be found in different references. For instance, several difficulties faced by Taiwanese workers with disabilities were recognized in a study conducted by the Taiwanese government including lower educational backgrounds, poor relationship with their non-disabled co-workers, and inadequate work competence (Council of Labor Affairs, 2009). Correspondingly, results of relevant research have also indicated that Taiwanese people with intellectual disabilities frequently had negative work experiences with their counterparts without disabilities due to their poor work competence or slow reactions (Hsu et al., 2009). All of these reasons could lead the participants to have less favorable attitudes toward PWDs' employability.

In conclusion, the results of this study indicated that age and having friends with disabilities were main factors that positively influenced employability attitudes toward PWDs. On the other hand, having classmates and co-workers with disabilities were considered factors that led the participants to have less favorable attitudes toward PWDs' employability. Gender and having relatives with disabilities had no effect on employability attitudes toward PWDs held by the participants. However, these findings

are very common; the results of related studies have yielded inconsistent outcomes that demonstrated various demographic variables, including age, gender, and contact experiences, might or might not have had effects on people's perceptions toward PWDs (Chenoweth et al., 2004; Dorji & Solomon, 2009; Favazza & Odom, 1997; Perry et al., 2008; Shafer et al., 1989; Tang et al., 2000).

Limitations

Every study has drawbacks and this research was no exception. Since this study was conducted through the utilization of two surveys, the social desirability tendency could have been one of the significant factors that influenced the outcomes of the study. The social desirability tendency meant that the research participants might have responded to survey questions in a positive direction to please researchers (Antonak & Livneh, 1988). As a result, although the participants showed positive general and employability attitudes toward PWDs in this study, the researcher could not exclude the possibility of the influence of the social desirability tendency. In other words, the participants' opinions toward PWDs identified in the study might not have reflected their true perceptions toward PWDs.

Another limitation of this study was the location where the surveys were distributed. Taiwan is an oceanic nation; its size is slightly smaller than the U.S. states of Maryland and Delaware combined (Central Intelligence Agency, n.d.). These two surveys were only distributed to those Taiwanese MBA students attending five different universities in the city of Taipei, the capital of Taiwan, and nearby areas where disability awareness has been promoted most often. Thus, the participants' attitudes toward PWDs and relevant issues might have been different from other Taiwanese MBA students who

studied and lived in the southern or other parts of Taiwan where attitudes toward PWDs might be influenced by local customs.

The curriculum the participants took from their business programs could also have been a factor that influenced the generalization of this study. Due to the possible influence of varied business courses offered by different universities, it is highly possible that other Taiwanese MBA students who did not join the study might have received disability knowledge from their curriculum. Similarly, schools that were not contacted by the researcher might have also incorporated disability awareness topics into their curriculum. Therefore, the results of the study do not represent that all Taiwanese MBA students have received disability knowledge and related information from their classes.

Finally, the main objectives of this study were to explore general and employability attitudes toward PWDs held by Taiwanese MBA students regardless of disability types. Western research has indicated that people have stereotypes or preferences toward individuals with specific disabilities. For instance, the results of some studies clearly indicated that people tended to have positive attitudes toward individuals with physical disabilities (Gordon, Tantillo, Feldman, & Perrone, 2004; Wong et al., 2004) rather than others with intellectual disabilities (Corrigan et al., 2000; Wang et al., 2003). Therefore, it is possible that the results of the study could have been different if disability types were examined.

Implications of the Study

Results of this study have yielded several recommendations for rehabilitation professionals, employment specialists, and related service providers who are specialized in supporting PWDs, especially in terms of their employment rights and opportunities.

First, few participants indicated that they received disability knowledge from their curricula (12%) or the workplace (33%), which indicated that there is a need to promote disability awareness and related knowledge among Taiwanese MBA students. While it is highly possible that business faculty might not possess relevant disability knowledge due to their academic backgrounds, rehabilitation and related professionals should contact heads of business departments and explain that they would like to promote disability awareness and provide information with regard to employment rights of PWDs whom their students might encounter in the workplace.

When an agreement is reached between rehabilitation professionals and heads of business departments, a guest consultant who is knowledgeable in employment rights for PWDs should be invited to give a short presentation or a lesson to Taiwanese MBA students. The guest speaker could be a vocational rehabilitation counselor, a special education teacher, or an employment specialist who not only possesses appropriate knowledge in vocational rehabilitation services for PWDs but is also familiar with employment legislation related to this population. This would be a simple but effective method to promote disability awareness and provide disability knowledge for Taiwanese MBA students.

Findings of this study also indicated that Taiwanese MBA students had positive attitudes toward PWDs' employability. This information is great news for employment specialists because these MBA students are considered future business representatives in their fields. Building a rich network with businesses is usually considered an important strategy that employment specialists can use to assist their job seekers with disabilities (Hagner, 2003). As a result, employment specialists or related professionals who are

invited to give a brief presentation or a lesson to the MBA students might also use this type of opportunity to build a network with these students who might already have or plan to pursue managerial positions that would allow them to make hiring decisions.

The above information indicated that rehabilitation and related professionals might have opportunities to promote disability awareness among MBA students and to establish networks with future business representatives. However, a significant discovery might cause rehabilitation professionals concern--participants who had classmates and/or co-workers with disabilities tended to have less favorable attitudes toward their employability.

To solve this issue, several approaches could be implemented. Promoting disability awareness through a presentation or a lecture as mentioned above would be a good start. This would be a great method to help Taiwanese MBA students acquire knowledge about how to interact with their classmates with disabilities. However, since the results of the study also demonstrated that younger participants had less favorable employability attitudes toward PWDs, it is recommended that awareness curricula be incorporated into business programs at the undergraduate level to help students acquire accurate disability information at an early college stage (Chan et al., 2002).

Conducting disability awareness campaigns could also start from kindergarten, primary schools, to secondary schools (Tang et al., 2000). This would be an appropriate method to promote disability awareness and change negative stereotypes toward PWDs at the early life stages of Taiwanese young children who might or might not have classmates with disabilities. However, collaboration between school personnel, rehabilitation related professionals, and the government is necessary to achieve this goal. Otherwise, without

cooperation between related government agencies and rehabilitative service organizations, conducting school-based and large-scale disability awareness programs or activities would be difficult to accomplish.

Finally, the results indicated the participants who had co-workers with disabilities tended to have negative attitudes toward their employability. Rehabilitation professionals need to conduct research to discover what reasons led them to have unfavorable reactions toward their co-workers with disabilities in terms of their employability. In addition, this finding reminds employment specialists that they need to provide long-term employment supports such as job modification and accommodations for their clients with disabilities to facilitate their performance (Hanley-Maxwell, Owens-Johnson, & Fabian, 2003) and to solve concerns of employers or managers who hire them (Gilbride & Stensrud, 1992). Otherwise, unfavorable reactions toward workers with disabilities held by their co-workers without disabilities could negatively influence work performance of PWDs in the workplace (Colella, 2001; Hsu et al., 2009).

Recommendations for Future Study

The main objectives of this study were to examine general and employability attitudes of Taiwanese MBA students toward PWDs since they are considered future business leaders in their chosen areas. The findings showed that Taiwanese MBA students had positive general and employability attitudes toward PWDs. However, the outcomes of this study have also raised several significant issues worth future study.

First, it is important to note that the results of Western research indicated that people tended to have different attitudes toward individuals with particular disabilities such as mental illness (Corrigan et al., 2000), intellectual disabilities (Gordon et al.,

2004), or psychiatric disabilities (Wong et al., 2004). Therefore, future researchers could explore whether Taiwanese MBA students or general public also had different general and employability attitudes toward persons with particular disabilities. Conducting related studies would provide future researchers with an opportunity to study whether Taiwanese people have stereotypes toward people with specific disabilities and whether having stereotypes toward persons with particular disabilities is a cross-culture phenomenon.

In addition, the outcomes of the study demonstrated that few Taiwanese MBA students received disability knowledge from their curriculum (12%) and workplaces (33%). Although the sample size of the study was relatively small, these findings might reflect true current practices of promoting disability awareness in graduate business curricula and workplaces. As a result, it would be important to conduct a larger-scale study to explore whether the majority of Taiwanese business graduate curricula incorporate disability knowledge in their courses. Similarly, it is necessary to explore whether businesses that meet the People with Disabilities Rights Protection Act of 2007 criteria do hire specific numbers of PWDs and provide relevant disability knowledge to their non-disabled employees. The results of these future studies might allow researchers and service providers to inspect whether it is a necessary to promote disability awareness in academic settings as well as the workplace.

Furthermore, in this study, all research participants were pursuing graduate degrees at the time the study was conducted. However, researchers have clearly indicated that having more education is an important factor that could influence people's attitudes toward PWDs in a positive way (Scior, Kan, McLoughlin, & Sheridan, 2010; Yazbeck et

al., 2004) because they might be more open-minded and well-informed toward relevant issues (Lau & Cheung, 1999). Therefore, although the findings of the study showed that the participants had positive general and employability attitudes toward PWDs, it might be due to their higher educational backgrounds. To verify whether Taiwanese people have positive general attitudes toward PWDs, future researchers need to recruit participants with a variety of educational backgrounds rather than those who had more education.

Moreover, when applying backward regression procedures, the constant collinearity values for excluded demographic factors (having a family member with a disability and gender) were .851 and .987, respectively. According to Weisberg (2005), if the collinearity between “a set of predictors [is high], one or more predictors must be deleted” when implementing multiple regression techniques (p. 216). Therefore, the constant collinearity values of these two variables found in backward regression indicated that the research participants might have had similar experiences in interacting with PWDs or in terms of their backgrounds. This also might have led to only about 13% variability in the participants’ employability attitudes toward PWDs explained by age, having contact experiences with a friend with a disability, and having contact experiences with a co-worker/classmate with a disability.

Therefore, researchers who would like to conduct relevant studies in the future should recruit participants with different academic backgrounds to learn whether they received disability and related knowledge from their courses or to compare how students were educated about disability awareness in their various academic domains. In addition, researchers could compare undergraduate and graduate students’ attitudes toward PWDs

to obtain a better understanding of whether age and academic backgrounds influenced their attitudes toward PWDs. This would be a great way to avoid the possibility of recruiting participants with similar backgrounds.

Finally, having positive general and employability attitudes toward PWDs of the research participants does not mean they will put their positive beliefs into practice. For example, Western researchers have indicated that employers tend to have positive attitudes toward PWDs while their hiring practices toward this population might not (Hernandez et al., 2000) due to particular concerns such as their productivity (Lengnick-Hall, 2007) and health issues (Diksa & Rogers, 1996). This could explain why a low employment rate of PWDs is a prevailing phenomenon. As a result, future researchers should conduct relevant studies to examine how PWDs perceive the attitudes of the general public toward themselves as well as how their counterparts without disabilities view them in the workplace. Their answers might be more precise in representing how Taiwanese people view PWDs in general and in the workplace.

Summary

This chapter contained detailed information regarding a discussion of the findings of the present study. The results were encouraging because Taiwanese MBA students had positive attitudes toward PWDs both in general and in regard to their employability. These findings indicated that previous beliefs that Chinese-culture-dominated societies, such as Taiwan, generally tend to view PWDs in a negative direction (Chang & McConkey, 2008; Chou & Palley, 1998) might not be true at this time. This positive change in attitudes toward PWDs could be due to the efforts of promoting disability awareness and the passage of disability and related employment legislation by the

Taiwanese government. However, since the outcomes also indicated that the research participants who had classmates/co-workers with disabilities tended to have less favorable attitudes toward PWDs' employability, some suggestions for future practice were also mentioned in this chapter. Finally, the limitations of this study and recommendations for future research directions were also included in the chapter, which may encourage future researchers to examine similar issues.

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APPENDIX A

**INSTITUTIONAL REVIEW BOARD APPROVAL
TO CONDUCT RESEARCH**

UNIVERSITY of
NORTHERN COLORADO
Institutional Review Board (IRB)



May 2, 2011

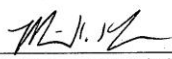
TO: Maria Lahman
Applied Statistics and Research Methods

FROM: The Office of Sponsored Programs

RE: Exempt Review of *Taiwanese Master of Business Administration (MBA) Students' Attitudes toward People with Disabilities*, submitted by Ying-Ting Huang (Research Advisor: Juliet H. Fried)

The above proposal is being submitted to you for exemption review. When approved, return the proposal to Sherry May in the Office of Sponsored Programs.

I recommend approval.


Signature of Co-Chair

5-11-11
Date

The above referenced prospectus has been reviewed for compliance with HHS guidelines for ethical principles in human subjects research. The decision of the Institutional Review Board is that the project is exempt from further review.

IT IS THE ADVISOR'S RESPONSIBILITY TO NOTIFY THE STUDENT OF THIS STATUS.

Comments: *sent email 5-9-11*

APPENDIX B
INFORMATIONAL LETTER



Informational Letter for the Study

Dear Business Program Director and Professors,

My name is Ying-Ting Huang and I am a doctoral student in the Department of Human Rehabilitation at the University of Northern Colorado. I am working on my doctoral dissertation and am conducting research about Taiwanese Master of Business Administration (MBA) students' attitudes toward people with disabilities (PWDs).

Over the past few years, several studies have been conducted to examine the attitudes of undergraduate business students toward PWDs in order to predict their future employment decisions associated with job applicants with disabilities. While related studies have been conducted in Western society, little relevant research has been done in Taiwan. In addition, unlike undergraduate business programs, MBA students usually have several years of work experience before entering the program, and are already or are preparing to be in charge of making employment decisions. Therefore, examining the attitudes of MBA students toward PWDs may be more appropriate to predict their future hiring practices toward this population.

Due to the above reasons, I would like to invite your students to participate in this research of MBA students' attitudes toward PWDs. Participation is voluntary. Participants will be asked to complete two surveys and a demographic sheet. The first survey is *The Scale of Attitudes Toward Disabled Persons* (SADP). This instrument will be implemented to find out MBA students' general attitudes toward PWDs. The second survey is the *Attitudes Toward the Employability of Persons with Severe Handicaps Scale* (ATEPSH), which will be utilized to explore attitudes of MBA students toward PWDs' employability.

The results of this research allow the researcher to find out the current perspectives of Taiwanese business graduate students toward PWDs as well as help rehabilitation-related professionals to learn how to improve the work competence of PWDs. Most importantly, the results of this study would allow the researcher to determine the extent to which it is necessary to promote disability awareness among Taiwanese MBA students.

The data will be collected between the beginning of June to middle of July, 2011. Professors or instructors who are willing to provide assistance for this study will make the final decision on when (either at the beginning or the end of your class) the survey instruments will be administered. The researcher will administer the surveys in a graduate

business class in the presence of the class instructor. The total time of participation will take students about 20 minutes. This research will remain totally anonymous.

No personal or school identity information will be collected or identified. I hope that you will invite your students to participate in this research. Upon completion of the survey, every participating student will be given a NT\$100 (equal to 4 U.S. dollars) convenience store gift card to thanks for his/her time and participation.

If you have any concerns or further questions regarding this study, I am willing to discuss relevant issues with you in person, via e-mail, or on the phone. Thank you for your patience and assistance.

Ying-Ting Huang, Principal Investigator
Taiwan (02-2709-4087)
U.S.A (970-397-2817)
Huan5584@bears.unco.edu
Venus613@gmail.com

APPENDIX C
CONSENT FORM



CONSENT FORM FOR HUMAN PARTICIPANTS IN RESEARCH
UNIVERSITY OF NORTHERN COLORADO

Project Title: Taiwanese Master of Business Administration (MBA) Students' Attitudes Toward People with Disabilities

Researcher: Ying-Ting Huang, Doctoral Candidate
School of Human Sciences, University of Northern Colorado

Phone: 970-397-2817

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Research Advisor: Juliet H. Fried, Ed.D.
School of Human Sciences, University of Northern Colorado

Phone: 970-351-1580

E-mail: Juliet.Fried@unco.edu

Purpose and Description: The purpose of this study is to investigate Taiwanese Master of Business Administration (MBA) students' attitudes toward people with disabilities (PWDs); these students represent the future generation of business representatives. This would not only allow the researcher to find out their current perspectives toward PWDs, but also help the researcher to obtain a better understanding of how they were trained and educated in their employment and educational settings regarding PWDs. The results of the study would allow the researcher to determine the extent to which it is necessary to promote disability awareness among Taiwanese MBA students.

If you volunteer to participate in this study, you will be required to take two surveys and complete a demographic information sheet. The first survey is *The Scale of Attitudes Toward Disabled Persons* (SADP). This will be implemented to discover your general attitudes toward PWDs. An example of a survey question which you will rate is: "*Simple repetitive work is appropriate for the disabled*".

The second survey is the *Attitudes Toward the Employability of Persons with Severe Handicaps Scale* (ATEPSH). This will be utilized to study your attitudes toward the employability of PWDs. An example of a survey question which you will rate is: "*In competitive employment, people with severe handicaps can learn appropriate social skills*".

The data will be collected sometime between the beginning of June to middle of July, 2011. The researcher will administer the surveys in your class. Professors or instructors who are willing to provide assistance for this study will make the final decision on when (either at the beginning or the end of your class) the survey instruments will be administered. The total time of your participation will be approximately 20 minutes.

The researcher will take every precaution in order to protect the confidentiality of your participation. The researcher will not ask you to put your name on the surveys and the demographic information sheet. At the same time, the researcher will ask you to turn in the consent form and survey instruments separately. As a result, your identity will be kept anonymous, which will ensure that your opinions toward PWDs are well protected. In addition, all data will be kept secure in a locked cabinet, which is only accessible by the researcher. Finally, all data will be destroyed upon completion of the project.

Potential risks in this project are minimal. The surveys and the demographic questions are fairly simple. It is unlikely that you will have problems as a result of participating in this project. For some participants, it is possible that answering some survey questions could cause you discomfort. If you feel uncomfortable, you may stop completing the survey at any time. Nonparticipation or withdrawal from the study will not affect your grade. Upon completion of the survey, you will be given a NT\$100 (equal to 4 U.S. dollars) convenience store gift card to thank you for your time and participation.

Participation is voluntary. You may decide not to participate in this study and if you begin participation you may still decide to stop and withdraw at any time. Your decision will be respected and will not result in loss of benefits to which you are otherwise entitled. Having read the above and having had an opportunity to ask any questions, please complete the questionnaire if you would like to participate in this research. By completing the questionnaire, you will give us permission for your participation. You may keep this form for future reference. If you have any concerns about your selection or treatment as a research participant, please contact the Office of Sponsored Programs, Kepner Hall, University of Northern Colorado Greeley, CO 80639; 970-351-2161.

APPENDIX D

DEMOGRAPHIC INFORMATION SHEET

Demographic Information Sheet

Directions: Please put "X" on your choice of response to the following items. Please do not respond to the questionnaire if you have a disability. Thank you for your cooperation.

1. Your gender:
 - Male
 - Female

2. What is your age? (e.g., 35 years and 9months)
 - years months

3. Your experience interacting with PWDs (**Please check all that apply**):
 - I do not know anyone with a disability
 - I have a classmate/co-worker with a disability
 - I have a friend with a disability
 - I have a family member with a disability
 - Others _____

4. How frequently do you have contact with PWDs?
 - I never have contact with PWDs
 - I have contact with PWDs at least one time per month
 - I have contact with PWDs at least one time per week
 - I have contact with PWDs almost daily

5. How much contact have you had with PWDs? (e.g., 5years and 9months)
 - years months

6. What disabilities do the people with whom you interact have? (Please check all that apply)
 - I do not know anyone with disabilities
 - People with physical disabilities
 - Please specify:** _____
 - People with emotional disabilities
 - Please specify:** _____
 - People with intellectual disabilities
 - Please specify:** _____
 - People with visual impairment
 - People with auditory impairment
 - Others _____

7. What types of business are you currently working in?
 Manufacturing
 Wholesale and retail
 Transportation
 Financial institution
 Hotel, food, and service industry
 Insurance
 Real estate
 Education
Other _____
8. Has your company hired any PWDs?
 Yes
 No (**please go to question 10**)
9. If yes, what disabilities do the employees with whom your company hires?
 People with physical disabilities
Please specify: _____
 People with emotional disabilities
Please specify: _____
 People with intellectual disabilities
Please specify: _____
 People with visual impairment
 People with auditory impairment
Others _____
10. How many years of working experiences do you have so far? (e.g. 3 years and 5 months)
_____ years _____ months
11. Do you currently work full time or part time?
 Full time
 Part time
12. Have you received any information about PWDs at your work?
 Yes
 No
13. **If yes**, what kind of information employers provided?
 Information about PWDs in general
 Information about co-workers with disabilities
Others _____

14. Do you know anything about *the People with Disabilities Rights Protection Act of 2007*?
- Yes
 No
15. Are you aware that *the People with Disabilities Rights Protection Act of 2007* regulate that 3% of all Taiwanese government agencies' workforce must be people with disabilities, when the agencies have 34 employees or more. These government agencies include public schools.
- Yes
 No
16. Are you aware that *the People with Disabilities Rights Protection Act of 2007* indicates that all private business organizations who have more than 67 employees are required to have at least 1 % of their employees be people with disabilities?
- Yes
 No
17. Do you receive any information related to disabilities from MBA courses?
- Yes
 No

APPENDIX E

**THE SCALE OF ATTITUDES TOWARD DISABLED
PERSONS (SADP)**

The Scale of Attitudes Toward Disabled Persons (SADP)

Directions:

The statements presented below express opinions or ideas about people with disabilities. There are many differences of opinion; many people agree and many people disagree with each statement. We would like to know your opinion about them. Put "X" through the appropriate number, from -3 to +3, which best corresponds with how you feel about the statement. There are no right or wrong answers. You should work as quickly as you can, but don't rush. Please respond to every statement. The term of disabled people was changed to people with disabilities throughout the SADP Chinese version.

1. Disabled children should not be provided with a free public education.

-3	-2	-1	+1	+2	+3
I disagree very much	I disagree pretty much	I disagree a little	I agree a little	I agree pretty much	I agree very much

2. Disabled people are not more accident prone than other people.

-3	-2	-1	+1	+2	+3
I disagree very much	I disagree pretty much	I disagree a little	I agree a little	I agree pretty much	I agree very much

3. A disabled individual is not capable of making moral decisions.

-3	-2	-1	+1	+2	+3
I disagree very much	I disagree pretty much	I disagree a little	I agree a little	I agree pretty much	I agree very much

4. Disabled people should be prevented from having children.

-3	-2	-1	+1	+2	+3
I disagree very much	I disagree pretty much	I disagree a little	I agree a little	I agree pretty much	I agree very much

5. Disabled people should be allowed to live where and how they choose.

-3	-2	-1	+1	+2	+3
I disagree very much	I disagree pretty much	I disagree a little	I agree a little	I agree pretty much	I agree very much

6. Adequate housing for disabled people is neither too expensive nor too difficult to build.

-3	-2	-1	+1	+2	+3
I disagree very much	I disagree pretty much	I disagree a little	I agree a little	I agree pretty much	I agree very much

7. Rehabilitation programs for disabled people are too expensive to operate.

-3	-2	-1	+1	+2	+3
I disagree very much	I disagree pretty much	I disagree a little	I agree a little	I agree pretty much	I agree very much

8. Disabled people are in many ways like children.

-3	-2	-1	+1	+2	+3
I disagree very much	I disagree pretty much	I disagree a little	I agree a little	I agree pretty much	I agree very much

9. Disabled people need only the proper environment and opportunity to develop and express criminal tendencies.

-3	-2	-1	+1	+2	+3
I disagree very much	I disagree pretty much	I disagree a little	I agree a little	I agree pretty much	I agree very much

10. Disabled adults should be involuntarily committed to an institution following arrest.

-3	-2	-1	+1	+2	+3
I disagree very much	I disagree pretty much	I disagree a little	I agree a little	I agree pretty much	I agree very much

11. Most disabled people are willing to work.

-3	-2	-1	+1	+2	+3
I disagree very much	I disagree pretty much	I disagree a little	I agree a little	I agree pretty much	I agree very much

12. Disabled individuals are able to adjust to a life outside an institutional setting.

-3	-2	-1	+1	+2	+3
I disagree very much	I disagree pretty much	I disagree a little	I agree a little	I agree pretty much	I agree very much

13. Disabled people should not be prohibited from obtaining a driver's license.

-3	-2	-1	+1	+2	+3
I disagree very much	I disagree pretty much	I disagree a little	I agree a little	I agree pretty much	I agree very much

14. Disabled people should live with others of similar disability.

-3	-2	-1	+1	+2	+3
I disagree very much	I disagree pretty much	I disagree a little	I agree a little	I agree pretty much	I agree very much

15. Zoning ordinances should not discriminate against disabled people by prohibiting group homes in residential districts.

-3	-2	-1	+1	+2	+3
I disagree very much	I disagree pretty much	I disagree a little	I agree a little	I agree pretty much	I agree very much

16. The opportunity for gainful employment should be provided to disabled people.

-3	-2	-1	+1	+2	+3
I disagree very much	I disagree pretty much	I disagree a little	I agree a little	I agree pretty much	I agree very much

17. Disabled children in regular classrooms have an adverse effect on other children.

-3	-2	-1	+1	+2	+3
I disagree very much	I disagree pretty much	I disagree a little	I agree a little	I agree pretty much	I agree very much

18. Simple repetitive work is appropriate for disabled people.

-3	-2	-1	+1	+2	+3
I disagree very much	I disagree pretty much	I disagree a little	I agree a little	I agree pretty much	I agree very much

19. Disabled people show a deviant personality profile.

-3	-2	-1	+1	+2	+3
I disagree very much	I disagree pretty much	I disagree a little	I agree a little	I agree pretty much	I agree very much

20. Equal employment opportunities should be available to disabled individuals.

-3	-2	-1	+1	+2	+3
I disagree very much	I disagree pretty much	I disagree a little	I agree a little	I agree pretty much	I agree very much

21. Laws to prevent employers from discriminating against disabled people should be passed.

-3	-2	-1	+1	+2	+3
I disagree very much	I disagree pretty much	I disagree a little	I agree a little	I agree pretty much	I agree very much

22. Disabled people engage in bizarre and deviant sexual activity.

-3	-2	-1	+1	+2	+3
I disagree very much	I disagree pretty much	I disagree a little	I agree a little	I agree pretty much	I agree very much

23. Disabled workers should receive at least the minimum wage established for their jobs.

-3	-2	-1	+1	+2	+3
I disagree very much	I disagree pretty much	I disagree a little	I agree a little	I agree pretty much	I agree very much

24. Disabled individuals can be expected to fit into competitive society.

-3	-2	-1	+1	+2	+3
I disagree very much	I disagree pretty much	I disagree a little	I agree a little	I agree pretty much	I agree very much

APPENDIX F

**ATTITUDES TOWARD THE EMPLOYABILITY OF PERSONS
WITH SEVERE HANDICAPS SCALE (ATEPSH)**

Attitudes Toward the Employability of Persons
with Severe Handicaps Scale (ATEPSH)

Directions:

Put “X” through the appropriate number, from -3 to +3, which best corresponds with how you feel about the statement. There are no right or wrong answers. You should work as quickly as you can, but don’t rush. Please respond to every statement. The phrase “with severe handicaps” was changed to “with disabilities” in every statement in the Chinese ATEPSH.

1. In competitive work sites, people with severe handicaps can learn appropriate social skills.

-3	-2	-1	+1	+2	+3
Disagree very strongly	Disagree strongly	Disagree	Agree	Agree strongly	Agree very strongly

2. With appropriate support services, people with severe handicaps can be dependable workers in the community.

-3	-2	-1	+1	+2	+3
Disagree very strongly	Disagree strongly	Disagree	Agree	Agree strongly	Agree very strongly

3. A controlled job simulation environment is more suitable for people with severe handicaps than is actual on-the-job training.

-3	-2	-1	+1	+2	+3
Disagree very strongly	Disagree strongly	Disagree	Agree	Agree strongly	Agree very strongly

4. Competitive employment affords people with severe handicaps the opportunities to lead relatively normal lives.

-3	-2	-1	+1	+2	+3
Disagree very strongly	Disagree strongly	Disagree	Agree	Agree strongly	Agree very strongly

5. No amount of training can prepare people with severe handicaps for competitive employment.

-3	-2	-1	+1	+2	+3
Disagree very strongly	Disagree strongly	Disagree	Agree	Agree strongly	Agree very strongly

6. Competitive employment settings enhance the productivity of people with severe handicaps.

-3	-2	-1	+1	+2	+3
Disagree very strongly	Disagree strongly	Disagree	Agree	Agree strongly	Agree very strongly

7. Most parents of people with severe handicaps prefer that they be placed in sheltered workshops rather than in competitive employment settings.

-3	-2	-1	+1	+2	+3
Disagree very strongly	Disagree strongly	Disagree	Agree	Agree strongly	Agree very strongly

8. Employers are generally resistant to hiring workers with severe handicaps.

-3	-2	-1	+1	+2	+3
Disagree very strongly	Disagree strongly	Disagree	Agree	Agree strongly	Agree very strongly

9. Income earned from competitive employment can change the quality of life for people with severe handicaps.

-3	-2	-1	+1	+2	+3
Disagree very strongly	Disagree strongly	Disagree	Agree	Agree strongly	Agree very strongly

10. The productivity of nonhandicapped coworkers decreases when they work with individuals with severe handicaps.

-3	-2	-1	+1	+2	+3
Disagree very strongly	Disagree strongly	Disagree	Agree	Agree strongly	Agree very strongly

11. The natural job setting provides too many distractions that impede the vocational training process for people with severe handicaps.

-3	-2	-1	+1	+2	+3
Disagree very strongly	Disagree strongly	Disagree	Agree	Agree strongly	Agree very strongly

12. Exposure to people with severe handicaps in job settings promotes positive attitudes on the part of nonhandicapped coworkers.

-3	-2	-1	+1	+2	+3
Disagree very strongly	Disagree strongly	Disagree	Agree	Agree strongly	Agree very strongly

13. People with severe handicaps present the employer with absence and punctuality problems.

-3	-2	-1	+1	+2	+3
Disagree very strongly	Disagree strongly	Disagree	Agree	Agree strongly	Agree very strongly

14. People with severe handicaps can be trained for competitive employment.

-3	-2	-1	+1	+2	+3
Disagree very strongly	Disagree strongly	Disagree	Agree	Agree strongly	Agree very strongly

15. On-the-job training at community based work sites is effective for people with severe handicaps.

-3	-2	-1	+1	+2	+3
Disagree very strongly	Disagree strongly	Disagree	Agree	Agree strongly	Agree very strongly

16. Nonhandicapped co-workers are not likely to interact with workers with severe handicaps.

-3	-2	-1	+1	+2	+3
Disagree very strongly	Disagree strongly	Disagree	Agree	Agree strongly	Agree very strongly

17. Mistreatment and abuse of people with severe handicaps by co-workers are frequent occurrences.

-3	-2	-1	+1	+2	+3
Disagree very strongly	Disagree strongly	Disagree	Agree	Agree strongly	Agree very strongly

18. Frustration experienced by people with severe handicaps at real work sites is greater than that experienced in sheltered workshops.

-3	-2	-1	+1	+2	+3
Disagree very strongly	Disagree strongly	Disagree	Agree	Agree strongly	Agree very strongly

19. It is possible for people with severe handicaps to receive appropriate job training in the community.

-3	-2	-1	+1	+2	+3
Disagree very strongly	Disagree strongly	Disagree	Agree	Agree strongly	Agree very strongly

20. Competitive employment for people with severe handicaps takes jobs away from nonhandicapped workers.

-3	-2	-1	+1	+2	+3
Disagree very strongly	Disagree strongly	Disagree	Agree	Agree strongly	Agree very strongly

21. Productivity rates of workers with severe handicaps can be as high as those of workers who are not handicapped.

-3	-2	-1	+1	+2	+3
Disagree very strongly	Disagree strongly	Disagree	Agree	Agree strongly	Agree very strongly

APPENDIX G

**ITEM ANALYSIS FOR THE SCALE OF ATTITUDES
TOWARD DISABLED PERSONS**

Items	Statements	Min	Max	Mean	SD	Median	Rank
Optimism-Human Rights		28	63	45.19	6.36	46	
2	Disabled people are not more accident prone than other people.	0	6	1.61	1.65	1	24
5	Disabled people should be allowed to live where and how they choose.	0	6	4.27	1.94	5	13
6	Adequate housing for disabled people is neither too expensive nor too difficult to build.	0	6	3.03	1.72	2	20
11	Most disabled people are willing to work.	1	6	4.44	1.23	5	11
12	Disabled individuals are able to adjust to a life outside an institutional setting.	1	6	4.11	1.19	4	15
13	Disabled people should not be prohibited from obtaining a driver's license.	0	6	3.55	1.69	4	19
15	Zoning ordinances should not discriminate against disabled people by prohibiting group homes in residential districts.	0	6	4.35	1.56	5	12
16	The opportunity for gainful employment should be provided to disabled people.	2	6	5.37	0.73	5	1
20	Equal employment opportunities should be available to disabled individuals.	2	6	5.25	0.88	5	2
23	Disabled workers should receive at least the minimum wage established for their jobs.	0	6	5.03	1.30	5	5
24	Disabled individuals can be expected to fit into competitive society.	0	6	4.17	1.40	4	14
Behavioral Misconceptions		14	40	24.64	5.42	25	
7	Rehabilitation programs for disabled people are too expensive to operate.	0	6	2.40	1.49	2	23
9	Disabled people need only the proper environment and opportunity to develop and express criminal tendencies.	1	6	3.96	1.62	4	17
10	Disabled adults should be involuntarily committed to an institution following arrest.	0	6	2.44	1.81	2	22
14	Disabled people should live with others of similar disability.	0	6	3.57	1.50	4	18
17	Disabled children in regular classrooms have an adverse effect on other children.	0	6	4.48	1.45	5	10
18	Simple repetitive work is appropriate for disabled people.	0	6	2.55	1.58	2	21
21	Laws to prevent employers from discriminating against disabled people should be passed.	1	6	5.24	1.16	6	3
Pessimism-Hopelessness		13	36	27.53	5.48	28.5	
1	Disabled children should not be provided with a free public education.	0	6	4.71	1.77	5	6
3	A disabled individual is not capable of making moral decisions.	1	6	4.66	1.34	5	7
4	Disabled people should be prevented from having children.	0	6	4.54	1.63	5	8
8	Disabled people are in many ways like children.	0	6	4.50	1.44	5	9
19	Disabled people show a deviant personality profile.	1	6	4.01	1.45	4	16
22	Disabled people engage in bizarre and deviant sexual activity.	2	6	5.11	0.92	5	4
General attitudes		68	132	97.35	13.61	97	

APPENDIX H

**ITEM ANALYSIS FOR THE ATTITUDES TOWARD THE
EMPLOYABILITY OF PERSONS WITH
SEVERE HANDICAPS SCALE**

Items	Statements	Min	Max	Mean	SD	Median	
	Appropriateness of Competitive Employment	35	61	46.66	5.00	46	
1	In competitive work sites, people with severe handicaps can learn appropriate social skills.	3	6	4.81	0.72	5	1
2	With appropriate support services, people with severe handicaps can be dependable workers in the community.	3	6	4.78	0.71	5	2
4	Competitive employment affords people with severe handicaps the opportunities to lead relatively normal lives.	2	6	4.66	0.82	5	3
5	No amount of training can prepare people with severe handicaps for competitive employment.	1	6	2.37	1.03	2	21
6	Competitive employment settings enhance the productivity of people with severe handicaps.	2	6	3.74	0.79	4	15
9	Income earned from competitive employment can change the quality of life for people with severe handicaps.	3	6	4.54	0.73	5	5
12	Exposure to people with severe handicaps in job settings promotes positive attitudes on the part of nonhandicapped coworkers.	2	6	4.50	0.85	4.5	8
14	People with severe handicaps can be trained for competitive employment.	3	6	4.53	0.72	4	6
15	On-the-job training at community based work sites is effective for people with severe handicaps.	3	6	4.52	0.76	4	7
19	It is possible for people with severe handicaps to receive appropriate job training in the community.	3	6	4.38	0.68	4	9
21	Productivity rates of workers with severe handicaps can be as high as those of workers who are not handicapped.	2	6	3.82	1.02	4	14
	Disadvantages of Competitive Employment	27	55	37.34	4.16	37	
3	A controlled job simulation environment is more suitable for people with severe handicaps than is actual on-the-job training.	1	6	2.87	0.98	3	19
7	Most parents of people with severe handicaps prefer that they be placed in sheltered workshops rather than in competitive employment settings.	1	6	3.50	1.08	3	17
8	Employers are generally resistant to hiring workers with severe handicaps.	1	5	2.93	0.95	3	18
10	The productivity of nonhandicapped coworkers decreases when they work with individuals with severe handicaps.	1	6	4.28	0.79	4	11
11	The natural job setting provides too many distractions that impede the vocational training process for people with severe handicaps.	2	6	3.73	0.96	4	16
13	People with severe handicaps present the employer with absence and punctuality problems.	1	6	4.59	0.90	4.5	4
16	Nonhandicapped co-workers are not likely to interact with workers with severe handicaps.	1	6	4.01	0.97	4	13
17	Mistreatment and abuse of people with severe handicaps by co-workers are frequent occurrences.	1	6	4.38	1.03	4	9
18	Frustration experienced by people with severe handicaps at real work sites is greater than that experienced in sheltered workshops.	1	5	2.84	0.77	3	20
20	Competitive employment for people with severe handicaps takes jobs away from nonhandicapped workers.	1	6	4.21	0.91	4	12
	Overall	67	113	83.99	7.64	83	