ABSTRACT

RYU, SEUNGAH. Assessing the Effects of Experience on Attitudes about Employability of people with Mental Illness: A Comparative Study of the U.S. and South Korea. (Under the direction of Frank Smith.)

Negative attitudes within the community have prevented people with mental illness from successful reintegration into their communities. In particular, such negative attitudes have caused lower rates of employment for this group. The purpose of this research was to assess the attitudes of college students in the U.S. and Korea about employability of people with mental illness. In addition, the structural formations of two nations were examined in order to obtain the understanding of the process by which multiple factors interact to produce the attitudes about employability.

Data were collected in a web-based survey from students in the U.S. and South Korea from April to September, 2007. A total 493 college students, respectively 250 in the U.S. and 243 in Korea, was used in the final data analysis. Dependent variables were demographics (gender, age), personality (locus of control, self-esteem, individualism, collectivism), school-based programs, contact experiences (types, numbers, frequency, valence), as well as characteristics of people with mental illness (symptoms, gender).

This study's findings demonstrated that individuals who showed symptoms of depression received more positive attitudes regarding employment while those individuals showing schizophrenia's symptoms received less favorable attitudes about employability. In terms of differences in cultural contexts, data from the U.S. and Korea revealed different structural relations to build attitudes about employability among the various characteristics of college students. Lastly, research found a positive relationship between previous contact with people with mental illness and positive attitudes about employability, which also worked as an effective mediation. Also, good feelings in public

contact situation significantly influenced employability in both countries. However, no relationship was found between school-based programs and positive attitudes toward individuals with mental illness.

Research findings may prove useful in the workplace regarding interventions to reduce stigma toward people with mental illness. The interventions with personal contact and positive public situations based on consideration of cultural contexts may positively influence views regarding people with mental illness in workplaces.

Assessing the Effects of Experience on attitudes about Employability of people with Mental Illness: A Comparative Study of the U.S. and South Korea

by
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A dissertation submitted to the Graduate Faculty of
North Carolina State University
in partial fulfillment of the
requirements for the Degree of
Doctor of Philosophy

Psychology

Raleigh, North Carolina

2008

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DEDICATION

To my parents who took me to this world, taught me the value of life,

and sent me to the bigger world

BIOGRAPHY

Seungah Ryu was born in Busan, South Korea in June, 1974 and lived there until she entered Korea University, Seoul, Korea. Her interest in mental illness regarding stigma and discrimination started when she was volunteering at the mental health center at the first semester of master program, clinical and counseling psychology. She realized that more is needed to accomplish the successful rehabilitation of people with mental illness. she wanted to get more involved in the community system, to shape community attitudes, and to educate the public.

She was admitted the Psychology in the Public Interest program at NCSU in August, 2002. While a doctoral student at NCSU, she has researched many minority groups such as African American adolescents, African American college students, seniors, and children. She also broadened her career experience through the internship with the Mental Health Association in NC.

ACKNOLEDGEMENTS

My utmost thanks go to many, many persons who have greatly influenced me, particularly those who have shaped me in my education process. There are countless others to whom I owe a great deal of gratitude. Following is a short list of some of those shapers.

First of all, I would like to thank Dr. Frank Smith for his unending support, advice, and seemingly limitless patience. There is no question that his guidance has enabled my successes at NC State. The guidance and advice of my Committee members, Dr. Pam Martin, Dr. Roger Mitchell, Dr. Rupert Nacoste, gave invaluable assistance in the completion of this study. They are also gratefully acknowledged. I have to give another special thanks Dr. Othelia Lee. She has been mentoring and guided for me to complete this journey as well as being my previous roommate.

I would also like to thanks Dr. Changil Ahn, Dr. Jonghan Lee, Dr. Junghae Kwon, who were my advisors of the master program in Korea. They have continued to encourage me to study here and inspire me both professionally and personally. I am appreciative of of Dr. Jinbok Jung, Dr. Youngsun Kim, and Dr. Jungmin Chae, who have contributed to the data collection in Korea for this paper.

Another thanks are due to my best friends, Okhee, Seunghee, and EunKyung, who are always beside me whenever I am, whatever I do, whichever I decide. I'd also like to thank Ruth, who is the role model of my life as well as my neighborhood, and members of Korean University Alumni Association. I would like to have special thanks to Wintermutes' family, Steve, Carrie Jo, Nathan, and Caroline, whose loves and cares gave me so much power to survive here and made me feel that I am one of their family member.

Last, but certainly not least, I would like to thank my younger brother's family - my sister-in-law, my brother, my nephew, and niece, who have given me the place that I could go to get emotional supports whenever I felt tired and needed some rests. Most importantly, I could never have this memorable moment without my father and my mother, whose support and unconditional love is the most beautiful thing in my life.

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INTRODUCTION

Stigma is defined as a societal reaction, which focuses on certain attributes, evaluates them as undesirable, and devalues the persons who possess them (Brunton, 1997). Stigma toward the formerly hospitalized mentally ill is a concern in the mental illness rehabilitation field because negative social attitudes have prevented this group from both improving their clinical symptoms and reintegrating into their communities. Studies have shown that social stigma is associated with negative effect when people with mental illness look for jobs (Bordieri & Drehmer, 1986; Farina & Felner, 1973; Link, 1982) and when they attempt to lease apartments (Alisky & Iczkowski, 1990; Page, 1995). It also overestimates their level of risk for becoming involved with the criminal justice system (Steadman et al., 1998). Therefore, it is important to seek effective ways to reduce the social stigma that unnecessarily separates people with mental illness from their community. McReynolds (2002) also supports this notion that the preferred modes of intervention include strengthening the level of environmental supports as well as the skills of people with mental illness. For these people to successfully reintegrate into their communities, greater public acceptance must be encouraged (Mayville & Penn, 1998). Attkisson et al. (1992) say, "Research about stigma is not simply a matter of curiosity: It is a vital component of the effort to enable severely mentally ill people to lead decent lives in the community" (p. 568).

Day (1984) asserts that successful community adjustment of people with mental illness is accomplished through competitive employment. Work is considered, in the area of psychiatric rehabilitation, both a sign of improvement and a highly effective treatment method in helping successful community integration (Ahrens, Frey, & Burke, 1999). The Americans with Disabilities Act (ADA) of 1990 was enacted to prohibit employers'

discrimination against people with disabilities, both physical and mental (The U.S. Equal Employment Opportunity Commission, 2005). The law requires employers to make reasonable accommodations in the areas of hiring, firing, compensation, and job training. Reasonable accommodations would be adjusting the work environment, job requirement, and job function in order to give a chance for the qualified disabled individual to take equal benefits and privileges of employment (The U.S. Equal Employment Opportunity Commission, 2005).

Nevertheless, discriminatory practices are still reported. A recent national survey, for example, reports that the unemployment rate of people with mental illness is three to five times higher than those with no psychiatric disorders (Sturm, Gresenz, Pacula, & Wells, 1999). Alexander and Link (2003) argued that the general public attitudes of the employability toward people suffering from mental illness also have an important impact since communities have the power to change services, policy, and legislation related to work environments. However, there is little research on what the public thinks about the ability of people with mental illness to perform their jobs competently. In order to make the work environment better, specific examination of the public's attitudes and beliefs toward the employability of people with mental illness should be conducted.

Stigma is a phenomenon shaped by cultural and historical forces (Dovidio, Major, & Crocker, 2000). Cross-cultural research on mental health contributes to a better understanding of the nature and characteristics of attitudes toward mental illness in different contexts (Hui & Triandis, 1985). Recently, there is an increasing importance of cultural differences in the mental health area (Okazaki & Sue, 1995). Different cultural backgrounds may lead people to show different attitudes toward people with mental

illness and to consider different factors in forming their attitudes. Although the effects of such relevant factors such as demographic characteristics, personality, and education or contact experience on attitudes toward mental illness have been widely documented, very little information is available concerning the role of cultural context in determining the influence of such factors. Moreover, few comparative studies on attitudes about employability toward people with mental illness have been conducted among different countries. The comparison of attitudes among different cultures provides practitioners with new information on where to start, what to focus on, how to approach the problem as they exist in each cultural context, and how to measure and evaluate the success of programs created to influence public views and opinions. The current study may ultimately enable individuals working in the mental health field to provide more precise information on effective interventions in the job market for people with mental illness.

Furthermore, education and contact have long been considered effective intervention strategies to decrease social negative attitudes toward people with mental illness (Link & Cullen, 1986; Link, Phelan, Bresnahen, Stueve, & Pescosolido, 1999; Wolff, Pathare, Craig, & Leff, 1996). These studies have shown that those who have some information about mental illness or contact experiences with the mentally ill express less negative reactions, display fewer discriminating behaviors, and have more tolerant attitudes toward them. Although the roles of education and contact have been widely documented in research regarding attitudes toward people with mental illness, little research has been conducted on the effect of school-based programs (elementary, middle, and high school) and contact experience on attitudes about employability. Therefore, the current study utilized a college student sample to research the impact of school-based programs about mental illness and previous contact experiences with the mentally ill on

attitudes about employability toward people with mental illness.

In the present study, the researcher documented the comparative results from two distinctively different countries, United States and Korea, on the attitudes about employability toward people with mental illness. Knowledge of cultural differences between American college students and Korean students may offer some important insights into how these two groups perceive employability of people with mental illness, as well as which variables had the most influence on such attitudes for each country. It also may provide mental health professionals with the tools needed to intervene on behalf of people with mental illness for better work environments in different cultural contexts.

Definition

Contact: Contact can be narrowly defined as a situation in which interaction has actually taken place between disabled and non-disabled persons (Makas, 1993), particularly between college students and people with mental illness in current research.

Stigma: Stigma is the application of a negative label or mark that distinguishes people in the community. It is manifested in negative attitudes, behaviors, and feelings toward the identified group (Bakshi, Rooney, & O'Neil, 1999).

Mental illness: Mental illness has been described by the DSM-Ⅳ manual as clinically significant behavioral or psychological syndromes or patterns that occur in individuals. It is associated with either present distress (e.g., very sad or very anxious); and/or disability (e.g., problems with work or family relationships); and/or an increased chance of pain, disability, loss of freedom, death, or suffering. It excludes culturally sanctioned or expectable responses to certain events such as the death of a loved one (Bakshi et al., 1999).

Stigma of mental illness: Stigma toward mental illness is a label, mark or myth that distinguishes people in the community with a mental illness. Many associated negative attitudes, feelings, and behaviors are felt by members of the community, toward those with a mental illness. Often the stigma is also extended to helpers, friends, and relations of those with a mental illness (Rooney, O'Neil, Bakshi, & Tan-Quigley, 1997, as cited in Bakshi et al., 1999, p. vi).

LITERATURE REVIEW

Stigma

Stigma is the application of a negative label or mark that distinguishes people in the community. It is manifested in negative attitudes, behaviors, and feelings toward the identified group (Bakshi et al., 1999). The World Health Organization (2005) has stressed how stigma can create "a vicious cycle of alienation and discrimination which can lead to social isolation, inability to work, alcohol or drug abuse, homelessness or excessive institutionalization, all of which decrease the chance of recovery" (p. 46). In particular, people with mental illness are the most stigmatized, discriminated, marginalized, disadvantaged and vulnerable members of society (Johnstone, 2001). The National Service Framework for Mental Health (Standard 1) also emphasizes the importance of reducing the discrimination and social exclusion associated with mental health problems.

Stigma is defined in terms of three components: stereotypes, prejudice, and discrimination (Schumacher, Corrigan, & Dejong, 2003). Kruger (1996) explained that stereotypes are knowledge structures learned by most members of a social group, which are efficient ways to categorize the knowledge about a particular social group. He stressed, however, that stereotypes are not directly related to prejudice (Kruger, 1996). Prejudice is an attitudinal state in which negative emotional responses are results of negative stereotypes. Prejudice is based on a negative cognitive and affective reaction and leads to discrimination concentrating a behavioral reaction (Crocker, Major, & Steele, 1998).

Stigma is associated with many problems such as lack of treatment, isolation, and marginalization for those with a mental illness (Ng, 1997). First of all, stigma negatively affects psychiatric treatment in many ways. Symptoms may worsen in those

with a mental illness because of the lack of treatment, deficiency of support, and the incorrect information (e.g., mental illness is incurable) (Bakshi et al., 1999). Sturm and Sherbourne (2000) found that people with substance abuse who might benefit from treatment do not take advantage of such opportunities. Thus, the probability of their getting better or improving their lives is decreased (Watson & Corrigan, 2001). In addition, stigma toward mental illness is a label, mark, or myth that distinguishes people in the community with a mental illness. For example, Regier et al. (1993) found that less than 30% of people with psychiatric disorders seek treatment. Many people do not seek mental health services due to their fear of being labeled a "mental patient" as well as they do not want to suffer the prejudice and discrimination this label entails. As a result, their symptoms worsen and their self-esteem and life satisfaction continue to be low (Dickerson, Sommerville, Origoni, Ringel, & Parente, 2002; Whal, 1999).

Once identified as mentally ill, individuals are confronted with negative attitudes, feelings, and behaviors exhibited by members of the community. More seriously, people with mental illness face significant societal, economic, and personal obstacles to full participation in community life such as education, employment, housing, and social and leisure time activities (Bordieri & Drehmer, 1986; Carling, 1995; Jackson & Hearheringron, 2006; Landeen, Pawlick, Woodside, Kirkpatrick, & Byrne, 2000; Link et al., 1999). People with a history of psychiatric treatment are often denied jobs for which they have qualifications. They also experience lower expectations for a normal life, rejection for housing, and exclusion from many social situations (Page, 1995; Wahl, 1999). Such stigma toward people with mental illness has been also underlying federal and state budget cuts for mental health care and the reluctance to improve community care facilities (Farina, Fisher, & Fisher, 1992), as well as reflected in disadvantages in

social legislation and health insurance practice (Gaebel, Baumann, Witte, & Zaeske, 2002). Braff (1992) asserted, “Unfortunately, this cost-effectiveness analysis is necessary because psychiatric patients in general, and psychotic patients in particular, are terribly stigmatized, and their care is underfunded in our society” (p. 37).

Interventions to Reduce Stigma

Since the beginning of the community mental health movement, negative public attitudes have become an essential factor in the management of mental illness. Successful community reintegration and tenure depend on the existence of a tolerant and supportive community environment (Song, Chang, Shin, Lin, & Yang, 2005). Therefore, the most popular way to reduce stigma is through increasing community acceptance of mental illness (Bakshi et al., 1999). The anti-stigma program of the World Psychiatric Association (WPA), “Open the Doors”, launched a global program to reduce the stigma and discrimination toward mental illness in 1996 across 18 countries and is currently being implemented in 27 countries such as the U.S., Austria, Canada, China, Egypt, Germany, Italy, and India (WPA, 2006). In the U.K., the Royal College of Psychiatrists has been conducting the campaign for no-stigmatization toward mental illness since 1998 (Crisp, 1999). In Canada, Canadian Mental Health Association (CMHA) performed a project focusing on employment called “Access to Real work” funded by Human Resources Development Canada, in an effort to maximize employment opportunities for people with mental illness. They also identified strategies that workplaces or colleges could implement and went on to develop a policy on employment (CMHA, 1998). In Germany, there exist the following anti-stigma programs: open days at psychiatric institutions to increase familiarity and provide opportunities for interactions with the

mentally ill, public health media service, educational projects and training units in schools, and public events such as readings, art exhibitions, and film evenings (Gaebel et al., 2002).

In the U.S., the National Stigma Clearinghouse (1990) provided a way to "track stigmatizing stereotypes of mental illness and provide information about stigma to concerned activists" (p. 1). They tried to increase public awareness about mental and work with the media about changing the negative images of mental illness (Arnold, 1993). The National Alliance for the Mentally Ill [NAMI] was created by a grass-roots group of family members and persons with severe mental illness. They have been fighting stigma as a top priority for its 172,000 members, started the "Campaign to End Discrimination" in 1995 to diminish stigma (NAMI E-news, 1998), and developed the "Science and Treatment Kit to State affiliates" including multi-media presentations for informing the public about the issue of mental illness and its treatments (Holmes et al., 1999). Moreover, in 1996, Rotary International launched the campaign "Erase the Stigma" to educate American business leaders about the truths and myths of mental illness (Corrigan & Penn, 1999). The National Mental Health Awareness Campaign [NMHAC] (1999) was formed to fight the discrimination and stigma associated with mental illnesses and to urge Americans to seek appropriate mental health care. NMHAC has developed public service and multi-media education initiative and created public service ads targeting three distinct groups: youth, adults, and seniors (NMHAC, 1999). South Carolina's Department of Mental Health [SCDMH] also started an anti-stigma campaign in 2000 to increase awareness and reduce fear associated with mental illness (SCDMH, 2000). This program includes public service announcements, a speaker's bureau, education for college students, and a media watcher to monitor portraying mental illness negatively. In addition, the

National Mental Health Association [NMHA] (2000) created the program entitled "Stigma Watch" to correct and prevent stigmatizing in advertising, television and radio programs, and print features. They conduct the Children's Mental Health Matters Campaign, which fights for the stigma and myths surrounding mental disorders (NMHA, 2000). Furthermore, many state departments of mental health hire advocates who work for alertness for inaccurate of mental health issues.

In Korea, the "We First" by 'We first' Campaign Head Quarter [WCHQ] has tried to protect the rights of people with disability, both physically and mentally, and to educate the public to change negative attitudes and behaviors toward them (WCHQ, 2004). They have conducted many programs in the various provinces such as publications, advocacy, research, and seminars. In addition, Mental Health Week lasts from April 1 through April 7 and includes exhibitions and conferences for reducing stigma and discrimination toward mental illness. Recently, the Ministry of Health Welfare in Korea held a mental health festival on the October 19, 2006 (Kim, 2006). Various groups, including people with mental illness, their families, and volunteers participated in this celebration.

Work Environment

Work is a valuable activity for all people. Anthony and Blanch (1987) support that work provides people with not only financial support to sustain their lives but also emotional support, confirming that one is valued in his or her community. Work also has great impacts for people suffering from mental illness on several ways. First of all, work is usually a source of income needed for goods and services for people with mental illness (Wahl, 1999). No one can live in the community without financial resources. Farina and

Felner (1973) argued, “The former patient cannot live in the community without an income, and unless he receives help from some source, he may have to return to the hospital for food and shelter” (p. 296). Therefore, work can be a foundation for people who suffer from mental illness to live in their communities.

Second, the workplace is a good area for people with mental illness to connect other people openly in community. The workplace environment provides a supportive network of interpersonal contacts, which develops higher self-esteem and perceived quality of life (Van-Dongen, 1996). According to Kelly (1987), the interventions for reintegration into the community should create a social setting that enables people with mental illness to experience (a) supportive others, (b) meaningful social roles and reciprocity of relationships, (c) opportunities for problem solving, and (d) a personal sense of purpose and meaning. The workplace might build the desirable social setting that Kelly (1987) argued above for people who are preparing to return their communities from a hospital. Through everyday interaction in workplaces, people with mental illness can participate in society, become involved and cooperative with others, and accordingly not feel like outsiders.

Third, the workplace itself can be an intervention to reduce stigma. Hand and Tryssenaar (2006) assert, “The workplace is an ideal setting to foster relationships, where mental health professionals can educate employers and support individuals with mental illness in volunteer work, supported employment, or other individualized employment strategies” (p. 172). In addition, due to the fact that the quality of contact is an important variable to affect attitudes toward mental (Jackman & Crane, 1986; Kolodziej & Johnson, 1996; Weller & Grunes, 1988), contact through workplace has a great advantage to reduce stigma because the work environment offers the opportunity of high quality contact such

as cooperative or equal-status (Cook, 1985; Desforges et al., 1991; Worchel, 1986). Pettigrew and Tropp (2000) examined 200 studies to investigate whether inter-group contacts were effective for reducing stigma. They found that contacts occurring in work settings or face-to-face situations were the most effective interventions. Therefore, positive and supportive contact in the workplace is expected to reduce stigma toward mental illness and people with mental illness.

Work environment in the U.S.

Since passage of the Rehabilitation Act of 1973 made competitive employment a legal responsibility for disabled workers, the programs to change attitude and behavior for employers have been given by numerous rehabilitation agency representatives. These programs have used the legal requirement of affirmative action compliance as a point of entry to offer employers technical assistance in fulfilling their obligation. However, employees with mental illness or with histories of mental illness continue to be blocked from chances for hiring and promotion (Hernandez et al., 2000; Nobel et al., 2001). Only 11% of full and part time competitive employment rates for Community Support Program clients were reported (Tessler & Goldman, 1982). Farkas, Rogers, and Thurer (1987) performed follow-up research over a 5-year period with 54 long-term state hospital inpatients who were deinstitutionalized in 1979 and found that none of those individuals obtained competitive employment. Anthony and Blanch (1987) estimated the unemployment rate of people with mental illness to be more than 85% of this group, which was higher than all other primary disability categories.

In 1990, The Americans with Disabilities Act (ADA) (1990) forbids discrimination against persons with disabilities in almost every domain of public life such

as employment, transportation, communication, and recreation. Specifically, Title I of the ADA prohibits employment discrimination because of disability, and requires employers to provide reasonable accommodations that allow persons with disabilities to perform essential job functions[1]. Even if there exists the actual policy such as the ADA since 1990, which is considered the most comprehensive civil rights law protecting people with disabilities in the workplace (Hernandez, Keys, & Balcazar, 2000), and the Individuals with Disabilities Education Act (IDEA), which is a special education legislation designed to prepare school-aged youth for the transition to the workplace, discriminatory practices are still reported. The New York State Office of Mental Health (1999) reported that the unemployment rate for people with mental illness was 85 to 90%, whereas 70% of these individuals indicated a desire to work. Garske (1999) asserts that many of those with psychiatric disabilities have no long-term attachment to the job market even if they have functional competencies, educational qualifications, and a strong desire to work. The unemployment rate, recently, has been reported at more than 85% (Nobel, Honberg, Hall, & Flynn, 2001). Moreover, many people with mental illness who do work are paid below average wages, only about $6 per hour, versus $9 per hour for the general population (Levy, Jessop, Rimmerman, Francis, & Levy, 1993).

Work environment in Korea

In Korea, the law of "obligation of employment" for people with disabilities was enacted in 1990 in an effort to increase the rate of hiring for this group (Welfare of

[1] Under the ADA, the term "disability" means a physical or mental impairment. The definition of 'mental impairment' is any mental or psychological disorder including bipolar disorder, major depression, anxiety disorders, schizophrenia, and personality disorders (The U.S. Equal Employment Opportunity Commission, 2005).

the Disabled Persons Act, 1990). The law obligates companies with 50 employees or more to recruit people with disabilities, at least 2% of its total workforce. The government also should employ people with disabilities with at least 2 % or more regardless of the number of employees (Welfare of the Disabled Persons Act, 1990). In 2000, psychiatric disorder was officially added to the list of the disabled group, which means that individuals diagnosed with a psychiatric disorder are entitled to the welfare services available to people with disabilities. This labor law provides the disabled with more equal opportunity of work. Recently, another policy about "Enforcement Regulations" for promoting welfare of the disabled (the Decree of the Ministry of Health and Welfare No. 250) was passed in Congress on March, 2007. Even if laws and policies exist for people with disabilities, discrimination in the workplace still continues. For example, when it comes to the law of "obligation of employment" for at least 2% of hiring people with disabilities, the rate of the disabled individuals employed in companies which have more than 300 workers was 1.49% or less in December of 2005. In particular, the employment rate for disabled individuals for the top 30 companies in Korea is only 1.14% (Kim & Im, 2007). Unemployment rate for this group is 23.5%, which is 6.5 times as high as that of the total population in Korea. Furthermore, the average wages for people with disabilities working in work-rehabilitation facilities is as low as ₩ 198,000[2] compared to ₩ 2,320,000 of the average wages for Koreans in June of 2006 (Na, 2007).

Moreover, mental disorders in Korea could lead to more discrimination in social life and dishonor in an occupational career than any other disability (Lee, Kim, Yoo, Lee, & Lee, 2003). According to Lee et al. (2001), only 26.1% of people with mental illness

[2] Won (₩) is the monetary unit in Korea, which is currently at the exchange rate of 963.70 won to the U.S. dollar on January 15, 2008 (from the website of Korean Exchange Bank, http://www.keb.co.kr/).

have jobs, which could be down to 10.4% considering that 15.7% of those are housewives and which are even simple labor positions. More seriously, people with mental illness are paid only 30-60% of the minimum wage in Korea (WI-ASIA, 2007).

Attitudes about Employability of People with mental illness

So, what causes such a high unemployment rate for people with mental illness? Many studies found that employers' positive attitudes and opinions are crucial in order for people with mental illness to successfully obtain and keep jobs (Bluhm, 1977; Bordieri & Drehmer, 1986; Diksa & Rogers, 1996; Florian, 1981; Gibson & Groeneweg, 1986; Levy et al., 1993; Scheid, 1999; Wilgosh & Mueller, 1989). Coelho (1997), Chairman of the President's Committee on Employment of People with Disabilities and one of the authors of the ADA, contends that employers' negative attitude is the main barrier for employing people with disabilities. Hernandez et al. (2000) also assert that the success of such laws and activities for a better employment situation depends strongly on the employers' willingness to accept the laws and policies. Therefore, much of the interference to open and equal employment for people with mental illness may actually come from employer attitudes.

A number of researchers have found that employers are reluctant to hire people with mental illness because the employers have the mistaken belief that these people are incompetent (Corrigan & Penn, 1999; Link, Cullen, Frank, & Wozniak, 1987). MacDonald and Hall (1989) examined the relations between the disability types and six personal-social areas that employers considered. The results showed that the vocational dimension (Q: "In your opinion, how seriously debilitating are the following for the adult male in his job?") was rated the lowest for the people with mental illness, which was

contrary to the pattern reflected in the ratings assigned to the other disorders such as deafness, obesity, and limb amputation. Farina (1971) conducted an experiment about the effect of a psychiatric history on employability. He found that this group was viewed as being less adequate and less liked. Akabas, Gates, and Galvin (1992) stated that disabled persons' acceptability as employee was related to disability type and to employers' perceptions of their productivity and the cost of accommodations. Among the types of disabilities, mental illness has received the most negative response for hiring to employers (Colbert, Kalish, & Chang, 1973; Combs & Omvig, 1986; Mithang, 1979). Mithang (1979) asked the Fortune 500 Companies to respond to which type of disabled individual an employer would most likely hire. They responded that physically disabled people would be hired 95% of the time while people with mental problems would only be hired 20% of the time. Stone and Sawatzke (1980) found the same result in their study involving MBA students. They reported that MBA students responded a lower rate of hiring for applicants with a history of mental illness than non-disabled or physically disabled job candidates.

Although employer's attitudes can determine work conditions, the general public's opinion of the employability toward people suffering from mental illness also has an impact. Public attitudes have the power to change services, policy, and legislation related to work environments (Alexander & Link, 2003). However, there is little empirical data on public attitudes about the job ability and work situation of people having mental illness. In particular, studies involving college students have great implications for stigma reduction interventions. Kolodziej & Johnson (1996) found that contact occurring in the context of student training showed greater attitude change than contact in employers' training. They proposed that students feel closer to people with

mental illness than employers and have more informal interactions than do employers. An intervention before bias develops may be valuable in reducing the predicted loss in advance. In regards to college students, they are more likely to construct positive attitudes than people who are already in the job market regarding employability toward people with mental illness. Thus, knowing the attitudes of students, as future co-workers and employers, is important in designing effective interventions for people with mental illness.

Cultural Context

Leininger and McFarland (2002) defined culture as the way of life that is built on a cognitive map of unwritten rules for living. Aggleton (1993) supported the importance of social context, "The impact of health promotion is always contingent, being mediated by social expectations, popular prejudices, and group norms. Thus, an understanding of the social context is essential when it comes to making sense of the varying ways in which people respond to health promotion intervention" (p. 186). The concept of health and illness is closely connected with the society's culture and depends on cultural belief systems (Herberg, 1995). Although Dovidio et al. (2000) contend that stigma is "cross culturally ubiquitous" (p. 31), existing in space and time, it is a phenomenon molded by cultural and historical forces. Berkman and Kawachi (2000) also suggest that research on the individual level be supported by reasonable grounds of social context and must be explained within a contextual frame that reflects critical structural and cultural differences in community, society, and across countries.

In regards to research about public attitudes, many researchers have stressed that public attitudes should be examined within the contextual situation because experiences of being valued or devalued are strongly influenced by social context, and

attitudes and behaviors cannot be separated from the context in which they occur (Hergerg, 1995; Shonkoff & Phillips, 2000). Therefore, the data from studies on public attitudes should be collected and interpreted not only at both the individual and contextual levels, but research should also examine the relationships between two levels. Angermeyer, Buyantugs, Kenzine, and Matschinger (2004) compared public attitudes toward people with schizophrenia among Russia, Mongolia, and Germany to find if labeling effects are culture-related. The findings showed that the stigma attached to schizophrenia varied among different cultures, and they note, "This has important implications for anti-stigma efforts. They underline the need for actions aimed at reducing stigma to be tailored to the specific conditions in a particular country" (p. 425). Bakshi et al. (1999) also stated that stigma about mental illness must be a response that is not considered "normal" within the sufferer's culture.

Shonkoff and Phillips (2000) argue that the empirical literature and data on attitudes toward mental illness for cross-cultural variations remain underdeveloped, unclear, and very limited. Moreover, the majority of cross-cultural studies comparing Asian and Western populations regarding attitudes toward mental illness were conducted within Chinese cultural contexts such as in China and Hong Kong and of Chinese people living in America. Although North-East Asian countries seem to have similar cultural background, it is not appropriate to apply the same result from Chinese studies into other nations in North-East Asia because they show different styles of mental health status. For example, Kumakura et al. (1992) examined attitude changes of nursing students in Korea, Taiwan, and Japan. The results showed different patterns of attitude changes even though the students had similar education, including coursework and clinical training. In comparing Koreans and Chinese, Kuo (1984) reported that Koreans showed higher

depression levels than did Chinese.

Difference of attitude toward mental illness between the U.S. and Asian populations

In the previous cross-cultural study, Asian university students rated higher on authoritarian and socially restrictive opinions and less benevolent attitudes toward mental patients than Western students (Fan, 1999; Shokoohi & Retish, 1991). Chan et al. (1988) also found that American students had more positive attitudes toward people with both physical and mental disabilities than do Chinese students.

Why do Asians have more negative attitudes of mental illness than people in the U.S.? On the one hand, Na (1997) explains that in Asian cultures, mental illness is thought to reflect on family linkage. Accordingly, family members of people suffering from mental illness feel ashamed and they try to keep it a secret. Ahn and Elizabeth (1980) contend that these characteristics of Asian cultures lead to barriers to their therapy, reduction of the individual's social worth, and isolation from society. On the other hand, Gellis, Huh, Lee, and Kim (2003) suppose that more positive attitudes of Americans compared to Asians have resulted from American mental health services and advocacy, which have been developed during the past decade. These improvements have been built from new forms of effective treatments to political support for parity of mental health coverage. Gellis et al. (2003) conclude that increased favorable environments and educational programs against stigmatization of mental illness have led to more positive attitudes in the U.S.

Culture and attitudes toward mental illness in Korea

According to Korean Ministry of Heath and Welfare, the statistic on the

prevalence of individuals registered with mental disorders ranks 5th following mental retardation, brain damage, blindness, and deafness (Na, 2007). Even if popularity of this group is increasing, the actual state of people with mental illness in Korea does not seem to be positive. In the traditional Korean society, mental disorders were associated with a crazy or divine disease, which was dealt with by folk healers or Shamans (Barcus, 1982). Although Western culture has greatly influenced the modern Korean's view, deep-rooted traditional beliefs and values based on Buddhism and Confucianism still strongly influence Korea (KOIS, 1993). These belief systems stress the spiritual qualities of patience through self-discipline and contentment (Do, 1988). In Korean culture, controlling emotions and overcoming difficulties or pain in life are a prerequisite to health because an excessive expression of emotion is said to be a sign of weakness and disrespect (Al-Issa, 1995). Thus, psychological problems are believed to result from not controlling emotions and not overcoming difficulties in life (Neary, 2000). Moreover, Koreans are reluctant to admit a history of mental illness in their families or themselves since they believe that mental illness runs in the family (Na, 1997). Consequently, they feel shame and even guilt when they have a family member with mental illness (Ha, 1995). Although attitudes toward mental illness have been improving in Korea, there still exist negative attitudes (Jung, 1998; Park, 1997; Sung, 1996). Yoo (2001) found that Koreans are not willing to visit professional counseling services even though the profession of counseling and psychotherapy in Korea has been growing in recent years. Noh (1998) examined attitudes toward mental illness of fifty Korean community leaders such as doctors, counselors, politicians, and school nurses. The result showed that more than 75% of participants expressed negative attitudes. Moreover, Choi and Lam (2001) report that the majority of Koreans think that people with mental illness should be

institutionalized.

In order to find effective interventions for each cultural context, it is necessary to assess the attitudes and beliefs about mental illness of the population who will receive the intervention. Therefore, the current research examined the difference between American and Korean students regarding their attitudes about employability of people with mental illness. This research hypothesized that there are cultural differences in attitudes about work-related beliefs and the difference of structural formations affected by various characteristics of college students on the attitudes about employability between the U.S. and Korea.

Factors that Shape Attitudes

The current research investigated the factors that influence attitudes toward people with mental illness. One aspect of this study examined the characteristics of people with mental illness, which include symptoms of mental disorder and gender interactions between a person with mental illness and respondents. Another aspect examined the characteristics of the respondents on four categories: demographics (i.e., gender, age), personality (i.e., locus of control, self-esteem, individualism, collectivism), experience with school-based programs regarding mental illness, previous contact with people suffering from mental illness (i.e., types, numbers, frequency, valence).

Characteristics of people with mental illness

Symptoms and labeling

Segal (1978) argued, “The behavior itself or the pattern of behavior is the major determinant of the positive or negative character of the public’s attitude toward mental

illness" (p. 213). Yuker (1995) asserted that disability type and characteristics of the disabled person strongly influence the attitudes toward this group. Kolodziej and Johnson (1996) also explained that attitudes are linked to the characteristics of the person with whom contact occurs. The study by Kirk (1974) conducted to examine college students' reactions to the vignettes described different types of mental illness on a social rejection index and found that only the behavior of the mentally ill influenced social rejection. The same result was observed in the study by Schumacher et al. (2003), which reported that respondents in public shopping centers in California rated the person exhibiting bizarre behavior (i.e., agitation and delusions) in the vignette as dangerous, threatening, and avoidant. Arkar and Eker (1992) also found that people react differently according to the type of illness. For instance, schizophrenia, especially paranoid schizophrenia, is seen as the most recognizable and unaccepted disorder. Other research has also reported that public views and beliefs are dependent upon the type of mental disorders (Huxley, 1993; Link & Cullen, 1986; Penn et al., 1994). When it comes to employability, studies found that alcoholism and drug abuse ranked lower employment acceptance than physical disabled people and even people with other mental problems such as mentally ill, emotionally disturbed, and mentally retarded (Byrd, Byrd, & Emener, 1977; Colbert et al., 1973; Combs & Omvig, 1986).

On the contrary, Scheff (1984) viewed the symptoms of mental illness as a violation of residual rules or forms. He contended that norms are determined by society, in which individuals who appear to conduct themselves outside of those socially-acceptable norms are considered to be unable or unwilling to meet the society's expectations. Dennis, Eric, and Benjamin (1999) also asserted that acceptable and unacceptable behaviors are defined by society and that people with mental illness suffer

more from the responses of society than from their psychiatric symptoms themselves. Some researchers found that stigmatization was produced even in the absence of aberrant behavior (e.g., Farina, 1988; Farina, Allen, & Saul, 1968; Piner & Kahle, 1984). Link (1982) examined whether psychiatric symptoms and being labeled mentally ill had a greater effect on hiring and income. He found that the labeling had more significant effect on hiring and income than their symptoms after controlling other affecting variables on income and hiring. Akabas et al. (1992) demonstrated that employer attitudes toward hiring the disabled was influenced more a person's potential productivity than the person's disability history or type of disability. Slade and Salkever (2001) examined the Schizophrenia Care and Assessment Program database (SCAP) to obtain the relationship between employment and symptom information, and found that the employment rate increased by only 8% in comparison with a 40% reduction in symptoms of mental illness. Corrigan, Watson, and Ottati (2003) also contend that stigma is not because of the behavior exhibited by people with mental illness, but because of prejudicial beliefs about them.

Therefore, in addition to the effect of symptoms, this study examined the 'marked' and 'unmarked' labeling of a former mental patient. In other words, previous hospitalization is regarded as an important factor that might determine the attitudes of respondents. The 'marked' person in the vignette was considered more dangerous and the respondents were more likely to keep social distance from that individual (Jones et al., 1984; Link et al., 1987). By using a vignette experiment, Link et al. (1987) examined the public response to individuals who had been marked as being hospitalized. The data from Link et al.'s (1987) study showed that the label of former patient considered people in a vignette to be dangerous and high social distance.

The current study used vignettes to examine whether there exist different views among types of symptoms with 3 different types of disorders (schizophrenia, depression, and alcohol abuse) for the 'marked' labeling effect, and 1 additional situation ('troubled person' with neither history of hospitalization nor DSM-Ⅳ diagnosis) for the 'unmarked' labeling effect. It would be expected, if outcomes varied according to types of symptoms, that disorder-specific data are beneficial to improve stigma reduction interventions more effectively.

Gender

The gender of people with mental illness is another variable impacting how (s)he is viewed by society. Coie, Pennington, and Buckley (1974) wrote, "The attribution of psychological disorder is likely to be influenced by the sex of the person who is engaged in the socially deviant behavior" (p. 560). Although there are a few studies concluding that male patients are treated more favorably and positively than females (Abramowitz, Abramowitz, Jackson, & Gomes, 1973; Israel, Raskin, Libow, & Pravder, 1978), most of research related to gender of people with mental illness has demonstrated that females with mental illness are treated more positively than males (Farina, 1981). A less tolerant and more negative social reaction was given to male sufferers than females (Tudor, Tudor, & Gove, 1977). The same pattern was found by Clausen's (1980) study, which reported that disturbed men after returning to home from hospitalization were likely to be divorced by their wives while women who were similarly as disturbed as man were not more likely to be divorced. Penn, Kommana, Mansfield, and Link (1999) found that, in the vignettes, subjects rated men with psychiatric disorders more dangerous than women with the same prognosis. In regards to work environment, workers were more accepting and responded positively to female applicants with mental history than to male

former patients (Farina, Murray, & Groh, 1978).

However, there is another opinion on gender effect. Coie et al. (1974) argued that some patterns of behavior may produce greater violations on males than females while the opposite might equally apply for other categories of behavior. Farina (1981) also reported that females were given more favorable evaluations than males in cases involving depression. It shows that type of symptoms could make different impressions regarding gender. Furthermore, the gender effect could be influenced by the gender of respondents. Therefore, the current study examined the gender interaction between people with mental illness and college students according to 4 different types of symptoms.

The factors of respondents

Demographics

Among demographic variables, gender, age, and educational level have been considered influential factors on attitudes. Previous studies have shown that educational level is consistently related to attitudes toward mental illness; the more educated the individual, the more positive are his/her attitudes (Brockman & D'Arcy, 1978; Ojanen, 1992; Rabkin, 1974). Cho (1981) found that people who were educated beyond the college level showed more favorable attitudes about mental illness. Choi and Lam (2001) demonstrate that graduate students have more positive attitudes toward people with mental illness than do undergraduate students. However, since the subjects of this study were limited to college students, educational level was a rather limited variable. The current research, therefore, examined the effect of the gender and age on attitudes about employability toward people with mental illness.

Gender Previous studies examining the correlation of public

attitudes and gender have showed conflicting results. Chunk, Chen, Lam, Chen, and Chan (1997) surveyed 308 undergraduate students and found that women keep greater social distance from people with mental illness than men, while Coie et al. (1974) examined the attribution of psychopathology with 288 male and 288 female undergraduates and observed that women appear to prefer less social distance. On the contrary, some studies have found that there are no gender differences in attitudes toward mental patients (Angermeyer, Matschinger, & Holzinger, 1998; Brockington, Hall, Levings, & Murphy, 1993; Chan et al., 1988; Ryu, 2001; Wolff et al., 1996). In Korea, gender-based studies also have conflicting results. Some demonstrate that men show more negative attitudes than women (Kim, 1993; Park, 1994; Jung, 1996), while others have the opposite results (Choi, 1998; Lee, Lee, Hwang, & Lee, 1996; Park, Paek, & Kawk, 1995).

Moreover, in the cross-countries review studies, Yuker and Block (1986) found some gender differences between countries. For example, in Belgium, England, and Yugoslavia, women had more positive attitudes than men, while the reverse has been found in Denmark, Finland, India, Israel, Italy, Spain, and Sri Lanka. Chan et al. (2002) also found a country-by-gender interaction effect among American, Taiwanese, and Singaporean college students. They showed that the attitudes of American female students were highly skewed by positive responses. Therefore, this research explored whether gender of respondent created a different pattern on attitudes toward people with mental illness.

Age Brockington et al. (1993) surveyed about 2000 residents in two cities of Germany regarding their attitudes on mental illness. Researchers found that individuals ages 25-44 had less authoritarianism and more benevolent attitudes toward people with mental illness. Unexpectedly, people below the age of 23 had the least

benevolent attitudes. Stuart and Arboleda-Florez (1999) examined that those over the age of 60 did not think that people with mental illness could successfully reintegrate into the community or keep a regular job. Consistent with this research, younger people were more humanitarian, more knowledgeable, and required less social distance (Huxley, 1993; Link & Cullen, 1986; Penn et al., 1994). Gaebel et al. (2002) reported that the elderly were less supportive of the establishment of a group home for persons with schizophrenia in their neighborhood than younger individuals.

In the current research, because the sample was comprised of college students, the age variable in relation to the difference in attitudes was not significant. Nevertheless, though college students are in the same age group, they gain more experiences as they mature. This increase in experience can have an effect on attitudes toward mental illness. The current research, therefore, examined the influence of age on attitudes about employability toward people with mental illness.

Personality

MacDonald and Hall (1969) argued that certain personality characteristics could be predictive of attitudes toward disabled persons since personality may determine the nature of the perception that a person holds. Several studies have shown that the personality of a person without mental illness influences attitudes toward people with mental illness (Canter, 1963; Cohen & Struening, 1962; Gilbert & Levinson, 1957). Pine and Levinson (1957) examined the relationship between attitudes toward patients in mental hospitals and the personality of assistants in nursing homes. Assistants with negative attitudes toward people with mental illness tended to stick to their own opinions and refuse the advice of others. Canter and Shoemaker (1960) also studied the relationship between authoritarianism and attitudes about mental patients. They showed

that people with high authoritarianism reported feeling threatened by mental patients and expressed more negative stereotypes toward them. Although Couture and Penn (2003) argued that it is important to examine how one's personality could impact the stigma-reduction intervention, little research has been done on the relationship between personality and attitudes related to stigma of mental illness. The current study hypothesized that two aspects of personalities, locus of control and self-esteem, may be predictors to influence the attitudes toward people with mental illness.

Locus of control In Rotter's theory (1966), people who believe that reinforcement is connected with their own behavior are disposed to an internal locus of control and believe that they can obtain proper rewards if they work hard. On the other hand, people believing that reinforcement is unrelated to their own behavior tend to have an external locus of control. These people do not expect positive outcomes for their behavior. Strickland (1965) and Gore and Rotter (1963) showed that people with a more internal tendency were willing to participate in social issues and events and more likely to assume that their efforts would be successful in that they try to seek information and knowledge in their situation than do those with a external tendency. MacDonald and Hall (1969) examined the relationship between locus of control and types of disability by which they felt threatened. The results showed that internal locus of control subjects rated emotional disturbance such as depression as more fearful and more debilitating than did externals. Research also showed that, when compared to other disorders such as blindness, amputated leg, and diabetes, people with an internal control characteristic considered emotional disorders more threatening to themselves (MacDonald & Hall, 1969).

Hersch and Scheibe (1967) found that the volunteer supervisor in a mental hospital rated college students with an internal locus of control as more effective than

those with an external locus of control. Beckman (1971) also surveyed mental health volunteers to study the relationship between the locus of control and their attitudes toward mental illness. He found that those with internal control personality had more volunteer experience and showed positive attitudes toward mental illness. Morrison, D'Man, and Drumheller (1994) reported that negative attitudes toward mental illness were related to external control personality while positive attitudes were significantly related to internal control personality. Recently, Ryu (2001) assessed what factors could affect attitudes toward mental illness. The outcomes of multiple regression analysis showed that internal locus of control was a significant predictor of positive attitudes.

Self-esteem Self-esteem is defined as a person's subjective value, approval, or worth about himself or herself that is positive or negative to some degree (Blascovich & Tomaka, 1991). Sedikides and Gregg (2003) explain that self-esteem influences individual emotional supporting such as self-relevant beliefs and self-relevant emotions. Johannsen, Redel, and Engel (1964) showed that psychiatric affiliation changed the level of self-esteem of nursing students. They found that increasing self-reliance and self-confidence were significantly associated to positive attitudes toward mental illness. In addition, self-esteem is related to social interactions with other people as well. McDaniel (1976) suggested that personality integration as evidenced by self-concepts may be the underlying dimension mediating attitudes toward disabled persons. He reasoned that demographic and trait measurements were predictive if they were variables that correlated with self-concepts. Kahle, Kulka, and Klingel (1980) found that people with lower self-esteem had a more difficult time maintaining personal relationships with others. Ryu (2001) demonstrated a similar result that people with higher self-esteem were positively associated with favorable attitudes toward people with mental illness.

Therefore, this research included two types of personality dimensions, locus of control and self-esteem, as important variables on shaping attitudes toward people with mental illness.

Cultural characteristics Triandis (1995) proposes that researchers could understand the way of culture correlated with social psychological phenomena in a systematic method by the concepts of individualism and collectivism. The continuum from collectivism to individualism provides us with an understanding of how people relate to other persons in the environment. Hofstede (2001) explains that people in individualistic cultures are autonomous and independent from their in-group norm while people in collectivist cultures are interdependent within their in-groups rules in that they work for the group over their own personal goal. In other words, people with collectivism attitudes try to do what they are expected to do whereas individualists try to do what they enjoy doing (Triandis, 1995). When it comes to behavior, individualistic cultures is regarded behavior as a product of internal qualities of the individual, while collectivistic cultures view behavior as a product of environmental forces or circumstances (Choi, Nisbet, & Norenzayan, 1999).

In describing the differences between The U.S. and Korean cultures, researchers have often used the model of collectivist versus individualist orientation (Cha, 1994; Han & Ahn, 1994; Triandis, 1995). Korean culture is said to be collectivism, emphasizing family values and meeting familial expectations through achievement, obedience, and conformity to social rules. The U.S. culture seems more individualistic, focusing on meeting the needs of individuals through achieving personal rather than family goals and bringing honor to the individual rather than to the family (Cha, 1994; Han & Ahn, 1994). Markus and Kitayama (1991) argued that American culture emphasizes the individual

qualities by stressing autonomy, self-sufficiency, self-determination, and personally meaningful goals over the needs of the group. Meanwhile, Korean culture emphasizes interdependence by making connections among, attending to, and coordinating with others (Na, 1997). Applying this concept of collectivism, families are likely to conceal the existence of a member with a disability or mental illness, which results in more negative attitudes toward mental illness among in-group members.

Most cross-cultural studies have used this concept to explain and predict the differences of attitude toward people with mental illness across different cultural groups or nations. Results reported that individualist cultural groups or nations have more positive attitudes than collectivist cultural groups or natures (Jacques, Linkowski, & Sieka, 1970; Westbrook, Legge, & Pennay, 1993). However, persons within a culture may also vary widely in their attitudes, opinions, and behaviors. Singelis and Brown (1995) asserted that it would be faulty to assume that individuals within a culture possess similar cultural characteristics. For instance, there may exist persons in an individualist culture whose personal views are more collectivist than a person in collectivist culture. To date, limited research has been devoted to the investigation of individualism and collectivism both within and between cultures (Dutta-Bergman & Wells, 2002). Furthermore, there have been no studies examining factors that influence stigmatic attitudes that were directly derived from the collectivist and individualist characteristics.

Therefore, the current study examined whether collectivist and individualist cultural characteristics influenced attitudes toward mental illness as well as cultural context, the U.S. and Korea[3].

[3] Triandis, Leung, Villareal, and Clack (1985) chose the terms idiocentrism and allocentrism to refer to individualism and collectivism, respectively, at the person level.

School-based programs regarding mental illness

Corrigan et al. (2001) examined the impact of education or information on individual attitudes toward mental illness. They found that people with more knowledge about mental illness showed less negative attitudes. Penn et al. (1999) also found that participants had less negative attitudes and felt less fear toward people with mental illness when they received accurate information about mental illness. Two studies by Locker, Rao, and Weddell (1971) and Sigelman, Spanhel, and Lorenzen (1979) examined attitudes toward deinstitutionalization and group homes for mentally retarded and disturbed persons, finding that those with a better understanding of these problems expressed more positive opinion. In Korea, Park (1994) demonstrated that social workers who took the course related to mental health in their college showed more positive attitudes than those who did not take the course. High school students also showed the same results; students who attended a mental health education program reported less negative attitudes than counterparts (Jung, 1996).

Schulze, Richter-Werling, Matschinger, and Angermeyer (2003) suggest that continuous efforts are needed rather than one-time large-scale public education campaigns. Thus, programs about mental illness through school system are considered an effective intervention to reduce sigma toward mental illness as well as to improve students' mental health condition. Holmes, Corrigan, Williams, Canar, and Kubiak (1999) suggest that the students' pre-education knowledge about mental illness is likely to affect the impact of education on attitudes later. Penn et al. (1994) in their study involving undergraduate

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Idiocentrism is personal-level individualism and allocentrism represents personal-level collectivism. The current study used the terms of individualism and collectivism, instead of idiocentrism and allocentrism, since they have been popularly used and may be easier to understand.

students, concluded, “It appears that education about mental illness is not adequate at the high-school level. Just as many of youth take sex education classes, they also should be educated about the realities and myths of mental illness” (p. 572). In other words, individuals with greater pre-education knowledge about mental illness are primed to positive attitudes about psychiatric disability, and also this knowledge is related to greater attitude change after completing an education program in the future. What this means is that education about mental illness in school before college is important for students to accept the participation in the programs related to mental illness in college or after that.

Nevertheless, Susin (2004) argues that students in the classroom are taught about major illness such as cancer, diabetes, AIDS, and drug and alcohol abuse but are rarely learning about mental illness. The interventions related to mental health have not been accepted as a regular part of the school curriculum (Battaglia, Cloverdale, & Bushong, 1990). Therefore, this study investigated the relationship between previous education about mental illness and attitudes about employability toward people with mental illness in order to examine the importance of education for the mental health area in regular school systems.

Previous contact

Several strategies are designed to reduce stigma. Corrigan et al. (2001) examined the effects of three strategies – education, contact, and protest – for reducing stigma toward mental illnesses. Though education has been an effective intervention strategy for reducing stigma (Brockington et al., 1993; Link et al., 1987), many studies have demonstrated that contact experience creates more significant improvements in attitudes about mental illness than any other (Link & Cullen, 1986; Link et al., 1999; Wolff et al., 1996). Corrigan et al.’s (2002) study reported that contact resulted in not only

improving public attitudes toward people with mental illness, but also it was the only stigma-changing strategy, compared to education and protest. Menec and Perry (1998) tried to explain the mechanism between contact and reducing stigma by using an Attribution-Affect-help Judgment model. They showed that previous contact with stigmatized persons was related to increased willingness to help the stigmatized group. Chen and Brodwin (1999) explained, "Geographical proximal, with its reinforcement, provides the insight into process of interaction between persons without disabilities and those with disabilities" (as cited in Yuker, 1995, p. 19). Another contact hypothesis proposed that contact with a disliked group, in appropriate conditions, increased acceptance and respect for those persons and decreased prejudice (Cook, 1984).

A number of studies have demonstrated that people who have contact experience with persons with mental illness show fewer discriminating behaviors (Jones et al., 1984; Penn et al., 1994), less inaccurate and negative beliefs (Couture & Penn, 2003), less judgmental opinions (Angermeyer & Mastschinger, 1997; Brockington et al., 1993; Chou & Mak, 1998; Vezzoli et al., 2001), and felt less threatened (Penn et al., 1999). Jones et al. (1984) suggested that negative expectations conveyed through the press, television, jokes, and other media can be changed with the continuing contact. Chung, Chen, and Liu (2001) reported that university students in Hong Kong who had previous contact with mental illness were more willing to interact with people labeled as mentally ill than students with no previous contact. Corrigan et al.'s (2001) study also reported similar findings that members of the general public who engage with a person with mental illness as part of an anti-stigma program showed significant changes in their attitudes about mental illness. Further, they showed that attitude change, which results from contact, was maintained over time and related to a change in behavior. As far as the

relations between employer's prior contact experience and their attitudes related to mental illness, many studies have found that prior experience in hiring persons with disabilities can result in a positive perception of mental illness (Diksa & Rogers, 1996; Emencer & Mchargue, 1978; Hartlage & Taraba, 1971; Landy & Griffith, 1958). Similarly, Wilgosh and Mueller (1989) surveyed 116 employers to ask about hiring people with mental illness and concluded that limited exposure to people with mental illness could make employers less likely to hire people from this group.

The effects of personal contact are not limited to adults. Research with school children showed that an education strategy for changing attitudes toward mental illness was more effective when used together with a contact strategy than using only an education strategy (Pinfold et al., 2002). Schultz, Harker, and Gardner (1977) attempted to improve eleventh graders' attitudes toward people with mental illness through six 40-minute classes over two weeks. In a two-by-two design, they compared the impact of explaining mental disorders in terms of the medical model versus the psychosocial community model, each with or without interaction with former mental patients. All treatments produced improvement in attitude scale scores, but the community model treatment with interaction yielded the most change and the medical model group without interaction showed the lowest change of score. Frith and Mitchell (1981) also found that contact between mildly mentally ill children and their peers resulted in positive attitudes. Contact effect has also been reported across the countries. Studies in Turkey, New Zealand, Nigeria, Hong Kong, and the U.K. have all demonstrated that contact decreases social distance and leads to more positive attitudes (Arikan & Uysai, 1999; Chou & Mak, 1998; Ingamells, Goodwin, & John, 1996; Ogedengbe, 1993; Read & Law, 1999). Choi and Lam (2001) also produced the same result from both Korean students and Korean-

American students; previous contacts with person with disabilities resulted in positive attitudes.

However, Levin (2001) questioned "If contact is so good, then why do mental health and emergency room providers maintain stereotypes?" (p. 8). Kolodziej and Johnson (1996) reviewed lots of contact-related studies and found that significant effects of contact were minimal. Brunton (1997) showed that increased community contact created an adverse effect on local public attitudes.

What could explain such disappointing results? Cloerkes (1979) concluded that the enjoyment and the status relations involved in contact determine whether its impact on attitudes links to positive or negative. Lyons and Haynes (1993) examined that unguided contacts such as distress and deficiencies with people suffering mental illness showed no attitude change or negative attitudes. Yuker (1995) proposed several factors to be considered in the study focusing on the effects of contact: frequency, status differences, type of interaction (social or work, competitive or cooperative, etc.), degree of intimacy, setting, and situational norms. Phelan, Link, Stueve, and Pescosolido (2000) explain that the simple contact does not imply liking which is assumed to reduce stigma. They suggest that the effect of contact is influenced by various contact characteristics such as contact types and number, contact frequency, and contact valence (positive or negative) of the interactions.

Types of contact and Number of contact Pettigrew and Tropp (2000) conducted a meta-analysis with more than 200 studies of intergroup contact and found that well-structured contact programs that included high quality contact such as equal-status, level of intimacy, voluntary contact and cooperative situation resulted in consistently large reductions on stigma. Corrigan and Penn (1999) found that contact

programs for mental illness were more successful when all participants, both people with mental illness and those without mental illness, had equal status, which might facilitate opportunities for friendly and intimate interaction between two groups of participants through mutual and informal conversations.

Other studies have found that people who work or volunteer at mental health facilities show positive attitudes toward people with mental illness (Corrigan et al., 2001; Link & Cullen, 1986; Rousseau & D'Man, 1998). Ryu (2001) surveyed college students in Seoul, Korea to determine which factors influence attitudes regarding mental illness. She found that subjects with volunteer experiences in mental hospitals or mental health centers showed more positive attitudes toward mental illness than their counterparts. The study by Paul and McInnis (1974) also found that voluntary contact resulted in effective outcomes. They conducted a program promoting contact interaction and examined the relations between their willingness to contact, voluntary or not, and attitude changes about the newly hired psychiatric attendants. Consequently, efforts to increase the trainees' motivation to voluntarily engage in contact with persons with severe psychiatric disorders appeared likely to result in successful changes of attitudes toward this group.

As far as the cooperative situation between persons with mental illness and other member without mental illness, Desforges et al. (1991) assigned 95 undergraduate students to one of three contact conditions: scripted cooperative contact, jigsaw cooperative contact, and a control condition. Two cooperative contact groups were required to complete a cooperative task working with a former mental patient as a partner while individuals in a control group were instructed to sit at opposite ends of a table and study the requirement without talking to each another. The results showed that students in both cooperative groups, who were initially prejudiced toward people with mental illness,

created more positive outcomes at the conclusion of the study than did students in control group.

In the case of family relationships, attitudes of family members toward other members with a mental illness often are ambivalent (Yuker, 1995). Yuker (1995) reports that family members express either positive reactions such as love and empathy or negative responses such as annoyance, anger, and even disgust. Some researchers have documented that people who have family or friends with mental illness express less negative attitudes toward mental illness than those without this exposure (Corrigan et al., 2001; Holmes et al., 1999; Link & Cullen, 1986; Penn et al., 1999), while other studies reports that the extent of social distance increases when the relationships are closer and more private (Angermeyer & Matschinger, 1997; Gaebel et al., 2002; Stuart & Arboleda-Florez, 2001). Phelan and Link (2004) conclude that both personal and impersonal public contacts influence how individuals feel toward the mentally ill. Therefore, contact-related studies on attitudes are needed to clarify the types of contact that a person has experienced.

In addition to examining the pattern of attitudes according to types of contact, number of contact type was employed for one of the contact variables in running the analysis for the predictors and mediations on attitudes about employability[4]. Link and Cullen (1986) examined the association between the number of contact types and perceived potential danger of mental patients. They found that, regardless of age,

[4] Another reason that number of contact type is substantial independent variables as predictors and mediations on attitudes about employability analysis instead of types of contact is that the analytic methods such as Regression and SEM require continuous variables in running analysis. Therefore, number of contact types was used as one of 'Contact' predictor and mediation along with Frequency and Valence contact, and followed by performing the scrutiny with types of contact.

education, and gender, the more types of contact a person had, the less dangerous (s)he believed the mentally ill to be.

Frequency of contact The quantity, or frequency, of contact also affects attitudes toward people with mental illness (Weller & Grunes, 1988). Islam and Hewstone (1993) explains that, as contact increases, not only does it provide more opportunities to get to know members of the stigmatized group, but it also increases familiarity with individuals in that group, making it more difficult to maintain negative stereotypes. Similarly, by improving interpersonal relations through increased contact, people begin to move away from the stereotypes they held regarding the stigmatized group (Jackson, 1993). Rabkin (1974) suggested that, even if direct contact created better attitudes for volunteer students, it only worked in the general population if they saw a patient everyday. Ingamells et al. (1996) divided their participants into either high or low contact groups depending on the quantity of previous contact with persons who had a history of mental illness. They found that people in the high-contact group were more accepting of people with mental illness than those in the low-contact group. Therefore, a high frequency of contact would be expected to develop positive attitudes toward people with mental illness.

Valence of contact As well as types, number, and frequency of contact, Kolodziej and Johnson (1996) found that pleasant experience is one of the effective contact factors. Prior negative personal experience is strongly related to resistant to change attitudes and beliefs (Pedersen, Sartorius, & Marsella, 1984). Kennon and Sandoval (1978) reported that teachers taking a program that emphasized incompetence of a disabled person tended to foster negative attitudes. Wilgosh and Mueller (1989) also demonstrated that the positive employment contact with the disabled resulted in the

improvement of employer's attitudes toward hiring the people with disability. Recently, Hand and Tryssenaar (2006) examined employers' willingness to hire people with mental illness. They found that the valence of interactions was the only significant predictor of willingness to hire; employers who expressed positive interactions with people having mental illness were more willing to hire those groups compared to employers who reported negative or neutral interactions.

Though these various contact characteristics (i.e., types, number, frequency, and valence) are believed to positively influence attitudes toward mental illness, there has been little research that has examined these various contact aspects together. Therefore, this research classified the contact characteristics into three categories (number, frequency, and valence of contact) as predictors for attitudes about employability and additionally examined the relationship between specified contact types and attitudes about employability.

Mediating effect of contact experience Although some researchers supposed that face-to-face interaction is a significant and positive mediator of contact's effects on affecting negative attitudes (Sigelman & Welch, 1993; Worchel, 1986), little empirical study has conducted to investigate the mediator's effect of contact experience on attitudes related to mental illness or people with mental illness. Therefore, in addition to the examination of the effects of previous contact experience, the current study is proposed additionally the mediating effect of previous contact: previous contact experiences with people who suffer from mental illness may mediate the effect of socio-demographic and personality on the attitudes about employability. Furthermore, multiple mediators are investigated in order to find out the mediation effect of contact experience according to contact characteristics such as number of contact, frequency of contact, and

valence of contact, these three contact variables are investigated

In conclusion, the current research investigated an extended model including both general model of perceived employability based on literature review (See Figure 1) and revised model of perceived employability based on the moderating effects of contact experience (See Figure 2). These models were replicated across U.S. and Korea in order to examine the underlying effect of cultural contexts.

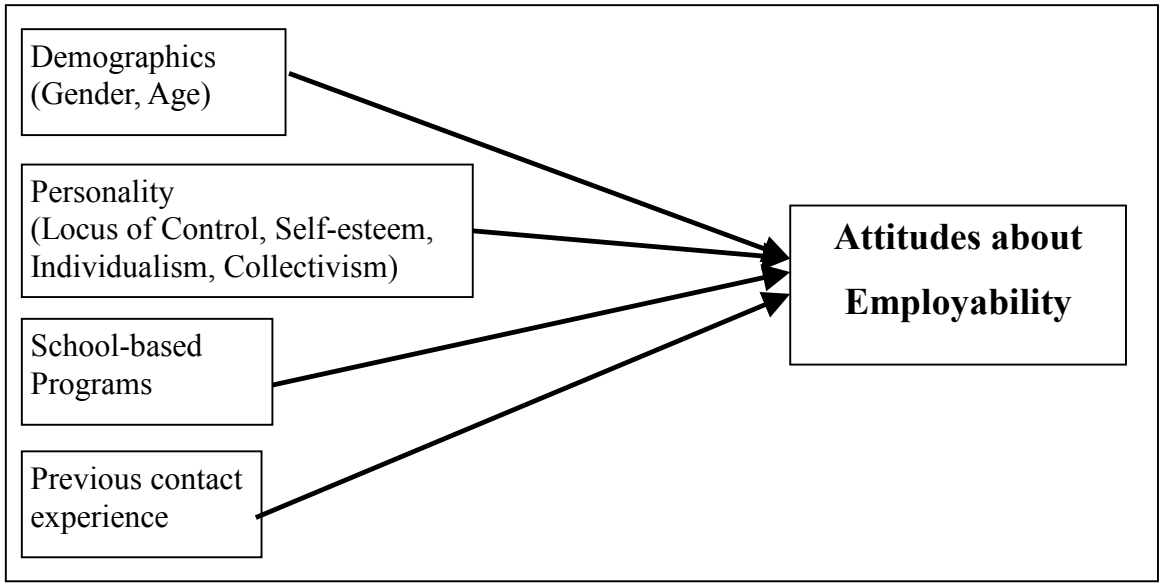

Figure 1. General Model of Perceived Employability based on Literature Review

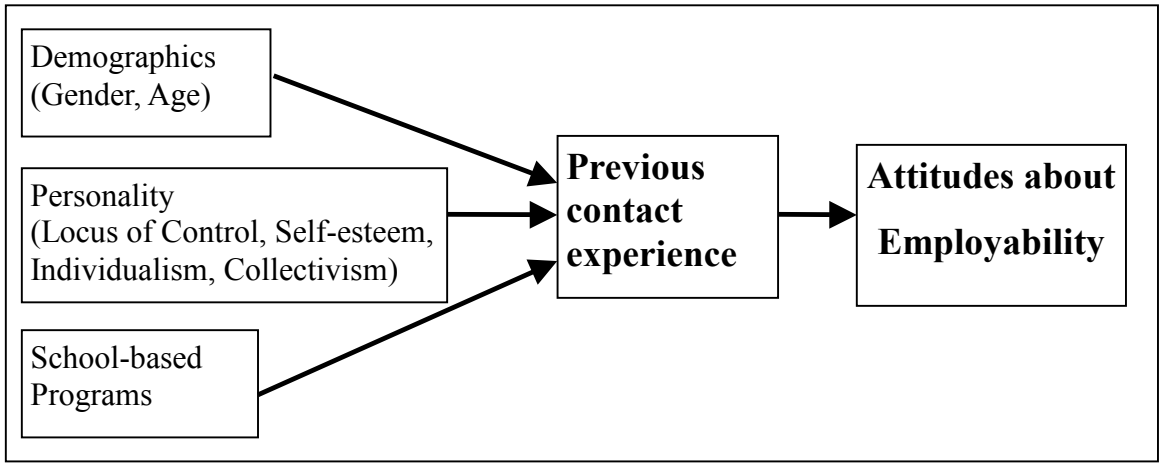

Figure 2. Revised Model of Perceived Employability based on the Moderating Effects of Contact experience

The Web-based Survey

The use of web-based questionnaire to conduct research has been considered one of the most significant advances in survey methodology in the 20th century (Dillman, 2000). Compared with paper-based surveys, the web-based mode could save costs of paper and postage, as well as time for distributing questionnaires and entering the data for analysis (Baer, Saroiu, & Koutsky, 2002; Dillman, 2000; Montgomery, 2004).

Recent studies have stressed some benefits of using web-based surveys among college students, considering higher response rates, enhanced completion rates, and reduction of costs and turnaround time without compromising the integrity of the data (Carini, Hayck, Kuh, Kennedy, & Ouimet, 2003; Pealer, Weiler, Pigg, Miller, & Dorman, 2001). Many studies have found no statistical differences on data collected between web survey-based and paper-based survey (Bason, 2000; McCabe, Boyd, Couper, Crawford, & D'Arcy, 2002). For example, McCabe et al. (2002) randomly assigned 7000 students to complete a survey with alcohol use measurement via two distinct survey modes, web and mail. The web mode produced a sample that was more representative of the overall student population with respect to gender. In addition, there were no differences in the distribution of race, academic year, academic credit hours, and age between the final samples obtained from the two survey modes. Moreover, general questionnaire and survey data gathered online prove to be as valid and reliable as those gathered off-line (Buchanan & Smith, 1999; Davis, 1999; Im et al., 2005; Riva, Teruzzi, & Anolli, 2003; Smtih & Leigh, 1997; Stanton, 1998). Therefore, it concludes that the web-based survey may be an effective mode for collecting data among undergraduate college students (McCabe et al., 2006).

More importantly, a web-based survey can offer a more effective and efficient

means of reaching respondents across international borders. Those who are interested in collecting data across countries can take inexpensive and fast ways to reach wide geographical areas (Dillman, 2000). Several studies made their samples more diverse in nationality by using web-based survey (Birnbaum, 1999; Buchanan & Smith, 1999; Krantz, Ballard, & Scher, 1997; Senior et al., 1999). Therefore, this study employed a web-based survey questionnaire on the attitudes about employability toward people with mental illness.

RESEARCH QUESTIONS

Research has noted that attitude formation is a development process that occurs across several dimensions within cultural context (Agbayani-Siewert, Takeuchi, & Pangan, 1999). The current study explored the relations between attitudes about employability toward people with mental illness and other variables reported to be correlated to the attitudes in different cultural contexts.

For the first research question, the Work Opportunity scale examines the responses of college students according to the symptoms and gender of person with mental illness. The second research question compared the structural patterns variables related to attitudes about employability between two countries, the U.S. and Korea, in an effort to elucidate the effect of cultural context. The third question assessed potential predictors to explain how college student's characteristics are correlated with attitudes about employability toward people with mental illness. In this regard, the study contended that past experiences of school-based programs regarding mental illness and previous contacts with people who have mental illness are effective tools to mitigate their negative attitude. Therefore, for the fourth questions examines more detailed these two variables, school-based programs and previous contacts on attitudes about employability.

The following research questions are proposed.

1. Questions about Work Opportunity toward people with mental illness
    1.1. Are there different responses on Work Opportunity scale according to the symptoms of mental illness (i.e., schizophrenia, depression, alcohol abuse, and troubled person)?
    1.2. How does gender of person in vignettes and that of respondents interact with respect to each of the 4 of the Work Opportunity scale?

2. Question about cultural difference
    2.1. Does the structural pattern among respondent's variables, which are supposed to influence attitudes about employability, differ between the U.S. and Korea?
3. Questions about predictors on attitudes about employability
    3.1. What are the predictor variables of Work Opportunity among demographics (Age, Gender), personalities (Locus of Control, Self-esteem, Individualism, Collectivism), school-based programs, and contact experiences (Number of contact, Frequency of contact, Valence of contact) in the U.S. and Korea?
    3.2. What are the predictor variables of ACE of ATTEMP among demographics (Age, Gender), personalities (Locus of Control, Self-esteem, Individualism, Collectivism), school-based programs, and contact experiences (Number of contact, Frequency of contact, Valence of contact), and Work Opportunity in the U.S. and Korea?
    3.3. What are the predictor variables of DCE of ATTEMP among demographics (Age, Gender), personalities (Locus of Control, Self-esteem, Individualism, Collectivism), school-based programs, and contact experiences (Number of contact, Frequency of contact, Valence of contact), and Work Opportunity in the U.S. and Korea?
4. Questions about school-based programs and previous contact experience
    4.1. Do school-based programs about mental illness affect positive results related to attitudes about employability toward people with mental illness in the U.S. and Korea?

4.2. Do previous contact experiences significantly affect positive results of attitudes about employability in the U.S. and Korea?

4.3. How do the three contact characteristics (Number, Frequency, and Valence) mediate the various characteristics of respondents and attitudes about employability in the U.S. and Korea?

4.4. Do respondents show different responses on attitudes about employability according to the types of contact such as family, friends, or in the public?

METHODS

Sample

Research participants were American and Korean college students who took psychology classes between April 2007 and September 2007. American participants were sampled from Psychology 200 courses at North Carolina State University. The Korean students were selected from 5 Psychology courses at Korea University and Hankuk University of Foreign Studies in Seoul and at Daegu National University in Daegu. The total number of respondents was 565, respectively 294 in the U.S. and 271 in Korea. After review and cleaning of the data, the number of participants for data analysis was 493, respectively 250 in the U.S. and 243 in Korea. Total 72 cases were deleted due to 46 incomplete surveys which means that respondents did less than half of survey questions (24 in the U.S. and 22 in Korea), 7 respondents over 30 years old (5 in the U.S. and 2 in Korea), 10 people who were not college students (6 in the U.S. and 4 in Korea), and 9 of outliers (9 in the U.S.).

With the cleaned data, the participating students ranged in age from 17 to 28 years (Mean = 19.97, SD = 2.055). For each country, the U.S. students ranged from 17 to 27 years (Mean = 19.10, SD = 1.517), and Korean students ranged from 18 to 28 years (Mean = 20.88, SD = 2.147). Korean students were significantly older than American students with $t = 10.602$ ($p < .001$). The possible explanation of this age difference maybe due to the starting age of school entrance; Korean children enter elementary school at 6 or 7 years old while American children are permitted to enter at 6 years old. The other reason may be that most Korean male students are obligated to go into the military for 2 years, and many of them go after their freshman or sophomore year.

Table 1. *Descriptive of demographics between the U.S. students and Korean students*

	Total	**The U.S.**	**Korea**	**t-test or χ^2**
Age	19.98 (SD: 2.055)	19.10 (SD: 1.517)	20.88 (SD: 2.147)	t =10.602***
Gender				t = .355
Male	202 (41.2%)	105 (42.0%)	97 (40.4%)	
Female	288 (58.2%)	145 (58.0%)	143 (59.6%)	
Grade				χ^2 = 44.569***
Freshman	215 (44.0%)	142 (56.8%)	73 (30.5%)	(df = 4)
Sophomore	153 (31.3%)	67 (26.8%)	86 (36.0%)	
Junior	66 (13.5%)	19 (7.6%)	47 (19.7%)	
Senior	51 (10.4%)	18 (7.2%)	33 (13.8%)	
Others	4 (0.8%)	4 (1.6%)		
Major				χ^2 = 177.041***
Undecided	26 (5.2%)	23 (9.3%)	2 (0 .9%)	(df = 9)
Psychology	94 (19.5%)	14 (5.6%)	80 (34.3%)	
Language	61 (12.7%)	10 (4.0%)	51 (21.9%)	
Education/Social work/Children &Family	20 (4.2%)	12 (4.8%)	8 (3.4%)	
Political/ Criminology/ International/ Public relations/ Communication	46 (9.6%)	19 (7.7%)	27 (11.6%)	
History/Philosophy	7 (1.5%)	4 (1.6%)	3 (1.3%)	
Accounting/ Business Management	60 (12.5%)	32 (12.9%)	28 (12.0%)	
Engineering(Civil, Industrial, Mechanical), Computer Science	67 (13.9%)	57 (23.0%)	10 (4.3%)	
Science(Biology/ Chemistry/ Food/ Nutrition)	68 (14.1%)	63 (25.4%)	5 (2.1%)	
Art/ Physiology	33 (6.9%)	14 (5.6%)	19 (8.2%)	
Race				
African American		13 (5.2%)		
White/Caucasian		194 (77.6%)		
Asian		25 (10.0%)		
Hispanic/Latino		7 (2.8%)		
Biracial/Multiracial		11 (4.4%)		

* p < .05 ** p < .01 *** p < .001

Respondents were comprised of 202 male students (41.2 %), respectively 105 in the U.S. and 97 in Korea, and 288 female students (58.2%), 145 in the U.S. and 143 in Korea, with 3 respondents who did not specify their gender. There was no significant difference in gender between the American and Korean students ($t = .355$, $p = .723$). In regards to students' academic year, there were 215 freshman (142 in the U.S. and 73 in Korea), 153 sophomores (67 in the U.S. and 86 in Korea), 66 juniors (19 in the U.S. and 47 in Korea), and 51 seniors (18 in the U.S. and 33 in Korea). Significantly more Korean than American students comprised the upper academic grade with 44.569 of Chi-square ($df = 4$, $p < .001$) (See Table 1, p. 48).

Results indicated a significant difference among the majors between the two countries. Korean sample had more respondents studying Psychology (34.3%) and Language (21.9%), comparing to 5.6 % of Psychology and 4.0% of Language in the U.S. sample. On the contrary, American sample had more students studying Engineering (23.0%) and Science (25.4%), comparing to 4.3% of Engineering and 2.1% of Science in the Korean sample (See Table 1, p. 48). In regards to race in the U.S. sample, there were 13 of African American (5.2%), 194 of Caucasian (77.6%), 25 of Asian (10.0%), 7 of Hispanic/Latino (2.8%), and 11 of Biracial/Multiracial (4.4%). Race was not a factor in the Korean sample because there are rarely foreign college students in Korea.

Procedure

IRB-approved surveys consisting of consent form, demographic form, and the measurements were distributed to participants in an online survey version. To minimize the difference of collecting samples from two countries, the U.S. and South Korea, the procedure of sampling was designed to be as equivalent as possible in two countries. For

American samples, the subjects responded to an invitation in Psy 200 classes, which was processed through the website 'Experimetrix.com'. They were given the address (URL) of the Web page that allowed them to access the online version of the questionnaire provided by 'Surveymonkey.com'. For Korean samples, the participants were collected from five psychology classes: three Introduction Psychology classes, one Personality Psychology, and one Psychological measurement class. Korean students also were given the address (URL) of the Web page that led them to the Korean version of the questionnaire, which was also provided by 'Surveymonkey.com'. The participants were required to click a 'next' button in the first page for a consent form if they wanted to answer the survey (See Appendix A).

The online questionnaire did not fit onto one screen. Therefore, participants were required to scroll down to answer all the questions. Both the English and Korean versions had the same order and design such as alignment, color, and even shape of click button. On the final page, students were shown a thank you note and a request to email their names to the researcher in order to receive research credits. American participants were given two credits and Korean student received varied credits according to their instructors. This separate procedure between surveying and sending their names by e-mail for a reward was done in an effort to protect participant confidentiality.

Measurements

Personality measurements

Locus of control scale

The Locus of control scale is a 29-item questionnaire developed by Rotter (1966) (See Appendix B). The scale measures generalized expectancies for internal (i.e.,

personally responsible) versus external (i.e., luck, chance) control of reinforcement. People with an internal locus of control believe that their own behaviors and actions determine primarily the rewards that they obtain, while those with an external locus of control believe that the events result from powerful others, fate, or chance, and the rewards in life are generally outside of their control. The scale consists of 23 scoring items and 6 filter items. Each item contains two sentences, one representing internal control and one external control, respectively. Subjects are expected to select one out of the two sentences in each item and it is rated as 1 point for external control. Consequently, A low score in total indicates internal control while a high score indicates external control. One item, for example, has two sentences: "Many of the unhappy things in people's lives are partly due to bad luck" and "People's misfortunes result from the mistakes they make." The former sentence represents the item for external locus of control and latter is for internal. This scale has been translated and adapted into the Korean version with appropriate reliability and validity (See Appendix C). The Korean version consists of a total 21 items including 6 filter items.

In cross-cultural study by Blakely, Srivastava, and Moorman (2005) using Chinese and Americans, Cronbach's alpha for the Locus of control scale is .60 for the Chinese sample and .69 for the American sample. In the Korean version, the Locus of control scale yielded a Cronbach's alpha of .84 (Cha, Kong, & Kim, 1973) and .60 (Ryu, 2001). In the current study, Cronbach's alpha was .687 for the American sample and .593 for the Korean sample. This study eliminated 3 items (3, 4, 8 items) for the Korean version of the Locus of control scale since these 3 items made the reliability too low. Therefore, Cronbach's alpha for Korean sample was the result after Korean version adjusted.

Self-esteem scale

The Self-esteem scale, developed by Rosenberg (1989), measures a positive or negative orientation toward oneself, an overall evaluation of one's worth or value. The Self-esteem scale includes items such as "I feel that I have a number of good qualities" or "I am able to do things as well as most other people." The 10 items are answered on a 4-point Likert scale from strongly agree to strongly disagree, with total scores ranging from 10 to 40 (See Appendix D). Items 3, 5, 8, 9, and 10 were reverse scored. A higher score on the scale means that a participant possesses a more positive self-esteem than one who scores lower.

Cronbach's alpha for the Self-esteem scale was .77 (McCarthy & Hoge, 1982) and .80 by the study of Shahani, Dipboye, and Philips (1990). The Korean version of the Self-esteem scale was translated by Jun (1974) and reported a Cronbach's alpha of .85 (Ryu, 2001) (See Appendix E). The reliability of the scale in current study was .881 for Americans and .820 for Koreans.

Individualism and Collectivism scale (INDCOL)

In addition to a nationality variable (i.e., American or Korean), this study included INDCOL scale, developed by Singelis, Triandis, Bhawuk, and Gelfand (1995), to explore the effect of the cultural characteristic of a person within a culture. Individualism refers to an emphasis on independence and personal aspects while a collectivist orientation places greater emphasis on interdependence and group aspects. The INDCOL consists of 2 subscales with 32 items that assess 16 items for Individualism and 16 items for Collectivism respectively. Items response ranged from strongly disagree to strongly agree on a 7-point Likert scale. The Individualism scale includes items such as "Winning is everything", and an example for the Collectivism scale is "I hate to disagree

with others in my group" (See Appendix F). A Korean version of INDCOL was translated by Kim (1996) (See Appendix G). With the Korean population, Cronbach's alpha is .80 for Individualism and .85 for Collectivism (Lee, 2004). In the current study, reliability of Individualism using Cronbach's alpha is .752 in the U.S. sample and .820 in Korean sample and that of Collectivism is .809 in the U.S. and .838 in Korea.

School-based programs regarding mental illness

In an effort to examine previous educational experiences regarding mental illness in school, students were given a questionnaire to determine if they experienced the following kinds of classes regarding mental illness: discussion during a class, forum, and written materials. The questionnaire inquired whether these programs existed in elementary, middle, and high school. The range of responses to these questions was from 1 (never) to 4 (many times) (See Appendix H). Mean scores were calculated from 9 items through three kinds of class and three levels of school.

Previous Contact scale

Although there are many studies regarding contact effects on attitudes about mental illness, there has been no scale available that measured contact types, number of contact types, contact frequency, and contact valence together. To measure Types of contact, this research modified the contact scale from Alexander and Link (2003), in which the four categories of contact type were as follows: family contact, friend/spouse contact, public contact, and work contact. Using these four categories as a bases for the current study, the current study developed the following 5 categories of contact type: (1) I have had a family member, such as a parent, spouse, child, sibling, or other relative, who

has had a mental illness, (2) I have had friends who have had a mental illness, (3) I have worked with people with mental illness, (4) I have volunteered with people with mental illness, and (5) I have seen someone who appeared to be mentally ill in a public place. For family contact, students were asked to rate their previous experience with each category of parent, spouse, child, sibling, and relatives. Responses were reconstructed to the family category of contact: Respondents indicating an affirmative response to any of the five family contacts within the family category were added to the group for experience with mental illness within the family.

In terms of frequency and valence for each type of contact, Separate ratings were made for frequency and valence for each type of contact. The researcher only measured the frequency of contact and valence of contact for students answered "yes" for each types of contact category. Therefore, the participants who were applicable to answer for frequency and valence were asked to rate Frequency of contact (the question of "how often") and Valence of contact (positive or negative) with the person with whom participants had contact. In the case that a listed type was not relevant to the respondent (e.g., the respondent does not have a friend with mental illness), "not applicable" was coded for that response. Responses on the Frequency of contact scale range from never, once or twice, a few times, often, to very often (almost everyday). Responses on the Valence of contact scale range from 1 (strongly negative) to 5 (strongly positive) (See Appendix J).

In an effort to employ regression and SEM for research questions, Contact scale consists of three subscales, which are defined as the Number of contact types, Frequency of contact, and Valence of contact. For the Number of contact type, which means how various contacts students had with people suffering from mental illness, the researcher

computed the number that a respondent rated "Yes" across the 9 categories (parent, spouse, child, siblings, relatives, friends, workplace, volunteer, public)[5]. Frequency of contact was the mean rating across each type of contact, based on the contact type applicable for the respondent. Valence of contact score was calculated in the same manner as Frequency of contact.

Attitudes Towards The Employability of Persons with Severe Disabilities Scale (ATTEMP)

The ATTEMP has been used to measure attitudes toward employability. The original ATTEMP was developed by Schmelkin and Berkell (1989) with a 21-item questionnaire. By using common factor analysis, Brown, Berkell, and Schmelkin (1992) obtained the following two subscales: (1) 11 items of Appropriateness of Competitive Employment (ACE) (i.e., the perceived appropriateness of providing services and competitive employment opportunities and the potential benefits of such employment); and (2) 10 items of Disadvantages of Competitive Employment (DCE) (i.e., the potential detrimental effects of competitive employment on the employer and non-handicapped workers and obstacles to and drawbacks of competitive employment for individuals with severe disabilities).

Recently, Hand and Tryssenaar (2006) modified Schmelkin and Berkell's (1989) version of the scale by replacing the phrase "severe disabilities" with the phrase

[5] The reason that number of contact type is substantial independent variables as predictors and mediations on attitudes about Employability analysis instead of types of contact is that the analytic methods such as Regression and SEM require continuous variables in running analysis. Therefore, number of contact types was used as one of 'Contact' predictor and mediation along with Frequency and Valence contact, and followed by performing the scrutiny with types of contact.

"mental illness" in an effort to focus on people with mental illness. The current study used this modified version (See Appendix L). The items for ACE include "Competitive employment enables people with mental illness the opportunity to lead relatively normal lives" and "Exposure to people with mental illness in job settings promotes positive attitudes on the part of coworkers without mental illness." The examples for DCE are "The productivity of coworkers decreases when they work with individuals with mental illness" and "Competitive employment for people with mental illness takes jobs away from workers without mental illness." Response categories range from "Disagree Very Strongly" to "Agree Very Strongly" on a 7-point Likert scale. To facilitate interpretation, the DCE subscale was reverse scored prior to data analysis. Consequently, high scores on both the ACE and DCE subscales are indicative of positive employability toward people with mental illness.

The Cronbach's alpha scores for Brown et al.'s (1992) study were .89 for ACE subscale and .81 for DCE. In the current study, the reliability of the scale, assessed by means of Cronbach's alpha, was .784 for total ATTEMP. In terms of reliability of each subscale, .821 for the ACE subscale (.840 in the U.S. and .801 in Korea) and .703 for DCE subscale (.716 in the U.S. and .636 in Korea).

Work Opportunity Scale with vignettes

Students were given four separate vignettes portraying schizophrenia, depression, alcohol abuse, and a troubled person. Vignettes were adopted from Penn et al. (1999), Pescosolido et al. (1996), and Anglin, Link, and Phelan (2006) and then modified to better represent the purpose of this research. In the present study, the vignettes described the target individual as a college student employed part-time at a coffee shop.

Persons in the three vignettes [major depression, schizophrenia, and alcohol abuse] were described that (s)he had a history of mental hospitalization due to the each psychiatric disorder, which meet DSM-4 criteria. The fourth vignette featuring a troubled person did not meet criteria for a DSM-4 diagnosis but represented common problems of daily life without a history of mental hospitalization.

Koledziej and Johnson (1996) recommended, "Rather than continue to label persons with psychiatric disorders as the generic group of the mentally ill, future investigations ought to consider specific descriptors, such as epidemiologic, diagnostic, and demographic characteristics" (p. 1394). Therefore, the current study described only the symptoms of each psychiatric disorder in the vignettes without mentioning the diagnosis of each disorder in order to avoid a stereotype effect from naming the psychiatric disorders. In addition, in portraying the individuals in the vignettes as former patients, symptoms that they had were depicted in past tense. Each vignette had two versions according to gender: male and female (i.e., "John" or "Jane"). Subjects were given one of two vignette versions to read, which were identical except for the changes in the name for gender described (See Appendix N).

After reading each vignette, students were asked to respond to 7 items on the Social Distance scale (Chung et al., 2001; Link et al., 1987; Hand & Tryssenaar, 2006), which were measured by willingness to interact with people with mental illness (See Appendix P). For the purpose of current study, 4 out of 7 items were analyzed, which were related to work situation among Social Distance scale: (1) Are you willing to work with A [the name in a vignette] at the same company?; (2) Are you willing to recommend A for a job working for a friend of yours?; (3) Are you willing to receive job applications from, interview, or hire A if you were in the position to hire someone?; (4) Are you

willing to be A as your work partner and responsible in the same project? The range of response was from “Definitely Unwilling” to “Definitely Willing” on a 4-point Likert scale.

To determine reliability of the 16 items (4 items for 4 vignettes) of Social Distance scale, factor analysis was conducted for the patterns of the extracted factors. The scale showed reliable factor patterns on Depression, Alcohol, Schizophrenia, and Troubled, in which each factor had four items from the Social Distance scale. The specific procedure and result for factor analysis was depicted in the Result section, p 64. Therefore, the redefined Social Distance scale with vignettes was called Work Opportunity scale for this study, which consists of 4 subscales according to the symptoms. The total Work Opportunity scale was scored as an aggregate measure across all four subscales (major depression, schizophrenia, alcohol abuse, and featured a troubled person). The value is given by the mean across 16 items composing the scale. The Work Opportunity measurement has total reliability of .912 for the U.S. and .910 for Korea. The Cronbach’s alpha for each subscale is as follows: .848 in the U.S. and .817 in Korea for depression subscale; .872 in the U.S. and .878 in Korea for Alcohol subscale; .901 in the U.S. and .894 in Korea for Schizophrenia subscale; and .902 in the U.S. and .850 in Korea for Troubled subscale.

Translated measurements

Translated versions for Korean language of School-based program measurement (See Appendix I), Previous Contact scale (See Appendix K), ATTEMP (See Appendix M), 4 vignettes (See Appendix O), and Social Distance scale (See Appendix Q) were used in this study to measure attitudes of the Korean students. To ensure accuracy of the

translated version, a double-translation method was employed, which has commonly been used in cross-cultural research (Chan et al., 2002; Chen & Brodwin, 1999). The translated versions were cross-validated by individuals who were fluent in both English and Korean. The translation procedure was designed to obtain content and semantic equivalence. Five persons participated in the translation procedures, three of whom majored in clinical psychology, one of whom in cognitive psychology, and one of whom in sociology. Scales were first translated from English to Korean; the Korean versions were then translated back to English.

Data Analysis

The data were analyzed using the Statistical Package for the Social Sciences software (SPSS) version 15.0 and AMOS version 16.0 for Structural equation modeling (SEM). Input data to SEM consisted of the raw data that were stored in SPSS version 15.0.

Descriptive statistics

Raw data were cleaned through examining missing data, outliers, and then all variables are descriptive by minimum, maximum, mean, SD, Skewness, and Kurtosis (See Table 2, p. 62).

Tests of the research questions

T-test, ANOVA, and hierarchical regression were employed with SPSS, and SEM was used with AMOS to compare the pattern among variables between the U.S. and Korea as well as to examine mediation effect of the contact variables.

As far as the Structural Equation Model (SEM), which is supposed to be one of

important statistical tools, Cheung and Lau (2007) suggest the following benefits: (1) Avoiding complications from measurement errors and the underestimation of mediation effect; (2) allowing for the analysis of a more complicated model when a model with more than one mediator and dependent variable can be considered simultaneously.

Therefore, SEM would provide for investigating three contact variables as multiple mediators simultaneously as well as examining the patterns combining with figure 1 (p. 41) and figure 2 (p. 41).

RESULTS

Descriptive Statistics

Missing data

After deleting 46 incomplete surveys and 17 unqualified cases (7 cases of over 30 years old and 10 cases of not college students), the procedure for detecting missing data was employed with 502 cases. There are several ways to deal with missing data such as deleting cases or using estimates. In this study, Expectation Maximization (EM) method was used to estimate missing values, which is considered the simplest and most reasonable approach to imputation of missing data (Tabachnick & Fidell, 2000). EM creates a missing data correlation (or covariance) matrix by assuming the shape of a distribution for the partially missing data and then inferences about missing values on the likelihood number from the distribution. Since non-random pattern of missing data affect the generalizability of results, it is the prerequisite for using EM method that scores are missing randomly (Tabachnick & Fidell, 2000). From the output of Missing Values Analysis (MVA) option of SPSS, there was no regular pattern of missing data in that it is no problem to use EM method to deal with missing data. As a result, all missing data were recorded with an appropriate score for each variable through the results of EM.

Normality

The minimum, maximum, mean, standard deviation, skewness, and kurtosis of all continuous variables in the U.S. and Korea are shown in Table 2.

Table 2. *Summary of mean, S.D., skewness, and kurtosis of variables*

Variables	**Minimum**		**Maximum**		**Mean**		**S.D.**		**Skewness (S.D.)**		**Kurtosis (S.D.)**	
	U.S	K[a]	U.S	K	U.S	K	U.S	K	U.S. (.154)	K (.156)	U.S. (.307)	K (.311)
Gender	1.00	1.00	2.00	2.00	1.58	1.60	.5095	.4887	-.326	-.395	-1.909	-1.846
Age	17.00	18.00	27.00	28.00	19.10	20.88	1.5168	2.1469	1.928	.761	5.045	-.042
Locus of Control	1.04	1.00	1.91	2.00	1.50	1.40	.1654	.2003	.023	.425	-.240	-.117
Self Esteem	1.50	1.50	4.00	3.80	3.19	2.86	.5020	.4371	-.364	-.312	-.276	-.126
Individualism	2.81	2.25	6.31	6.81	4.74	4.92	.6456	.6960	-.166	.017	.048	.347
Collectivism	2.31	2.13	6.63	6.38	4.88	4.79	.6952	.7114	-.262	-.392	.328	.418
School Program	0.00	0.00	1.00	1.00	.94	.66	.2380	.4738	-3.728	-.692	11.993	-1.534
Contact Number	.00	.00	7.00	4.00	2.61	1.86	1.3253	.9518	.377	.285	-.137	-.482
Contact Frequency	.00	.00	5.00	5.00	2.95	2.64	.9566	.8837	-.737	-.555	.936	2.401
Contact Valence	1.00	1.00	5.00	5.00	3.82	2.92	.7768	.6467	-.529	-.062	.871	1.115
Work Opportunity (Depression)	1.75	1.25	4.00	4.00	3.14	2.86	.5355	.4340	.029	-.105	-.667	1.608
Work Opportunity (Alcohol)	1.00	1.00	4.00	4.00	2.63	2.58	.6279	.5406	-.046	-.091	-.090	.837
Work Opportunity (Troubled)	1.50	1.00	4.00	4.00	3.15	2.72	.5311	.4603	.002	-.666	.049	1.688
Work Opportunity (Schizophrenia)	1.00	1.00	4.00	4.00	2.49	2.38	.6626	.5590	-.058	-.169	-.036	.411
ACE of ATTEMP	1.73	2.36	7.00	6.64	4.50	4.84	.8236	.7545	.161	-.477	.970	.364
DCE of ATTEMP	1.90	1.60	6.70	5.10	4.01	3.48	.7394	.6479	.249	-.185	.731	-.064

Note: a. ‘K’ represents Korea

Gender and School-based program were transferred into dummy variables (1 = male/ 2 = female; 0 = No/ 1 = Yes). Normality of variables was assessed by statistical components, skewness, and kurtosis (Tabachnick & Fidell, 2000). Skewness shows how the distribution is symmetric; a skewed variable is a variable whose mean is not in the center of the distribution. Kurtosis points out the peak, or highest point, of a distribution; a distribution is either too peaked (with short, thick tails) or too flat (with long, thin tails). Values of more than 2 standard errors (regardless of sign) of Skewness and Kurtosis are considered to be significantly different from normality (Tabachnick & Fidell, 2000).

Table 2 shows that Gender, Age, and School-based program have non-normality tendency. Non-normality tendency of Gender and School-based program may be due to the fact that Gender and School-based program were dichotomous variables. In the case of Age variable, it happened from the unbalanced distribution that several students were in the late of 20's, while most of students were in the early of 20's. Other variables such as Frequency of contact showing the departures from normality were evaluated and dealt with in the next step of multivariate outliers.

Multivariate outliers

After dealing with missing data, the remaining 502 surveys were screened for multivariate outliers by using SPSS. The criterion for multivariate outliers is Mahalanobis distance at $p < .001$, for dependent variables of Work Opportunity, two subscales of ATTEMP, ACE and DCE. Mahalanobis distance is evaluated as $\chi 2$ with degrees of freedom equal to the number of variables. In current study, degree of freedom for dependent variables is 13. With a criterion of $\chi 2$ (13) = 34.528, 9 cases were found as multivariate outliers. Accordingly, there were 493 cases left to run the analysis for this

study.

Factor analysis for Work Opportunity scale

In order to explore their dimensional structure and make a sub-grouping for new measurements combining work opportunity items from Social Distance scale with 4 vignettes describing different symptoms of psychiatric diagnosis, principal component factor analyses with Varimax rotation were conducted. The criterion of factor extraction was set more than 1.00**.** In a result, Kaiser-Meyer-Olkin (KMO) was .869, which means that it possess an adequate sampling for a satisfactory factor analysis to proceed since it is supposed to be meritorious when the value is greater than .80**.** Additionally, Bartlett's Test of sphericity, which conforms whether or not the correlation matrix is an identity matrix and is usually expected to be less than .05 of probability, showed significance (Chi-square = 5327.553, df = 120, $p < .001$) (Tabachnick & Fidell, 2000).

Table 3 presents factors, factor loading, and variance explained for total sample, the U.S. and Korean subjects. Factor Analysis classified the 4 factors. Total variances explained were 74.54%. The results from additional analyses for each country revealed similar percentages regarding factor and pattern with 75.09% and 71.97% of variance explained in the U.S. and Korea, respectively. Each factor consisted of 4 items, which items came from same vignette. The results from factor loadings and variance explained confirmed reliable factor patterns on 4 subscales for both the U.S. sample and Korean sample as well as for total sample.

Table 3.
Factor Analysis for Work Opportunity scale

Factor	Items	Total Factor loading	The U.S. Factor loading	Korea Factor loading
Schizophrenia	Hiring	.861	.877	.844
	Recommend	.855	.874	.833
	Work with same project	.837	.833	.820
	Wok in same company	.703	.717	.716
	% of variance explained	19.613%	20.157%	19.465%
Troubled	Hiring	.878	.878	.874
	Recommend	.864	.868	.831
	Work with same project	.834	.833	.816
	Wok in same company	.770	.805	.659
	% of variance explained	19.528%	19.898%	17.876%
Alcohol	Hiring	.837	.842	.803
	Recommend	.821	.822	.754
	Work with same project	.805	.807	.747
	Wok in same company	.668	.711	.745
	% of variance explained	17.927%	18.277%	17.485%
Depression	Hiring	.794	.799	.799
	Recommend	.759	.770	.768
	Work with same project	.741	.745	.752
	Wok in same company	.688	.644	.685
	% of variance explained	17.474%	16.757%	17.144%
	Total variance explained	74.543%	75.089%	71.969%

Extraction Method: Principal Component Analysis; Rotation Method: Varimax with Kaiser Normalization.

Reliability

Table 4 presents reliability for Locus of control, Self-esteem, Individualism, Collectivism, Work Opportunity, and ATTEMP by using Cronbach's alpha in total subjects, the U.S., and Korea sample. Although three reliabilities of Locus of control for

the U.S., Locus of control for Korea, and DCE of ATTEMP for Korean sample were lower than the conventional cut-off of .70 (Nunnally, 1978), Blakely et al. (2005) noted, "It is not out of line with a substantial portion of cross-national research" (p. 109). Oyserman, Coon, and Kemmelmeier (2002) found, in their meta-analysis research of Individualism-Collectivism, that about half of the available cross-national research studies were less than .70 based on Cronbach's alpha. Therefore, current study could proceed to run analyses with these results of reliability.

Table 4.
Reliability (Cronbach's alpha)

Reliability	Total	The U.S.	Korea
Locus of control[a]		.687	.593
Self-esteem	.862	.881	.820
Individualism	.772	.752	.820
Collectivism	.806	.809	.838
Work Opportunity	.914	.912	.910
Depression	.844	.848	.817
Alcohol	.871	.872	.878
Schizophrenia	.898	.901	.894
Troubled	.898	.902	.850
ATTEMP	.784	.827	.756
ACE	.821	.840	.801
DCE	.703	.716	.636

Note: a. Total score of reliability for Locus of control cannot be calculated since the translated version for Korean sample omitted several items, which were not applicable for Korean culture, from the original Locus of control.

Scores on each item for attitudes about Employability scales

Table 5 showcases the means and S.D. of Work Opportunity scale in the U.S. and Korea samples.

Table 5.
Mean and S.D. for each items of Work Opportunity scale

Items	**Subscales**	**Total**		**The U.S.**		**Korea**	
Are you willing to		**Mean**	**S.D.**	**Mean**	**S.D.**	**Mean**	**S.D.**
Work with A [name in the Vignettes] at the same company?	Depression	3.23	.529	3.45	.537	3.00	.414
	Alcohol	2.95	.637	3.06	.685	2.84	.561
	Schizophrenia	2.74	.674	2.85	.725	2.63	.600
	Troubled	3.13	.546	3.33	.578	2.93	.422
recommend A for a job working for a friend of yours?	Depression	2.90	.665	3.03	.698	2.77	.603
	Alcohol	2.43	.699	2.42	.725	2.45	.671
	Schizophrenia	2.29	.698	2.34	.739	2.23	.649
	Troubled	2.88	.655	3.12	.608	2.64	.613
receive job applications form, interview, or hire A if you were in the position to hire someone?	Depression	3.00	.613	3.15	.633	2.85	.552
	Alcohol	2.55	.709	2.60	.756	2.50	.655
	Schizophrenia	2.36	.729	2.42	.788	2.31	.658
	Troubled	2.94	.626	3.16	.587	2.71	.583
be A as your work partner and responsible in the same project?	Depression	2.88	.658	2.94	.719	2.81	.583
	Alcohol	2.47	.727	2.42	.784	2.53	.660
	Schizophrenia	2.34	.723	2.34	.766	2.33	.676
	Troubled	2.82	.654	3.01	.652	2.62	.595

College students in both countries endorsed positive views of the items, “Are you willing to work with A [name in the Vignettes] at the same company?” while they reacted with negative attitudes of the items, “Are you willing to recommend A for a job working for a friend of yours?” and “Are you willing to be A as your work partner and

responsible in the same project?" The mean score on each Work Opportunity item ranged from 2.29 (S.D. = .698), on item asking, "Are you willing to recommend A for a job working for a friend of yours?" in the Schizophrenia vignette, to 3.23 (S.D. = .529), on item asking, "Are you willing to work with A at the same company?" in the Depression vignette. Positive and negative tendency of Work Opportunity appear with same patterns in both countries.

Table 6 reports the means and S.D. for ACE of ATTEMP to explore how respondents consider the statements about appropriateness of providing services and competitive employment opportunities and potential benefits of such employment. This subscale revealed very different views between the U.S. and Korean respondents. The mean score on each ACE item ranged from 3.76 (S.D. = 1.364) to 5.11 (S.D. = 1.479) in the U.S. and 4.02 (S.D. = 1.363) to 5.45 (S.D. = 1.187) in Korea. Korean students showed relatively higher scores of ACE than American students, meaning that Korean students think more positively about appropriateness of competitive employment opportunities than do American students. In American students, the item of "In competitive work sites, people with mental illness can learn appropriate social skills" received the lowest score (mean = 3.76) while the item of "No amount of training can prepare people with mental illness for competitive employment" received the highest score (mean = 5.11). Meanwhile, the item of "Competitive employment settings enhance the productivity of people with mental illness" received the lowest score (mean = 4.02) while the item, "Income earned from competitive employment can change the quality of life for people with mental illness", received the top score (mean = 5.45) in Korea.

Table 6. *Mean and S.D. for each items on ACE of ATTEMP scale*

Items	Total		The U.S.		Korea	
	Mean	**S.D.**	**Mean**	**S.D.**	**Mean**	**S.D.**
In competitive work sites, people with mental illness can learn appropriate social skills.	4.14	1.459	3.76	1.364	4.53	1.455
With appropriate support services, people with mental illness can be dependable workers in the community.	4.99	1.297	4.81	1.280	5.17	1.292
Competitive employment enables people with mental illness the opportunity to lead relatively normal lives.	4.32	1.524	3.86	1.492	4.79	1.412
No amount of training can prepare people with mental illness for competitive employment.[a]	5.05	1.487	5.11	1.479	4.99	1.496
Competitive employment settings enhance the productivity of people with mental illness.	4.02	1.307	4.02	1.252	4.02	1.363
Income earned from competitive employment can change the quality of life for people with mental illness.	5.16	1.288	4.88	1.323	5.45	1.187
Exposure to people with mental illness in job settings promotes positive attitudes on the part of coworkers without mental illness.	4.74	1.407	4.39	1.363	5.09	1.362
People with mental illness can be trained for competitive employment.	4.81	1.243	4.66	1.276	4.95	1.193
On-the-job training at community-based work sites is effective for people with mental illness.	4.80	1.173	4.51	1.129	5.09	1.147
It is possible for people with mental illness to receive appropriate job training in the community.	4.74	1.300	4.98	1.239	4.50	1.320
Productivity rates of workers with mental illness can be as high as those of workers who are not handicapped.	4.62	1.374	4.56	1.494	4.67	1.239

Note: a. this item was reverse-coded. Therefore, the higher the score is, the greater agreements students do with the statement, which means that they have positive attitudes on ACE of ATTEMP.

Table 7 reports the means and S.D. for DCE of ATTEMP, revealing respondents' agreement regarding the potential detrimental effects of competitive employment on employer and co-workers as well as people with mental illness. DCE items were reverse-coded. Therefore, higher scores represent more disagreement with DCE statement. Consequently, higher scores mean that respondents reported positive attitudes about employability of people with mental illness. The mean score on each DCE item ranged from 2.79 (S.D. = 1.364) to 4.73 (S.D. = 1.387) in the U.S. and 1.91 (S.D. = .981) to 4.73 (S.D. = 1.440) in Korea. Unlike ACE outcomes, American students responded relatively more positively about DCE statements than did Korean students. The items receiving the highest scores are "The productivity of coworkers decreases when they work with individuals with mental illness" for American students (mean = 4.73) and "Competitive employment for people with mental illness takes jobs away from workers without mental illness" for Korea students (mean = 4.73). Respondents from both countries reported negatively (i.e., the lowest score) on the item, "Employers are generally resistant to hiring workers with mental illness."

A review of the means reported on Tables 6 and 7 reveal that the attitudes expressed on the ACE subscale are relatively more positive than those expressed on the DCE subscale.

Table 7. *Mean and S.D. for each items on DCE of ATTEMP scale*

Items	Total		The U.S.		Korea	
	Mean	**S.D.**	**Mean**	**S.D.**	**Mean**	**S.D.**
A controlled job simulation environment is more suitable for people with mental illness than is actual on-the-job training.	3.58	1.493	3.70	1.406	3.45	1.570
Most parents of people with mental illness prefer that they be placed in sheltered workshops rather than in competitive employment settings.	3.68	1.555	3.76	1.528	3.59	1.581
Employers are generally resistant to hiring workers with mental illness.	2.35	1.268	2.79	1.364	1.91	.981
The productivity of coworkers decreases when they work with individuals with mental illness.	4.60	1.446	4.73	1.387	4.47	1.497
The natural job setting provides too many distractions that impede the vocational training process for people with mental illness.	3.22	1.575	4.28	1.284	2.13	1.000
People with mental illness present the employer with absence and punctuality problems.	4.49	1.367	4.66	1.227	4.32	1.478
Coworkers without mental illness are not likely to interact with workers with mental illness.	4.12	1.511	4.42	1.554	3.81	1.401
Mistreatment and abuse of people with mental illness by co-workers are frequent occurrences.	3.69	1.394	3.89	1.375	3.48	1.385
Frustration experience by people with mental illness at real work sites is greater than that experienced in sheltered workshops.	3.08	1.263	3.29	1.278	2.85	1.210
Competitive employment for people with mental illness takes jobs away from workers without mental illness.	4.67	1.475	4.61	1.509	4.73	1.440

Note: DCE items were reverse-coded. Therefore, the higher the score is, the greater disagreements students do with the statement, which means that they have positive attitudes on DCE of ATTEMP.

Analysis of first research questions

The first research question was to examine if there would be different response on Work Opportunity scale according to the symptoms of mental illness. Repeated ANOVA regarding four symptoms by the option of SPSS GLM was employed to see if there was a significant difference among four subscales. Figure 3 shows the plot for means of four subscales of Work Opportunity in the U.S. and Korea.

Table 8 presents the results of ANOVA for the four subscales. Data reveal that students in both the U.S. and Korea had more positive attitudes about opportunities in work-related situation toward people with depression psychiatric symptoms while they showed less positive toward people alcohol problem and schizophrenia. In both countries, students were reluctant to interact with people with schizophrenia in work-related situations.

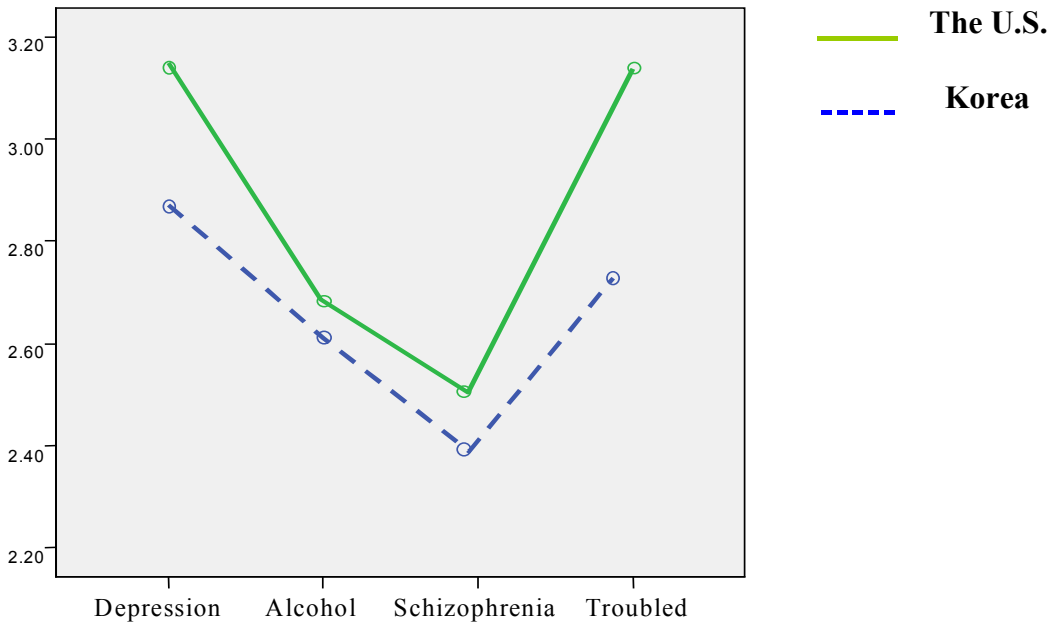

Figure 3. Means for 4 subscales of Work Opportunity in the U.S. and Korea

Table 8.
ANOVA on four subscales of Work Opportunity

	The U.S. (N=250)		**Korea** (N=243)		**Total** (N=493)	
	Mean (S.D.)	F (df = 3)	Mean (S.D.)	F (df = 3)	Mean (S.D.)	F (df = 3)
Depression	3.14 (0.54)		2.86 (0.44)		3.00 (0.51)	
Alcohol	2.63 (0.63)	79.048 ***	2.57 (0.54)	160.848 ***	2.60 (0.59)	220.174 ***
Schizophrenia	2.49 (0.66)		2.38 (0.56)		2.43 (0.62)	
Troubled	3.15 (0.53)		2.73 (0.46)		2.94 (0.54)	

* p < .05 ** p < .01 *** p < .001

With the significant F value in Table 8, post-hoc analysis was used to determine which pairs were viewed significantly different in each country. Table 9 shows the pair-wise comparisons between two subscales.

Table 9.
Pair-wise comparisons between two subscales

	The U.S.		**Korea**	
Subscale	**Mean difference**	**S.E.**	**Mean difference**	**S.E.**
Depression - Alcohol	.440 ***	.033	.250 ***	.028
Depression - Schizophrenia	.630 ***	.037	.480 ***	.034
Depression - Troubled	-.020	.031	.140 ***	.031
Alcohol - Schizophrenia	.189 ***	.037	.230 ***	.032
Alcohol - Troubled	-.460 ***	.041	-.110 ***	.033
Schizophrenia - Troubled	-.649 ***	.043	-.341 ***	.037

* p < .05 ** p < .01 *** p < .001
Note: 'Least Significant Difference' method was employed to see the significant difference between two subscales.

Except for the pair of Depression and Troubled subscales in American sample, all pairs of subscales showed significant differences of the mean scores. Furthermore, Korean students tended to give the most willingness of work opportunities to the individual in the Depression vignette. Even the depression character depicting as possessing a history of mental treatment was received more willingness response than the individual in the Troubled vignette who described no history of hospitalization. American students rated the Troubled vignette significantly more positively than people with Alcohol and Schizophrenia vignettes.

A two-by-two factorial design of ANOVA performed by SPSS GLM was employed on four subscales of Work Opportunity. Independent variables consisted of gender in a vignette (i.e., man, woman) and gender of respondents (i.e., male students, female students), factorially combined.

Table 10 shows number of cases for each combination in all participants as well as both country, the U.S. and Korea.

Table 10.
Number of cases for each combination

		Gender in Respondents								
		Total			**The U.S.**			**Korea**		
		M	W	T	M	W	T	M	W	T
Gender in Vignettes	M	93	145	238	46	69	115	47	76	123
	W	108	143	251	59	76	135	49	67	116
	T	201	288	489	105	145	250	96	143	239

Note: M = Man; W= Woman; T = Total

Table 11 presents the result from a two-by-two factorial ANOVA. As summarized in Table 11, there were significant interactions on depression symptoms between gender in a vignette and gender in respondents, with $F(1, 485) = 4.708$ ($p < .05$). Same result was shown in depression symptoms, with $F(1, 485) = 4.102$ ($p < .05$). Such significant interactions in depression and alcohol symptoms tell that the effects of gender in vignettes depend on the gender of the respondent.

Table 11.
A 2 X 2 factorial ANOVA of Work Opportunity

Source	Dependent Variables	SS	df	MS	F
Gender in Respondents	Depression	2.537	1	2.537	9.989**
	Alcohol	.079	1	.079	.230
	Schizophrenia	.441	1	.441	1.158
	Troubled	.031	1	.031	.107
Gender in Vignettes	Depression	.345	1	.345	1.357
	Alcohol	.718	1	.718	2.082
	Schizophrenia	1.459	1	1.459	3.834*
	Troubled	.836	1	.836	2.844
Gender in Respondents * Gender in Vignettes	Depression	1.196	1	1.196	4.708*
	Alcohol	1.414	1	1.414	4.102*
	Schizophrenia	.203	1	.203	.534
	Troubled	.475	1	.475	1.616

* $p < .05$ ** $p < .01$ *** $p < .001$

Figure 4 depicts the patterns of the interaction with gender in vignettes and gender in respondents. Female college students had more positive response to a man with depression symptom than a woman with depression while male students expressed more positive reaction toward a woman than a man with depression symptom. A similar pattern was observed for the Alcohol vignette; college students tended to be more willing to

provide work opportunities to an opposite gender than the same gender in the Alcohol vignettes. There were no statistically significant interaction effects of the gender between respondents and mentally ill individuals on the Troubled and Schizophrenia vignettes.

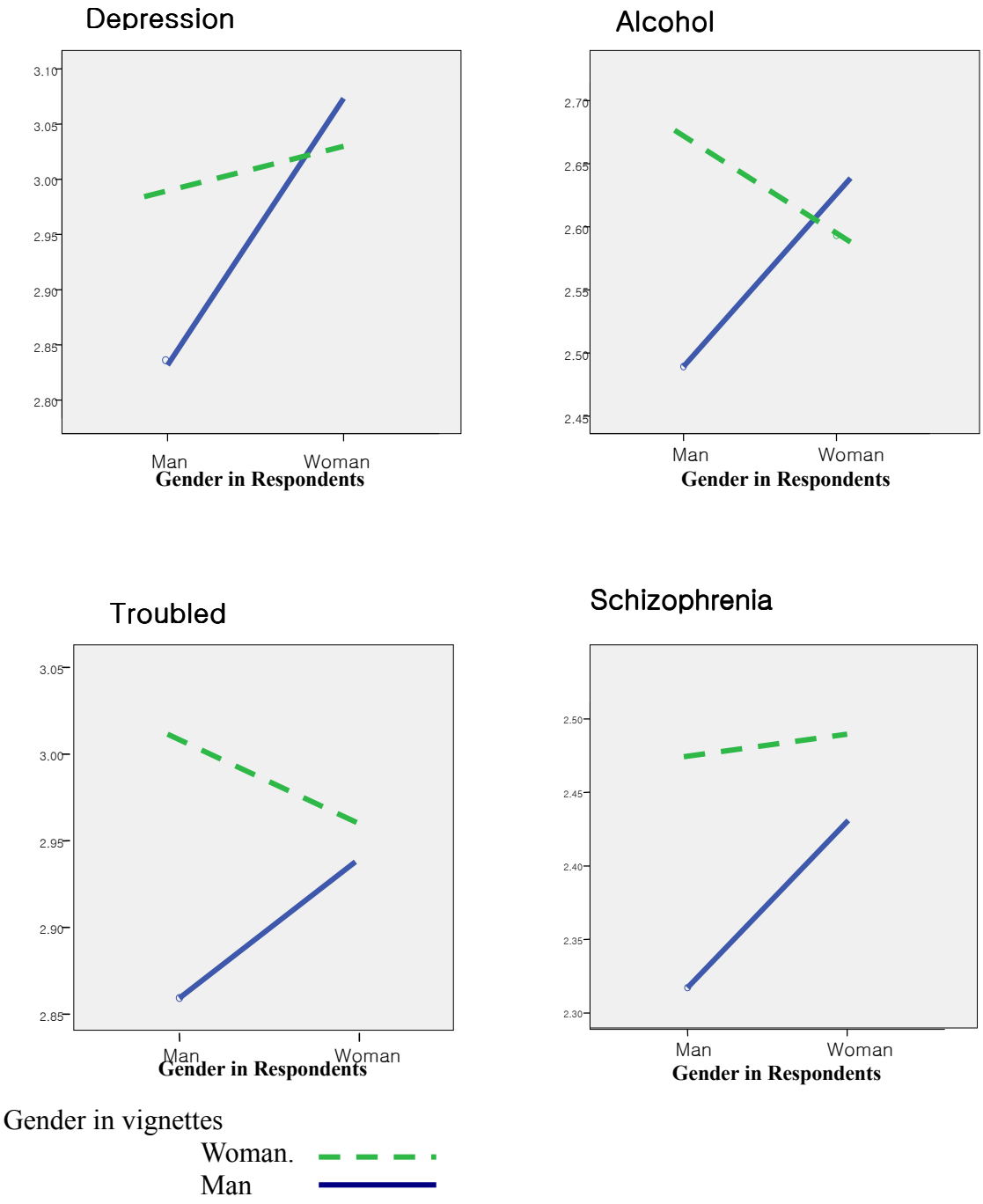

Figure 4. Gender interactions between vignettes and respondents

Additionally, Table 12 provides specific scores of the means for each combination group. There was a significant main effect on the Depression vignette from gender in respondent; female college students expressed more willingness on Work Opportunity scale (Mean = 3.06) than male college students (Mean = 2.92) regardless of the gender in the Depression vignette ($F = 9.989$, $p < .01$). Another significant main effect was found the gender on the Schizophrenia vignette; a woman with schizophrenia had more chance to take the work-related opportunities (Mean = 2.48 than a man with Schizophrenia (Mean = 2.38) regardless of gender in respondents ($F = .834$, $p < .05$). Interestingly, male college students responded with more positive attitudes to a woman than man in vignettes across all four symptoms.

Additional analyses were conducted to examine whether the two countries, the U.S. and Korea, differed in the interactions of gender between vignettes and respondents. Table 13 shows the results of two-by-two factorial ANOVA according to countries. In the U.S., no statistically significant main effect of gender in vignettes was found. Nor were there significant interactions of gender between vignettes and respondents. The only main effect of gender in respondents was found in the Depression vignette ($F = 10.496$, $p < .001$); American female students showed more positive attitudes toward a person with depression than did American male students. In Korea, there were no main effects on gender of both vignettes and respondents. As far as the interaction effect, one of which was found on the Alcohol vignette ($F = 5.476$, $p < .05$); female Korean college students showed more willingness toward a man with alcohol problems than a woman in the same vignette while male Korean college students expressed more positive reactions to a woman in the Alcohol vignette than a man with alcohol problems.

Table 12.
Mean and S.D. for each cell across diagnoses

	Gender in Respondents	Gender in Vignettes	Total		The U.S.		Korea	
			Mean	S.D.	Mean	S.D.	Mean	S.D.
Depression	Man	Man	2.84	0.49	2.92	0.51	2.76	0.45
		Woman	2.99	0.55	3.10	0.52	2.86	0.56
		Total	2.92	0.52	3.02	0.52	2.81	0.51
	Woman	Man	3.08	0.46	3.24	0.53	2.94	0.33
		Woman	3.04	0.52	3.22	0.54	2.83	0.42
		Total	3.06	0.49	3.23	0.53	2.89	0.38
	Total	Man	2.99	0.48	3.11	0.54	2.87	0.39
		Woman	3.02	0.53	3.17	0.53	2.84	0.48
		Total	3.00	0.51	3.14	0.54	2.86	0.44
Alcohol	Man	Man	2.49	0.64	2.53	0.67	2.45	0.61
		Woman	2.68	0.64	2.65	0.63	2.71	0.65
		Total	2.59	0.64	2.60	0.65	2.58	0.64
	Woman	Man	2.62	0.57	2.64	0.68	2.61	0.45
		Woman	2.59	0.53	2.65	0.55	2.53	0.50
		Total	2.61	0.55	2.65	0.61	2.57	0.47
	Total	Man	2.57	0.60	2.60	0.68	2.55	0.52
		Woman	2.63	0.58	2.65	0.58	2.60	0.57
		Total	2.60	0.59	2.63	0.63	2.57	0.54
Schizo-phrenia	Man	Man	2.32	0.64	2.39	0.66	2.25	0.62
		Woman	2.47	0.66	2.54	0.65	2.38	0.66
		Total	2.40	0.65	2.47	0.65	2.32	0.64
	Woman	Man	2.42	0.61	2.42	0.70	2.42	0.51
		Woman	2.49	0.58	2.56	0.64	2.41	0.50
		Total	2.45	0.59	2.49	0.67	2.41	0.50
	Total	Man	2.38	0.62	2.41	0.68	2.35	0.56
		Woman	2.48	0.61	2.55	0.64	2.40	0.57
		Total	2.43	0.62	2.49	0.66	2.38	0.56
Troubled	Man	Man	2.86	0.57	3.09	0.53	2.63	0.52
		Woman	3.01	0.49	3.19	0.44	2.79	0.47
		Total	2.94	0.53	3.14	0.48	2.71	0.50
	Woman	Man	2.94	0.54	3.16	0.59	2.74	0.41
		Woman	2.96	0.56	3.16	0.55	2.73	0.47
		Total	2.95	0.55	3.16	0.57	2.73	0.44
	Total	Man	2.91	0.55	3.13	0.56	2.70	0.45
		Woman	2.98	0.53	3.17	0.50	2.75	0.47
		Total	2.94	0.54	3.15	0.53	2.73	0.46

Table 13.
A 2 X 2 factorial ANOVA of Work Opportunity in the U.S. and Korea

Source	Dependent Variable	The U.S. SS	Df	F	Korea SS	df	F
Gender in Respondents	Depression	2.897	1	10.496***	.363	1	1.918
	Alcohol	.175	1	.441	.003	1	.012
	Schizophrenia	.045	1	.102	.536	1	1.689
	Troubled	.031	1	.110	.028	1	.129
Gender in Vignettes	Depression	.391	1	1.417	.001	1	.005
	Alcohol	.228	1	.575	.484	1	1.654
	Schizophrenia	1.345	1	3.066	.206	1	.650
	Troubled	.157	1	.553	.303	1	1.411
Gender in Respondents * Gender in Vignettes	Depression	.636	1	2.303	.643	1	3.395
	Alcohol	.206	1	.518	1.601	1	5.476*
	Schizophrenia	.003	1	.007	.303	1	.953
	Troubled	.121	1	.425	.416	1	1.939

* $p < .05$ ** $p < .01$ *** $p < .001$

Analysis of second research question

For the second research question (Does the structural pattern among respondent's variables, which are supposed to influence attitudes about employability, differ between the U.S. and Korea?), Structural Equation Modeling (SEM) was used to compare the pattern of relations among variables.

The hypothesized structural models for each country are a prerequisite for comparing the pattern between two countries. Table 14 (for the U.S.) and Table 15 (for Korea) present inter-correlations of all variables used in Structural Equation Modeling by AMOS. These two correlations matrices for the U.S. and Korea (i.e., Tables 14 and 15) showed different patterns of correlations among variables.

Table 14. *Correlation Matrices for all variables in the U.S.*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Gender	1.00														
2. Age	-.09	1.00													
3. Locus of control	.10	.01	1.00												
4. Self-esteem	.05	-.01	-.24***	1.00											
5. Individualism	-.13*	-.06	-.11	.05	1.00										
6. Collectivism	.15*	-.14*	.09	.13*	.23**	1.00									
7. School program	-.04	-.16*	.09	.04	-.01	.11	1.00								
8. Number of contact	.04	-.04	.09	-.10	.16**	.05	.12	1.00							
9. Frequency of contact	.00	-.14*	-.09	.05	.09	.06	.03	.33***	1.00						
10. Valence of contact	.09	-.25***	-.07	.26***	-.03	.24***	.16**	.12	.31***	1.00					
11. Work Opportunity (Depression)	.19**	.04	.07	-.03	-.11	.09	.04	.02	.08	.03	1.00				
12. Work Opportunity (Alcohol)	.04	.01	.08	-.04	-.18**	-.06	-.01	.03	.12	.07	.51***	1.00			
13. Work Opportunity (Troubled)	.02	.03	-.02	.05	-.01	-.02	-.07	-.03	.05	.07	.51***	.29***	1.00		
14. Work Opportunity (Schizophrenia)	.02	.04	.03	-.06	-.18**	-.05	.05	.10	.12	.03	.49***	.50***	.31***	1.00	
15. ACE of ATTEMP	.09	-.05	-.08	.08	.09	.21***	.02	.22***	.23***	.27***	.27***	.10	.15*	.23***	1.00
16. DCE of ATTEMP	.08	-.05	-.10	.16*	-.25***	-.04	.01	.04	.15*	.24***	.22***	.22***	.10	.26***	.32***

* $p < .05$ ** $p < .01$ *** $p < .001$

Table 15. *Correlation Matrices for all variables in Korea*

	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15
1. Gender	1.00														
2. Age	-.40***	1.00													
3. Locus of control	-.03	-.07	1.00												
4. Self-esteem	.09	.14*	-.43***	1.00											
5. Individualism	-.21***	.20**	-.19**	.30***	1.00										
6. Collectivism	-.07	.04	-.29***	.22***	.25***	1.00									
7. School program	-.01	-.10	.00	-.10	.03	.17**	1.00								
8. Number of contact	.12	.03	-.04	-.04	.12	.14*	.20***	1.00							
9. Frequency of contact	.20**	-.01	-.02	.05	.03	.17**	.22***	.38***	1.00						
10. Valence of contact	.02	-.01	-.13	.08	-.05	.18**	.09	.31***	.17**	1.00					
11. Work Opportunity (Depression)	.09	.08	-.07	.09	-.05	.04	-.13*	.11	-.02	.07	1.00				
12. Work Opportunity (Alcohol)	-.01	.05	-.05	.05	-.06	.00	-.02	.02	-.06	.09	.54***	1.00			
13. Work Opportunity (Troubled)	.02	.03	.00	-.05	-.08	-.11	.00	-.03	.04	.01	.35***	.42***	1.00		
14. Work Opportunity (Schizophrenia)	.08	.05	-.12	.02	-.13*	.02	-.02	-.01	.06	.07	.47***	.61***	.40***	1.00	
15. ACE of ATTEMP	.20***	-.01	-.26**	.18**	-.01	.31***	.05	.26***	.23***	.27***	.29***	.16*	.09	.19**	1.00
16. DCE of ATTEMP	.17**	.01	-.22**	.19**	-.18**	-.01	.00	.00	.02	.19**	.08	.08	-.04	.19**	.20**

* $p < .05$ ** $p < .01$ *** $p < .001$

The two structural models were made in the following steps using AMOS. The first step began to depict the baseline model in which all possible paths among variables were set, similar to the approach used by Perdue and Summers (1991). Second, post hoc model modifications were performed in an attempt to develop a better fitting by using the following values of fit index from the AMOS output: 'Estimate', 'Modification Indexes (MI)', 'Model fit', chi-square test, the ratio of the model chi-square to degrees of freedom, Goodness-of-Fit Index (GFI)[6], Comparative Fit Index (CFI)[7], and Root Mean Square Error of Approximation (RMSEA)[8]. These values show whether or not the model is better and it is more parsimonious model as well.

Final models for each country were seen clearly to have the best fit. The Goodness-of-Fit index for each hypothesized best final model is summarized in Table 16 and Table 17. The fit index for each model show a small non-significant chi-square, which is an expected small size with no significance for a good model (Hu & Bentler, 1995). The ratio of chi-square to the degrees of freedom was lower than two, which meets the requirement for satisfactory fit (Browne & Cudeck, 1993). The GFI was high relative to any accepted standard, .958 for the U.S. and .957 for Korea. Values of GFI close to 1.00 are indicative of good fit (Hu & Bentler, 1995). CFI was also high: 1.00 for the U.S. and .986 for Korea, which cutoff value closes to .95 means there is an adequate fit to the data (Hu & Bentler, 1995). Both countries received an acceptably low score of

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[6] GFI is a measure of the relative amount of variance and covariance in the unrestricted sample covariance matrix, S. It can be classified as absolute indexes of fit because they basically compare the hypothesized model with no model at all (Hu & Bentler, 1995).

[7] The values for the CFI are derived from the comparison of a hypothesized model with the independent model, which provides a measure of complete co-variation in the data (Hu & Bentler, 1995).

[8] RMSEA estimates the lack of fit in a model compared to a perfect model with a measure of the discrepancy per degree of freedom for the model. It takes into account the error of approximation in the population (Browne & Cudeck, 1993).

RMSEA: .000 for the U.S. and .021 for Korea. An RMSEA value of less than .05 indicates good fit (Browne & Cudeck, 1993). All fit index proved that final hypothesized models could consider the best-fit model for this research.

Table 16.
Goodness-of-Fit Summary for the U.S.

χ^2	Df	χ^2/df	P	GFI	CFI	RMSEA
86.547	87	.995	.494	.958	1.000	.000

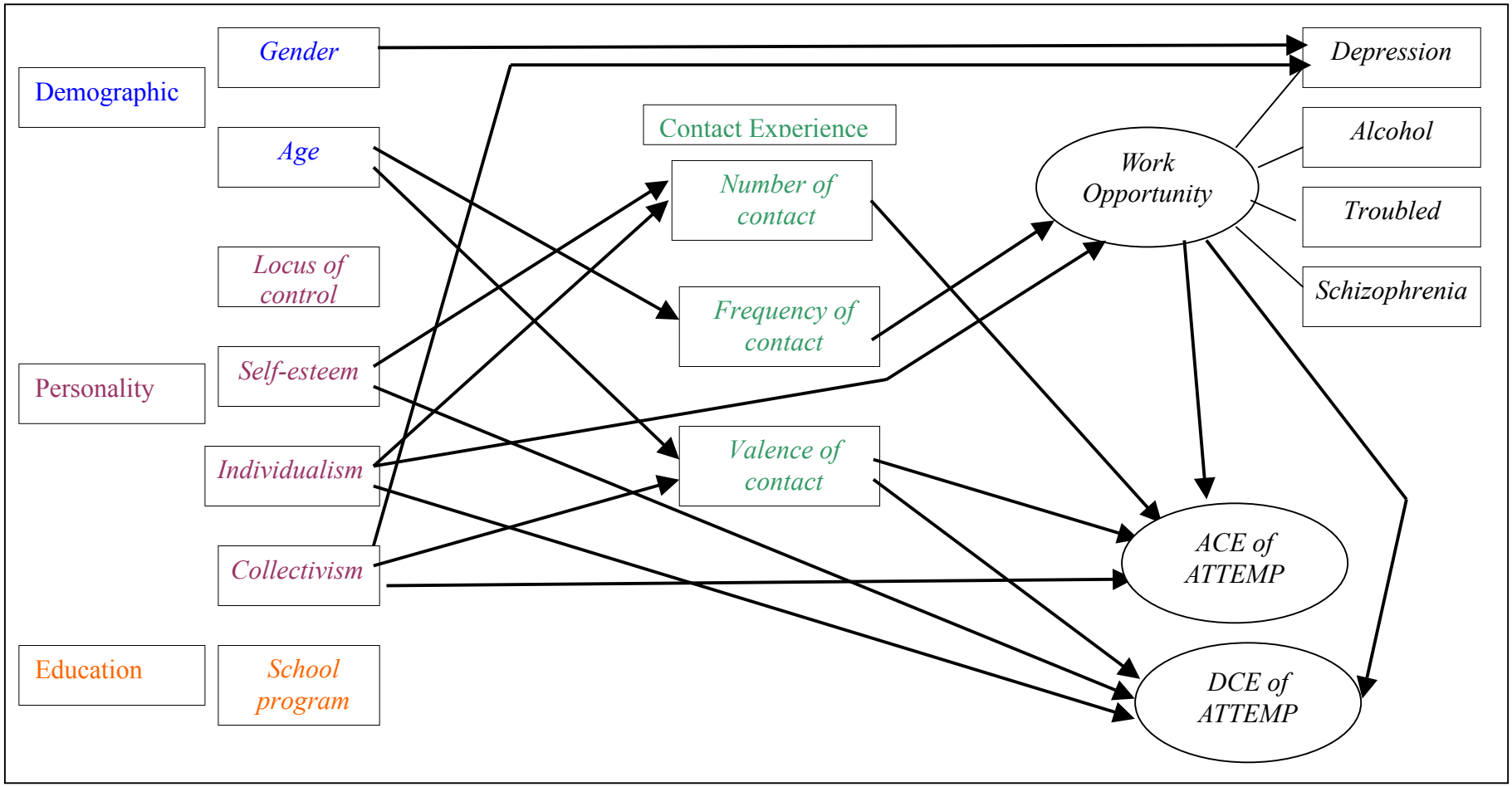
Note: GFI = Goodness-of-Fit index; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation.

Table 17.
Goodness-of-Fit Summary for Korea

χ^2	Df	χ^2/df	P	GFI	CFI	RMSEA
90.018	81	1.111	.231	.957	.986	.021

Note: GFI = Goodness-of-Fit index; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation.

Figures 5 and 6 show the pattern of the best fit models for the U.S. (Figure 5) and Korea (Figure 6). The values of coefficients for each significant path in Figures 5 and 6 are presented in Table 18 (the U.S.) and Table 19 (Korea). These tables contain squared multiple correlations for three dependent variables such as Work Opportunity, ACE of ATTEMP, and DCE of ATTEMP, as well as the structural path coefficients.



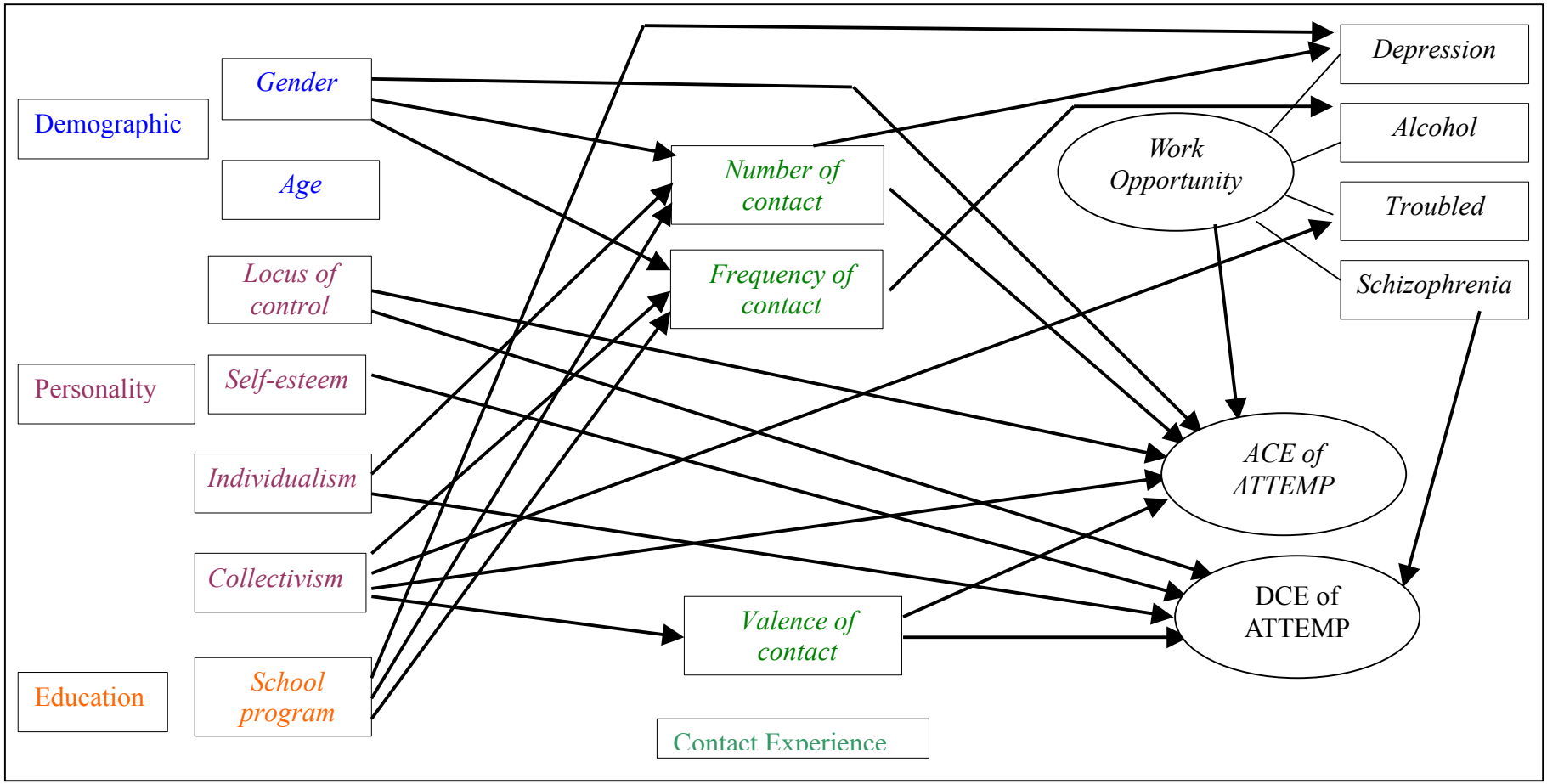
Note:1. Only significant path lines are presented due to the process of making the best fit model for this research.
2. Error terms in the dependent variables have been omitted in the figure.

Figure 5. The hypothesized best fit models for the U.S.

Table 18.
Structural coefficients and Squared multiple correlations for the U.S. model

Parameters (Path Coefficients)			**Regression Weights**	**S.E.**	**Standardized Regression Weights**
Gender	→	Depression	.160	.049	.148***
Age	→	Frequency of contact	-.081	.037	-.129*
Age	→	Valence of contact	-.113	.029	-.222***
Self-esteem	→	Number of contact	-.323	.155	-.123*
Self-esteem	→	Valence of contact	.343	.086	.224***
Self-esteem	→	DCE of ATTEMP	.181	.084	.122*
Individualism	→	Valence of contact	-.141	.069	-.118*
Individualism	→	Number of contact	.291	.121	.142*
Individualism	→	Work Opportunity	-.134	.043	-.226**
Individualism	→	DCE of ATTEMP	-.243	.066	-.210***
Collectivism	→	Valence of contact	.224	.064	.203***
Collectivism	→	Depression	.088	.035	.115*
Collectivism	→	ACE of ATTEMP	.210	.067	.179**
Number of contact	→	ACE of ATTEMP	.101	.035	.163**
Frequency of contact	→	Work Opportunity	.070	.028	.174*
Valence of contact	→	ACE of ATTEMP	.204	.063	.192***
Valence of contact	→	DCE of ATTEMP	.181	.057	.187***
Work Opportunity	→	ACE of ATTEMP	.564	.148	.263***
Work Opportunity	→	DCE of ATTEMP	.544	.137	.278***
R^2					
Work Opportunity			.081		
ACE of ATTEMP			.189	.	
DCE of ATTEMP			.222		

* $p < .05$ ** $p < .01$ *** $p < .001$
Note: 1. All path coefficients in this Table resented are significant due to the process of making the best fit model for this research.
2. R^2 is calculated only for the dependent variables for this research.



Note: 1.Only significant path lines are presented due to the process of making the best fit model for this research.
2. Error terms in the dependent variables have been omitted in the figure.

Figure 6. The hypothesized best fit models for Korea

Table 19.
Structural coefficients and Squared multiple correlations for Korea model

Parameters (Path Coefficients)			**Regression Weights**	**S.E.**	**Standardized Regression Weights**
Gender	→	Number of contact	.295	.117	.152*
Gender	→	Frequency of contact	.376	.109	.209***
Gender	→	ACE of ATTEMP	.284	.085	.187***
Locus of control	→	ACE of ATTEMP	-.556	.216	-.150**
Locus of control	→	DCE of ATTEMP	-.475	.210	-.149*
Self-esteem	→	DCE of ATTEMP	.277	.100	.189**
Individualism	→	Number of contact	.226	.079	.166**
Individualism	→	DCE of ATTEMP	-.224	.058	-.244***
Collectivism	→	Frequency of contact	.164	.072	.133**
Collectivism	→	Valence of contact	.139	.055	.153*
Collectivism	→	Troubled	-.078	.036	-.121*
Collectivism	→	ACE of ATTEMP	.242	.062	.231***
School-based Program	→	Number of contact	.426	.138	.182**
School-based Program	→	Frequency of contact	.408	.131	.188**
School-based Program	→	Depression	-.164	.056	-.153**
Number of contact	→	Depression	.057	.024	.125*
Number of contact	→	ACE of ATTEMP	.114	.046	.146*
Frequency of contact	→	Alcohol	-.057	.029	-.092*
Valence of contact	→	ACE of ATTEMP	.174	.068	.151**
Valence of contact	→	DCE of ATTEMP	.137	.059	.138*
Work Opportunity	→	ACE of ATTEMP	.569	.168	.217***
Schizophrenia	→	DCE of ATTEMP	.147	.068	.129*
R^2					
Work Opportunity			.000		
ACE of ATTEMP			.258	.	
DCE of ATTEMP			.135		

* $p < .05$ ** $p < .01$ *** $p < .001$
Note: 1. All path coefficients in this Table resented are significant due to the process of making the best fit model for this research.
2. R^2 is calculated only for the dependent variables for this research.

With the base on each hypothesized best fit model, two methods were analyzed to prove that these two models for each country were not statistically identical. The first method examined the fit index when each data was input into the counterpart country's hypothesized best fit model. The U.S. data was input into Korean model; Korean data was set into the U.S. model. Tables 20 and 21 report the Goodness-of-Fit summary for each hypothesized best fit model with counterpart country's data.

Table 20.
Goodness-of-Fit Summary for the U.S. model with Korea data

χ^2	df	χ^2/df	P	GFI	CFI	RMSEA
255.059	87	2.932	.000	.889	.742	.089

Note: GFI = Goodness-of-Fit index; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation

Table 21.
Goodness-of-Fit Summary for Korea model with the U.S. data

χ^2	df	χ^2/df	P	GFI	CFI	RMSEA
171.561	81	2.118	.000	.922	.828	.067

Note: GFI = Goodness-of-Fit index; CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation

Two tables above show both significant chi-squares and more than 2 of χ^2/df, which indicates lower fit of the model with counterpart country's data. Furthermore, other fit indices are also lower fit than standard cut-off values, which is advised close to .95 for GFI and CFI and less than .05 for RMSEA (Hu & Bentler, 1999). In addition, these fit indices are inferior in comparison with those of the hypothesized modes with the original country's data (See Tables 16 and 17), which means that the models for each country do not seem to have same structural patterns. Consequently, there were different working

patterns between the U.S. and Korea on the relationships among variables proposed to influence attitudes about employability of people with mental illness.

The second method for assuring that the two models from the U.S. and Korea were not identical, Invariant Latent Mean Structure was employed. Invariant Latent Mean Structure is assumed to test for latent mean differences across groups, which require that the factor intercepts for one group be fixed to zero for the purposed of achieving over-identification of the factors (Bryne, 2001). When interpreting the path coefficients, one group is regarded as the reference group with its means constrained to a value of zero, and then the estimated mean of the other group are compared to the zero value of reference group. In the step for comparing two models using Invariant Latent Mean Structure, the intercepts of all observed variables and common regression weights across two models were examined. Table 22 reports the goodness-of-fit statistics resulting from the analysis of Invariant Latent Mean Structure.

Table 22.
Model Fit Summary from Invariant Latent Mean Structure with the U.S. and Korea data

χ^2	df	χ^2/df	P	CFI	RMSEA
3428.862	193	17.766	.000	.000	.185

CFI = Comparative Fit Index; RMSEA = Root Mean Square Error of Approximation
Note: The option of Latent Mean Structure does not have the value of GFI.

Result indicates that the two models are statistically different: Chi-square is significant large; the ratio of chi-square to the degrees of freedom is much higher than the cutoff value of two; CFI also supports the difference between two models; and the score of RMSEA is unacceptably high. Like the implication of the first method for proving that structural patterns for each country are not identical, the second method, Invariant Latent

Mean Structure, also confirmed that there were different working patterns between the U.S. and Korea on the relations among variables proposed to influence attitudes about employability of people with mental illness.

For elucidating the difference of parameter estimates between the two models, Table 23 presents the Estimates, Standard Error (S.E.), and Critical Ratios (C.R.) for common regression weights and the observed variable intercepts across two models.

Table 23.
Common Parameters from Invariant Latent Mean Structure with the U.S. and Korea data

Common Parameters		**Estimates**	**S.E.**	**C.R.**
Regression Weight				
Self	→ DCE of ATTEMP	.214	.047	4.586***
Individualism	→ DCE of ATTEMP	-.249	.023	-10.858***
Collectivism	→ Valence of Contact	.162	.008	19.477***
Collectivism	→ ACE of ATTEMP	.252	.032	7.779***
Number of Contact	→ ACE of ATTEMP	.106	.027	3.908***
Valence of Contact	→ ACE of ATTEMP	.179	.046	3.926***
Valence of Contact	→ DCE of ATTEMP	.160	.040	3.956***
Work Opportunity	→ ACE of ATTEMP	.462	.095	4.853***
Intercepts				
Number of Contact		1.658	.060	27.731***
Frequency of Contact		1.690	.054	31.260***
Valence of Contact		2.156	.041	52.913***
Work Opportunity		-1.185	.462	-2.565**
Depression		3.775	.376	10.033***
Alcohol		3.914	.541	7.236***
Troubled		3.845	.296	13.004***
Schizophrenia		3.723	.541	6.875***
ACE of ATTEMP		3.156	.263	12.005***
DCE of ATTEMP		4.416	.180	24.574***

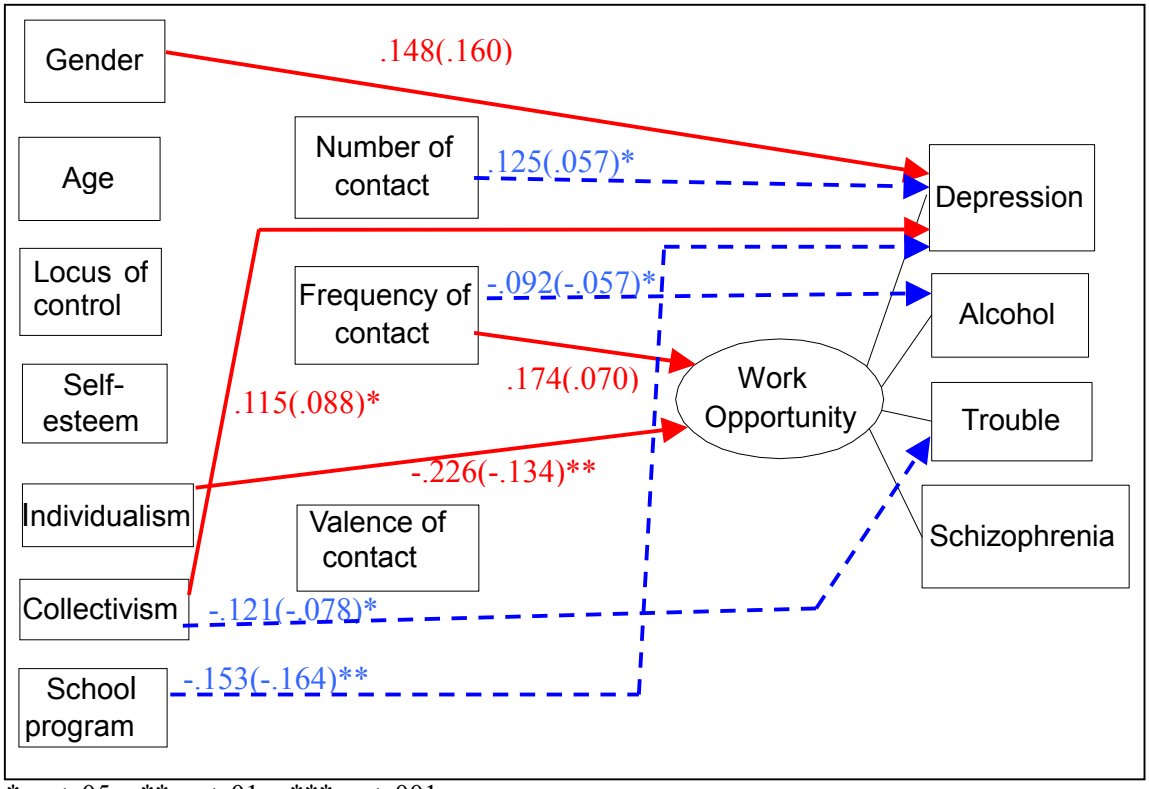
* $p < .05$ ** $p < .01$ *** $p < .001$

The results revealed all common paths to be statistically significant, which means that even the same paths applying for both countries weighed differently on the dependent variables. All intercepts of the observed variable also indicated significance, which supports that the values of the same observed variables between two countries have different weights to each structural model.

Analysis of third research questions

The third research questions sought to ascertain what predictors explained attitudes about employability toward people with mental illness. Path coefficients were examined from the hypothesized best fit models (See Figure 5 for the ., p. 84 and Figure 6 for Korea, p. 86) in order to determine which variables significantly influence the three dependent variables, Work Opportunity, ACE of ATTEMP, and DCE of ATTEMP. The following three figures (i.e., Figures 7, 8, and 9) explain the relationships between independent variables and three dependent variables, respectively.

Figure 7 represents the relationship between characteristics of college students and one of dependent variables, Work Opportunity. As seen in Figure 7, American college students (the red solid line) who reported low individualism (standardized coefficient = -.226, $p < .01$) and experienced high frequency of contact (standardized coefficient = .174, $p < .05$) expressed more positive attitudes about work opportunity toward people with mental illness. In regards to symptoms of mental illness, female American students comparing to male American students (standardized coefficient = .148, $p < .05$; dummy variables were used, where male was 1 and female was 2) and those with higher collectivism cultural characteristics (standardized coefficient = .115, $p < .05$) tended to show more positive attitudes about work opportunities for a person with depression.



* p < .05 ** p < .01 *** p < .001

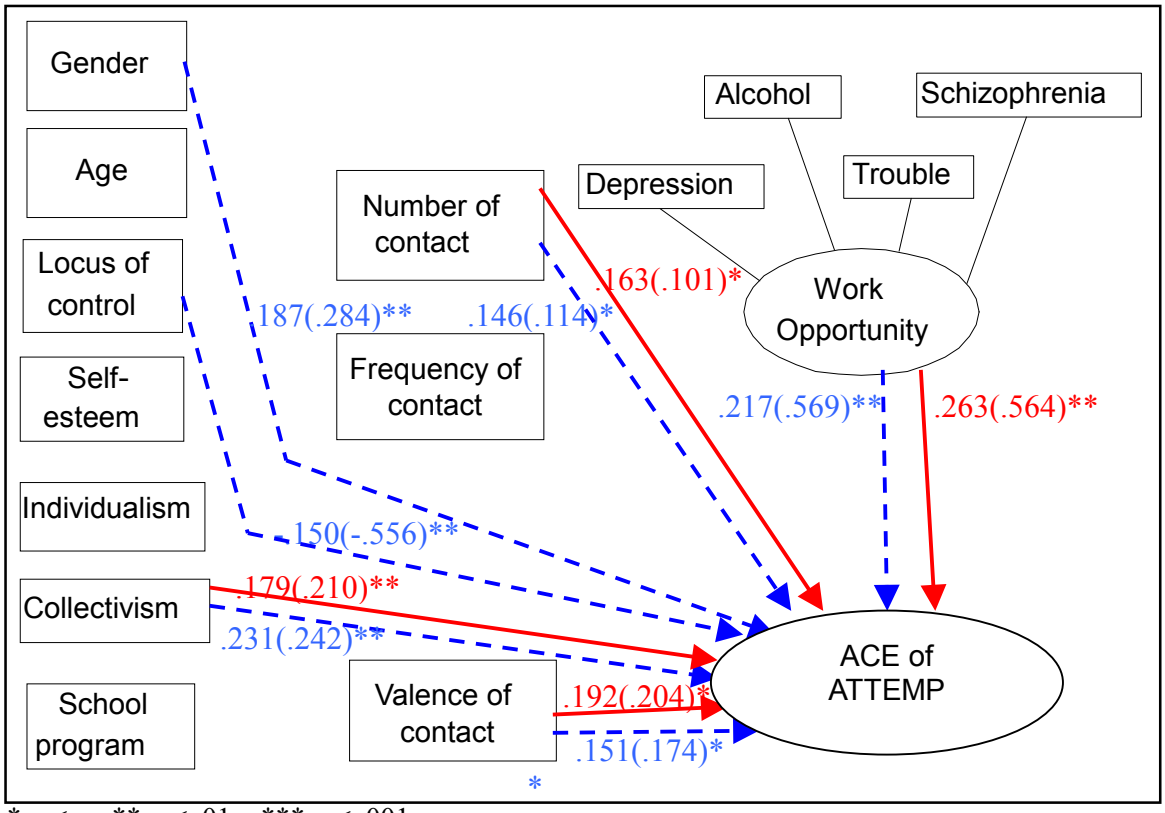
Note: 1. The lines presented in this figure are only related to the variable of Work opportunity by selecting from hypothesized best fit model for the U.S. (Figure 5) and Korea (Figure 6).
2. The U.S. path represents by red solid line; Korea path represents by blue dotted line.
3. The scores are standardized path coefficients and unstandardized path coefficients in parenthesis.

Figure 7. Significant path loadings for Work Opportunity

When it comes to Korean students (the blue dotted line) in Figure 7, there was no significant path line for total Work Opportunity scale. Instead, students who experienced more number of contacts with people having mental illness reported positive attitudes of work opportunity for people with a history of depression (standardized coefficient = .125, $p < .05$). Interestingly, students who had a program from their regular school systems (elementary, middle, and high school) showed negative attitudes of work opportunity for people with depression (standardized coefficient = -.153, $p < .01$). Same results was also found in the case of Frequency of contact; the higher frequency of contact they had, the more negative expressions for Alcohol diagnosis (standardized

coefficient = -.092, p < .05). There were no common paths on Work opportunity scale between the U.S. and Korea.

Figure 8 reports the relationships between characteristics of college students and ACE of ATTEMP, which items are related to appropriateness of providing services and competitive employment opportunities, as well as the potential benefits of such employment.



* p < . ** p < .01 *** p < .001

Note: 1. The lines presented in this figure are only related to the variable of ACE of ATTEMP by selecting from hypothesized best fit model for the U.S. (Figure 5) and Korea (Figure 6).
2. The U.S. path is represented by the red solid line; Korea path represented by blue dotted line.
3. The scores are standardized path coefficients and unstandardized path coefficients in parenthesis.

Figure 8. Significant path loadings for ACE of ATTEMP

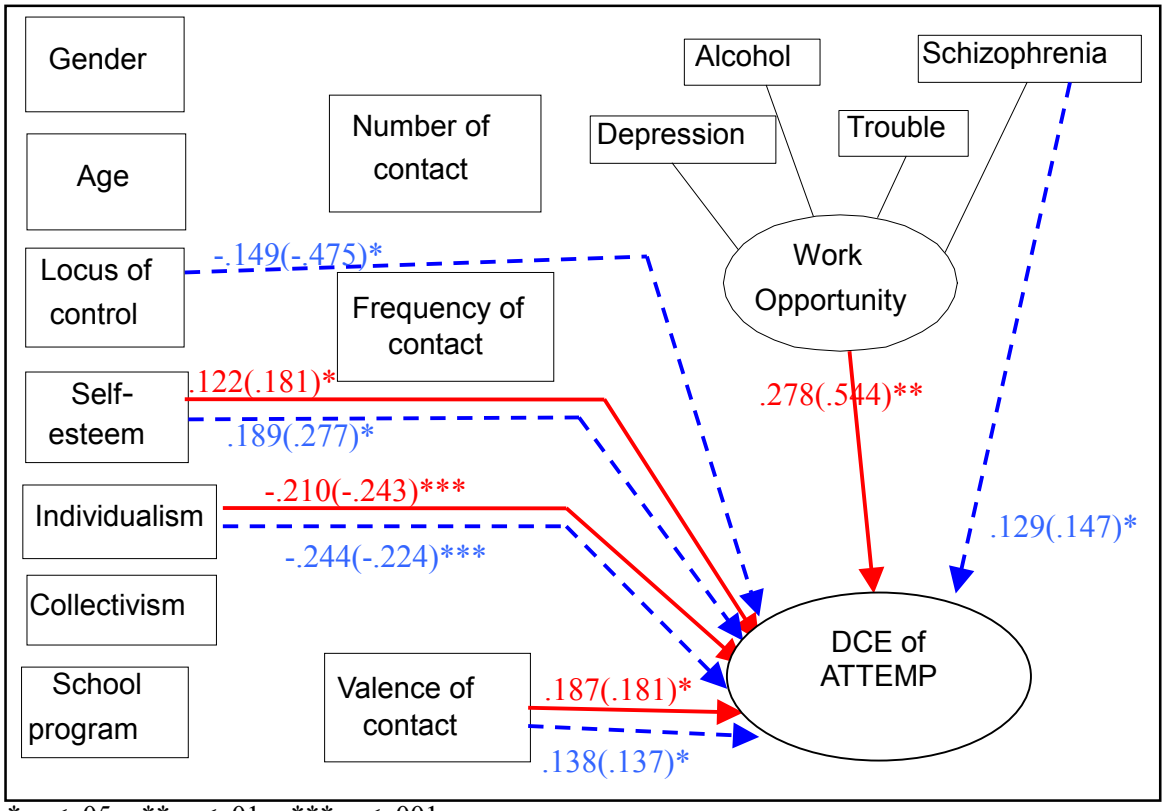
In the U.S. sample, Collectivism was assumed to be one of the predictors (standardized coefficient = .179, p < .01) on the ACE of ATTEMP; American students

with higher collectivism reacted with more positive attitudes related to the contents of ACE than those with lower collectivism. Moreover, students with higher scores of Work Opportunity expressed positive attitudes on ACE of ATTEMP. Notably, ACE of ATTEMP revealed the strong positive relationships with contact experiences in the U.S. students; those with more numbers of contact (standardized coefficient = .163, $p < .01$) and more positive feelings (standardized coefficient = .192, $p < .001$) rated higher on ACE of ATTEMP than ones with fewer contacts and more negative memories.

In the Korean sample, gender resulted in one of the significant predictors on ACE of ATTEMP; female Korean students reported more positive attitudes on the contents of ACE than male Korean students (standardized coefficient = .187, $p < .001$). Locus of control variable was also related to this attitude of ACE, meaning that Korean students with external locus of control had less positive attitudes of ACE toward people with mental illness. The other 4 predictors (i.e., Work Opportunity, Collectivism, Number of contact, and Valence of contact) on ACE of ATTEMP in Korean sample were shown same patterns as the American sample did. People with higher Collectivism (standardized coefficient = .231, $p < .001$), higher Number of contact (standardized coefficient = .146, $p < .05$), more positive feelings (standardized coefficient = .151, $p < .01$), and higher Work Opportunity (standardized coefficient = .217, $p < .001$) expressed positive views on ACE of ATTEMP.

The DCE of ATTEMP had different predictors comparing to those of the ACE of ATTEMP. In Figure 9, college students in both countries who reported higher self-esteem (standardized coefficient = .122, $p < .05$ for the U.S.; standardized coefficient = .189, $p < .01$ for Korea), lower Individualism (standardized coefficient = -.210, $p < .001$ for the U.S.; standardized coefficient = -.244, $p < .001$ for Korea), and more positive

memory about the person whom they had contact (standardized coefficient = .187, p < .001 for the U.S.; standardized coefficient = .138, p < .05 for Korea) indicated more positive attitudes of DCE than students with low self-esteem, high individualism, and negative feelings toward the person whom they met.



* p < .05 ** p < .01 *** p < .001
Note: 1. The lines presented in this figure are only related to the variable of DCE of ATTEMP by selecting from hypothesized best fit model for the U.S. (Figure 5) and Korea (Figure 6).
2. The U.S. path is represented by the red solid line; Korea path represented by blue dotted line.
3. The scores are standardized path coefficients and unstandardized path coefficients in parenthesis.

Figure 9. Significant path loadings for DCE of ATTEMP

The other predicted paths on DCE of ATTEMP in the U.S. model were found on Work Opportunity, meaning that American students who expressed more willingness to provide a work opportunity for people with mental illness have more positive attitudes related to contents of DCE of ATTEMP (standardized coefficient = .278, p < .001). For

Korean students, only Schizophrenia subscale among four Work Opportunity subscales had a positive relationship with DCE of ATTEMP. In other words, respondents willing to provide work opportunities for people having a history of schizophrenia reported positive attitudes of DCE (standardized coefficient = .129, $p < .05$). Additionally, Korean students with external locus of control indicated negative attitudes of DCE (standardized coefficient = -.150, $p < .01$).

In results with ACE and DCE of ATTEMP, Locus of control affected on both ACE and DCE for Korean students while there were no correlations between Locus of control and ACE or DCE for American students. In regards to Collectivism and Individualism, Collectivism was the predictor for ACE of ATTEMP while Individualism was the predictor for DCE of ATTEMP in both countries. As far as contact variables, the significant path between Number of contact and ACE was found in both countries. Same results were seen in the Valence of contact with both ACE and DCE in the U.S. and Korea. Frequency of contact, however, had no effect on attitude of ATTEMP. Work Opportunity also affected significantly ACE of ATTEMP in both countries while it had an effect on DCE of ATTEMP for only American students.

Analysis of fourth research questions

The final research questions examined the effect of school-based programs and previous contact experience. Table 24 presents descriptive outcomes from experiences of school programs in the U.S. and Korea, as well as T-test analysis in order to examine the significant difference of experiences of school-based programs regarding mental illness between two countries: Students were asked if they took one of programs as discussion, forum, or written materials about mental illness in each level of school system.

As Table 24 shows, American college students had significantly much more education experience about mental illness than did Korean students in middle school and high school. There were 79.2% of the U.S. respondents who reported taking the educational opportunity about mental illness in middle school while only 56.8% of Korean respondents reported the experience, which resulted in a significant difference between two countries ($t = -5.475$, $p < .001$). Similar results were evident on the high school level: 89.6% of American college students and 53.9% of Korean students ($t = -9.535$, $p < .001$). Unlike the result of middle and high school category, there was no statistically significant difference of this experience between two countries ($t = -1.468$) in elementary level. These results indicate that education programs about mental illness in formal school systems have been taking place much more in the U.S. than Korea, especially at the middle and high school levels.

Table 24.
Experience of School-based programs according to education level and T-test

Educational level	**Experience**	**The U.S. (%)**	**Korea (%)**	**t-test**
Elementary School	No	108 (43.2)	121 (49.8)	-1.468
	Yes	143 (56.8)	122 (50.2)	
Middle School	No	52 (20.8)	105 (43.2)	-5.475***
	Yes	198 (79.2)	138 (56.8)	
High School	No	26 (10.4)	112 (46.1)	-9.535***
	Yes	224 (89.6)	131 (53.9)	
Total	No	15 (6.0)	82 (33.7)	-8.180***
	Yes	235 (94.0)	161 (66.3)	

* $p < .05$ ** $p < .01$ *** $p < .001$
Note: 'No' means that a student had taken none of discussion, forum, or written materials in each educational level; 'Yes' means that a student had taken more than one of discussion, forum, or written materials in each educational level.

Table 25 shows which types of educational program have been carried out in each country. In the U.S., discussion method has been used much more than any other types of programs across all school levels while written materials have been adopted most popular in Korea across all school levels.

Table 25.
Descriptive of types of educational program about mental illness

Types of education program	**The U.S.**	**Korea**
Elementary School	Of total 143 who took programs about mental illness	Of total 122 who took programs about mental illness
Discussion	120 (84%)	59 (48%)
Forum	65 (45%)	32 (26%)
Written materials	76 (53%)	112 (91%)
Others	11 (8%)	9 (7%)
Middle School	Of total 198 who took programs about mental illness	Of total 138 who took programs about mental illness
Discussion	186 (94%)	72 (52%)
Forum	82 (41%)	59 (43%)
Written materials	147 (74%)	125 (91%)
Others	6 (4%)	4 (3%)
High School	Of total 224 who took programs about mental illness	Of total 161 who took programs about mental illness
Discussion	217 (97%)	73 (45%)
Forum	99 (44%)	58 (36%)
Written materials	167 (75%)	115 (71%)
Others	15 (7%)	6 (4%)

Note: The reason that the total % is over 100% in each level of school system is that the respondents were asked to mark all types of programs that they experienced among discussion, form, written, and others.

In an effort to examine the effect of school-based programs on attitudes about employability of people with mental illness, two outcomes were inspected: (1) correlations between school-based programs and three dependent variables; (2) structural models for the patterns of relationships between school-based programs and dependent variables. In the U.S. data, correlations (See Table 14, p. 80) and structural model (See Figure 5, p. 84) show that school-based program about mental illness has no direct influence on any of the three dependent variables (Work Opportunity, ACE of ATTEMP, and DCE of ATTEMP). For the Korean sample, correlations (See Table 15, p. 81) and structural model (See Figure 6, p. 86) appear that school-based programs directly influence on Depression subscales of Work Opportunity ($b = -.164$, $p < .01$). However, like the result from the U.S. sample, school-based programs had no influence on any of the other dependent variables in Korean sample. The absence of relationship between school-based program and attitudes about employability indicate that programs regarding mental illness, in both the U.S. and Korea, have no direct influence on improving attitudes about employability toward people with mental illness.

However, more additional analysis is needed in order to conclude that school-based programs do not influence positive attitudes related to mental illness in the U.S. and Korea because 94% of the students in the U.S. sample had taken programs about mental illness through formal school systems. Tabachnick and Fidell (2001) explain that "The correlation between a continuous variable and a dichotomous variable or between two dichotomous variables (unless they have the same peculiar splits) is also too low if the majority of the responses (e.g., over 90%) to the dichotomous variable fall into one category. Even if the continuous and dichotomous variables are strongly related in the population, the highest correlation that could be obtained is well below 1" (p. 58). Based

on this reason, additional analyses were run to examine the existence of differences between the group that had experienced school programs about mental illness and the other group that did not have that experience. In Table 26, there were no significant outcomes between the two groups for all three dependent variables in both countries.

Table 26.
T-test for experience of School-based program in the U.S. and Korea

Country	Experience of School program / Dependent Variables	'No' group Mean (S.D.)	'Yes' group Mean (S.D.)	T-test
The U.S.		Of 15 cases	Of 235cases	df = 248
	Work Opportunity	2.891 (.440)	2.849 (.450)	.347
	ACE of ATTEMP	4.818 (1.150)	4.482 (.797)	1.536
	DCE of ATTEMP	3.980 (.763)	4.017 (.740)	-.187
Korea		Of 52 cases	Of 198 cases	df = 244
	Work Opportunity	2.669 (.433)	2.615 (.367)	1.006
	ACE of ATTEMP	4.755 (.827)	4.887(.713)	-1.288
	DCE of ATTEMP	3.421 (.703)	3.503 (.619)	-.934

* $p < .05$ ** $p < .01$ *** $p < .001$

Furthermore, as noted in Figure 10, the Work Opportunity for both countries shows more negative attitudes from the groups that participated in the school programs. The same pattern was found on ACE of ATTEMP in American college students. Results supported that school-based programs about mental illness had no positive effect on attitudes of employability in both the U.S. and Korea. Specific examination with subscale of Work Opportunity found that school-based program affected negative attitudes for depression symptoms in Korean sample: The regression weight from school-based program to Depression shows negative directions with -.164 (See Table 19, p. 87).

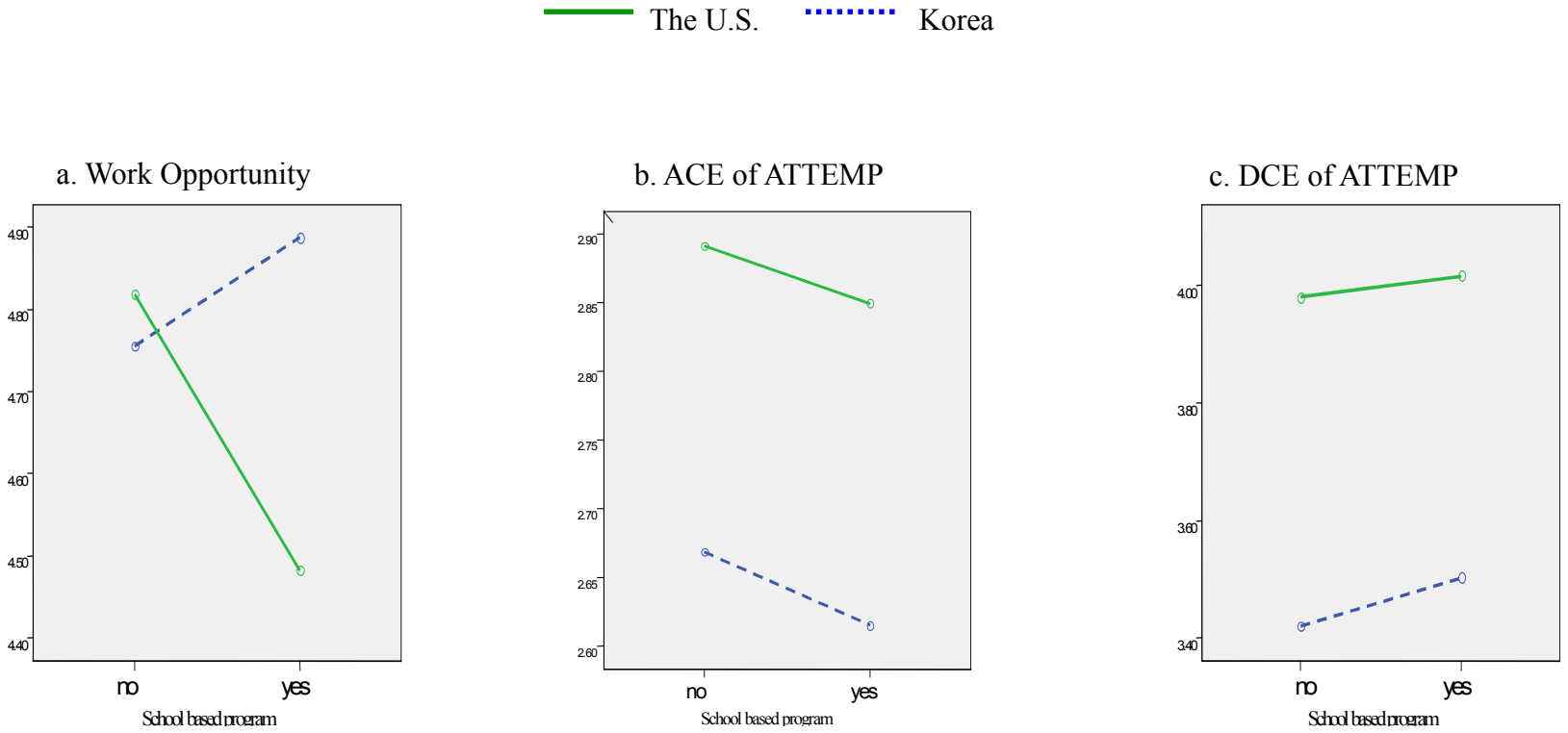


Figure 10. Scores on Work Opportunity, ACE of ATTEMP, and DCE of ATTEMP according to country and experience of School-based program about mental illness

The following results are in regards to the effect of previous contact experience in research question 4.2. A hierarchical regression analysis was employed to examine the effect of contact experience variables (Number of contact, Frequency of contact, Valence of contact) on attitudes of employability of people with mental illness. Age, Gender, Locus of control, Self-esteem, School-based program, Individualism, Collectivism, and Work Opportunity were entered at the first block, and then Number of contact, Frequency of contact, and Valence of contact variables were entered in the second block. Table 27 shows the results for ACE of ATTEMP and Table 28 is resulted from the analysis for DCE of ATTEMP.

In Table 27, it shows that three contact experience variables were statistically significant of ACE in both the U.S. (R^2 change = .076, $p < .001$) and Korea (R^2 change = .060, $p < .001$). Specifically, students with more number of contacts with people having a mental illness (ß = .163, $p < .05$ for the U.S.; ß = .131, $p < .05$ for Korea) and with good contact memory (ß = .175, $p < .01$ for the U.S.; ß = .137, $p < .05$ for Korea) expressed more positive attitudes about Appropriateness of Competitive Employment (ACE). There was no significant effect of Frequency of contact on ACE in both countries.

In Table 28 for DCE of ATTEMP, the total contact variable failed to show the significant effect on DCE for Korea students (R^2 change = .023) while American students were affected significantly by total contact experiences (R^2 change = .038, $p < .05$). Nevertheless, students with good memory for people with mental illness in both countries reacted more positively on Disadvantages of Competitive Employment (DCE) than others with negative contact memory with people with mental illness (ß = .163, $p < .05$ for the U.S.; ß = .161, $p < .05$ for Korea). In other words, Number of contact and Frequency of contact did not change the attitudes of DCE.

Table 27. *Hierarchical Regression Analysis for Variables Predicting ACE of ATTEMP*

	The U.S.						Korea					
	Model 1			Model 2			Model 1			Model 2		
Predictors	***B***	***S.E.***	**ß**	***B***	***S.E.***	**ß**	***B***	***S.E.***	**ß**	***B***	***S.E.***	**ß**
Gender	.104	.104	.062	.081	.100	.048	.335	.102	.217***	.253	.102	.164*
Age	-.011	.034	-.020	.015	.033	.029	.020	.023	.056	.011	.022	.033
Locus of control	-.478	.317	-.096	-.455	.307	-.091	-.533	.251	-.141*	-.511	.244	-.135*
Self-esteem	.059	.103	.036	.018	.103	.011	.067	.119	.039	.085	.116	.049
School Program	.001	.117	.000	-.073	.114	-.039	.036	.114	.019	-.053	.113	-.028
Collectivism	.219	.077	.185**	.179	.075	.151*	.303	.067	.284***	.251	.067	.235***
Individualism	.111	.082	.087	.079	.081	.062	-.058	.072	-.053	-.069	.071	-.063
Work Opportunity	.486	.112	.265***	.423	.109	.230***	.394	.115	.204***	.367	.111	.190***
Number of contact				.101	.039	.163*				.104	.052	.131*
Frequency of contact				.064	.056	.074				.076	.054	.089
Valence of contact				.185	.071	.175**				.160	.071	.137*
F	4.418***			5.532***			8.270***			8.145***		
R^2	.128			.204			.223			.283		
Adj. R^2	.099			.167			.196			.248		
R^2 change				.076***						.060***		

* $p < .05$ ** $p < .01$ *** $p < .001$

Table 28. *Hierarchical Regression Analysis for Variables Predicting DCE of ATTEMP*

	The U.S.						Korea					
	Model 1			Model 2			Model 1			Model 2		
Predictors	***B***	***S.E.***	**ß**	***B***	***S.E.***	**ß**	***B***	***S.E.***	**ß**	***B***	***S.E.***	**ß**
Gender	.037	.092	.025	.027	.090	.018	.156	.091	.118	.174	.094	.133
Age	-.031	.030	-.064	-.010	.030	-.021	.020	.021	.068	.022	.021	.075
Locus of control	-.490	.279	-.109	-.440	.277	-.098	-.570	.225	-.177*	-.531	.224	-.165*
Self-esteem	.219	.091	.148*	.171	.092	.116	.277	.107	.188**	.260	.107	.177*
School Program	-.004	.103	-.003	-.046	.102	-.027	.073	.102	.045	.074	.104	.046
Collectivism	.001	.067	.001	-.034	.068	-.032	-.028	.060	-.031	-.045	.061	-.050
Individualism	-.263	.072	-.230***	-.267	.073	-.234***	-.211	.064	-.225***	-.190	.065	-.203**
Work Opportunity	.397	.099	.241***	.355	.099	.215***	.091	.103	.055	.075	.102	.045
Number of contact				.031	.036	.055				-.019	.048	-.028
Frequency of contact				.051	.050	.066				-.022	.050	-.030
Valence of contact				.155	.064	.163*				.161	.065	.161*
F	5.784***			5.388***			4.651***			3.993***		
R^2	.161			.199			.139			.162		
Adj. R^2	.133			.162			.109			.122		
R^2 change				.038*						.023		

* $p < .05$ ** $p < .01$ *** $p < .001$

The current study continued to examine the mediating effect of each contact variable between other independent variables and the three dependent variables.

The recently developed Structural Equation Model (SEM) is supposed to be one of important statistical tools to investigate mediation. Before SEM became popular, many researchers used the hierarchical regression method to examine the existence of mediation effect. SEM has several advantages over the hierarchical regression approach to mediation analyses. Cheung and Lau (2007) argue that SEM is a more appropriate technique for testing mediation comparing to multiple regression since the variable as a mediator have both roles of dependent variable and independent variables at the same time while, in hierarchical regression method, one variable does not work with both dependent and independent variable at once.

In examining the mediation effect with SEM, many empirical studies have mistaken by testing the significance of two direct effects separately: (1) the significance of the direct effect from the independent variable to the mediator; (2) the significance of the direct effect from the mediator to the dependent variable. However, the significance of these separate two direct paths does not provide support for a significant mediation effect from the independent to the dependent variable through the mediator (Cheung & Lau, 2007). For overcoming this problem, the current study was employed the method of indirect effect, where the effect of the independent variable X1 on the dependent variable Y goes through a mediator X2. Specifically, the models are tested for significance of mediation by using the bootstrap method. Bootstrap method involves a “resampling” procedure designed to estimate standard errors, confidence intervals, and other statistical properties (Stine, 1989). The general approach to the bootstrap method is to produce an empirical estimation of the sampling distribution for population with replacement of

original data sample repeatedly (Mooney & Duval, 1993). Cheung and Lau (2007) support that the bootstrapping approach has an advantage of establishing confidence intervals for estimated parameters with unknown distributions or violated the normality assumption. Shrout and Bolger (2002) contend, in regards to mediation with bootstrap method, that bootstrap tests are powerful because they detect that the sampling distribution of the mediated effect is skewed away from 0, which shows if it stays inside confidence intervals or outside with significant criterion. In current study, 2000 bootstrap samples of the observations and 95 confidence intervals were created with the bias-corrected and accelerated BCa of Bootstrap methods. BCa bootstrap methods produce the most accurate confidence limits, the most accurate Type 1 error, and have the largest power for detecting mediation and suppression effects (Cheung & Lau, 2007).

There are two types of mediation: complete mediation and partial mediation. A relationship implies mediation if, when in the presence of the mediator, the independent variable is not significantly associated with the dependent variable. In this case, there exists only an indirect link between independent variable and dependent variable through the mediator without direct relations between two variables. The other type of mediation, partial mediation means that the path from the independent variable to the dependent variable is reduced in size but still significant when in the presence of the mediator. It shows significant direct effects as well as significant indirect effects at the same time (Bystrom et al., 2004). As far as indirect effects, two types exist: total indirect effect and specific indirect effect. The example of total indirect effect and specific indirect effect is as the following: In the U.S. model, for instance, Self-esteem has indirect effects on ACE through both Number of contact and Valence of contact variable. It is called total indirect effect while separate route of (1) Self-esteem to ACE through Number of contact and (2)

Self-esteem to ACE through Valence of contact are called specific indirect effect. Holbert and Stephenson (2003) reported that all of the major structural equation modeling software including AMOS estimates only total indirect effects, not the specific indirect effects mediation. Although the various SEM software packages do not directly estimate the statistical significance of specific indirect effects, all of the information to calculate can be accessible from the AMOS output[9].

Figure 11 illustrates the mediation of each contact variable in the U.S., and Table 29 presents estimations of indirect effect, direct effects, and total effects on three dependent variables through three Contact variables with the significance of parameter scores. In terms of the structural coefficients, findings showed no significant effects from Gender, Locus of control, and School-based program to any of three contact experiences as the mediated variables. As seen Figure 11 and Table 29, Age, Self-esteem, Individualism, and Collectivism variables have an indirect effect on attitudes about employability through previous Contact variables. The three paths from Self-esteem to DCE, Individualism to DCE, and Collectivism to ACE have direct effects as well as significant indirect effects through Valence of contact. It means that the relations were supposed to be partially mediated by Contact of valence.

In regards to each contact variable, Self-esteem and Individualism on ACE of ATTEMP were mediated by Number of contact variable, meaning that people with low

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[9] The procedure to calculate the significance of specific indirect effects needs two parts: (1) the estimated mediation effect; (2) the standard error.

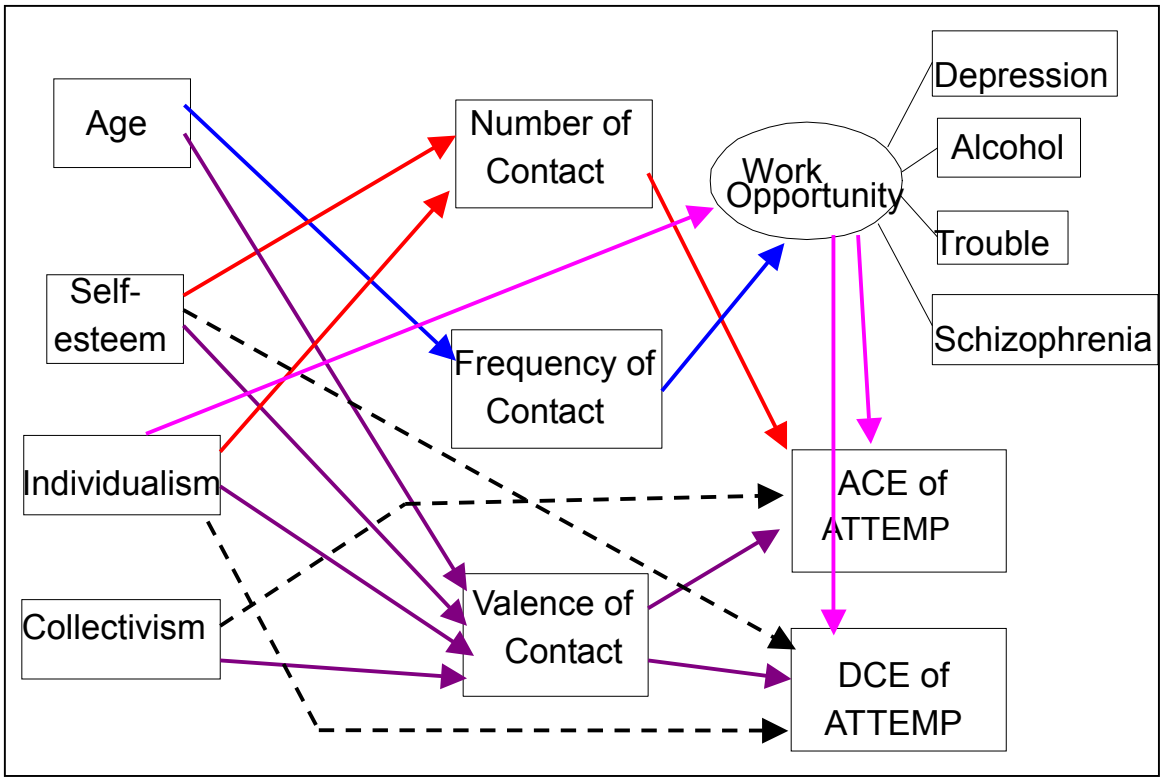
(1) The estimate of specific indirect effect is produced from the product of a (coefficient of independent variable to mediated variable) and b (coefficient of mediated variable to dependent variable).

(2) Tthe standard error of ab (se_{ab}) is calculated from the following equation:

$$se_{ab} = \sqrt{(a^2 * seb^2) + (b^2 * sea^2)}$$ (Sobel, 1982)

And then, the significance of specific indirect effects is obtained by dividing (1) the estimated mediation effect by (2) the standard error (Cheung & Lau, 2007).

self-esteem and high individualism tended to experience various types of contacts with people suffering from mental illness. Therefore, positive attitudes for ACE are probable if college students with these characteristics take an opportunity to experience more kinds of contacts with people with mental illness. Frequency of contact mediated the relationship between Age and Work Opportunity. Younger people had more frequency of contact with people having mental illness, followed by having effect on willingness of work opportunity for people with mental illness.



Note:
1. All paths shown in the figure are significant.
2. The paths of direct effects unrelated to contact variables are not shown in this figure.
3. Unrelated three independent variables to Contact variables, Gender, Locus of control, and School- based program, are not shown in this figure.
4. Red solid lines means indirect effect through Number of contact variable; Blue solid lines are through Frequency of contact; Violet solid lines through Valence of contact; Pink solid lines represent the relations with going through Work Opportunity variables, Black dotted line means direct effect which are able to explain with indirect effects.
5. Parameters for path coefficients are shown in Table 18 (p. 85).

Figure 11. Mediation role of Contact experiences in the U.S.

Table 29.
Indirect effect, direct effect, and total effect in the U.S.

The path of indirect effect	Indirect Effect (S.E.)		Direct Effect	Total Effect
Age → F→WO	-.006*	(.004)		-.006
Age → F /WO + V → ACE	-.026***	(.010)		-.026
Age → F → WO → ACE	*-.003**	*(.002)*		
Age → V → ACE	*-.023***	*(.009)*		
Age → F/WO + V → DCE	-.024***	(.009)		-.024
Age → F → WO → DCE	*-.003**	*(.002)*		
Age → V → DCE	*-.020****	*(.006)*		
Self –esteem → N + V → ACE	.037	(.036)		.037
Self –esteem → N → ACE	*-.033****	*(.011)*		
Self –esteem → V → ACE	*.070****	*(.022)*		
Self-esteem → V → DCE	.062**	(.025)	.181*	.244
Individualism → N + V + WO→ ACE	-.075*	(.038)		-.075
Individualism → N → ACE	*.029**	*(.016)*		
Individualism → V → ACE	*-.029***	*(.014)*		
Individualism → WO → ACE	*-.076****	*(.024)*		
Individualism → V + WO → DCE	-.098***	(.034)		-.341
Individualism → V → DCE	*-.026****	*(.008)*		
Individualism → WO → DCE	*-.073***	*(.029)*		
Collectivism → V → ACE	.046**	(.019)	.210**	.256
Collectivism → V → DCE	.041**	(.018)		.041

* $p < .05$ ** $p < .01$ *** $p < .001$; N=Number of contact, F=Frequency of contact, V=Valence of contact, WO = Work Opportunity

Note: 1. The scores are an unstandardized parameter.

2 The estimations of significance for direct effects resulted from ML analysis of SEM and those for indirect effects resulted from bootstrap analysis with BCa of bootstrap method.

3. Total effect = total indirect effect + direct effect; Total indirect effect = ∑specific indirect effects.

4. The estimation for the specific indirect effects represents with *ItalicFont.*

5. The criterion of significance for total indirect effects is based on the value of each unstandardized parameter estimate divided by its respective standard error in the output of bootstrap analysis. Statistically significance of specific indirect effects was assessed on the base of significance table for total indirect effect with the value which are produced by dividing unstandardized parameter estimate of specific indirect by its standard error.

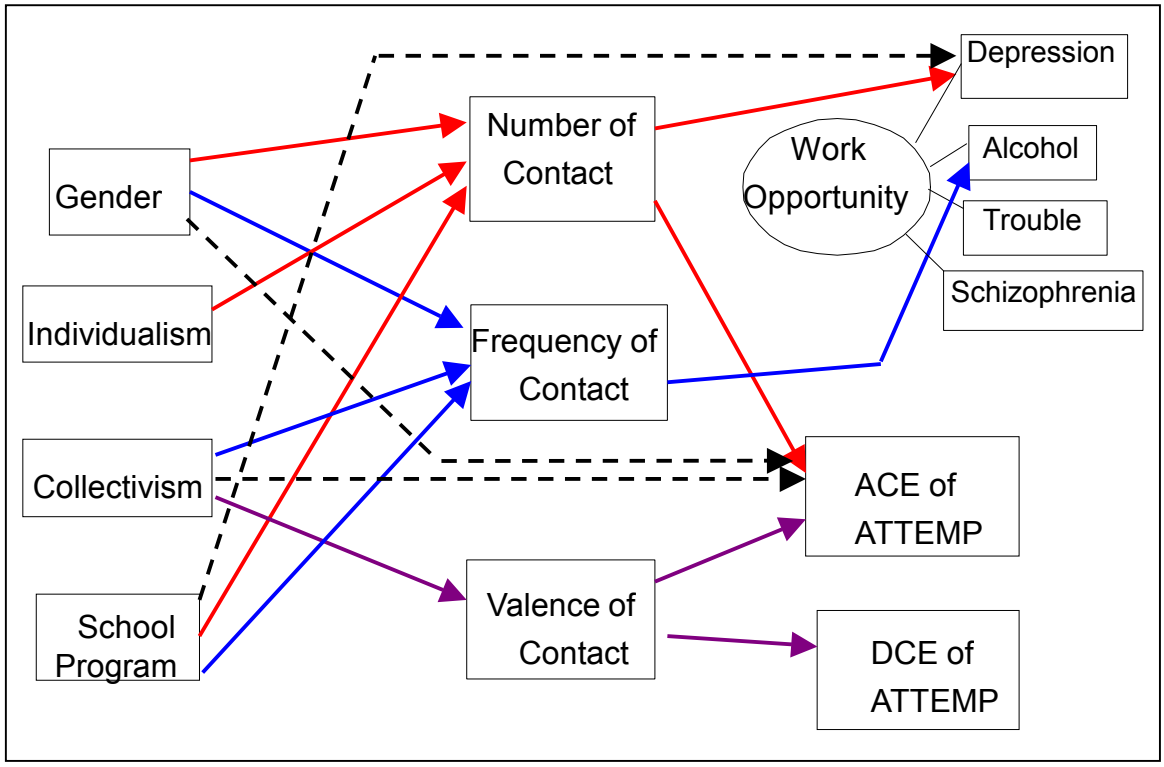
6.The parameters of path coefficients and S.E., which are needed for getting specific indirect effects, were referred by Table 18 (p. 85).

In regards to Valence of contact, the relationship between the four independent variables, Age, Self-esteem, Individualism, and Collectivism and 2 dependent variables, ACE and DCE of ATTEMP, were mediated significantly through Valence of Contact. Students with younger, high Self-esteem, low Individualism, and high Collectivism have positive feelings toward people with mental illness whom they met. In other words, the positive effect of these characteristics on ACE and DCE attitude prospered through good memory of contact experience.

In determining the relationship among Self-esteem and ACE through the two Contact variables, Number of contact and Valence of contact, the interpretations in Table 29 should be paid attentions. Results revealed no statistical significance of total indirect effect even when the two specific indirect effects were definitely significant because the total indirect effect is calculated from the sum of path coefficient of all specific indirect effects. Self-esteem was negatively related to Number of contact, meaning that a person with high Self-esteem had less number of contact to people with mental illness, while Self-esteem was positively correlated with Valence of contact, meaning that a person with high Self-esteem reported positive memories of the person whom (s)he met. Therefore, results indicated that each Contact variable, Number of contact and Valence of contact, produced statistically significant mediation effects between Self-esteem and ACE of ATTEMP. Consequently, the Figure 11 shows that the Valence of contact variable, among three Contact experience variables, was the most effect of mediation among other Contact experience. It means that it is important for American students to have positive feelings about the person with mental illness whom students have met.

Figure 12 illustrates the mediating effects of each contact variable in Korea, and Table 30 presents estimations of indirect effect, direct effects, and total effects on three

dependent variables through three Contact variables. In Table 30, the mediating effects of each Contact variable were examined with the significance of parameter estimate of indirect effect. As seen in Figure 12 and Table 30, Gender, Individualism, Collectivism, and School-based program variables had an indirect effect on attitudes about employability through Contact variables. With the structural coefficients, results showed no significant effects from Age, Self-esteem, and Locus of control to any of three Contact experiences as the mediated variables.



Note:
1. All paths shown in the figure are significant.
2. The paths of direct effects unrelated to contact variables are not shown in this figure.
3. Unrelated three independent variables to Contact variables, Age, Self-Esteem, and Locus of control, are not shown in this figure.
4. Red solid lines means indirect effect through Number of contact variable; Blue solid lines are through Frequency of contact; Violet solid lines through Valence of contact; Black dotted line means direct effect which are able to explain with indirect effects.
5. Parameters for path coefficients are shown in Table 19 (p.87).

Figure 12. Mediation role of Contact experiences in Korea

Unlike the U.S. outcomes, Korean data did not have any total indirect effect[10]. The three paths – (1) Gender to ACE, (2) Collectivism to ACE, (3) School-based program to Depression - had direct effects as well as indirect effect through Number of contact or Valence of contact. It means that the relations between each path are partially mediated by Number of contact or Valence of contact.

Table 30.
Indirect effect, direct effect, and total effect in Korea

The path of indirect effect	Indirect Effect (S.E.)		Direct Effect	Total Effect
Gender → N → Depression	.017*	(.010)		.017
Gender → N → ACE	.034*	(.021)	.284***	.318
Gender → F → Alcohol	.021*	(.013)		.021
Individualism → N → Depression	.013**	(.008)		.013
Individualism → N → ACE	.026*	(.015)		.026
Collectivism → F → Alcohol	-.009*	(.007)		-.009
Collectivism → V → ACE	.024**	(.013)	.242***	.266
Collectivism → V → DCE	.019*	(.011)		.019
School program → N → Depression	.024**	(.015)	-.164**	-.139
School program → N → ACE	.049*	(.025)		.049
School program → F → Alcohol	-.023**	(.014)		-.023

* $p < .05$, ** $p < .01$, *** $p < .001$;
N=Number of contact, F=Frequency of contact, V=Valence of contact
Note: 1. The scores are each unstandardized parameter.
2. The estimation of significance for direct effects resulted from ML analysis of SEM and for indirect effects resulted from bootstrap analysis with BCa.
3. Total effect = indirect effect + direct effect.
4. There are no specific indirect effects in Korean sample, which mean that all indirect effects are mediated by just one contact variable in each case.
5. The parameters of path coefficients and S.E., which are needed for getting specific indirect effects, were referred by Table 19 (p. 87).

[10] Total indirect effect means that there are more than two specific indirect effects from an independent variable to a dependent variable through Contact.

An interesting result was found that the direction of regression weight (positive or negative) from School-based program to Depression changed when Number of contact mediated this relationship. The direct effect of School-based program on Depression showed negative direction (Regression weight = -.164) while the indirect effect through Number of contact revealed a positive path coefficient (Regression weight = .024). This changed direction of regression weight (from negative to positive) proposes that various types of contact experiences of people with mental illness could change negative attitude into positive attitudes even if school programs negatively affect the attitude toward people with depression, specifically related to Work Opportunity scale, in Korea[11]. This would explain that more number of contact experiences plays a critical role on building the positive attitudes toward people with mental illness for Korean college students.

In Figure 12 and Table 30, the effects of Gender, Individualism, and School-based program on both Depression and ACE of ATTEMP were mediated by Number of contact variable. In Korea, female students, students with high Individualism, and those with educational programs about mental illness in formal school systems tended to get more Number of contacts to people with mental illness, followed by more likely willingness of work opportunity for people with depression and more positively thinking about ACE of ATTEMP. Frequency of contact mediated the relationship between Gender, Collectivism, and School-based program and one of dependent variable, Work Opportunity for people with alcohol problem. Women, people with high Collectivism, and those with school programs about mental illness showed more Frequency of contact with

[11] It is defined as "suppression" effect when the indirect effect has the opposite sign of the direct effect (Shrout & Bolger, 2002).

people having mental illness, and then it was connected to willingness of work opportunity for people with Alcohol problem. In regards to Valence of contact, the relationships between Collectivism and two dependent variables, ACE and DCE of ATTEMP, were mediated significantly through Valence of contact. People with high Collectivism responded positive valence of contact toward the people with mental illness whom they met. In a result, the positive effect of Collectivism on ACE and DCE attitude flourished through good memory of contact experience.

In comparing the patterns for mediators of contact experiences between the U.S. and Korea, there were different results: the U.S. data revealed that Valence of contact was more effective mediators than Number of contact and Frequency of contact while Korean data showed that Number of contact and Frequency of contact variables played a role on mediators than Valence of contact. In other words, the more types of contact experienced may be more influential on an intervention process for affecting positive attitudes about employability toward people with mental illness for Korean college students.

For last research question, closer scrutiny of the association between the types of contact and dependent variables was analyzed. Table 31 shows the number of respondents who have contacted people with mental illness according to the type of contact in the U.S. and Korea. In Table 31, students in both countries had contacted to people with mental illness in public with the highest percentage, 95.5% in the U.S. and 92.1% in Korea, while the experience that they had with mental illness showed the lowest percentage, 16.0% in the U.S. and 12.8% in Korea. These two types of contact, 'public contact' and 'myself'[12] had no significant difference of cases between two countries (χ^2 =

[12] The type of Myself contact means that a respondent have an experience of mental disorder. This item was collected from the demographic information in the survey.

1.051 for public; $\chi^2 = 2.488$ for myself). Contact through a volunteer, also, had no significance between two countries (42.0% for the U.S. and 45.5% for Korea; $\chi^2 = .596$).

Table 31.
The number of cases and χ^2 for Contact experiences according to types of contact in the U.S. and Korea students

Contact Experience		Total	The U.S.	Korea	χ^2
Myself	No	422 (85.6%)	210 (84.0%)	212 (87.2%)	$\chi^2 = 1.051$
	Yes	71 (14.4%)	40 (16.0%)	31 (12.8%)	(df=1)
Family	No	348 (70.9%)	148 (59.4%)	200 (82.6%)	$\chi^2 = 32.019$***
	Yes	143 (29.1%)	101 (40.6%)	42 (17.4%)	(df=1)
Friends	No	329 (67.0%)	148 (59.4%)	181 (74.8%)	$\chi^2 = 13.089$***
	Yes	162 (33.0%)	101 (40.6%)	61 (25.2%)	(df=1)
Work	No	397 (80.7%)	166 (66.4%)	231 (95.5%)	$\chi^2 = 66.625$***
	Yes	95 (19.3%)	84 (33.6%)	11 (4.5%)	(df=1)
Volunteer	No	277 (56.3%)	145 (58.0%)	132 (54.5%)	$\chi^2 = .596$
	Yes	215 (43.7%)	105 (42.0%)	110 (45.5%)	(df=1)
Public	No	30 (6.1%)	11 (4.5%)	19 (7.9%)	$\chi^2 = 2.488$
	Yes	458 (93.9%)	236 (95.5%)	222 (92.1%)	(df=1)
Only public		121 (25.7%)	44 (18.3%)	77 (33.6%)	$\chi^2 = 14.505$***
More than public		349 (74.2%)	197 (81.7%)	152 (66.4%)	(df=1)

* $p < .05$ ** $p < .01$ *** $p < .001$

In ‘family contact’, 40.6% of American students had family members with mental illness while Korean students answered that they had 17.4% of family members. The two countries showed significantly differences of number of cases ($\chi^2 = 32.019$, $p < .001$). In ‘friends contact’, the number of students differed in two countries: 101 cases (40.6%) for the U.S. and 61 cases (25.2%) for Korea ($\chi^2 = 13.089$, $p < .001$). In regards to contact in workplace, they responded 33.6% of ‘Yes’ in the U.S. and only 4.5% was

demonstrated in Korea ($\chi^2 = 66.625$, $p < .001$). As a result, American students had more contact experiences than did Korean students across all types of contacts except experience as a volunteer although there were no significant differences in 'myself' and 'public contact'.

Students who had the experience for each contact type were asked to rate frequency of contact (how often) and valence of contact (positive or negative) with the person. Table 32 shows how often they had contact with the person whom they experienced and how positive or negative they felt about him/her. In addition, Table 32 presents T-test of frequency and valence of each contact type between the U.S. and Korea to determine the rate of frequency and valence according to types of contact were different between two countries. As seen in Table 32**,** American students had significantly higher scores than did Korean students across all types of frequency and valence except contact frequency in public. Therefore, American students who experienced each type of contact with the mentally ill have met the person much often with more positive feelings than did Korean students.

In terms of comparison among types of contact, Table 32 presents that both countries have highest frequency score for 'friends contact' (3.51 for the U.S.; 3.15 for Korea) and highest valence score for 'volunteer contact' (4.17 for the U.S.; 3.46 for Korea). It means that college students in both countries meet people with mental illness most frequently when they are friends and express positive feelings toward people with mental illness when volunteering. In the meanwhile, result showed lowest frequency score for 'public contact' in the U.S. (2.63) and 'work contact' in Korea (2.40) and lowest valance score for 'public contact' in both countries (3.56 for the U.S.; 2.65 for Korea). There was the least opportunity to meet people with mental illness in public for American

students while the same was true in the workplace for Korean students. In addition, students in both countries had most negative feelings toward people with mental illness who were seen in public.

Table 32.
The T-test for Frequency and Valence of contact according to contact types in the U.S. and Korea

		The U.S.	**Korea**	
		Mean (S.D.)	**Mean (S.D.)**	**T-test**
Family		Of total 101 cases	Of total 42 cases	
	Frequency	3.46 (1.039)	2.94 (1.097)	t = -2.582 *
	Valence	3.91 (.987)	3.21 (.766)	t = -4.253 ***
Friends		Of total 101 cases	Of total 61 cases	
	Frequency	3.51 (.810)	3.15 (1.127)	t = -3.069 *
	Valence	4.11 (.807)	3.27 (.751)	t = -6.463 ***
Work		Of total 84 cases	Of total 11 cases	
	Frequency	3.29 (.994)	2.40 (.843)	t = -2.701 **
	Valence	3.89 (.916)	3.22 (.667)	t = -2.215 *
Volunteer		Of total 105 cases	Of total 110 cases	
	Frequency	3.04 (1.038)	2.73 (.827)	t = -2.630 **
	Valence	4.17 (.633)	3.46 (.719)	t = -7.892 ***
Public		Of total 236 cases	Of total 222 cases	
	Frequency	2.63 (1.109)	2.72 (.695)	t = 1.015
	Valence	3.56 (.919)	2.65 (.721)	t = -11.965 ***

* $p < .05$ ** $p < .01$ *** $p < .001$
Note: The Frequency of contact and the Valence of contact scores were coded from a 5-point Likert scale. Higher score means more frequent contact (Frequency) and more positive contact memory (Valence).

Table 33 shows the relationship between three contact variables and four subscales of Work Opportunity according to different contact types.

Table 33.
The correlations between contact types and Work Opportunity

Pearson-Correlation		The U.S.				Korea			
		Depression	**Alcohol**	**Troubled**	**Schizophrenia**	**Depression**	**Alcohol**	**Troubled**	**Schizophrenia**
Myself	Experience	0.104	0.025	0.058	.125*	-0.010	0.001	0.027	-0.003
Family	Experience	0.054	-0.005	0.035	0.018	0.069	0.067	0.014	0.044
	Frequency	0.040	0.183	-0.100	0.128	-0.006	0.080	0.100	0.139
	Valence	-0.003	0.124	0.085	-0.068	0.187	0.164	0.213	-0.114
Friends	Experience	-0.007	-0.053	-0.021	0.103	0.095	-0.058	-0.035	-0.022
	Frequency	0.124	0.023	0.154	0.105	-0.087	-0.115	0.060	0.138
	Valence	-0.033	-0.034	0.142	-0.033	0.063	0.145	-0.035	0.100
Work	Experience	-0.026	0.018	-0.037	0.085	0.031	0.091	0.044	.151*
	Frequency	0.145	0.208	0.099	0.096	-0.214	0.060	0.021	-0.036
	Valence	-0.070	0.072	0.046	-0.045	-.711*	-.695*	-0.390	-.770*
Volunteer	Experience	-0.039	0.034	-0.054	0.021	0.023	-0.033	-0.030	-0.120
	Frequency	0.077	0.087	0.133	-0.003	0.077	-0.100	0.032	0.151
	Valence	0.167	0.065	0.177	-0.051	0.010	-0.045	-0.011	-0.047
Public	Experience	-0.007	-0.073	0.036	-0.091	-0.015	0.015	-0.042	-0.008
	Frequency	0.006	0.084	0.001	0.067	-0.107	-0.075	0.014	-0.031
	Valence	0.057	0.079	0.016	0.008	0.091	.203**	0.057	.199**

* $p < .05$ ** $p < .01$ *** $p < .001$

As seen in Table 33, for the U.S. sample, students who suffered from mental illness expressed positive reactions on Work Opportunity for people with Schizophrenia. The other contact experiences found no significant correlations with Work Opportunity scales. In Korea, students with positive valence for 'public contact' showed more affirmative responses of Work Opportunity for people with depression, alcohol abuse, and schizophrenia. Interestingly, there were negative relations between the valence in 'work contact' and three subscales of Work Opportunity, Depression, Alcohol, and Schizophrenia, in Korea. However, caution is needed to interpret this outcome, which students with good feelings toward people with mental illness in workplace had less willingness of work opportunity for those groups, because only 11 cases responded that they have contact experience in workplace in Korean sample.

Table 34 shows the correlations between contact characteristics and ACE/DCE of ATTEMP scale according to the various contact types. In regards to ACE of ATTEMP, 'family contact' with more frequency and more positive feelings was positively related to ACE of ATTEMP in the U.S. In addition, higher rates of frequency of 'friend contact' and positive valence of 'public contact' also produced positive relationships with ACE attitudes among American students In Korea, experience of 'friends contact' and 'volunteer contact' revealed positive relationships with ACE of ATTEMP. Same results were shown between good memory in a contact from family, volunteer, and public and ACE of ATTEMP. For the DCE of ATTEMP, frequent family contact and good feelings from the contact of 'work', 'volunteer', and 'public' resulted in positive attitudes of DCE in the U.S. sample while only valence of 'public contact' related to DCE of ATTEMP in Korea. As a result, 'public contact' with positive valence is supposed to be an important factor to build positive attitudes about employability in both countries.

Table 34.
The correlations between contact types and ACE/ DCE of ATTEMP

Pearson-Correlation		The U.S.		Korea	
		ACE	**DCE**	**ACE**	**DCE**
Myself	Experience	0.091	-0.037	-0.057	-0.043
Family	Experience	.131*	-0.022	0.085	-0.028
	Frequency	.266**	.254*	0.275	0.162
	Valence	.216*	0.166	.475**	0.161
Friends	Experience	.152*	0.007	.141*	0.024
	Frequency	.257**	0.122	0.052	0.247
	Valence	0.180	0.129	-0.045	0.139
Work	Experience	0.094	0.062	0.073	-0.049
	Frequency	0.088	0.195	0.178	0.177
	Valence	0.025	.232*	-0.112	0.133
Volunteer	Experience	0.090	0.021	.213**	0.073
	Frequency	0.169	0.037	.226*	0.051
	Valence	0.160	.228*	.289**	0.094
Public	Experience	0.080	-0.052	0.054	-0.090
	Frequency	0.026	0.114	.167*	0.065
	Valence	.201**	.219**	.206**	.209**

* $p < .05$ ** $p < .01$ *** $p < .001$
Note: Number of cases for Frequency and Valence differs according to types of contact. See Table 32, p. 117.

DISCUSSION

This research provided quite a detailed picture of relationships with effective variables on attitudes about employability toward people with mental illness in the U.S. and Korea. The results for first research question revealed that students in both countries had the lowest willingness of work opportunity to person who had schizophrenia symptom and the opposite result, the most positive willingness of work opportunity, was found in depression symptom. In terms of the result related to schizophrenia, it is on the same line with the study of Stuart and Arboleda-Florez (2001). They also found that 72% of respondents believed that persons with schizophrenia were not able to work in regular jobs. Many organizations have realized a negative atmosphere regarding schizophrenia: the World Psychiatric Association's global campaign was launched to fight stigma and discrimination toward Schizophrenia since 1997 (Sartorius, 1997). Therefore, the correct information must be disseminated to the public stating that people with schizophrenia can work with an appropriate supporting.

As far as the result of depression, depression symptom was given the most positive willingness to give a chance to employment among any other symptoms. In addition, when comparing to the Troubled subscale that describes no history of hospitalization and no serious symptoms meeting the criterion with DSM-Ⅳ, college students do not consider a person who had a history of depression as one who has problems related to work ability. Moreover, this result revealed the opposite of previous studies by Jones et al. (1984) and Link et al. (1987), finding that the person labeled a former mental patient in the vignette was considered more dangerous and was afforded more social distance than one with no history of hospitalization. The current study proposes that college students do not weigh the history of previous psychiatric treatments

when considering work opportunity in the case of depression symptom.

In regards to gender interaction, the Depression and Alcohol vignettes showed the interaction effect of the gender: Respondents reported more positive attitudes to the opposite gender in the Depression and Alcohol vignettes. In addition, two main effects of the gender were found: Female students had significantly more positive willingness of work opportunity toward people with depression than did male students; the woman in the Schizophrenia vignette was significantly given more positive views of work opportunity than the man with schizophrenia symptom. It supports that the effect of gender should be considered a complex function of other variables such as type of symptoms appeared (Farina, 1981). It also says that contextual cures such as behavior symptoms and gender presenting in vignettes enable respondents to consider how they would react to this specific circumstance.

Another results were that female students had relatively more positive attitudes than male students across all four symptoms, and the woman in the vignettes obtained more positive willingness of work opportunities than the man in the vignettes across all four symptoms. These results are in agreement with the conclusions by Farina et al. (1978), which found that, concerning work ability, workers reacted with more acceptance and positive sentiment to female applicants with mental history than male former patients. Coie et al. (1974) explained that male patients would be more threatened than female by events that disrupt progress toward vocational goals. Rabkin (1980) also proposed, "Males are more likely to be stigmatized than females, perhaps because they are seen as potentially more capable of dangerous and violent behavior" (p. 22). Also, as a relatively more positive willingness of work opportunity that female students showed, Farina 's (1981) supports this result: "Women have been kindness or generosity, concerned and

caring about others, more sophisticated and advanced in their understanding of others than are men" (p. 239). Interestingly, male students showed positive reactions toward female with mental illness across all vignettes

In second research question about cultural contexts on attitudes about employability toward people with mental illness, the result showed that there were different structural formations among variables between the U.S. and Korea. The comparison of attitudes between two different cultural contexts, the U.S. and Korea, provides empirical data for appropriate stigma-reducing interventions that fit into each cultural context. According to Hui and Triandis (1985), cross-cultural research into attitudes about disability can contribute to a better understanding of the universality-cultural specificity nature of the construct of attitudes toward disability. Corrigan et al. (2003) also suggest that culture-specific bases of stigma need to be examined to plan and adjust educational and public information to the cultural context. Importantly, cultural context plays a crucial role to develop successful interventions for reducing stigma. In consideration of culture influence, the data from this research proposes that intervention should be applied with the proper approaches that are able to work effectively at each cultural context. Moreover, even if certain intervention or campaign succeeds effectively in one context, it does not guarantee a success in another context. With the different results depending on culture, it will be employed usefully when translating existing successful programs in the U.S. into Korea.

In third research questions about the predictors on each dependent variable for attitudes about employability toward people with mental illness, the attitude of ACE of ATTEMP (Appropriate of Competitive Employability) had the predictors as the followings in both countries: Collectivism, Number of contact, Valence of contact, and

Work Opportunity. In the attitude of DCE of ATTEMP (Disadvantage of Competitive Employability), it was affected by Self-esteem, Individualism, Valence of contact in the U.S. and Korea. The Age variable did not associate with any dependent variable. The plausible reason for this result is predicted by the restriction of age range since the subjects in this research were college students from 17 to 28 and the average was 19.97 years old (19.10 in the U.S.; 20.88 in Korea) (See Table 2, p. 62).

It showed that there were different variables predicting between ACE and DCE of ATTEMP. An inspection of the means indicated that both American college students and Korean students had relatively more positive attitudes about ACE of ATTEMP toward people with mental illness than the attitude about DCE. Several previous research as Brown et al. (1992), Hand and Tryssenaar (2006), and Schmelkin and Berkell (1989) had same results of the current study: college students had more positive attitudes toward the employability potential of people with mental illness (ACE) than the contents of disadvantages of competitive employability (DCE). Therefore, the intervention needs to stress more on the contents of DCE informing that it is not true that people with mental illness make the disadvantage on the workplace as much as what the public think. Researchers should remember that they are required special attentions to deliver both contents of employability information.

The other findings of current study support that Individualism and Collectivism are connected to attitudes toward people with mental illness. Also, it demonstrates that they work differently according to the contents of ATTEMP: Individualism was related negatively to DCE subscale of ATTEMP; Collectivism was linked positively to ACE subscale. It showed in both countries with a same pattern. In a result, the findings from the analysis of predictors supported the study of Corrigan and Penn (1999) that individual

difference in responding to stigma-reduction strategies should be considered. Such individual difference factors may assist to design the strategies and explain the evaluation of various stigma reduction strategies.

Besides, another interesting data about the comparison of Collectivism and Individualism, even if it was not included for the purpose of current study, was found. Unlike the general expectation that is supposed that Americans have more individualism and less collectivism characteristics than Koreans, it turned out different results (See Appendix R, p. 198): Korean students expressed more Individualism (mean = 4.92) than American students (mean = 4.74) with significant difference, $t = 2.992$ ($p < .01$); American students showed more Collectivism (mean = 4.88) than Korean students (mean = 4.79) although there was no statistically difference. This finding supports the assertion of Singelis and Brown (1995); the view of homogeneous population within a culture, Collectivism group or Individualism group, may no longer be valid and effective. Moreover, it needs to be very careful for college students in the early of 20's ages to apply traditional criterion of Individualism and Collectivism into designating the characteristic of ethnic group or nations.

Last research questions were about the effectiveness of school-based programs and previous contact experience. Unexpectedly, the programs about mental illness in regular school systems did not have any effectiveness to make positive employability attitudes toward people with mental illness. Several possible reasons for this finding are considered. First, as the same opinion by Link et al. (1999), there could be a gap between knowledge and attitudes on mental illness among the general public. It means that the knowledge from the programs in schools might not be connected to build the positive attitudes. Second predicted reason is about the difficulty to change the attitudes related to

employability. Holmes et al. (1999) employed the scale of OMI (The Opinion About Mental Illness) including 3 subscales such as benevolence, social restriction, and authoritarian. They found that attitudes about benevolence and social restriction were getting positive while changes in authoritarian attitudes about mental illness were not examined in the study. Therefore, like the result of Holmes et al. (1999), attitudes about employability may be in the cognitive area where program receivers are not easy to change their attitudes. Third, it might come from the limitation of education programs itself. Corrigan and Penn (1999) argue, "Active forms of education that combine formal instruction with discussion and simulations will lead to greater reduction in stigma than formal lectures alone" (p. 772). Yuker (1995) found that children who spent time in integrated classes have positive attitudes toward people with disabilities than children in segregated class. Thus, effective methods to delivery for correct information of employability toward people with mental illness have to be provided in formal school systems.

As far as the effect of previous contact experience, the analysis showed that previous contact explicitly influenced shaping the desirable attitudes about employability toward people with mental illness. This finding suggests that the contact between the public and people with mental illness stigma can reduce stigma (Link and Cullen, 1996; Penn et al., 1994). Furthermore, the findings supported for treating contact experiences as a multidimensional construct: The more various types contacts the respondents have experienced, the more positive attitudes that they show; The better feelings they hold, the more affirmative reactions that they express. The most outstanding contact characteristic among Number, Frequency, and Valence of contact on the attitudes about employability was Valence of contact. Same result found the study of Hand and Tryssenaar (2006),

which concluded that the valence of contact interactions was the only significant predictor of willingness to hire. In their study, employers who reported positive interactions with a person with mental illness showed more willingness to hire the person than employers who had negative or neutral contact experience.

Interestingly, Frequency of contact did not show significant predictors on attitudes about employability for both countries. This result is placed in opposition to the contact-based hypothesis expectation suggested by Islam and Hewstone (1993), who concluded that more frequent contact with a person gives people opportunities to change their negative attitudes about the person. Kolodaiej and Johnson (1999), however, found the same result as current research that they reviewed studies related to interpersonal contact between mental health employees or students and persons with mental illness. Their analyzed data showed that there was no association between duration of contact and the magnitude of attitude changes. The results from the research of Hand and Tryssenaar (2006) also came out similar data that there was no difference of willingness to hire between employers with frequency of contact and others with lower frequency of contact at work. Gaertner, Mann, Dovidil, Murrell, and Pomare (1990) give a clue to explain this result as "These findings seem likely to related unsatisfied contact hypothesis requirements for the development of mutual goals and collaborative activities" (as cited in Kolodaiej & Johnson, 1999, p. 1393). Although frequent contact theoretically is associated with more positive attitudes toward people with mental illness, the data of current study found that this was not necessarily the case.

The data from current study had a very good fit with contact experience as mediation, which means that one's contact experiences of people with mental illness strongly filter the effects of characteristics of students on attitudes about employability.

The result from the current study demonstrated that socio-demographics and personality variables influence the individual with positive attitudes related to employability that can be transferred to the contact experience. Also, the structural patterns delineated how socio-demographics and personality variables influenced contact experiences, and simultaneously how these contact experiences affected attitudes. Especially, in Korea, school programs had a directly negative effect on college students' attitudes, but it became a positive reaction in case of being indirectly through contact experiences. It means that contact experience can be considered motivational spots. Therefore, the potential to contribute contact experiences will be applied to design the intervention to reduce negative attitudes of employability toward people with mental illness.

The outcomes according to the specific types of contact found that 'family contact' and 'friends contact' influenced significantly on the positive attitudes in the U.S. while 'friends' and 'volunteer' experience played the most important role in Korea. Interestingly, American students showed the positive attitudes in interacting volunteer experience only in case that they had a good memory of the interaction of that types of contact. Korean students rated better attitudes in family experience only in cases that they induced a good feeling from the relationships with the family member with mental illness. This result can be explained with cultural differences proposed by Ng (1997) that Asians, including Koreans, feel shame and even guilt when they have a family member with mental illness since such diagnoses are believed to run in the family. Consequently, Koreans showed positive attitudes only in cases wherein that they experienced positive feelings, while they reported positive attitudes regardless of positive or negative feelings in non-familial contexts, such as volunteering.

The findings suggest that, in the U.S., the interventions through workplace or

volunteer practice need to focus more on encouraging good impressions of relationships rather than spending time together without appropriate management or supervision. Meanwhile, in Korea, the proper interventions for people who have a family member with mental illness are needed in order to increase positive interactions and relationships with that family member.

Results indicated that good feelings from public contact significantly influenced attitudes about employability in both countries. These findings propose two implications: (1) the significance of this relation (i.e., the importance of public impression); (2) the usefulness of this contact (i.e., how can researchers utilize this information). In an effort to facilitate positive impressions regarding mental illness, the media needs to become involved. Unfortunately, current situations about attitudes toward people with mental illness do not seem favorable in the mass media. Corrigan and Penn (1999) revealed the misconceptions that film and print representations commit about mental illness: "People with mental illness are homicidal maniacs who need to be feared, they have childlike perceptions of the world that should be marveled or they are rebellious, free spirits" (p. 766). Also, Arboleda-Florez (2003) asserts that the media describe people with mental illness as unpredictable, violent, dangerous, and usually involved in a serious crime scene, which is opposite of the true: The overall percentage of mental illness to the total level of crimes in society is exceptionally small (Arboleda-Florez, 2003). Therefore, the role of mass media should be considered one of important factors in reducing stigma about mental illness.

In addition to the media's efforts, Adlerfer (1982) argued that schools and other academic settings formally acknowledge and facilitate contact experience since institutional supports make interpersonal contacts more effective. For example, principals

in a school could publicly approve and promote contact programs (Corrigan & Penn, 1999). Although it seems like a difficult task to find optimal conditions to reduce stigma for impersonal public contact between people with mental illness and other members of the public, organizations such as the National Alliance for the Mentally Ill (NAMI) have been trying various ways to achieve this mission. NAMI makes speakers' bureaus through their local affiliates, which give persons who are willing to discuss their experiences of mental illness opportunities to present in churches, civic groups, schools, and businesses (Watson & Corrigan, 2001).

In conclusion, the findings from this research have important implications for future programming and practice. The findings will help inform future educational programs for college students as well as students in formal school systems. The patterns shown in the results suggest that there is a need to develop interventions regarding attitudes and stigma according to different population subgroups such as gender, cultural characteristics, varied contact experiences, and nationality, with respect to the types of different mental illness. The results from the current study disagree with the large-scale, uniformly educational campaigns designed to attempt to improve awareness or knowledge of mental illness in general because not only are people affected by different factors and attitudes, but they also possess different stereotypical views of the mentally ill. Therefore, specific strategies according to the characteristics of the populations who take the intervention should be designed in an effort to maximize the effect of stigma reduction programs.

Contributions

The current study offers several contributions to mental health area.

First, this research focused on a specific attitude, employability, rather than general attitudes, toward people with mental illness. Considering the benefits from employment for the people suffering from mental illness, specific work related attitudes must be examined. Mayville and Penn (1998) also suggest, "Attitudes and behavior should be measured at the same level of specificity; for example, the specific behavior of hiring persons with mental illness will be better predicted by a specific attitudes (e.g., how one feels about hiring persons with mental illness) rather than a general attitudes (e.g., attitudes toward persons with severe mental illness in general)" (p. 251). The effort in the current study to assess specific attitudes about employability may help to create effective ways to intervene the work environment for people with mental illness.

Second, this research collected original data from college students. Although many studies have been examined the employers' attitudes toward people with mental illness, there is little empirical data on students' attitudes about employability such as the job ability or work situation of people having mental illness. There are some advantages with focusing on college students: (1) Openness, (2) proactive interventions for future employers, and (3) easiness to connect with community. Students' openness may influence their sensitivity to the assets and abilities that individuals hold rather than restrictions of a specific disability (Byrd, Byrd, & Emener, 1977). Therefore, students have more possibility to approach people with disability and to change their attitudes. Next, college students are the future leaders of business and community organizations that proper programs or educations about employability of people with mental illness will help a new generation of leaders practice rightly in the workplace. As far as easiness to

connect with community, university resources can promote community intervention for both people with mental illness and college students. For example, Stein, Ward, and Cislo (1992) arranged a collaborative project between Midwestern university and a local mental health center designed to help both people with mental illness and undergraduates to enhance interpersonal skills and to increase their social relationships for one semester (15 weeks) course with 14 mental health center clients and 14 college students. This project produced successful lessons about mental illness acquired in a context of personal contact. Therefore, studies based on university resources such as college students and courses could provide good environment to improve communities' mental health

Another contribution of this research is that it included various contact characteristics, which covered both quantitative and qualitative aspects such as contact types, contact frequency, and contact valence. The specified contact characteristics are expected to provide for a clearer understanding of how different forms of contact relate to stigma. Consequently, the findings will facilitate the development of effective contact-related stigma interventions.

The fourth contribution is regarding the method of analysis for cross-cultural studies. Many cross-cultural studies utilize T-test or ANOVA (Choi & Lam, 2001; Gellis et al., 2003; Hashimoto, Elia, & Chambliss, 2002; Yoo, 2001) to examine which nation/country has more positive or negative attitude about mental illness. However, such a simple comparative method does not provide information regarding specific mechanisms occurring within each cultural context. On the contrary, Structural Equation Model (SEM) may reveal approaches on how to organize, begin, and apply the intervention programs for different cultural contexts. In addition, SEM enables researchers to examine the effect of mediators. Baron and Kenny (1986) strongly stressed

the use of SEM for examining the effect of mediation because SEM can answer the questions of "how" and "why" an effect takes place. As a result, the data from SEM might also provide the way to implement successful interventions into culturally different contexts.

Lastly, this study employed web-based surveys to obtain the data for long-distanced research. Little research has been conducted with web-based survey in the area of mental heath attitude. As the use of the Internet and worldwide web increase in popularity, web-based surveys are proposed to be useful way to collect data. The Internet survey provides not only researchers who want to conduct their research through international contexts with the more efficient and the easier way to get the data, but it also allows respondents affordable access to participate in the studies of interest (Couper, 2000; Rainie, 2001).

Limitations

The first limitation of the current study is that it focused on attitudes rather than on behavior. Gibson and Groeneweg (1986) conducted interviews with Canadian employers and found that two thirds of the employers interviewed responded willingness to hire people with developmental disabilities but only a third agreed to receive immediate job applications. These findings showed the discrepancy between attitudes and behaviors for immediate hiring. Similar result appeared in Krauss' (1995) research, which found that mean association between attitudes and future behavior was approximately .39. Krauss (1995) concluded that changing attitudes does not assure changing behavior. Therefore, the observed effects on attitudes should not be considered as the same direction of effects on behaviors (Eagly & Chaiken, 1993). Therefore, it is not certain,

through results from self-report data, whether people, whose views positively modify, also adjust their behavior or not.

However, Myers (1990) agreed to the link between attitudes and behaviors. He stated, “Studying and understanding attitude is important for three major reasons: (1) attitudes guide our thoughts; (2) attitudes influence our feelings; and (3) attitudes affect our behavior” (p. 90). Moreover, the current study has some advantages to moderate disconnection of attitudes with behaviors. First, the current study examined the specific attitude, employability, rather than general attitudes about mental illness. Yuker (1995) proposes that the relationship between attitudes and behaviors to a great extent relies on how each variable is measured. In other words, the relationship would be more secure than measuring general attitudes in case the measurement gauges a specific behavior. The other advantage to overcome the gap between attitudes and behavior is from the mode of collecting data. According to Kolodaiej and Johnson (1999), social desirability is the one of reasons for the difference between attitudes and behaviors. Social desirability could drive subjects into responding more positive attitudes than what they actually behave (Stuart & Arboleda-Florez, 2001). When compared to face-to-face interview or telephone survey methods, web-based surveys, due to the confidentiality and anonymity, guard against the social desirability tendency (Richman, Kiesler, Weisband, & Drasgow, 1999).

The second limitation is in regards to the method of sampling. Even if the current study was supposed to make a comparison between countries, the convenience sample of Korean students, residing in Seoul and Daegu, and American students, residing Raleigh, NC, should not be representative of all Korean and American students. Therefore, the result from the current study should be careful when it is generalized into either population.

Another possible problem is that this research was conducted in the way of a retrospective method. Couture and Penn (2003) pointed out one of the limitations about retrospective studies on previous contact with mental illness, “It seems reasonable to assume that people with less stigmatizing attitudes toward a group would be more likely to interact with members of that group than people who have more negative attitudes” (p. 296). In other words, subjects with less negative attitudes may engage in more contact with people suffering from mental illness. Therefore, future studies using experimental research design is needed to clarify the causal relationships between the contact and the attitudes.

The last limitation is in regards to the translated measurements. This research used several measurements that had not been translated into Korean before being employed for the current study. Thus, the current study had to follow proper procedure to translate the measurements. The scales had been translated following the guidelines for cross-cultural research in an effort to make sure that the two language versions of measurements were as similar as possible. Nevertheless, these scales were developed in the U.S. in which inherently carried a potential cultural bias. Further research needs to account for biases as well as compare the translated and English versions in order to show no significant loss in meaning.

CONCLUSIONS

Stigma continues to be the fatal factor to improved quality of life for people with mental illness (Hinshaw & Cicchetti, 2000; Jonstone, 2001). Harnois and Gabriel (2000) announced that stigma causes inequalities, segregation, and discrimination, as well as prevents people with mental illness from reintegrating into society. Hand and Tryssenaar (2006) argue that, in order to successfully integrate back into society, "Efforts to decrease stigma through education, facilitation of positive interactions, and legislation change could greatly improve the hiring rate, community participation, and ultimately, quality of life of people with mental illness" (p. 172). In particular, employment for people with mental illness should be an important issue. Employment affords them an avenue to reintegrate, as well as assure financial security and higher life satisfaction, since unemployment or underemployment results in decreased income, lower quality of life, and self-worth for people with mental illness (Eklund, Hansson, & Bejerholm, 2001; Kirsch, 2000). Although the current study focused on an individual's characteristics affecting attitudes about employability of people with mental illness, Arboleda-Florez (2003) stresses that successful community management of mental illness depends strongly on the efforts of many levels of government, social institutions, various advocacy, community-service group, clinicians, caregivers, the public at large, consumers, and their families.

The current study's findings demonstrated that there exist different attitudes about employability according to symptoms of mental illness. Depression received more positive work opportunities while schizophrenia was considered to possess symptoms that lead to negative attitudes about employability. In terms of cultural context, the U.S. and Korea revealed different structural relationships that aided in building attitudes about

employability among the various characteristics of college students. Lastly, previous contact found powerful factors to form positive attitudes about employability as well as an effective mediation. These results provide potentially useful information regarding stigma reduction interventions in the workplace.

Our communities exist with various levels of diverse groups: the rich and the poor, men and women, young and older, majority and minority, disabled and non-disabled. Individuals belong to more than one of these groups and sometimes may change membership to another counterpart group. Group membership is such an important aspect in life that people pursue the benefits of their own groups and struggle for keeping their privileges or acquiring their rights. However, we should not forget that society is a place where all humans live together. Therefore, society needs to balance the power for all groups. Unfortunately, our societies have been always inclined toward majorities such as the rich, men, non-disabled rather than the poor, women, disabled. It should be of very great value that people with mental illness live together within our community without inequality, discrimination, and disparity. People with mental illness are also our neighbors, our friends, our family, and might be ourselves.

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APPENDICES

Appendix A

IRB approved form

We are asking you to participate in a research study. The purpose of this study is to know what college students think about issues related to psychology and culture.

If you agree to participate in this study, you will be asked to fill out several questionnaires and it will take around 45 minutes to 50 minutes.

You should not experience any risk or discomfort from this research.

The information in the study records will be kept strictly confidential. All information gathered during this survey will be used only for this research study and only the researchers will have access to the data. No identifying names will be used during any of the data reporting. No reference will be made in oral or written reports which could link you to the study.

You will receive two research credits for Psy 200, as compensation for participating in this research.
Your participation in this study is voluntary; you may decline to participate without penalty. If you decide to participate, you may withdraw from the study at any time without penalty. If you withdraw from the study before data collection is completed, your data will be returned to you or destroyed at your request.

If you have questions at any time about the study or the procedures, you may contact the researcher, Seungah Ryu, at sryu@ncsu.edu or (302) 384-1887. If you feel you have not been treated according to the descriptions in this form, or your rights as a participant in research have been violated during the course of this project, you may contact Dr. David Kaber, Chair of the NCSU IRB for the Use of Human Subjects in Research Committee, Box 7514, NCSU Campus (919/515-3086) or Mr. Matthew Ronning, Assistant Vice Chancellor, Research Administration, Box 7514, NCSU Campus (919/513-2148).

By clicking "NEXT" box below, you agree to participate in this survey as the following statement.

"I have read and understand the above information. I have received a copy of this form. I agree to participate in this study with the understanding that I may withdraw at any time."

Appendix B

Locus of control - English Version

1.	( )	Children get into trouble because their parents punish them too harshly.
	( )	The trouble with most children nowadays is that their parents are too easy with them.
2.	( )	Many of the unhappy things in people's lives are partly due to bad luck.
	( )	People's misfortunes result from the mistakes they make.
3.	( )	One of the major reasons why we have wars is because people don't take enough interest in politics.
	( )	There will always be wars, no matter how hard people try to prevent them.
4.	( )	In the long run people get the respect they deserve in this world.
	( )	Unfortunately, an individual's worth often passes unrecognized no matter how hard he tries.
5.	( )	The idea that teachers are unfair to students is nonsense.
	( )	Most students don't realize the extent to which their grades are influenced by accidental happenings.
6.	( )	Without the right breaks one cannot be an effective leader.
	( )	Capable people who fail to become leaders have not taken advantage of their opportunities.
7.	( )	No matter how hard you try some people just don't like you.
	( )	People who can't get others to like them don't understand how to get along with others.
8.	( )	Heredity plays the major role in determining one's personality.
	( )	It is mainly one's experiences in life which determine what they're like.
9.	( )	I have often found what is going to happen, will happen.
	( )	Trusting to fate has never turned out as well for me as making a decision to take a definite course of action.
10.	( )	In the case of the well prepared student there is rarely if ever such a thing as an unfair test.
	( )	Many times exam questions tend to be so unrelated to course work that studying is often useless.
11.	( )	Becoming a success is a matter of hard work. Luck has little or nothing to do with it.
	( )	Getting a good job depends mainly on being in the right place at the right time.
12.	( )	The average citizen can have an influence in government decisions.
	( )	This world is run by the few people in power, and there is not much the little guy can do about it.
13.	( )	When I make plans, I am almost certain that I can make them work.
	( )	It is not always wise to plan too far ahead because many things turn out to be a matter of good or bad fortune.
14.	( )	There are certain people who are just no good.
	( )	There is some good in everybody.
15.	( )	In my case getting what I want has little or nothing to do with luck.
	( )	Many times we might just as well decide what to do by flipping a coin.

16.	( )	Who gets to be the boss often depends on who was lucky enough to be in the right place first.
	( )	Getting people to do the right thing depends upon ability, and luck has little or nothing to do with it.
17.	( )	As far as world affairs are concerned, most of us are the victims of forces we can neither understand, nor control.
	( )	By taking an active part in political and social affairs the people can control world events.
18.	( )	Most people don't realize the extent to which their lives are controlled by accidental happenings.
	( )	There really is no such thing as "luck".
19.	( )	One should always be willing to admit mistakes.
	( )	It is usually best to cover up one's mistakes.
20.	( )	It is hard to know whether or not a person really likes you.
	( )	How many friends you have depends upon how nice a person you are.
21.	( )	In the long run the bad things that happen to us are balanced by the good ones.
	( )	Most misfortunes are the result of lack of ability, ignorance, laziness, or all three.
22.	( )	With enough effort we can wipe out political corruption.
	( )	It is difficult for people to have much control over the things politicians do in office.
23.	( )	Sometimes I can't understand how teachers arrive at the grades they give.
	( )	There is a direct connection between how hard 1 study and the grades I get.
24.	( )	A good leader expects people to decide for themselves what they should do.
	( )	A good leader makes it clear to everybody what their jobs are.
25.	( )	Many times 1 feel that I have little influence over the things that happen to me.
	( )	I don't believe that chance or luck plays an important role in my life.
26.	( )	People are lonely because they don't try to be friendly.
	( )	There's not much use in trying too hard to please people. If they like you, they like you.
27.	( )	There is too much emphasis on athletics in high school.
	( )	Team sports are an excellent way to build character.
28.	( )	What happens to me is my own doing.
	( )	Sometimes I feel that I don't have enough control over the direction my life is taking.
29.	( )	Most of the time I can't understand why politicians behave the way they do.
	( )	In the long run the people are responsible for bad government on a national as well as on a local level.

Note:

1. Score one point for each of the following:
   2.a, 3.b, 4.b, 5.b, 6.a, 7.a, 9.a, 10.b, 11.b, 12.b, 13.b, 15.b, 16.a, 17.a, 18.a, 20.a, 21.a, 22.b, 23.a, 25.a, 26.b, 28.b, 29.a.
2. A high score = External Locus of control / A low score = Internal Locus of control

Appendix C

Locus of control - Korean Version

1. ( )	아이들이 빗나가는 것은 부모가 너무 야단을 치기 때문이다.
( )	아이들이 빗나가는 것은 부모가 너무 얼러 기르기 때문이다.
2. ( )	일어날 일은 기어코 일어나고야 만다.
( )	노력하지 않고 운수만 믿을 때에는 결과가 아주 좋지 않다.
3. ( )	세상은 착실한 사람이 손해를 보게 마련이다.
( )	착실히 사는 것이 세상을 가장 잘 사는 방법이다.
4. ( )	자식은 가르치기 나름이다.
( )	아무리 가르쳐도 안 될 아이는 안된다.
5. ( )	사람은 모두 이기적이다.
( )	사람의 본성은 남을 돕기를 좋아한다.
6. ( )	계획만 잘 짜면 일은 다 된 거나 다름없다.
( )	아무리 계획을 잘 짜도 운이 나빠 그르치는 수가 있다.
7. ( )	하려고만 하면 부정부패는 일소할 수 있다.
( )	정치인들이 하는 일에 일반인이 손을 쓰기란 대단히 힘들다.
8. ( )	해야 할 일을 스스로 결정하도록 하는 사람이 좋은 지도자이다.
( )	해야 할 일을 분명히 정해 주는 사람이 좋은 지도자이다.
9. ( )	주는 것 없이 미운 사람은 어쩔 수 없이 밉다.
( )	사람은 사귀어 보면 다 좋다.
10. ( )	사람에 대한 불평등을 없애기 위해서는 국민 각자가 자기의 권리를 지키고 주장해야 한다.
( )	사회의 모든 불평등을 없애기 위해서는 집권자 자신의 이해와 노력이 있어야 한다.
11. ( )	내가 노력해야 좋은 배필을 만난다.
( )	연분이 닿아야 좋은 배필을 만난다.
12. ( )	자기의 잘못은 기꺼이 받아들이는 것이 옳다.
( )	잘못은 했지만 덮어 두는 것이 좋을 때가 더러 있다.
13. ( )	잘 살고 못 살고는 팔자 소관이다.
( )	얼마나 잘 사느냐는 내가 얼마나 열심히 일했는가에 달려 있다.
14. ( )	국민도 나라 일에 영향을 줄 수 있다.
( )	일반 국민은 나라 일에 왈가왈부해 봤자 소용없다.
15. ( )	될성부른 나무는 떡잎부터 알아본다.
( )	공든 탑은 무너지지 않는다.

16. ( )	사회의 부정은 대개 정치인들에게 잘못이 있어 그렇다.
( )	사회의 부정은 국민 하나 하나에 그 책임이 있다.
17. ( )	세계적으로 일어나는 일에 대해서는 우리로서는 어쩔 수 없다.
( )	정치 및 사회적인 일에 적극 참여하면 우리는 세계적으로 일어나는 일에 영향을 미칠 수 있다.
18. ( )	사람이란 결국 자기의 값어치에 따라 존경을 받게 마련이다.
( )	불행한 일이긴 하나 제 아무리 노력해도 그 가치를 인정 받지 못하는 일이 가끔 있다.
19. ( )	돈은 먹고 살 수 있을 정도만 벌면 된다.
( )	돈은 많이 벌면 벌수록 좋다.
20. ( )	농사가 잘 되는 것은 하늘의 소관이다.
( )	농사가 잘 되고 안 되는 것은 그저 부지런히 일하는 데 달렸다.
21. ( )	유능한 사람이라도 운이 나쁘면 지도자가 될 수 없다.
( )	유능하면서도 지도자가 못 되는 것은 그 사람이 자기의 모든 기회를 활용하지 않았기 때문이다.

Note:

1. Score one point for each of the following:
   2.a, 3.a, 4.b, 6.b, 7.b, 8. b, 10.b, 11.b, 13.a, 14.b, 16.a, 17.a, 18.b, 20.a, 21. a.
2. A high score = External Locus of control / A low score = Internal Locus of control

Appendix D

Self-esteem - English Version

		1 STRONGLY DISAGREE	2 DISAGREE	3 AGREE	4 STRONGLY AGREE
1.	I feel that I'm a person of worth, at least on an equal plane with others.	1	2	3	4
2.	I feel that I have a number of good qualities.	1	2	3	4
3.	All in all, I am inclined to feel that I am a failure.**	1	2	3	4
4.	I am able to do things as well as most other people.	1	2	3	4
5.	I feel I do not have much to be proud of.**	1	2	3	4
6.	I take a positive attitude toward myself.	1	2	3	4
7.	On the whole, I am satisfied with myself.	1	2	3	4
8.	I wish I could have more respect for myself.**	1	2	3	4
9.	I certainly feel useless at times.**	1	2	3	4
10.	At times I think I am no good at all.**	1	2	3	4

** Reversed items (3, 5, 8, 9, 10) before scoring in analysis

Appendix E

Self-esteem - Korean Version

		항상 그렇지 않다.	대체로 그렇지 않다.	대체로 그렇다.	항상 그렇다.
1.	나는 내가 다른 사람들처럼 가치 있는 사람이라고 생각한다.	1	2	3	4
2.	나는 좋은 성품을 가졌다고 생각한다.	1	2	3	4
3.	나는 대체적으로 실패한 사람이라는 느낌이 든다.**	1	2	3	4
4.	나는 대부분의 다른 사람들과 같이 일을 잘 할 수가 있다.	1	2	3	4
5.	나는 자랑할 것이 별로 없다.**	1	2	3	4
6.	나는 내 자신에 대하여 긍정적인 태도를 가지고 있다.	1	2	3	4
7.	나는 내 자신에 대하여 대체로 만족한다.	1	2	3	4
8.	나는 내 자신을 좀 더 존경할 수 있으면 좋겠다.**	1	2	3	4
9.	나는 가끔 내 자신이 쓸모 없는 사람이라는 느낌이 든다.**	1	2	3	4
10.	나는 때때로 내가 좋지 않은 사람이라고 생각한다.**	1	2	3	4

** Reversed items (3, 5, 8, 9, 10) before scoring in analysis

Appendix F

Individualism-Collectivism Scale (INDCOL) - English Version

1. My happiness depends very much on the happiness of those around me.
2. Winning is everything.
3. I usually sacrifice my self-interest for the benefit of my group.
4. It annoys me when other people perform better than I do.
5. It is important to maintain harmony within my group.
6. It is important that I do my job better than others.
7. I like sharing little things with my neighbors.
8. I enjoy working in situations involving competition with others.
9. The well-being of my co-workers is important to me.
10. I often do “my own thing”.
11. If a relative were in financial difficulty, I would help within my means.
12. Competition is the law of nature.
13. If a co-worker gets a prize, I would feel proud.
14. I like my privacy.
15. To me, pleasure is spending time with others.
16. When another person does better than I do, I get tense and aroused.
17. Children should be taught to place duty before pleasure.
18. Without competition, it is not possible to have a good society.
19. I feel good when I cooperate with others.
20. Some people emphasize winning; I’m not one of them.*
21. I would do what would please my family, even if I detested that activity.
22. One should live one’s life independently of others.
23. Children should feel honored if their parents receive a distinguished award.
24. What happens to me is my own doing.
25. We should keep our aging parents with us at home.
26. I prefer to be direct and forthright when discussing with people.
27. I would sacrifice an activity that I enjoy very much if my family did not approve of it.
28. When I succeed, it is usually because of my abilities.
29. I hate to disagree with others in my group.
30. I am a unique individual.
31. Before taking a major trip, I consult with most members of my family and many friends.
32. I enjoy being unique and different from others in many ways.

Note:
1. Item number 20 is reversed prior to subscale scoring.
2. Even numbers are Individualism items and odd numbers are Collectivism items.

Appendix G

Individualism-Collectivism Scale (INDCOL) - Korean Version

1. 내 주변에 있는 사람들이 행복해야 나도 행복하다.
2. 어느 경쟁에서나 이기는 것이 가장 중요하다.
3. 내가 속한 집단을 위해 나의 이익을 양보한다.
4. 다른 사람들보다 어떤 일을 못한다면 기분이 언짢다.
5. 내가 속한 집단의 구성원들과 사이 좋게 지는 것이 중요하다.
6. 내가 매사에 다른 사람들보다 더 잘해야 한다.
7. 나는 이웃과 사소한 것도 나누는 것을 즐긴다.
8. 격렬한 경쟁 사회에 참여하는 것을 즐긴다.
9. 나의 동료가 잘 되는 것이 나에게 중요하다.
10. 나는 내 방식대로 산다.
11. 만일 친인척이 재정적인 어려움을 겪고 있다면, 나는 능력이 되는 데까지 도와줄 것이다.
12. 경쟁은 삶의 원천이다.
13. 만일 동료가 상을 탄다면 나도 자부심을 느낄 것이다.
14. 나만의 개성을 추구하는 것은 나에게 중요하다.
15. 나의 즐거움은 다른 사람들과 함께 있는 것이다.
16. 다른 사람들이 나보다 좋은 성과를 얻었을 때 나는 자극받아 더 노력하게 된다.
17. 아이들은 자기 할 일을 먼저 한 다음에 놀아야 한다.
18. 경쟁 없이는 좋은 사회를 만들 수 없다.
19. 사람들과 함께 어떤 일을 같이 할 때 기분이 좋다.
20. 어떤 사람들은 이기는 것을 중요시하지만 나는 그런 사람이 아니다.
21. 내가 속한 집단들의 결정 사항을 존중하는 것이 나에게 중요하다.
22. 나는 다른 사람들에게 의존하기보다는 나에게 의존한다.
23. 가족들은 어떠한 희생이 요구된다 하더라도 서로 단결해야 한다.
24. 다른 사람들을 믿기보다는 나 자신을 믿는다.
25. 부모님들과 자식들은 가능한 한 함께 살아야 한다.
26. 다른 사람과 달리 독립적인 인격체가 되는 것이 나에게 중요하다.
27. 내가 원하는 것을 희생해서라도 나의 가족을 부양해야 한다.
28. 나는 내가 하나의 인격체라는 사실이 중요하다.
29. 나는 내가 속한 집단의 대다수의 의견을 존중한다.
30. 나는 다름 사람과는 구별되는 독특한 사람이다.
31. 어떤 일을 결정하기 전에 친한 친구의 의견과 자문을 구하는 것이 중요하다.
32. 나는 독특한 개성을 가지고 있는 것을 자랑스럽게 생각한다.

Note:
1. Item number 20 is reversed prior to subscale scoring.
2. Even numbers are Individualism items and odd numbers are Collectivism items.

Appendix H

School-based program regarding mental illness - English Version

Following questions are related to the educational experience for mental illness. Please, check the level that you experienced.

1. Was Mental illness (excluding drug or alcohol) in Elementary school....	Never	Once or twice	Often	Many times
a. discussed during a class?	1	2	3	4
b. discussed at a assembly forum?	1	2	3	4
c. presented with written materials?	1	2	3	4

2. If you had other educational experience for mental illness (excluding drug or alcohol) in Elementary school, please, describe.

3. Was Mental illness (excluding drug or alcohol) in Middle school....	Never	Once or twice	Often	Many times
a. discussed during a class?	1	2	3	4
b. discussed at a assembly forum?	1	2	3	4
c. presented with written materials?	1	2	3	4

4. If you had other educational experience for mental illness (excluding drug or alcohol) in Middle school, please, describe.

5. Was Mental illness (excluding drug or alcohol) in High school....	Never	Once or twice	Often	Many times
a. discussed during a class?	1	2	3	4
b. discussed at a assembly forum?	1	2	3	4
c. presented with written materials?	1	2	3	4

6. If you had other educational experience for mental illness (excluding drug or alcohol) in High school, please, describe.

Appendix I

School-based program regarding mental illness - Korean Version

정신장애와 관련된 교육을 받은 경험에 관한 질문입니다. 자신의 경험을 잘 생각해 보시고 답해주십시오.

1. 초등학교에서 다음과 같은 종류의 정신장애 (음주나 마약등은 제외) 교육을 받은 적이 있습니까?	전혀 없음	한 두 번	자주	아주 많음
ㄱ. 수업시간에 토론을 통한 교육	1	2	3	4
ㄴ. 포럼이나 세미나를 통한 교육	1	2	3	4
ㄷ. 인쇄된 책자나 자료배부를 통한 교육	1	2	3	4

2. 초등학교에서 받은 정신장애에 대한 교육 (음주나 마약등은 제외) 이 위에서 제시된 것과 다른 종류의 교육을 받은 경험이 있다면 적어주십시오.

3. 중학교에서 다음과 같은 종류의 정신장애 (음주나 마약등은 제외) 교육을 받은 적이 있습니까?	전혀 없음	한 두 번	자주	아주 많음
ㄱ. 수업시간에 토론을 통한 교육	1	2	3	4
ㄴ. 포럼이나 세미나를 통한 교육	1	2	3	4
ㄷ. 인쇄된 책자나 자료배부를 통한 교육	1	2	3	4

4. 중학교에서 받은 정신장애에 대한 교육 (음주나 마약등은 제외) 이 위에서 제시된 것과 다른 종류의 교육을 받은 경험이 있다면 적어주십시오.

5. 고등학교에서 다음과 같은 종류의 정신장애 (음주나 마약등은 제외) 교육을 받은 적이 있습니까?	전혀 없음	한 두 번	자주	아주 많음
ㄱ. 수업시간에 토론을 통한 교육	1	2	3	4
ㄴ. 포럼이나 세미나를 통한 교육	1	2	3	4
ㄷ. 인쇄된 책자나 자료배부를 통한 교육	1	2	3	4

6. 고등학교에서 받은 정신장애에 대한 교육 (음주나 마약등은 제외) 이 위에서 제시된 것과 다른 종류의 교육을 받은 경험이 있다면 적어주십시오.

Appendix J

Contact Experience - English Version

1. Have you contacted with the person as the following each case?

(1) I have had a parent, who has had a mental illness.	Yes	No
(2) I have had a spouse who has had a mental illness.	Yes	No
(3) I have had a child who has had a mental illness.	Yes	No
(4) I have had a sibling who has had a mental illness.	Yes	No
(5) I have had relatives who have had a mental illness.	Yes	No
(6) I have had friends who have had a mental illness.	Yes	No
(7) I have worked with people with mental illness.	Yes	No
(8) I have volunteered with people for mental illness.	Yes	No
(9) I have seen someone who appeared to be mentally ill in a public place.	Yes	No

2. For the case that you answered 'yes', how often have (had) you contacted to the person?

	Never	Once or twice	A few times	Often	Very often (almost everyday)
(1) parent	1	2	3	4	5
(2) spouse	1	2	3	4	5
(3) child	1	2	3	4	5
(4) sibling	1	2	3	4	5
(5) relatives	1	2	3	4	5
(6) friends	1	2	3	4	5
(7) working with	1	2	3	4	5
(8) when volunteering	1	2	3	4	5
(9) in a public place	1	2	3	4	5

3. Again, how do you feel about the person in each case?

	Strongly negative	Negative	both negative and positive	Positive	Strongly positive
(1) parent	1	2	3	4	5
(2) spouse	1	2	3	4	5
(3) child	1	2	3	4	5
(4) sibling	1	2	3	4	5
(5) relatives	1	2	3	4	5
(6) friends	1	2	3	4	5
(7) working with	1	2	3	4	5
(8) when volunteering	1	2	3	4	5
(9) in a public place	1	2	3	4	5

Appendix K

Contact Experience - Korean Version

1. 다음의 각 경우에 해당하는 정신장애인을 접촉한 적이 있습니까?

(1) 나는 정신장애를 가진 부모가 있다 (있었다).	예	아니오
(2) 나는 정신장애를 가진 배우자가 있다 (있었다).	예	아니오
(3) 나는 정신장애를 가진 자녀가 있다 (있었다).	예	아니오
(4) 나는 정신장애를 가진 형제가 있다 (있었다).	예	아니오
(5) 나는 정신장애를 가진 친척이 있다 (있었다).	예	아니오
(6) 나는 정신장애를 가진 친구가 있다 (있었다).	예	아니오
(7) 나는 정신장애인과 일을 하고 있다 (했다).	예	아니오
(8) 나는 정신장애인들을 위해 자원봉사를 하고 있다 (했었다).	예	아니오
(9) 나는 공공장소에서 정신장애인으로 보이는 사람을 본 적이 있다.	예	아니오

2. '있다'라고 답한 경우의 접촉에서, 얼마나 자주 부딪히거나 만나고 있습니까? (만났습니까?)

	전혀	한 두번	여러 번	자주	거의 매일
(1) 부모	1	2	3	4	5
(2) 배우자	1	2	3	4	5
(3) 자녀	1	2	3	4	5
(4) 형제, 자매	1	2	3	4	5
(5) 친척	1	2	3	4	5
(6) 친구	1	2	3	4	5
(7) 동료	1	2	3	4	5
(8) 자원봉사를 통해	1	2	3	4	5
(9) 공공장소	1	2	3	4	5

3. 다시 각 경우에, 그 사람에 대한 느낌은 어떻습니까?

	아주 나쁘다	나쁘다	나쁘기도 하고 좋기도 하다	좋다	아주 좋다
(1) 부모	1	2	3	4	5
(2) 배우자	1	2	3	4	5
(3) 자녀	1	2	3	4	5
(4) 형제, 자매	1	2	3	4	5
(5) 친척	1	2	3	4	5
(6) 친구	1	2	3	4	5
(7) 동료	1	2	3	4	5
(8) 자원봉사를 통해	1	2	3	4	5
(9) 공공장소	1	2	3	4	5

Appendix L

Attitudes Towards the Employability of Persons with Severe Disabilities (ATTEMP) - English Version

1. In competitive work sites, people with mental illness can learn appropriate social skills. (ACE)
2. With appropriate support services, people with mental illness can be dependable workers in the community. (ACE)
3. A controlled job simulation environment is more suitable for people with mental illness than is actual on-the-job training. (DCE)
4. Competitive employment enables people with mental illness the opportunity to lead relatively normal lives. (ACE)
5. No amount of training can prepare people with mental illness for competitive employment. (ACE) *
6. Competitive employment settings enhance the productivity of people with mental illness. (ACE)
7. Most parents of people with mental illness prefer that they be placed in sheltered workshops rather than in competitive employment settings. (DCE)
8. Employers are general resistant to hiring workers with mental illness. (DCE)
9. Income earned from competitive employment can change the quality of life for people with mental illness. (ACE)
10. The productivity of coworkers decreases when they work with individuals with mental illness. (DCE)
11. The natural job setting provides too many distractions that impede the vocational training process for people with mental illness. (DCE)
12. Exposure to people with mental illness in job settings promotes positive attitudes on the part of coworkers without mental illness. (ACE)
13. People with mental illness present the employer with absence and punctuality problems. (DCE)
14. People with mental illness can be trained for competitive employment. (ACE)
15. On-the-job training at community-based work sites is effective for people with mental illness. (ACE)
16. Coworkers without mental illness are not likely to interact with workers with mental illness. (DCE)
17. Mistreatment and abuse of people with mental illness by co-workers are frequent occurrences. (DCE)
18. Frustration experience by people with mental illness at real work sites is greater than that experienced in sheltered workshops. (DCE)
19. It is possible for people with mental illness to receive appropriate job training in the community. (ACE)

20. Competitive employment for people with mental illness takes jobs away from workers without mental illness. (DCE)
21. Productivity rates of workers with mental illness can be as high as those of workers who are not handicapped. (ACE)

Note.

1. Competitive employment refers to paid work in integrated settings, where they earn wages based upon the quality of their work, their productivity rates, and the prevailing minimum wages.
2. Sheltered workshops mean special facilities that employ only people with mental illness.
3. ACE (Appropriateness of Comparative Employment) or DCE (Disadvantages of Competitive Employment) in parentheses after each item designates with of the two subscales the item belongs to.
4. Item number 5 of ACE and 3, 7, 8, 10, 11, 13, 16, 17, 18, 20 (all DCEs) are reversed prior to subscale scoring.

Appendix M

Attitudes Towards the Employability of Persons with Severe Disabilities (ATTEMP) –Korean Version

1. 비정신 정애인들과 함께 일하는 일터에서 정신 장애인들은 적절한 사회적 기술을 배울 수 있다. (ACE)
2. 적절한 지원체계가 동반된다면 정신 장애인들도 지역사회에서 신뢰 받는 일꾼이 될 수 있다. (ACE)
3. 정신 장애인들이 직업훈련을 받을 때는 실제 직업현장보다 적절히 통제된 모의환경이 더 적합하다. (DCE)
4. 정신 장애인들이 비정신 장애인들에 뒤지지 않는 직업을 갖는다면 어느 정도 정상적인 삶을 이끌어갈 수 있을 것이다. (ACE)
5. 정신 장애인들이 비정신 장애인들과 경쟁성을 가질 수 있는 직업을 준비하는 것은 소용없는 일이다. (ACE)*
6. 비정신 장애인들과 함께 일하는 작업환경은 정신 장애인들의 생산성을 향상시킨다. (ACE)
7. 중증정신장애인의 부모들은 자녀가 일반인들과 함께 일하는 곳보다 정신장애인으로서 보호 받는 일터에서 일하는 것이 낫다고 생각한다. (DCE)
8. 고용주들은 일반적으로 정신 장애인들을 고용하지 않으려고 한다. (DCE)
9. 비정신장애인과 동등하거나 그 이상 수준의 직업을 통해 얻는 수입은 정신장애인의 삶의 질을 변화시킬 수 있다. (ACE)
10. 비정신 장애인들이 정신 장애인들과 함께 일한다면 비정신 장애인들의 생산성은 떨어질 것이다. (DCE)
11. 실제 직장환경은 정신 장애인들이 직업훈련을 받기 어려운 방해 요소들을 매우 많이 안고 있다. (DCE)
12. 비정신 장애인들이 직장동료로서 정신 장애인들과 함께 일한다면 정신장애인에 대한 긍정적인 태도를 가질 수 있다. (ACE)
13. 정신 장애인들은 출석이나 시간약속에 있어 문제를 일으킬 수 있다. (DCE)
14. 정신장애를 가진 이들도 비정신장애인에 뒤지지 않는 직업기술을 익힐 수 있다. (ACE)
15. 지역사회복지관이나 공공기관에서 하는 직업훈련은 정신 장애인들에게 도움이 된다.(ACE)
16. 비정신장애인은 정신장애 동료들과 대화나 접촉을 하지 않으려고 한다. (DCE)
17. 비정신 장애인들에 의한 정신 장애인들의 차별이나 학대를 자주 볼 수 있다. (DCE)
18. 정신 장애인들은 직업훈련이나 워크샵보다 실제 일터에서 좌절을 훨씬 더 크게 느낀다. (DCE)
19. 정신 장애인들이 지역사회에서 적절한 직업훈련을 받는 것이 가능하다. (ACE)
20. 장애인 의무 고용제 등으로, 정신 장애인들이 비정신장애인 수준의 직업을 갖는다는 것은, 비정신 장애인들의 직업기회를 상실한다는 의미이다. (DCE)
21. 정신장애인들의 생산성도 비정신 장애인들 만큼 향상될 수 있다. (ACE)

Appendix N

Social Opportunity Questions –English Version

Are you willing to		DEFINITELY UNWILLING	UNWILLING	WILLING	DEFINITELY WILLING
1	work with A [the name in a vignette] at the same company?	1	2	3	4
2.	have A be your neighbor?	1	2	3	4
3	recommend A for a job working for a friend of yours?	1	2	3	4
4.	be a friend with A?	1	2	3	4
5.	Receive job applications from, interview, or hire A if you were in the position to hire someone?	1	2	3	4
6.	live with A in the same house?	1	2	3	4
7.	be A as your work partner and responsible in the same project?	1	2	3	4

Appendix O

Social Opportunity Questions - Korean Version

		전혀 없다.	없다.	있다.	강하게 있다.
1	예시에 나온 갑 [예시문에 나온 이름] 과 같은 회사에서 일할 의향이 있습니까?	1	2	3	4
2.	예시에 나온 갑과 이웃이 될 의향이 있습니까?	1	2	3	4
3	예시에 나온 갑을 친구회사에 추천할 의향이 있습니까?	1	2	3	4
4.	예시에 나온 갑과 친구가 될 의향이 있습니까?	1	2	3	4
5.	만약 고용주의 입장이라면 갑을 고용할 의향이 있습니까?	1	2	3	4
6.	예시에 나온 갑과 같은 집에서 살 의향이 있습니까?	1	2	3	4
7.	예시에 나온 갑과 같은 프로젝트에서 파트너나 책임자로써 일할 의향이 있습니까?	1	2	3	4

Appendix P

Psychiatric disorder vignettes - English Version

- Man description -

1) Depression

I meet John in the morning when I stop by the coffee shop across the campus. He is a college student and has a part-time job there. He always gives me a big smile and friendly greetings, and he seems to get along well with his co-workers. However, I heard about his history from a friend of mine two weeks ago.

About 2 years ago, John showed the following symptoms.

He started feeling really down. He woke up in the morning with a flat, heavy feeling that sticks with him all day long. He wasn't enjoying things that he normally would. In fact, nothing seemed to give him pleasure. Even when good things happened, they didn't seem to make John happy. He pushed on through his days, but it was really hard. The smallest tasks were difficult to accomplish. He found it hard to concentrate on anything. He felt out of energy and out of steam. And even though John felt tired, when night came he couldn't get to sleep. John felt pretty worthless, and very discouraged. John's family had noticed that he hadn't been himself for about the one month, and that he had pulled away from them. John just didn't feel like talking.

After receiving treatment, John appears to be OK and is doing better now. He takes his medication as prescribed and also attends weekly individual therapy with a psychologist.

2) Alcohol abuse

I meet Mike in the morning when I stop by the coffee shop across the campus. He is a college student and has a part-time job there. He always gives me a big smile and friendly greetings, and he seems to get along well with his co-workers. However, I heard about his history from a friend of mine two weeks ago.

About 2 years ago, Mike showed the following symptoms.

He started to drink more than his usual amount of alcohol during the last month. In fact, he noticed that he needed to drink twice as much as he used to in order to get the same effect. Several times, he tried to cut down, or stop drinking, but he couldn't. Each time he tried to cut down, he became very agitated, sweaty, and he couldn't sleep, so he took another drink. Mike's family complained that he was often hangover, and became unreliable, making plans one day and then canceling them the next.

After receiving treatment, Mike appears to be OK and is doing better now. He takes his medication as prescribed and also attends weekly individual therapy with a psychologist.

3) Troubled person

I meet Sam in the morning when I stop by the coffee shop across the campus. He is a college student and has a part-time job there. He always gives me a big smile and friendly greetings, and he seems to get along well with his co-workers. However, I heard about his history from a friend of mine two weeks ago.

Up until a year ago, life was pretty okay for Sam. While nothing much is going wrong in Sam's life, he sometimes feels worried, a little sad, or has trouble sleeping at night. Sam feels that at times things bother him more than they bother other people and that when things go wrong, he sometimes gets nervous or annoyed. Otherwise, Sam is getting along pretty well and enjoys being with other people. Although Sam sometimes argues with his family, he has been getting along well with his family.

4) Schizophrenia

I meet Paul in the morning when I stop by the coffee shop across the campus. He is a college student and has a part-time job there. He always gives me a big smile and friendly greetings, and he seems to get along well with his co-workers. However, I heard about his history from a friend of mine two weeks ago.

About 2 years ago, Paul showed the following symptoms.

He started thinking that people around him were spying on him and trying to hurt him. He became convinced that people could hear what he was thinking. He also heard voices when no one else was around. Sometimes he even thought people on TV were sending messages especially to him. Paul lost his drive to participate in his usual work and family activities and retreated to his home, eventually spending most of his day in his room. Paul became so preoccupied with what he was thinking that he skipped meals and stopped bathing regularly. At night, when everyone else was sleeping, he was walking back and forth in his room.

After receiving treatment, Paul appears to be OK and is doing better now. He takes his medication as prescribed and also attends weekly individual therapy with a psychologist.

- Woman description -

1) Depression

I meet Jane in the morning when I stop by the coffee shop across the campus. She is a college student and has a part-time job there. She always gives me a big smile and friendly greetings, and she seems to get along well with her co-workers. However, I heard about her history from a friend of mine two weeks ago.

About 2 years ago, Jane showed the following symptoms.

She started feeling really down. She woke up in the morning with a flat, heavy feeling that sticks with her all day long. She wasn't enjoying things that she normally would. In fact, nothing seemed to give her pleasure. Even when good things happened, they didn't seem to make Jane happy. She pushed on through her days, but it was really hard. The smallest tasks were difficult to accomplish. She found it hard to concentrate on anything. She felt out of energy and out of steam. And even though Jane felt tired, when night came she couldn't get to sleep. Jane felt pretty worthless, and very discouraged. Jane's family had noticed that she hadn't been herself for about the one month, and that she had pulled away from them. Jane just didn't feel like talking.

After receiving treatment, Jane appears to be OK and is doing better now. She takes her medication as prescribed and also attends weekly individual therapy with a psychologist.

2) Alcohol abuse

I meet Mary in the morning when I stop by the coffee shop across the campus. She is a college student and has a part-time job there. She always gives me a big smile and friendly greetings, and she seems to get along well with her co-workers. However, I heard about her history from a friend of mine two weeks ago.

About 2 years ago, Mary showed the following symptoms.

She started to drink more than her usual amount of alcohol during the last month. In fact, she noticed that she needed to drink twice as much as she used to in order to get the same effect. Several times, she tried to cut down, or stop drinking, but she couldn't. Each time she tried to cut down, she became very agitated, sweaty, and she couldn't sleep, so she took another drink. Mary's family complained that she was often hangover, and became unreliable, making plans one day and then canceling them the next.

After receiving treatment, Mary appears to be OK and is doing better now. She takes her medication as prescribed and also attends weekly individual therapy with a psychologist.

3) Troubled person

I meet Susan in the morning when I stop by the coffee shop across the campus. She is a college student and has a part-time job there. She always gives me a big smile and friendly greetings, and she seems to get along well with her co-workers. However, I heard about her history from a friend of mine two weeks ago.

Up until a year ago, life was pretty okay for Susan. While nothing much is going wrong in Susan's life, she sometimes feels worried, a little sad, or has trouble sleeping at night. Susan feels that at times things bother her more than they bother other people and that when things go wrong, she sometimes gets nervous or annoyed. Otherwise, Susan is getting along pretty well and enjoys being with other people. Although Susan sometimes argues with her family, she has been getting along well with her family.

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4) Schizophrenia

I meet Kathy in the morning when I stop by the coffee shop across the campus. She is a college student and has a part-time job there. She always gives me a big smile and friendly greetings, and she seems to get along well with her co-workers. However, I heard about her history from a friend of mine two weeks ago.

About 2 years ago, Kathy showed the following symptoms.

She started thinking that people around her were spying on her and trying to hurt her. She became convinced that people could hear what she was thinking. She also heard voices when no one else was around. Sometimes she even thought people on TV were sending messages especially to her. Kathy lost her drive to participate in her usual work and family activities and retreated to her home, eventually spending most of her day in her room. Kathy became so preoccupied with what she was thinking that she skipped meals and stopped bathing regularly. At night, when everyone else was sleeping, she was walking back and forth in her room.

After receiving treatment, Kathy appears to be OK and is doing better now. She takes her medication as prescribed and also attends weekly individual therapy with a psychologist.

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Appendix Q

Psychiatric disorder vignettes - Korean Version

- Man description -

1) 우울장애 (Depression)

나는 아침에 학교 앞 커피전문점에 들을 때마다 철수를 만난다. 그는 우리 학교 학생으로 그 곳에서 아르바이트를 하고 있다. 그의 표정은 항상 밝고 언제나 친절하다. 또한 같이 일하는 사람들과도 잘 지내는 것처럼 보인다.

하지만 나는 며칠 전에 내 친구로부터 철수에 관한 다음의 이야기를 들었다.

약 2년 전, 철수는 힘이 없고 피로하며 몸이 처지는 느낌을 받기 시작했다. 밤에는 잠을 이룰 수가 없었고, 초조하고 쉽게 짜증이 나기도 하였으며 집중력이나 기억력이 저하되기도 하였다. 자신이 무가치하고 삶이 공허하다는 생각이 들면서 한때 즐거웠던 일이나 취미생활에서 의욕 및 흥미를 상실하였다. 철수는 자신의 생각을 바꾸기 위해서 노력하였으나 그럴수록 더 절망적이고, 심지어 죄책감과 무기력감은 깊어졌다. 그의 가족들은 철수의 이런 증상이 한달간 계속되고 있다는 사실을 확인하고 그와 대화를 하려고 시도하였으나 철수는 전혀 그의 상태를 말할 의사를 보이지 않았다.

병원에서 지속적인 치료를 받은 후 철수의 상태는 아주 좋아졌고 퇴원하였다. 철수는 현재 병원에서 처방 해 준 약을 먹고, 일주일에 한번씩 개인 심리치료도 받고 있다.

2) 알코올 중독 (Alcohol abuse)

나는 아침에 학교 앞 커피전문점에 들을 때마다 정환이를 만난다. 그는 우리 학교 학생으로 그 곳에서 아르바이트를 하고 있다. 정환이의 표정은 항상 밝고 언제나 친절하다. 또한 같이 일하는 사람들과도 잘 지내는 것처럼 보인다.

하지만 나는 며칠 전에 내 친구로부터 정환에 관한 다음의 이야기를 들었다.

정환이는 2년 전 이맘 때 다음의 어려운 시기를 겪었다. 그는 약 한달 동안 평소보다 많은 양의 술을 마시기 시작했었고, 본인 스스로도 술이 취한다는 느낌을 받기 위해서 이전의 두 배를 마셔야 한다는 사실을 알게 되었다. 음주에 대한 죄책감으로 몇 번이나 정환이는 술을 끊기 위해서 노력했지만 번번이 실패하였다. 그는 짜증이 나고 잠을 잘 수 없을 때마다 그 핑계로 또 술을 마셨다. 그는 너무나 자주 술에 취해 있고, 약속을 취소하는 일이 많아지자 가족들과 주위 사람들 역시 정환에 대해 많은 불평을 하였다.

병원에서 지속적인 치료를 받은 후 정환의 상태는 아주 좋아졌고 퇴원하였다. 정환은 현재 병원에서 처방 해 준 약을 먹고, 일주일에 한번씩 개인 심리치료도 받고 있다.

3) Troubled person

나는 아침에 학교 앞 커피전문점에 들을 때마다 영수를 만난다. 그는 우리 학교 학생으로 그 곳에서 아르바이트를 하고 있다. 그의 표정은 항상 밝고 언제나 친절하다. 또한 같이 일하는 사람들과도 잘 지내는 것처럼 보인다.

대학생인 영수는 1년 전 까지만 해도 자신의 생활에 불만이 없었다. 요즈음 그는 그의 생활이 크게 잘못되는 것이 없는 데도 때때로 걱정을 하고, 우울하기도 하고 때로 밤에 잠을 쉽게 잘 수가 없다. 영수는 다른 사람들 보다 본인이 더 힘들게 느껴지고, 가끔 일이 잘 안 풀릴 때는 신경질이 나거나 짜증이 난다. 하지만, 영수는 대부분 잘 생활하고 있고, 사람들과도 잘 어울리고 있다. 가족들과도 가끔 싸우기도 하지만, 잘 지내고 있다.

4) 정신분열증 (Schizophrenia)

나는 아침에 학교 앞 커피전문점에 들을 때마다 대희를 만난다. 그는 우리 학교 학생으로 그 곳에서 아르바이트를 하고 있다. 대희의 표정은 항상 밝고 언제나 친절하다. 또한 같이 일하는 사람들과도 잘 지내는 것처럼 보인다.

하지만 나는 며칠 전에 내 친구로부터 대희에 관한 다음의 이야기를 들었다.

약 2년 전, 대희는 주위 사람들이 자기를 감시하고 해치려 한다는 생각을 하기 시작했었고, 사람들이 자기가 무엇을 생각하는지 다 알고 있다고 말했다. 그는 주위에 아무도 없는 데도 누군가의 목소리가 들리는 것 같았고, 때때로 TV에 나오는 사람들이 자신에게 특별한 메시지를 보낸다고 생각했다. 대희는 의욕이 저하되어 평소에 하던 일들을 하지 않으려 하고 대인관계도 하지 않고 대부분의 시간을 그의 방에서만 보냈다. 그는 극도로 자신의 생각에 사로잡혀서 식사와 목욕조차 제때 하지 않았다.

병원에서 지속적인 치료를 받은 후 대희의 상태는 아주 좋아졌고 퇴원하였다. 대희는 현재 병원에서 처방 해 준 약을 먹고, 일주일에 한번씩 개인 심리치료도 받고 있다.

- Woman description -

1) 우울장애 (Depression)

나는 아침에 학교 앞 커피전문점에 들을 때마다 영희를 만난다. 그녀는 우리 학교 학생으로 그곳에서 아르바이트를 하고 있다. 영희의 표정은 항상 밝고 언제나 친절하다. 또한 같이 일하는 사람들과도 잘 지내는 것처럼 보인다.

하지만 나는 며칠 전에 내 친구로부터 영희에 관한 다음의 이야기를 들었다.
약 2년 전, 영희는 힘이 없고 피로하며 몸이 처지는 느낌을 받기 시작했다. 밤에는 잠을 이룰 수가 없었고, 초조하고 쉽게 짜증이 나기도 하였으며 집중력이나 기억력이 저하되기도 하였다. 자신이 무가치하고 삶이 공허하다는 생각이 들면서 한때 즐거웠던 일이나 취미생활에서 의욕 및 흥미를 상실하였다. 영희는 자신의 생각을 바꾸기 위해서 노력하였으나 그럴수록 더 절망적이고, 심지어 죄책감과 무기력감은 깊어졌다. 그녀의 가족들은 영희의 이런 증상이 한달간 계속되고 있다는 사실을 확인하고 그녀와 대화를 하려고 시도하였으나 영희는 전혀 그녀의 상태를 말할 의사를 보이지 않았다.

병원에서 지속적인 치료를 받은 후 영희의 상태는 아주 좋아졌고 퇴원하였다. 영희는 현재 병원에서 처방 해 준 약을 먹고, 일주일에 한번씩 개인 심리치료도 받고 있다.

2) 알코올 중독 (Alcohol abuse)

나는 아침에 학교 앞 커피전문점에 들을 때마다 정아를 만난다. 정아는 우리 학교 학생으로 그곳에서 아르바이트를 하고 있다. 정아의 표정은 항상 밝고 언제나 친절하다. 또한 같이 일하는 사람들과도 잘 지내는 것처럼 보인다.

하지만 나는 며칠 전에 내 친구로부터 정아에 관한 다음의 이야기를 들었다.
정아는 2년 전 이맘 때 다음의 어려운 시기를 겪었다. 그녀는 약 한달 동안 평소보다 많은 양의 술을 마시기 시작했었고, 본인 스스로도 술이 취한다는 느낌을 받기 위해서 이전의 두 배를 마셔야 한다는 사실을 알게 되었다. 음주에 대한 죄책감으로 몇 번이나 술을 끊기 위해서 노력했지만 번번이 실패하였다. 정아는 짜증이 나고 잠을 잘 수 없을 때마다 그 핑계로 또 술을 마셨다.
그녀는 너무나 자주 술에 취해 있었고, 약속을 취소하는 일이 많아지자 가족들과 주위 사람들 역시 정아에 대해 많은 불평을 하였다.

병원에서 지속적인 치료를 받은 후 정아의 상태는 아주 좋아졌고 퇴원하였다. 정아는 현재 병원에서 처방 해 준 약을 먹고, 일주일에 한번씩 개인 심리치료도 받고 있다.

3) Troubled person

나는 아침에 학교 앞 커피전문점에 들을 때마다 은지를 만난다. 은지는 우리 학교 학생으로 그곳에서 아르바이트를 하고 있다. 은지의 표정은 항상 밝고 언제나 친절하다. 또한 같이 일하는 사람들과도 잘 지내는 것처럼 보인다.

대학생인 은지는 1년전 까지만 해도 자신의 생활에 불만이 없었다. 요즈음 은지는 그녀의 생활이 크게 잘못되는 것이 없는 데도 때때로 걱정을 하고, 우울하기도 하고 때로 밤에 잠을 쉽게 잘 수가 없다. 은지는 다른 사람들 보다 본인이 더 힘들게 느껴지고, 가끔 일이 잘 안 풀릴 때는 신경질이 나거나 짜증이 난다. 하지만, 은지는 대부분 잘 생활하고 있고, 사람들과도 잘 어울리고 있다. 가족들과도 가끔 싸우기도 하지만, 잘 지내고 있다.

4) 정신분열증 (Schizophrenia)

나는 아침에 학교 앞 커피전문점에 들을 때마다 빛나를 만난다. 빛나는 우리 학교 학생으로 그곳에서 아르바이트를 하고 있다. 빛나의 표정은 항상 밝고 언제나 친절하다. 또한 같이 일하는 사람들과도 잘 지내는 것처럼 보인다.

하지만 나는 며칠 전에 내 친구로부터 빛나에 관한 다음의 이야기를 들었다. 약 2년 전, 빛나는 주위 사람들이 자기를 감시하고 해치려 한다는 생각을 하기 시작했었고, 사람들이 자기가 무엇을 생각하는지 다 알고 있다고 말했다. 빛나는 주위에 아무도 없는 데도 누군가의 목소리가 들리는 것 같았고, 때때로 TV에 나오는 사람들이 자신에게 특별한 메시지를 보낸다고 생각했다. 빛나는 의욕이 저하되어 평소에 하던 일들을 하지 않으려 하고 대인관계도 하지 않고 대부분의 시간을 그녀의 방에서만 보냈다. 빛나는 극도로 자신의 생각에 사로잡혀서 식사와 목욕조차 제때 하지 않았다.

병원에서 지속적인 치료를 받은 후 빛나의 상태는 아주 좋아졌고 퇴원하였다. 빛나는 현재 병원에서 처방 해 준 약을 먹고, 일주일에 한번씩 개인 심리치료도 받고 있다.

Appendix R

Table.
T-test for countries according to Individualism and Collectivism

	Individualism		Collectivism	
	Mean (S.D.)	T-test (df = 491)	Mean (S.D.)	T-test (df = 491)
The U.S.	4.74 (0.646)	2.992**	4.88 (0.695)	-1.367
Korea	4.92 (0.696)		4.79 (0.711)	

* p < .05 ** p < .01 *** p < .001