**Title**
The Effect of Interpersonal Contact on Attitudes Change Toward People with Intellectual or Developmental Disabilities



**Author**
Lee, Ji Sun

**Publication Date**
2016

Peer reviewed|Thesis/dissertation

UNIVERSITY OF CALIFORNIA

Los Angeles

# The Effect of Interpersonal Contact on Attitudes Change Toward People with Intellectual or Developmental Disabilities

A dissertation submitted in partial satisfaction of the requirements for the degree Doctor of Philosophy in Social Welfare

by

Ji Sun Lee

2016

ABSTRACT OF THE DISSERTATION

The Effect of Interpersonal Contact on Attitudes Change

Toward People with Intellectual or Developmental Disabilities

by

Ji Sun Lee

Doctor of Philosophy in Social Welfare

University of California, Los Angeles, 2016

Professor Ailee Moon, Chair

**Background and Aims.** Despite many policies promoting the social inclusion of people with intellectual or developmental disabilities (IDD), negative attitudes are both prevalent and have serious negative consequences for people with IDD. A better understanding of attitudes and factors can help enhance social inclusion and quality of life for individuals with IDD. Thus, this mixed-methods study aims to (1) describe public attitudes toward persons with IDD among Korean-Americans, (2) investigate predictors of attitudes toward people with IDD, and (3) determine whether naturalistic, interpersonal contact with persons with IDD could improve negative attitudes within the theoretical context of Intergroup Contact Theory.

**Methods.** Data were collected from 235 of non-disabled, Korean-American adolescents and young adult participants who engaged in a one-to-one contact with persons with IDD during a summer camp. The quantitative data on attitude changes were measured before and immediately

following the interventions based on self/group-administered questionnaires. For the qualitative study, semi-structured interviews were conducted.

**Results.** This study found that interpersonal contact yielded improvement in affective and behavioral factors of attitudes toward people with IDD, while there was no impact on cognitive factors. Previous camp participation, acculturation, religious preference, and levels of education attainment were associated with the attitude change, while controlling for the demographic variables and social desirability. The qualitative research findings yielded attitudes toward persons with IDD changed positively through the intimate contact and bonding with persons with IDD. Perception of their similarities between people with and without IDD and increased knowledge of how to interacting with people with IDD led positive attitude change.

**Conclusions**. The study suggests that having interpersonal contact with peers with IDD has a significant impact on improving the non-disabled' attitudes toward people with IDD. Despite its exploratory nature and limitations on the data's generalizability, the overall findings of the study provide further support for the implementation of integration programs that promote meaningful interactions between individuals with and without IDD and the wider community. This study also provides empirical findings to plan policies and strategies to promote greater acceptance of individuals with IDD into society.

The dissertation of Ji Sun Lee is approved.

Fernando M Torres-Gil

Todd M. Franke

Willam A. Sandoval

Ailee Moon, Committee Chair

University of California, Los Angeles

2016

## Dedication

I dedicate this dissertation to my family, who provided me with unconditional love and lifted unceasing prayers on my behalf. It was because of your support that I was able to complete this dissertation and grow to be who I am today.

I thank my friends who encouraged me not to give up this journey. I also thank good music, good coffee, and study buddies who kept me in front of my laptop.

I would like to express my gratitude to the Milal Mission for making this research project possible. I am also incredibly grateful for all the volunteers of the Milal Mission who participated in this study and reflected God's great love to people with intellectual or developmental disabilities.

I would like to thank my advisor, Ailee Moon, and my dissertation committee members, Fernando M. Torres-Gil, Todd Franke, and Willam Sandoval for their time, critical questions, and thoughtful comments.

Lastly, I thank God who gave me a reason to study and the wisdom to seek answers. God made all of this possible.

TABLE OF CONTENTS

LIST OF TABLES

LIST OF FIGURES

VITA

## EDUCATION

| | | |
|---|---|---|
| **MSW** | COLUMBIA UNIVERSITY<br>School of Social Work<br>Concentration in Aging and Policy Practice | 2010 |
| **MS** | BOSTON UNIVERSITY<br>Rehabilitation Counseling<br>Specialization in *Psychiatric Rehabilitation* | 2008 |
| **BA** | EWHA WOMANS UNIVERSITY<br>Early Childhood Education | 2001 |

## PUBLICATION

Lee, J. S. (Under Review) The effects of cash transfers on poverty reduction in people with disabilities: a comparison between South Korea and the U.S.

## CONFERENCE PRESENTATIONS AND POSTERS

Lee, J. (2016, January). Healthcare disparities in people with disabilities: comparison with the non-disabled in South Korea. Poster presented at the 20th Annual Meeting of the Society for Social Work Research, Washington, DC.

Lee, J. (2016, January). Does interpersonal contact change attitudes toward persons with intellectual or developmental disabilities?; The case of camp Agape. Poster presented at the 20th Annual Meeting of the Society for Social Work Research, Washington, DC.

Lee, J. (2015, January). The Effect of Cash Transfers on Poverty Reduction in People with Disabilities: A Comparison Between Korea and the United States. Presentation at the 19th Annual Meeting of the Society for Social Work Research, New Orleans, LA.

Kim, B. J., Choi, Y., **Lee, J.** & Harris, L. M. (2013, January). The Relationship between Activities of Daily Living, Chronic Diseases and Depression among Older Korean Immigrants. Presentation at the 17th Annual Meeting of the Society for Social Work Research, San Diego, CA.

## AWARDS, FELLOWSHIPS, AND HONORS

2015– 2016 Luskin Graduate Fellowship
2014– 2015 David and Marianna Fisher Fellowship, Community Partnerships Fellowship

| | |
|---|---|
| 2013– 2014 | Luskin Graduate Fellowship, Waaserman Fellowship, Appenzeller Memorial Scholarship |
| 2012– 2013 | David and Marianna Fisher Fellowship, Waaserman Fellowship |
| 2010– 2012 | Graduate Division Fellowship, *UCLA* |
| 2010 | Young Leadership Award, *National YWCA of Korea* |
| 2005– 2008 | Departmental Merit Scholarship, The Bernstein Scholarship, *Boston University* |
| 2006 | 100 Brightest People in Korea Award, *Korea Green Fund* |
| 2004 | 2004 Best Books of the Year Award, *Yes24* |
| 2004 | Beautiful Faces of the Year Award, Beautiful Foundation |
| 2003 | Candle Award, *Korean Popular Culture Supervision* |

## RESEARCH EXPERIENCE

*Research Assistant* 2009 – 2010
Monitoring Public Opinion towards Immigrants Projects at Columbia University Population Research Center
*Research Assistant/Independent Research* 2009
Policy Analysis on American Disability Act and Anti-Discrimination Act at Ministry for Health, Welfare, and Family Affairs in Korea
*Research Assistant/Independent Research* 2007-2008
Korean Community-Based Rehabilitation Research at Boston University

## CLINICAL EXPERIENCE

*Social Work Intern* 2009 – 2010
F.E.G.S Health and Human Services System, New York, NY
*Social Work Intern* 2008 – 2009
Lighthouse International, New York, NY
*Rehabilitation Counselor Intern* 2007– 2008
Career Advancement Resources, Boston, MA
*Rehabilitation Counselor Intern* 2006 – 2007
Center Clubhouse, Boston, MA
*Rehabilitation Counselor Intern* 2005 – 2006
Massachusetts Rehabilitation Commission, Boston, MA

## COMMUNITY SERVICES

| | |
|---|---|
| *Ambassador* of Korean Burn Patient Foundation, Seoul, Korea | 2003- Present |
| *Ambassador* of Milal Social Welfare Foundation, Seoul, Korea | 2005- Present |
| *Ambassador* of Purme Rehabilitation Hospital Foundation, Seoul, Korea | 2005- Present |
| *Ambassador* of MBC Na-Num Social Enterprise, Seoul, Korea | 2011- Present |

# CHAPTER 1: INTRODUCTION

## Who Are People with Intellectual or Developmental Disabilities?

The American Association on Intellectual and Developmental Disabilities (AAIDD) characterizes intellectual disability by "significant limitations both in intellectual functioning (i.e., learning, reasoning, and problem solving) and adaptive behaviors (as expressed in conceptual, social, and practical adaptive skills)" manifested before the age of 18 years. According to the DSM-5, intelligence quotient (IQ) tests are often used to measure intellectual functioning, where a score below 70 is indicative of the afore mentioned limitations. Formerly referred to as mental retardation in the DSM-IV, the diagnosis of intellectual disability is the currently revised term (Schalock, Luckasson, & Shogren, 2007).

According to the Developmental Disabilities Act (Public Law. 106-402), developmental disability refers "a severe, chronic disability that is attributable to mental or physical impairment, or combination of those impairments". Developmental disabilities appear before the age of 22 and are likely to be life-long. "Developmental disabilities" is a broader term that includes intellectual disability, epilepsy, autism spectrum disorders, Down syndrome, Fragile X syndrome, and cerebral palsy (Centers for Disease Control and Prevention, 2004).

"Intellectual or developmental disability (IDD)" is the term often used to describe situations in which an intellectual disability and other disabilities are present**.** Larson, Lakin, Anderson, Kwak, Lee, and Anderson (2000) estimated intellectual and/or developmental disabilities affected 1% to 2% of the population in the U.S., or 4.6 million Americans. Another study reported that 1 of 6 U.S. children between 2006-2008 reported having developmental disabilities (Boyle et al., 2008). Despite being a significant minority, this population is often rather invisible.

**Problems of Negative Attitudes toward Individuals with IDD**

The deinstitutionalization of individuals with IDD closely parallels the civil rights movement in America during the 1960s. Politicians, advocacy groups, and family members have pioneered disability policies directed toward the inclusion of individuals with IDD into mainstream society (Talbott, 2004). The amount of support for and integration of individuals with IDD has markedly shifted in the last 40 years. In many countries, current disability policies seek to maximize the independence, social inclusion, and empowerment of persons with IDD. The transformation of educational, psychosocial and vocational services promotes the integration of persons with IDD into the local community (e.g., schools, neighborhoods and workplaces). U.S. policies also provide the legal right to full citizenship, social inclusion, and self-determination to people with IDD (U.S. Department of Health and Human Services (USDHHS), 2005). However, legal regulations and integration policies cannot solely actualize the full integration and inclusion of individuals with IDD. Though implementing federal policies are pivotal steps toward protecting the rights of people with IDD, cultivating mainstream acceptance and tolerance are equally important to achieving integration and inclusion.

People with disabilities face negative attitudes, such as social rejection and greater social distance, which increases barriers to success in social, educational and vocational contexts (White, Jackson, & Gordon, 2006). In fact, more than the disability itself, prejudice, stigma, and negative attitudes are greater impediments to social participation of people with disability (Braddock, 2002). Persons with disabilities are viewed as being inferior to non-disabled individuals (Yuker, 1988; Hunt & Hunt, 2000) and stereotyped as dependent, unstable, and isolated (Furnham & Thompson, 1994). The public is generally uneasy, uncomfortable and uncertain about how to act in the presence of a person with disabilities (Gilmore, Campbell, &

Cuskelly, 2003; McCaughey & Strohmer, 2005). Individuals also often feel fear and pity toward persons with disabilities (Findler, Vilchinsky, & Werner, 2007). These negative social attitudes toward people with disabilities act as invisible barriers and prevent individuals with disabilities from joining mainstreaming society (Chen, Brodwin, Cardoso, & Chan, 2002).

Moreover, persons with IDD are viewed less favorably by the general public compared to people with different types of disabilities (Corrigan, 2000; Crandall, Eshleman, & O'Brien, 2002; Gordon, Tantillo, Feldman, & Perrone, 2004). For example, recent studies demonstrates that people prefer to establish friendships with individuals with physical or chronic disabilities rather than individuals with mental illness and IDD, pointing to a hierarchy amongst the types of disabilities (Gordon et al., 2004; Hsu et al., 2015). Among the Taiwanese people, mental illness and ID are viewed as the most negative disability type (Wang, Thomas, Chan, & Cheing, 2003). Such unfavorable and negative attitudes toward persons with IDD have debilitating intrapersonal and interactive effects.

Negative self-evaluations, disempowerment, and frustrations experienced by persons with IDD stem from experiences of negative attitudes. (Jahoda & Markova, 2004). Moreover, negative attitudes toward persons with IDD have been found to increase the exclusion, discrimination and experiences of inequality in many of the life domains, including education, employment, housing, and those everyday interactions with the general public, of persons with IDD (Siperstein et al., 2003). Negative attitudes create real obstacles, especially in the fulfillment of personal roles and the attainment of life goals in the lives of people with IDD (Antonak & Harth, 1994; Siperstein et al., 2003; Yazbeck, McVilly, & Parmenter, 2004). Thus, acceptance and support from the general public are essential to the well-being of persons with disabilities (Seltzer, 1984). Persons with disabilities will not be accepted by society until subtle barriers,

such as the public's negative attitudes toward them, can be eliminated (Gilmore et al., 2003). In order to improve the social inclusion of and the overall quality of life for persons with IDD, it is important to investigate factors affecting attitude changes toward persons with IDD and explore strategies to reduce negative attitudes and foster positive attitude changes toward this population.

**Effects of Contacts**

The harmful impact of negative attitudes should prompt researchers to further examine how to improve perceptions and interactions with individuals with IDD; subsequently, finding effective strategies for changing attitude is an important area of research. Allport's (1954) contact hypothesis posits that improved attitudes toward and beliefs about people can occur through interpersonal contact and interactions with people from a different group (e.g., people with IDD).

Researchers extensively studied the contact hypothesis on mental health stigma as a method to reduce the negative perceptions of persons with severe mental illness in the 1960s. (i.e., Link & Cullen, 1986; Trute, Tefft, & Segall, 1989). Since then researchers have extended the target population to include persons with disabilities and have found that the contact hypothesis is a successful way to reduce negative attitude toward persons with disabilities (i.e., Antonak, Fiedler, & Mulick, 1993; Barr & Bracchitta, 2008; Hunt & Hunt, 2000; Yuker, 1994). However, compared to the large numbers of studies with varied participants on attitudes toward people with disabilities, in general, the studies on attitudes toward people with IDD are relatively limited.

Researchers have used various methods to study the effects of contact on attitude toward persons with disabilities. One popular method for examining the effects of contact on attitude is to ask participants simply to report about their past exposures to and experiences with persons

with IDD (i.e., Antonak et al., 1993; Krjewsky & Flaherty, 2000; Lau & Cheung, 1999). Retrospective studies provide substantial evidence for contact and its association to more positive affective reactions and a desire for less social distance from persons with a mental illness (Chung, Chen, & Liu, 2001; Corrigan, Edwards, Green, Diwan, & Penn, 2001; Vezzoli et al., 2001). Similarly, through correlational analysis between reported previous contacts and the participants' attitudes toward persons with IDD, many of these studies find that prior contact with people with IDD also significantly lessens negative attitudes and social distancing from such persons (Antonak et al., 1993; Krjewsky & Flaherty, 2000; Lau & Cheung, 1999).

Some studies, however, have resulted in insignificant findings, possibly due to the lack of differentiation between the use of retrospective self-reports, the types of contacts, and the quality of contacts. Retrospective research is inherently limited in that it is impossible to know if people who reported previous contacts held less negative attitudes toward people with IDD before the contact occurred. In response to the limitations of retrospective research, the present study not only measured the frequency and quality of prior contact experiences and prior media exposure as a form of indirect contact, but also assessed the impact of prospective interpersonal contact with persons with IDD on attitude change toward people with IDD.

**Korean Culture and Attitudes Toward Disability**

Although the impacts of negative attitudes toward disabilities on their social integration into and full participation in mainstream society have been studied in Western countries, less is known the attitudes toward people with IDD in Asia. One country in which attitudes toward people with IDD are beginning to receive more public attention is Korea. As the modernization and globalization were processed, the Western culture influenced to Korean culture. Yet, disability remains a strong dishonor and shame linked to stigma, discrimination and exclusion

(Won, Krajicek, & Lee 2004). For example, an inter-country comparison study indicated that Korean mothers with children of intellectual impairments experienced a higher level of stress than their U.S. counterparts, perhaps due to the strong cultural stigma around issues of disability in Korea (Shin & Crittenden, 2003).

Influenced by Confucianism, Koreans value harmony within the family, the community and the society as a whole, in contrast to American mainstream culture that stresses individualism (Hur & Hur, 1999). Generally, Koreans are a homogenous group with conservative customs and values. Social deviations from the norm are often negatively viewed leading to unwanted stares and gossiping. Due to such a strong stigma, people with disabilities are at a high risk of being social isolated and excluded.

Moreover, commonly used language reflects negative attitudes toward persons with disabilities and reinforces stigmatization against them. In Korea, a derogatory term, *Ae-ja* is short for *Jang-ae-ja* which refers to a person with a disability in Korean language and often tends to be used as an insulting and offensive remark against a person without a disability.

The public tends to avoid persons with disabilities because of an uneasiness related to not knowing what to do. A study described that when helping a person with disabilities, Koreans usually overprotected or overcompensated, which only served to frustrate those they are trying to help (Kim–Rupnow, 2005).

As well, shamanistic beliefs held by most Asians view disabilities a punishment for one's sins (Livneh, 1991). As superstitious beliefs about disabilities in Korea are deep-rooted in fatalism and shamanistic thinking (Kwon, 2000), disabilities are viewed as fatal abandonment and a source of shamefulness to the family and their ancestors (Kim & Kang, 2003). Based on

the amount of exposure to Western culture, especially by younger generations, adherence to traditional values, attitudes and beliefs varies considerably and are often challenged.

**Dissertation Study Purpose & Overview**

The purpose of this mixed-methods study is to investigate the effect of interpersonal contact experience on reducing negative attitudes toward persons with IDD within the theoretical context of Intergroup Contact Theory (Allport, 1954; Amir, 1969; Brewer & Brown, 1998; Pettigrew & Tropp, 2006). The interpersonal contact intervention consists of engaging in a one-to-one relationship between non-disabled participants and persons with IDD during a summer camp. This study also describes: what attitudes Korean-American adolescents and young adults hold toward people with IDD; if those attitudes differ based on age, gender, education attainment, religious preferences, and acculturation level; previous knowledge about IDD; the quantity (types and frequency) and quality of previous contacts; perceived disability status; and the effect of media as indirect contact. Cross-sectional, primary data analysis was used to study the effect of contact on attitude change toward people with IDD among Korean-American adolescents and young adults.

Ajzen and Fishbien (1980) and Kraus (1995) found that attitudes best predict behavior. Given this relationship, it is critical to understand the predominant attitudes in a community, which influence how members will react to bring about social change and promote inclusion (Schwartz & Armony-Sivan, 2001; Sigafoos, 1997). When planning policies and strategies to promote positive attitudes toward people with IDD in society, current attitudes toward people with disabilities must be understood. This baseline information is needed to pointedly tailor attitude change programs to counteract negative attitudes. Once information on the attitudes of

persons with various ages, genders, acculturation levels, and education attainment levels is obtained, programs can be developed to improve negative attitude toward people with IDD.

This study further extends previous research in this area by exploring each of factors, such as age, gender, education attainment, and acculturation; the quantity (type and frequency) and quality of previous contacts; knowledge about IDD; perceived disability status; and the effect of media as indirect contact hypothesized to be related to. Examining variables and investigating the effect of intervention related to Korean-Americans' attitudes toward individuals with IDD becomes important when considering a few points. First, research has shown that individuals with IDD are less acceptable (Crandall, Eshleman, & O'Brien, 2002; Gordon et al., 2004; Hsu et al, 2015; Wang et al., 2003). In spite of these beliefs, people with IDD are often subjected to marginalization, discrimination, and exclusion. Such negative attitudes and the associated behaviors can greatly limit their life choices. Acceptance by the general population is critical to the successful inclusion and integration of people with IDD, but, to date, research on the contact effect of public attitudes toward IDD is very limited.

Secondly, the majority of the research has focused on children's attitudes toward their peers with disabilities (Siperstein, Norins, & Mohler, 2007), even though adolescent and young adults are singularly important groups to study because this population is more accessible through such settings as schools or volunteer programs. Yet, a limited number of studies focused on attitudes toward adolescents and young adults with IDD who are the harbinger of future social attitudes toward persons with IDD (Yazbeck et al., 2004).

Third, to date, the literature on attitudes toward people with IDD primarily focuses on developed Western societies. Even less is known about the effect of contacts on attitudes among Korean-Americans. Culture has been shown to have a marked impact on attitudes toward mental

health. East Asian cultures generally hold more stigmatizing attitudes and attribute greater shame to mental health problems (Furnham & Chan, 2004; Ng & Chan, 2000). However, little is know about the impact of culture on attitudes toward IDD, especially in the Korean-American population. The length of stay in the US, for instance, may affect the attitudes that Korean-Americans hold toward people with IDD given the recent policies and the long history on movement toward deinstitutionalization and social inclusion. An understanding of this population's attitudes toward people with IDD is particularly useful to study in order to ascertain the differential impact of cultures in a heterogeneous society, especially as Korean-Americans carry both Eastern and Western traditions and values.

**Organization of the Current Study**

Chapter 1 has given a brief overview of attitudes toward people with IDD and effects of contacts on attitudes, and presented the study purpose and overview. Chapter 2 reviews current literature on the structures and formation of attitude, attitudes toward persons with IDD and the impact of attitudes, factors on attitudes toward persons with IDD. Chapter 3 introduces the study's theoretical framework and it concludes with an outline of the research questions and associated hypotheses. Chapter 4 outlines the methods, which include a detailed description of the research design, data collection, measurements, and data analysis procedures. Chapter 5 presents the results of the analyses conducted for each research questions. Chapter 6 discusses the major findings, the conclusions, strength and limitations of the study, and implications for social work practice and future research.

# CHAPTER 2: LITERATURE REVIEW

This chapter aims to: (1) summarize the definition and structures of attitude and attitude formation, (2) describe the nature of attitudes toward persons with IDD, (3) review the literature on the impact of negative attitudes toward persons with IDD, and (4) review the literature on the factors that affect attitudes toward persons with IDD with a focus on the effect of contact on reducing negative attitudes. A summary of the observed gaps in the literature is reviewed at the end of the chapter.

## Definitions and Structures of Attitude

No universally agreed upon definition exists for attitudes or attitude changes, despite being thoroughly researched by social psychologists. Notwithstanding the differences among the various definitions, most attitude theorists agree that: "(a) evaluation constitutes a central, perhaps predominant, aspect of attitudes, (b) attitudes are represented in memory, and (c) affective, cognitive, and behavioral antecedents of attitudes can be distinguished, as can affective, cognitive, and behavioral consequences of attitudes" (Olson & Zanna, 1993).

Attitudes are defined as a person's belief or opinion and include a positive or negative evaluation of some target, such as an object, a person, or an event, which then predispose the individual to act in a particular way toward the target (Plotnik, 2005). Barry and Dalal (1996) define attitudes as

> "learned disposition or an internal biasing mechanism that focuses a person's attention and provides a framework within which one encodes an experience and is provided guiding parameters for his or her behavior" (p. 19).

According to Cook (1992), attitudes are comprised of three elements: (a) cognition, or the individual's perception and conceptualization of the attitude subject; (b) affect, or the emotional underpinning of these beliefs and the amount of positive or negative feeling that an individual

has toward the attitude object; and (c) behavior, or responses, an observable behavior, or the individual's intention to behave in particular ways toward the attitude object. An influential view on attitudes postulates that affective, cognitive, and behavioral correlates of attitudes necessarily have corollary components. For example, Zanna & Rempel (1988) argue that attitudes can be based on or develop from affective (e.g., conditioning), cognitive (e.g., knowledge-based evaluations), and behavioral (e.g., self-perception inferences from prior actions) information. In turn, both positive and negative attitudes toward an object can be expressed in verbal or non-verbal responses, which can be categorized as cognition (expressions of belief/ perceptual reactions), affection (expressions of feeling/ psychological reactions), and conation (expressions of behavioral intentions / behaviors) (Ajzen, 1988). Thus, the affective-cognitive-behavioral framework provides a useful way to think about the antecedents and consequences of attitudes, although these domains will not all be applicable to a given attitude. Consistency among affective, cognitive, and behavioral correlates of attitudes, however, remains an empirical issue (Olson & Zanna, 1993).

**Attitude Formation**

Attitude theorists agree that attitudes are socially acquired and also subject to change. Attitudes may be thought of as latent or inferred psychosocial processes, which manifest when one is evoked by specific referents (Oskamp, 1991). Attitudes, which are socially constructed and acquired through experience over time, predispose one's responses to sociocultural events and other people (Tregaskis, 2000). Attitudes are learned knowledge structures acquired through subtle interpersonal and influential processes and are susceptible to change (Rillotta & Nettelbeck, 2007).

Kelman (1974) views attitudes not as, "an index of action, but a determinant and consequent. Attitude and action are linked in a continuing reciprocal process, each generating the other in an endless chain. Action is the ground on which attitudes are formed, tested, modified, and abandoned (p 312)." According to Kelman's view, attitudes develop as a result of person's direct or indirect interactions with an object; and through these interactions, attitudes are tested, exposed to new information, altered, or consequently discarded. While this conceptualization stresses the action component of attitude, one can readily see the role that cognition and affect plays in the process of forming, testing, modifying, and/or abandoning (Kelman, 1974). This dynamic view of attitude formation is particularly useful in understanding the interactions, or the role of contacts, between people with and without disabilities and modifying the general public's attitudes toward persons with disabilities.

**Attitudes Toward Persons with IDD**

In an experiment testing the communication styles of college students introduced to an adult in a wheelchair (Liesenner & Mills, 1999), it was found that an adult in a wheelchair is likely to be spoken to as a child. In this study, the perception of a person with a disability was evaluated based on physical appearance, rationalized by a pre-existing schema of characterization and stereotypes of people with disabilities, and associated with a state of helplessness. Thus, the person in a wheelchair was not judged based on his mobility challenge but on the overall perception of weakness. Their study highlights the *concept of spread* on the perception of traits and characteristics of others (Wright, 1983).

According to Wright (1983), the *concept of spread* is based on the perception that the condition of disability has 'spread' to the other physical, mental, social and emotional aspects of the person. The person is assumed to be 'disabled' in all aspects of his or her life. Wright (1988)

explains that when a regular person comes into contact with a person with a disability, the fundamentally negative aspects of the disability looms larger in the mind of the perceiver than the positive information about the person with a disability. Therefore, the perception of the disability could extend to infer more global weaknesses, such as the inability to learn or make intelligent decisions.

Attributions made from both positive and negative learned prejudices often have little to do with the disability itself (Yuker, 1994). Hastorf, Wildfogel, and Cassman (1979) assert that these negative attitudes stem from a sense of discomfort that the non-disabled feel when interacting with persons with disabilities. The source of this discomfort stems from the non-disabled person's uncertainty about what behaviors to expect and gauging which behaviors are appropriate during interactions with people with disabilities. The larger society's general anxiety and fear, about persons with disabilities contribute to the negative attitudes toward them.

The general public has tended to hold more negative attitudes toward people with intellectual and/or psychiatric disabilities than those with physical disabilities (Yuker 1988; Yuker & Block, 1986; Chan, Hedl, Parker, Chan, & Yu, 1988; Choi & Lam, 2000; Horner-Johnson et al., 2000). Based on a hierarchy of 24 types of acceptable and severe disabilities, Yuker (1988) identified IDD was rated the third least accepted disability. Only multiple disabilities and mental illness were considered more unacceptable than IDD. Myers, Ager, Kerr, and Myles (1998) identify three types of attitudes that influence how nondisabled people interact with persons with intellectual disability: (1) engagement as consumers (e.g., neighbors, or friends); (2) unawareness about intellectual disability; and (3) wariness, or even hostility, particularly toward the idea of community integration. Regrettably, the third attitude characterized by negativity and non-acceptance is most commonly observed (Gething, 1994;

Yuker, 1988; Yuker & Hurley, 1987) and serves as the underlying source of disablement in our society (Shakespeare & Watson, 1997).

**Impact of Attitudes Toward Persons with IDD**

Public negative attitude toward individuals with IDD can take several forms. Individuals with IDD may be exposed to teasing and stares while avoided by others (Pratt, 2010). Discrimination toward individuals with IDD is evidenced through the lack of decent services and discriminatory treatment within hospitals, such as the humiliation of public bathing, lack of privacy, and an overly restrictive environment (Jahoda & Markova, 2004). Also illustrating the discrimination faced by individuals with IDD is the use of segregated day services and workshops instead of community-based services (Siperstein, Parker, Norins, & Widaman, 2011), and the limited number of employment and choice making opportunities made available to individuals with IDD (Wehmeyer & Bolding, 1999). Negative attitude and stigma have been cited as one of the potential barriers to the delivery of adequate services to this population resulting in poorer treatment and rejection within society (Corrigan, Markowitz, Watson, Rowan, & Kubiak, 2003). Discriminatory behaviors lead to the lack of inclusion and social acceptance of persons with IDD within local communities as well as broader society (Jahoda & Markova, 2004). Furthermore, negative attitudes toward persons with IDD impact negative self-evaluations, feelings of powerlessness, and frustration in people with IDD (Jahoda & Markova, 2004).

Given the serious impediments to inclusion in schools, the workplace and the wider community caused by negative attitudes toward people with IDD (Gilmore et al., 2003), it is important to monitor current social attitudes toward these persons and investigate the influences what factors improve negative attitudes in efforts to eliminate segregation and discrimination.

**Factors on Attitude Toward Persons with IDD**

Previous research on attitudes toward people with disabilities has identified multiple variables, such as, gender, age, education attainment, cultural factors, knowledge, educational programs, interpersonal contact, and indirect contact as important correlates. Thus, this review provides an overview of these factors.

**Gender.** Some studies found that gender were significantly associated with attitudes toward persons with disabilities. Female had more positive attitudes toward people with disabilities than the male (Akrami, Ekehammar, Claesson, & Sonnander, 2006; MacDonald & MacIntyre, 1999). Other studies reported gender did not have any effect on the attitude (McGee, 1989; Lau & Cheung, 1999; Ouellette-Kuntz, Burge, Brown, & Arsenault, 2010; Yazbeck et al., 2004).

There also has been some indication that gender differences may be more prominent based on geographical location. In most Western studies, women expressed more positive attitudes toward people with disabilities than men did (Yuker & Block, 1986; Ouellette-Kuntz, Burge, Henry, Bradley, & Leichner, 2003). In Hong Kong, women appeared to be more discriminatory against people with mental health difficulties than men (Lau & Cheung, 1999). However, another Hong Kong study (Sior, Kan, McLoughlin, & Sheridan, 2010) indicated that women were more likely to support the inclusion, although all effect sizes for gender were very small. A study conducted in Kuwait (Al-Kandari, 2014) found that male students had more positive attitudes toward persons with IDD than females.

**Age.** Some studies found that younger people had more positive attitudes toward people with IDD than older people (Beckwith & Matthews, 1995; Sinson, 1993; Lau & Cheung, 1999; Yazbeck et al., 2004; Morin, Rivard, Crocker, Boursier, & Caron, 2013). In Hong Kong, younger

people had less discriminatory attitudes toward people with disabilities than older people (Lau & Cheung, 1999). Similarly, Sinson (1993) suggested that this phenomenon was related to the experiences of the older generation, who grew up in an era of long-stay hospitals, where people with IDD were institutionalized and less visible in the community. Other researchers indicated that the lack of education about disability awareness of older persons may be related to the negative attitudes toward people with disabilities (Dorji & Solomon, 2009).

Research suggests that the age of the evaluator affects attitudes toward persons with disabilities. Although children younger than 3 years of age do not appear to have an awareness or understanding of disabilities and generally have unbiased attitudes (Nabors & Keyes, 1997), negative attitudes appear duing early childhood (Harper & Peterson, 2001). These negative attitudes intensify as the child reaches adolescence and enters middle and high school (e.g., Weiserbs & Gottlieb, 1995). For instance, Harper & Peterson (2001) found that eight to twelve year olds report a lower preference for interacting with people with disabilities and are less likely to be friends with a person with a disability (Weiserbs & Gottlieb, 1995). In sum, the literature suggests age significantly influences one's attitude toward a person with a disability, which generally change over the course of the lifespan.

**Education attainment.** Attitudes toward people with disabilities were associated with educational attainment (Kobe & Minnick, 1995). Studies indicate people with higher educational attainment tend to have more positive attitudes toward people with disabilities (Morin et al., 2013a; Scior et al., 2010; Yazbeck et al., 2004). This relationship may be because people with higher educational attainment may be more liberal, open, and knowledgeable about people with disabilities and related issues, which leads them to have more positive attitudes toward persosns with disabilities (Lau & Cheung, 1999).

Those with higher educational attainment also reported being more willing to interact with people with intellectual disabilities (Lau & Cheung, 1999; Yuker, 1994; Scior et al., 2010). In a study on attitudes of American and Israeli staff, higher educational levels, regardless of nation, were associated with higher empowerment scores, lower exclusion scores, and lower sheltering scores (Henry et al., 2004). Similarly, in a study on the attitudes of Australians, individuals with higher levels of education, in particular, a university education, reported more positive attitudes than respondents with a high school education (Yazbeck et al., 2004).

**Cultural factors.** Cultural factors have been found to have a significant influence on the prevailing attitudes toward people with IDD. Berry and Dalal (1996) noted significant differences in attitudes in countries between India and Asia about the terms integration, assimilation, segregation, and marginalization. These contrasts were thought to be the result of the varying religious beliefs across these cultures (Hinduism, Buddhism, and Islam). Results from another study revealed that English adolescents held less positive views of people with disabilities in their community than their Swedish contemporaries (Hastings, Sjöström, & Stevenage, 1998). The differential cross-cultural findings could be explained by Sweden's well-established and more widespread philosophical and social policies based on the normalization theory. Jaques, Burleigh, and Lee (1973) demonstrated significant differences in the attitudes held by American, Danish, Chinese and Greek samples toward people with disabilities, where Americans had the most favorable and Greeks had the most negative attitudes. Compared to Americans, the Chinese were reported to have negative attitudes toward people with mental illnesses (Chan, Lam, Wong, Leung, & Fang, 1988). Research in Israel demonstrated more negative attitudes toward physical disability amongst Arabs and Jews from Arab countries than among Jews from western countries (Florian & Katz, 1983). A cross-cultural study (Scior et al.,

2010) investigated attitudes toward people with intellectual disability among Hong Kong Chinese (N=149) and compared them to a White British group (N=135) using the CLAS-MR (Henry et al., 1996). The Hong Kong Chinese reported less favorable attitudes toward IDD than the British sample and were more in favor of excluding and sheltering people with intellectual disability. This study suggests that the polar attitudes might reflect the two countries' very different histories in advancing the social inclusion of people with intellectual disability.

In a cross-cultural study between Korean and Korean-American undergraduate students, Korean students who enrolled in a US university were found to have less favorable attitudes toward people with mental disabilities compared to their American-born counterparts (Choi & Lam, 2001). Tseng (1972) also found that longer lengths of stay in America were correlated to more positive attitudes in Asian students, suggesting that the acculturation process and a modern cultural mediation played important roles in influencing attitudes toward people with disabilities.

**Knowledge.** Having more knowledge and better information about intellectual disability are associated with improved attitudes toward individuals with intellectual disability (Lau & Cheung 1999; Hunt & Hunt, 2004; Morin et al., 2013a). McManus, Feyes, and Saucier (2011) show that the level of knowledge about intellectual disabilities is associated with attitudes in four domains, except for the individual capacity and rights of persons with intellectual disabilities. People who self-reported more knowledge about intellectual disabilities did not have more positive attitudes toward the individual capacity and rights of persons with intellectual disabilities. Aimed targeted teaching is need to improve attitudes related to the capacity and rights of individuals with IDD (Morin et al., 2013a).

**Educational programs.** Educational programs are commonly used to reduce negative attitudes about persons with disabilities by providing contradictory information and dispelling

commonly held beliefs (Rüsch, Angermeyer, & Corrigan, 2005). In South Australia, Rillotta and Nettelbeck (2007) investigated the effects of an educational program about disability awareness aimed at improving the attitudes of 259 secondary school students. The group that completed the awareness program had significantly more positive attitudes than those who did not receive the program, and longer training programs yielded long-term positive attitude change. Nevertheless, this study did not capture the interrelatedness between personal experiences, such as contact with family members with disabilities, and attitudes toward people with disabilities.

While educational programs have proven successful in reducing negative attitudes (Rillotta & Nettelbeck, 2007; Lau & Cheung 1999; MacDonald & MacIntyre 1999; Hunt & Hunt, 2004; Morin et al., 2013a), there are methodological concerns, such as the limited effect size, regarding research assessing the efficacy of such programs. As well, researchers have cautioned that the content of these educational programs be carefully examined (Corrigan, 2000).

**Quantity of interpersonal contact.** Various researchers have indicated that contact with persons with disabilities, in general, is a key variable in shaping favorable or unfavorable attitudes toward them. Contact with individuals with disabilities is both negatively associated with misconceptions and hopelessness and positively associated with optimism (Yuker, 1994; Barr & Bracchitta, 2008). Compared to the large numbers of studies with varied participants on attitudes toward people with disabilities, in general, research on attitudes toward people with IDD are relatively limited and revealed the mixed findings. Some studies on attitudes toward persons with IDD have demonstrated the positive effects of contact. Antonak and colleagues (1993) administered a 9-item questionnaire concerning misconceptions about intellectual disability to 558 intellectual disability professionals, parents of children with intellectual disability, and lay people. Participants who had contact with a person with IDD reported lower

levels of misconceptions about people with intellectual disability (Antonak et al., 1993). Beckwith and Matthews (1995) examined attitudes of trained professionals toward people with intellectual disability using the Interaction with the Disabled Persons Scale (Gething, 1994), an index measuring discomfort using attitude measures in relation to people with different types of disabilities. Positive attitudes significantly increased when respondents had more frequent contact with persons with intellectual disability compared to those with less contact.

Krjewsky and Flaherty (2000) examined the attitudes of 144 high school students toward individuals with intellectual disability using the Mental Retardation Attitude Inventory-Revised (MRAI; Antonak & Harth, 1994), which consists of four subscales: Integration–Segregation, Social Distance, Private Rights, and Subtle Derogatory Beliefs. The result showed that gender and frequency of contact had significant impacts on student attitudes. Students who reported more frequent contact held more favorable attitudes as measured by their responses to those items in the Integration–Segregation and Social Distance subscales (Krjewsky & Flaherty, 2000).

In a Hong Kong study, researchers measured public attitudes toward intellectual disability using a telephone survey with 822 randomly sampled adults (Lau & Cheung, 1999). While controlling for other background characteristics, such as age, gender, and educational attainment, respondents were less discriminatory toward people with intellectual disability when they reported a social interaction within the last 6 months. However, the causal direction of the study's findings was found to be inconclusive.

Horner-Johnson, Keys, Henry, Yamaki, Oi, and Watanabe (2000) examined attitudes toward people with intellectual disability amongst 284 undergraduate students in Japan. Using the MRAI (Antonak & Harth, 1994) and the Community Living Attitudes Scale– Mental Retardation (CLAS-MR; Henry, Keys, Jopp, & Balcazar, 1996), researchers found that students

with a disabled relative or friend were more supportive of intellectual disability rights compared to those without a relative or friend.

In a Canadian study, Morin et al. (2013) compared attitudes according to gender, age, education, income, the degree of knowledge about intellectual disabilities, and frequency and quality of contacts with persons with intellectual disabilities using a telephone survey with 1,605 randomly sampled adults. They used the Attitudes Toward Intellectual Disability Questionnaire (ATTID), a multidimensional perspective of attitudes that reflects affective, behavioral, and cognitive dimensions. The results showed more frequent contacts were related to more positive attitudes.

Other studies found that prior contact was not associated with positive attitudes toward people with IDD. For example, Yazbeck et al. (2004) assessed the attitudes of students, disability services professionals, and the general population in Australia (N=479) toward people with intellectual disability using the MRAI (Antonak & Harth, 1994). The results indicated that those with prior personal knowledge and contact of a person with an IDD held more positive attitudes than those without such knowledge and contact. Conversely, prior knowledge or regular contact with persons with intellectual disability produced no significant effect on either the Scale of Attitudes Towards Mental Retardation & Eugenics–Revised (AMR&E-R; Antonak et al., 1993) or the CLAS-MR (Henry et al., 1996). Another study (Sior, Kan, McLoughlin, & Sheridan, 2010) concluded although contact with individuals with intellectual disability was regarded as the key to improving attitudes, prior contact did not predict any of the subscale scores from the CLAS-MR. Similarly, Schwartz and Armony-Sivan (2001) examined 149 Israeli college freshmen's attitudes toward people with intellectual disability using the CLAS-MR and found

that prior personal contact (‘some contact’ versus ‘no contact’) with people with intellectual disabilities was not related to attitudes in this sample.

Overall, there is some disagreement regarding the effect of prior contact on attitudes toward people with IDD. The studies above examined only prior contacts with persons with IDD. A few studies assess the impact of prospective contact on attitudes toward people with disabilities. For example, Li and Wang (2013) examined the effect of prospective exposure to people with ID during the Special Olympic Games held in China. They measure the attitude change of 90 volunteers for the Special Olympic Games at three time points using the MRAI-R. They concluded that a one-week exposure to the Special Olympic Games improved volunteers’ attitudes toward inclusion of people with ID and this effect could maintain for up to a month. However, they did not investigate the nature of exposure or volunteers’ interaction with people with ID, for example, the types of exposure or interaction with people with IDD, and positive or negative contact experiences.

**Quality of contact.** Some research has demonstrated that the quality of the contact also can have an important impact upon attitudes. A study examined lay people's attitudes toward individuals with physical or mental disabilities (Furnham & Gibbs, 1984). This study indicated more positive attitudes toward persons with disabilities were associated with knowing a disabled person and having had positive experiences with that person in the past. In a study with high school students, Strong (1987) reported that previous contact quality predicted beliefs, feelings and behavioral intentions toward individuals with disabilities. Hall and Minnes (1999) examined the attitudes of young adults toward Down Syndrome using measures of beliefs, feelings of comfort, behavioral intentions, volunteering intentions, social desirability and variables associated with previous contacts (e.g., quality and quantity of contact and media exposure).

Participants who had positive past experiences with persons with Down syndrome believed that these individuals should not belong in separate school, work or living environments. Whereas quantity of contact did not emerge as a significant predictor of beliefs, feelings or behavioral intentions, quality of contact emerged as a significant predictor of beliefs and behavioral intentions.

McManus, Feyes, and Saucier (2011) examined quantity of contact, quality of contact, and knowledge as predictors of attitudes toward individuals with intellectual disabilities using the MRAI, which was administered to 125 undergraduate students. Overall, the results consistently demonstrated greater quality of contact uniquely predicted more positive attitudes toward individuals with intellectual disability. Greater quantity of contact and knowledge, however, were unrelated to attitudes toward individuals with intellectual disability. These authors suggested, although quantity of contact, quality of contact, and knowledge were interrelated constructs, the quality of contact in previous interactions was an important variable in predicting attitudes toward individuals with intellectual disabilities (McManus, Feyes, & Saucier, 2011).

The most recent study (Morin et al., 2013a) using the ATTID questionnaire also implicated the importance of the quality of the contacts. Participants who reported an excellent contact with a person with ID had significantly more positive attitudes than those who considered their relationship to be good, neutral or bad.

Overall, positive contact experiences increase social inclusion (Hall & Minnes, 1999), whereas negative contact experiences decrease social integration (Tachibana, 2005). Attitudes that lead to either social inclusion or exclusion may depend on the nature of the contact experience (e.g., positive or negative).

**Media as an indirect contact.** Unfortunately, the general public in many countries, including the US, perceive individuals with IDD as moderately impaired and capable of performing only the simplest of tasks (Siperstein et al., 2003). This image is often perpetuated by the media and other popular cultural outlets that depict individuals with IDD as objects of pity and vulnerable (Pardun, Corbin, & Engstrom, 2005). Indirect methods of contact, such as videos, can effectively reduce negative attitudes toward mental illness and reach large groups of individuals (Reinke, Corrigan, Leonhard, Lundin, & Kubiak, 2004). However, one type of contact that has received relatively little attention is the indirect contact obtained through the mass media.

Indirect contact offers a form of safe interaction through the mass media to people who do not have or may have only limited contact with disabled people. The mass media can be impersonal, potent, and adversely influential (Zimbardo & Leippe, 1991), especially when negative portrayals of minority groups are cast (Oskamp, 2000). Barnes (1992) suggests that negative portrayals of the media's rendition of disabilities may be waning, although far from being eliminated. As television is impactful on socialization and societal values, the media's subliminal messages must necessarily be evaluated, particularly concerning the disabled population (Donaldson, 1981; Elliott & Byrd, 1982; Stirling, 1991). Television can provide opportunities for "sanctioned staring," which is thought to help reduce the anxiety related to interacting with persons with disabilities (Donaldson, 1981).

A few studies assess the impact of media on attitudes toward people with disabilities. For example, one reported a significant positive increase in nursing students' attitudes toward a quadriplegic patient after viewing a short, documentary-style program (Sadlick & Penta, 1975). In a later study, participants were asked to view a debate being conducted by panel members

with physical disabilities. Those participants who viewed the discussion live or via television showed an increase in positive attitudes, as opposed to those participants who showed no such effect after hearing the debate on audiotape (Donaldson & Martinson, 1977).

In two similar studies, Elliott and Byrd (1983) and Stirling (1991) studied the effects of various program types on attitudes toward individuals with disabilities. Elliott and Byrd (1983) used comedy and documentary-style programs to expose a blind individual, whereas Stirling (1991) used drama and documentary-type programs featuring characters with Down syndrome. Results from the former study indicated a significant positive attitude change only in the documentary group. Similar results in the Stirling study supported this finding. While the characters portrayed in the various programs were similar, the documentary programs appeared to have been more effective in delivering information about blindness and Down syndrome and did so in a humorous, but systematic, manner (Stirling, 1991).

Hall and Minnes (1999) investigated the effects of various television portrayals of a young adult male with Down syndrome on the attitudes of undergraduate students. While the types of media presentation did not predict beliefs concerning a person with Down syndrome, greater feelings of comfort were significantly correlated with viewing the documentary as opposed to the drama.

**Gaps in the Literature**

Despite the amount of knowledge on attitudes toward persons with disabilities, published empirical studies on attitudes toward persons with IDD are limited in social work literature. The majority of the research focuses on the attitudes of peers and teachers toward children with IDD. Although these populations are more readily accessible, they do not provide the full spectrum of attitudes representative of the public at large.

The limited research to date on the effects of contact on attitudes toward people with IDD reports mixed findings. To remedy these mixed findings, researchers must investigate how attitudes toward individuals with IDD are shaped by various contact factors, such as quantitative factors (i.e., number of individuals known, types of contact and frequency of contact) and qualitative factors (i.e., degree of intimacy, pleasantness of prior contact). It is not just contact, but type of contact and context in which contact occurs that is important in determining the direction of the attitude (Maras & Brown, 2000; Yuker & Hurley, 1987). Close and intimate contact leads to have positive attitudes compared to superficial contact (English, 1977). Different experiences of contact may lead to different consequences. When examining attitudes toward people with IDD, the multi-dimensional aspects of contact should be considered.

Furthermore, although some supportive evidence points to the media (i.e., television) as an effective form of indirect contact with various disabilities (Sadlick & Penta, 1975; Donaldson & Martinson, 1977; Elliott & Byrd, 1983; Stirling, 1991; Hall & Minnes, 1999), little research exists on the potential impact of media as a form of indirect contact to shape public attitudes toward people with IDD.

The contradictory findings might be because research on the effect of either the quality or quantity of contact has been studied retrospectively. Retrospective research is limited in that it is impossible to know if people who report previous contact held less negative attitudes toward people with IDD before the contact occurred and does not involve actual contact with people with IDD. Additionally, there is substantial evidence that contact is related to more positive attitudes when contact is studied retrospectively (i.e., Chung, Chen, & Liu, 2001; Corrigan et al., 2001; Vezzoli et al., 2001). Thus, a stronger test of the contact hypothesis is to measure contact prospectively.

Couture and Penn (2006) also argue that there been limited studies investigating the effect of contact in artificial situations (e.g., classrooms, laboratory). Thus, to improve upon this limitation, they measured the impact of naturalistic interpersonal contact. Contact was provided through a volunteer program, which paired volunteers from the community with people with mental illness. Their study provided preliminary evidence that naturalistic contact could reduce negative affective responses to individuals with severe mental illness. Therefore, the present study was designed to follow the method of Couture and Penn (2006) that addressed the important limitations.

**Summary**

The limited body of research on attitudes toward people with disabilities has produced mixed findings. The inconsistent results regarding the effects of demographic factors, such as age and gender, were found. Although it was difficult to ensure which demographic factors may or may not have influenced people's attitude toward people with disabilities, researcher have agreed that educational attainment, acculturation, different contact experiences with people with disabilities (quantity and quality of contact), and media as indirect contact on attitude toward people with IDD may be factors that affect attitude change.

As reported above, several studies have looked at the effects of interpersonal contact on attitudes toward people with IDD. In general, findings support the effect of interpersonal contact. There is some evidence that increased interpersonal contact can have a positive effect on the attitudes of the non-disabled toward people with IDD. In contrast, other studies suggest that interpersonal contact does not always lead to a positive change in the attitudes toward people with IDD. Rather than dichotomous measures (e.g., 'some contact' versus 'no contact'), one must examine multi-dimensional attitudes in relation to frequency, types, and quality of contacts

with individuals with IDD. Thus, studies that examine the effects of multifaceted contacts on attitudes change will be more successful in finding ways to break down attitudinal barriers and integrate people with IDD equally into mainstream society.

# CHAPTER 3: THEORETICAL FRAMEWORK

## Intergroup Contact Theory

"Familiarity then breeds acceptance and ambiguity breeds contempt" (Triblet & Sugarman, 1987). This general truism applies to one's interactions with and attitudes toward persons with IDD. Interactions can dispel one's stereotypic perceptions through positive contact and learning experiences. Positive information, in turn, can expel negative beliefs and attitudes toward persons with IDD.

Within social psychology, several related models of intergroup contact were developed and built on Allport's (1954) contact hypothesis, which was viewed as a method to change prejudicial attitudes toward ethnic minority groups (e.g., Allport, 1954; Gaertner, Rust, Dovidio, Bachman, & Anastasio, 1996). In his classic book on *The Nature of Prejudice*, Allport (1954) conceptualized intergroup contact as a means to effectively reduce negative stereotypes and prejudices resulting in improved attitudes and behaviors and, ultimately, a reduction in stigma and improvement in intergroup relations. His work led to over 60 years of social psychology investigations on how intergroup contact reduces prejudice. Intergroup contact theory is an effective psychological strategy for improving intergroup relations. According to this model, positive contact with people from the stigmatized group is inconsistent with negative stereotypes and results in a reduction in stigma (Amir, 1969; Desforges et al., 1991). The quantity and quality of contact and relationships between members of groups in conflict may greatly influence the intergroup attitudes that members of these groups hold. On the one hand, if the contact is only among hostile and violent members of these groups, then it may result in extreme and negative attitudes toward the outgroup. On the other hand, intergroup contact theory proposes

that positive intergroup contact can lead to the reduction of prejudice and stereotypes about the outgroup and positive social development.

As Pettigrew and Tropp (2005) summarize, intergroup contact theory asserts that certain criteria must be met in order for contacts between individuals of different groups to successfully reduce negative attitudes associated with the outgroup. Allport (1954) listed several optimal conditions of positive contact settings that brought about positive changes in attitudes. The combination of these conditions resulted in positive contact experiences, which reduced prejudice and increased social acceptance. After reviewing the literature fifteen years later, Amir (1969) specified the contact conditions, which would result in positive or negative changes in attitude. Today, intergroup contact theory posits that attitudes toward members of a negatively stereotyped outgroup, such as people with disabilities, can become more positive after having direct interpersonal contacts with outgroup members. After half a century of research on contact theory (Allport, 1954; Amir, 1969; Brewer & Brown, 1998; Pettigrew, 1998), contact has been found to produce favorable attitudes toward outgroup members in situations marked by the following four optimal conditions:

(1) *Opportunity to interact*: Situations with high acquaintance potential promote intimate contact between individuals, which enhances the development of meaningful relationships. Stated explicitly, contact must be of sufficient frequency, duration, and closeness to facilitate the development of intergroup (e.g., disabled–nondisabled) friendships (Brewer & Brown, 1998).

(2) *Equal status*: The way ingroup members perceive their status relative to the status of an outgroup member can strongly influence the outcome of the interaction. The contact situations that promote equal status interactions lead to more positive attitudes (Amir,

1969). A common stereotype of outgroups is that their members have an inferior ability to perform various tasks. If the outgroup members occupy lower status positions within the contact situation, preexisting stereotypes about the inferior abilities of outgroup members are likely to be reinforced rather than dispelled (Cohen, 1984).

(3) *Cooperative pursuit of common goals*: According to Allport (1954), the cooperative striving for a common goal generates solidarity. This suggests that when outgroup members are dependent on one another to reach mutually desired goals, they have instrumental reasons to get along and work together toward achieving their shared goals.

(4) *Authority support*: Intergroup contact is more successful when it occurs in the context of supportive authorities, laws, or customs (Brewer& Brown, 1998). Authority support for integration establishes norms of acceptance, equality, and tolerance (Pettigrew, 1998).

Intergroup contact theory is derived largely from intergroup relations in real world contexts. Begun initially with the racial desegregation efforts of the 1950s, the most extensive application of contact theory has been the implementation of cooperative learning programs in racially desegregated classrooms (Brewer & Brown, 1998). Intergroup contact theory has since been applied to a diverse range of social groups, such as groups with racial, ethnic, cultural, religious, physical, intellectual, political, and status differences in the domains of housing, schooling, employment, recreation, and travel and tourism.

In a meta-analysis of 203 studies examining the effect of intergroup contact on prejudice, Pettigrew and Tropp (2006) found that the theory holds equally well for groups other than ethnic and racial groups for whom the theory was originally developed. These other groups include age, non-heteronormative sexual orientations, and people with mental or physical disabilities. This meta-analysis also found that the optimized four conditions of contact yielded significantly and

markedly greater reductions of prejudice and argued that these optimal contact conditions functioned together best when facilitating positive intergroup outcomes.

Moreover, a recent extensive analysis of intergroup contact theory supported the perspective that contact reduces feelings of threat and anxiety, which helps to reduce prejudice (Pettigrew & Tropp, 2006, 2008). In their metal-analysis of 515 studies from 1940 to 2000, Pettigrew and Tropp (2006) showed contact typically reduced prejudice as it involves "the tendency for familiarity to breed liking." More specifically, structured contact experience led to better positive contact outcomes.

Pettigrew and Tropp (2008) further identified how the experience of contact reduced prejudice and improved positive attitude. First, they examined Allport's theory on the notion that knowledge reduced prejudice. They agreed that contact experience facilitated reciprocal learning between the groups, increased awareness and led to understanding and acceptance. They also stated that there was strong evidence showing that contact reduced threat and anxiety. The third most effective mediating effect of contact was that it enhanced one's ability to take on another's perspective and ability to empathize with the weaker group.

In sum, contact theory advocates that the presence of others, who are different, such as those with disabilities, would increase social interaction and acceptance. The intergroup contact theory offers a framework for strategies of reducing the public's negative attitudes toward people with IDD.

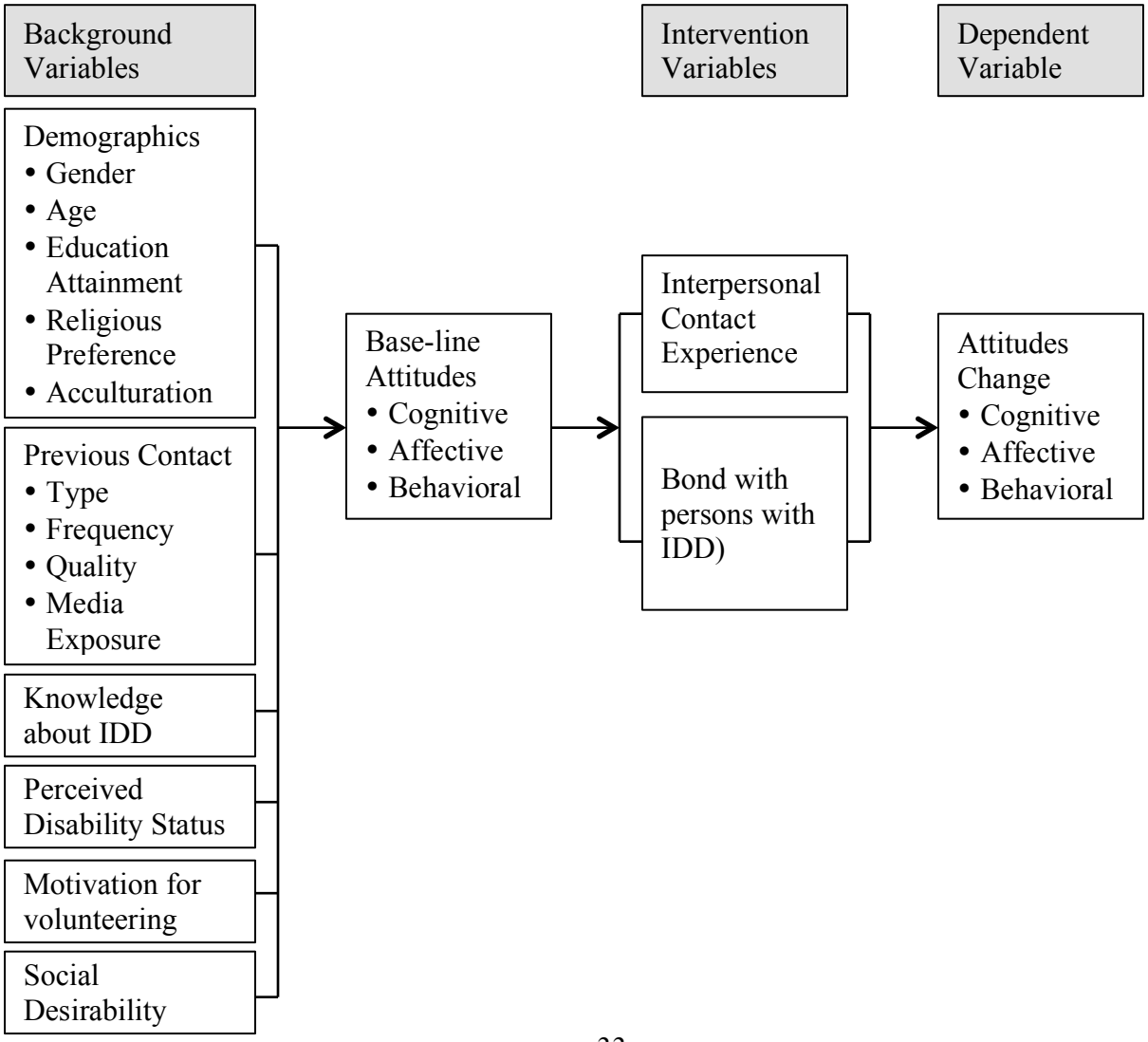
**Conceptual Framework for this Study**

This study investigates the factors affecting the baseline attitudes toward people with IDD and the effect of interpersonal contact intervention on attitudes change toward individuals with IDD. Hypotheses were formulated based on intergroup contact theory (Allport, 1954; Amir,

1969; Brewer & Brown, 1998; Pettigrew & Tropp, 2006) and the findings regarding more knowledge about, more contact with, and the better quality of contact. Figure 1 shows the conceptual framework for this study. Based on the Intergroup Contact Theory, the background variables (demographic characteristics, previous contact experience, and previous knowledge about IDD) and intervening variable (interpersonal contact experience and quality of the contact) may affect the cognitive, affective, and behavioral components of attitude.

Figure 1

*Conceptual Framework of Attitude Change*



**Research Questions and Hypotheses**

This study explored the following research questions and results may inform the factors that reduce negative attitudes toward persons with IDD and lead to recommendations for developing a sustainable, intentional approach to social integration of persons with IDD.

1. What are baseline attitudes Korean-American adolescents and young adults held toward people with IDD?
    - What are the differences in the baseline attitudes between the intervention group and comparison group participants?
2. Are there differences in attitudes toward persons with IDD according to various individual characteristics such as the demographics variables, social desirability, and previous contact experiences?
    - How do *the demographic characteristics* (gender, age, educational attainment, religious preference, and acculturation) affect the baseline attitude?
    - How do *previous contact experiences* (types, frequency, and quality of previous contacts and media exposure) affect the baseline attitude?
    - How do *perceived disability status* of person with IDD affect the baseline attitude?
    - How does *knowledge about IDD* affect the baseline attitude?
    - How does *previous attendance in disability-related educational programs* affect the baseline attitude?
    - How does *the motivation for volunteering* at Camp Agape affect the baseline attitude among the intervention group participants?
    - Two non-directional hypotheses are posed: there is at least one significant difference between scores for males and females and between the young and the old.

- It is also hypothesized that more educated, longer time in the US, increased contacts with, the better the quality of contacts, more accurately depicted media exposure, more knowledge, an internal motivation would hold more positive attitudes after controlling for other variables.

3. Is there a significant association between the previous camp participation and their baseline attitudes toward people with IDD, while controlling for other variables? What are significant factors associated their baseline attitudes toward people with IDD, while controlling for other variables?
4. Does the interpersonal contact intervention have an effect on attitude change toward persons with IDD?
    - Are there differences in pre- and post-test attitudes of the affective, behavioral, or cognitive factors?
    - Are there differences in changes of the pre- and post-test attitudes between the first timers and those who previously experienced the camp?
    - It is hypothesized that participants would have more positive attitude after the intervention and the attitudes of the first timer would be improved pronouncedly compared to the attitudes of those who previously experienced the camp.
5. Is there a significant association between attitude change and the bond between the non-disabled camp participants and their buddies?
    - A hypothesis is formulated about the relationship between the Camp Agape participants who are people without IDD and their buddies who are individuals with IDD, and attitude change. One way to directly assess the quality of contact is by asking participants to rate the strength of the "bond" between themselves and their

buddies. It is hypothesized that a greater (i.e., more positive) bond between the Camp Agape participants and buddies will be related to a greater reduction in negative attitudes, in comparison those contacts without a good relationship.

6. Are there differences in attitudes according to the level of functioning in IDD?
7. From the qualitative data, how do participants describe their experience at the camp, including the interactions with a matched person with IDD? How and when the camp intervention affected the participants' attitude to change?

# CHAPTER 4: METHODOLOGY

## Research Design

The mixed-methods research design that utilized in the present study consists of two studies, quantitative and qualitative, which executed by sequential transformative procedures (Creswell, 2012). This approach would expand the scope of the research related to attitudes and enhance the reliability and validity of the research findings (Mathison, 1998). The quantitative approach would provide a statistical model to describe participants' attitudes toward people with IDD and allow for the collection of information from a large number of participants in a short time frame. The qualitative approach would allow for further elaboration of the quantitative results and enable the researcher to conduct a more holistic analysis of the problem (Mertens, 2005). The rich and multilayered data that arisen from the mixed-methods study would help to explain the complex dynamics of Korean-American adolescents' and young adults' attitudes toward people with IDD.

The following sections provide a description of the research project and an overview of the methods and instruments employed in this study. The multi-dimensional attitude questionnaire and multi-dimensional measures of contact were used in the quantitative portion of the study. For the qualitative study, semi-structured interviews were conducted.

## Research Project Description

This study examined the effects of interpersonal contact through participation in Camp Agape, a summer camp program for persons with IDD, on attitude change toward persons with IDD. The Milal Mission is a nationwide non-profit organization for Korean-Americans with IDD and has over 10 branches. Each branch offers Class Agape, a Saturday school for adolescents and young adults with IDD. The Milal Mission holds Camp Agape, an annual two nights and

three days summer camp. Camp Agape 2015 of the Western branches took place from June 25th to June 27th, 2015 at the University of California, Santa Barbara and Camp Agape 2015 of the Eastern branches was held from July 3rd to July 5th, 2015 at the Hyatt Regency Hotel in Princeton, NJ.

Camp Agape runs educational and recreational programs for people with IDD to develop their abilities and help them integrate into society. The Milal Mission recruited the camp volunteers who are Korean-American adolescent and young adults without disabilities by posting fliers and giving presentations at community churches. The Milal Mission matches volunteers to individuals with IDD (hereafter referred to as a "buddy" in the present study as identified by Class Agape and Camp Agape). The directors of Camp Agape matched the volunteers and buddies based on age and gender.

Camp Agape is based on the perspective of friendship building rather than helping people with IDD for the purpose of creating an equal relationship. All of the camp participants had one-to-one interactions with their assigned buddies for two nights and three days. The matched pairs ate, slept, and participated in all the camp activities (e.g. worship services, swimming, crafting) together during the camp. The camp's activities were planned and sequenced by the Milal Mission.

The present study is based on the intergroup contact theory, which states equal status, having common goals between groups, intergroup cooperation, and authority support ensure favorable attitude changes (Allport, 1954; Pettigrew & Tropp, 2006). A one-to-one relationship with a person with IDD encouraged during the camp provides continuous opportunity to interact with people with IDD in an equal status relationship, while simultaneously providing an opportunity for the two to develop a friendship. This camp also meets cooperative pursuit of

common goals between groups within the Milal Mission's support. In this case, the common goal is to get along safely and satisfactorily during the camp. The participants and their buddies work together toward achieving their common goal through various recreational games provided during the camp.

**Subject Recruitment**

The Camp group participants were recruited from the Camp Agape volunteers at the camp preparation workshop which was held a week before the camp. This researcher described the present study to the camp volunteers. It was emphasized that the decision of whether or not to participate in the study would not affect the volunteers' status in Class Agape or Camp Agape. Volunteers who chose to participate in the study received a packet of questionnaires to complete during the workshop.

Since the camp group participants volunteered for interacting with persons with IDD, it is possible that this group demonstrates selection bias or sample bias. Thus, this study included the comparison group participants consisting of those who were not currently participating in any volunteer activity for persons with IDD and had never participated in Camp Agape. The comparison group participants were recruited through this researcher's presentation at Korean-American churches in greater Los Angeles area. After assessing their appropriateness for the study, the questionnaire packets were distributed to those who were willing to participate in the study. The comparison group provides baseline attitudes that can then be used to explore the differences and similarities between the attitudes of the intervention group participants. Attempts were made to select comparison group participants with analogous demographic characteristics to the intervention group participants, such as age, gender, education attainment, religious preference, and acculturation level.

The camp and comparison group participants were excluded if they have an intellectual or developmental disabilities and they are younger than age of 14. Comparison group participants were excluded if they are currently participating in volunteer activities involving people with IDD and have participated in Camp Agape before. The study procedures are included in a flowchart in Appendix A.

For the qualitative data, the present study purposively varies the sample with the goal of achieving a maximum array of perspectives. Participants were asked if they were willing to be interviewed about the camp experience in the end of the post-test questionnaire. This researcher pre-screened and selected participants from those who were willing to be an interviewee, based on a diversity of demographic factors, such as age, gender, education attainment level, acculturation and previous camp participations.

All of the participants received a brief description of the purpose of the research and a consent form. Participants were assured that their cooperation is voluntary, and no negative consequences would result for those who decided not to participate in the survey. Participants were assured of their confidentiality, as any personal identifiers would be coded. Since the Camp Agape buddies (people with IDD) were not the focus of the present study, permissions and personal information were not collected on them.

**Data Collection**

This study used a one-group pretest-posttest design with a pretest-only comparison group for quantitative portion. Quantitative data were collected from self/group-administered surveys. Camp group participants had approximately 30 minutes survey at the pre- and post-test. Camp group participants took a pre-test a week before the camp (Time 1) using the developed questionnaire, which collected information on demographics, previous contact experience,

knowledge about IDD, and motivation for volunteering, and the attitudes questionnaire toward persons with IDD. To investigate the effect of the interpersonal contact intervention, camp group participants completed the post-test (Time 2) immediately following the camp using the attitudes questionnaire toward persons with IDD, the questionnaire on the bond between buddies, and social desirability. Each component of the survey was adapted or modified specifically for use with this study. Although the codes were assigned on questionnaires for pre- and post-test matching comparisons, all responses were anonymous on all instruments. Participants were provided with a gift card incentive for their participation. The incentives were given to the participants upon completion the post-test.

The comparison group did not receive any intervention but completed a questionnaire package including background information, attitudes toward persons with IDD, and social desirability at a time after Time 2.

Qualitative data collection was drawn from the semi-structured interviews and the participants' essays to develop a deeper understanding of the effects of the interpersonal contact experience on attitude changes toward persons with IDD and explore how contact experience influenced their attitude change. For the semi-structured interviews, emails or text message were made for the participants who agreed to be an interviewee. Twelve of the 32 contacted participants participated in the interviews. Over a two-month period (August to September, 2015), I interviewed these 12 participants who experienced Camp Agape in 2015. Each participant chose between a phone interview or in-person interview based on their preference. Individual interviews were completed at a time and place convenient for them so as to create a comfortable environment for them to share their experiences (Doody & Noonan, 2013).

In-depth interviews comprised of predetermined, but flexibly worded, questions were conducted with participants individually to understand their contact experience and explore factors that influenced their attitude change (The interview protocol is presented in Appendix B.) Interviews were openly probed for deeper issues of specific interest to the interviewees. For example, the following follow-up questions were asked: Can you give an example? Can you explain that? What else can you tell me about that? This is what I thought I heard… Did I understand you correctly? This in-depth interview could reveal the unobserved feelings and thoughts of interviewees and fill the gaps in the quantitative data. To reduce the social desirability effect, the interviewer stressed confidentiality and anonymity and appealed to the respondents to provide honest answers. Interviews last approximately 20 minutes and were digitally recorded for transcription and analysis. The denaturalized transcription approach was used to focus on the meanings and perceptions shared during a conversation, rather than depicting accents or involuntary vocalization.

The qualitative data also were collected from five of the participants' essays. After the camp, the Milal Mission encouraged the camp participants to write an essay about their camp experiences. There was no specific instruction on the essay beyond 'write about your camp experience'. Five participants turned into their essays, which served as the data for qualitative analysis.

**Study Participants**

For quantitative data, initial recruitment for the pre-intervention time of measurement drew a sample of 316 participants. A sample of 252 participants completed surveys at pre- and post-intervention. For the comparison group, a sample of 267 participants completed the attitudes survey. Those who were above 30 years old were excluded to focus on the adolescents and

young adults. After cleaning up the aggregated data set, responses from 235 participants for the camp group and 240 participants for comparison group constituted the final analyzed sample for the present research.

**Variables**

The dependent variable in this study was the three components of attitudes toward people with IDD, which were affect (discomfort and sensibility), behavior (interaction), and cognition (Cognition of capacity and Cognition of causes about IDD).

The primary independent variables were camp participation and the relationship between a participant and her/his buddies through the intervention (bond). The followings were included as the independent variables to examine the factors of the attitudes and/or the control variables in multivariate regression models: demographic characteristics (age, gender, education attainment, religious preferences, and acculturation level); the quantity (types and frequency) and quality of previous contacts; perceived prior knowledge about IDD and attendance of disability-related educational program; perceived disability status of previous contact; the effect of media as indirect contact, and social desirability.

**Measurements**

**The Attitudes Toward Intellectual Disability Questionnaire (ATTID).** The ATTID (Morin, Crocker, Beaulieu‐Bergeron, & Caron, 2013) was recently developed through previously validated scales, including MRAI-R (Antonak & Harth, 1994), the Behavioral Intention Scale (Roberts & Lindsell, 1997), and CLAS-MR (Henry et al., 1996). The ATTID has been identified as one of the few validated scales that measure the multidimensional nature of attitudes, such as the affective, behavioral, and cognitive components (Morin et al., 2013b). The ATTID is considered as a suggestive measurement to assess a given population's attitudes or evaluate the

effect of interventions aimed at changing these attitudes (Patel & Rose, 2014). This questionnaire has total of 67-items and yields a five-factor structure overlapping the tri-partite model of attitudes; which were two *affective* factors: discomfort (17 items) and sensitivity/compassion (6 items), a *behavioral* factor (17 items); two *cognitive* factors: cognition of capacity and right (20 items) and cognition of causes of intellectual disabilities (7 items). The ATTID is based on a Likert-type scale, ranging from 1 (strongly agree) to 5 (strongly disagree). This measurement has two vignettes referring to two different levels of functioning and allows determining potential differences in attitudes toward mild and severe IDD. Cronbach's alpha coefficients range from 0.59 to 0.89 for the five factors. Internal consistency was 0.92 for the overall questionnaire. Test–retest reliability yields correlations from 0.62 to 0.83 for the five factors (Morin et al., 2013b). Modifications on the scale for the present study were made such that the terms "intellectual disability" and "ID" were replaced with "intellectual or developmental disabilities" or "IDD". The higher scores on the different items and factors mean the more negative attitude toward persons with IDD.

**Background Information.** A demographic questionnaire was developed for this study. It asks for demographic information such as age, gender, education attainment, religious preference, and acculturation (length of stay in the U.S.). Questions probing for the participant's motivation for volunteering for Camp Agape, relationship types of the previous contact, perceived disability status of the person with IDD, knowledge about IDD, previous attendance of any disability-related educational programs, and previous media exposures were also included. Questions on the relationship types of the previous contact and knowledge about IDD were adapted from the ATTID. Questions on the relationship types of previous contact consist of 7 items inquiring about various relationships of people with IDD whom a respondent has known. Participants were

asked to respond “yes” or “no” to each item. Regarding knowledge, participants were asked to respond to the question, “How much do you know about the conditions and circumstances of people with IDD?” Participants had the options to choose between nothing, not much, quite a bit, and a lot. Whether the participants had any prior educational programs related to disability awareness is asked as well. The questions on the media exposure were developed for this study based on the Media’s Portrayal of People with Intellectual Disabilities (Pardun et al., 2005). Participants were asked to respond to the question, “If you have watched a movie or television show in which a character depicted a person with IDD, how was the character with IDD depicted?” Participants had the options to choose between ‘superhero with great achievement despite obstacles’, ’Victim or vulnerable/pitiful character’, or ‘Character who acted appropriately or engage in mainstream activities’. All participants were asked to complete the background information at Time 1.

**Contact with Disabled Persons (CDP) scale.** Yuker and Hurley (1987) developed a reliable and valid measure of the quantity and quality of a person's prior contact with individuals with disabilities. Pruett, Lee, Chan, and Lane (2008) suggested that the CDP scale may be used as a multidimensional measure of contact. The respondents rate the 17 items using a Likert format from ‘1’ (never) to ‘5’ (very often). As Yuker and Hurley (1987) report, "the items can be modified to refer to contact with members of other minority or ethnic groups" (p.148), modifications on the scale for the present study were made such that the terms "disabled" and "disability" were replaced with "persons with intellectual or developmental disabilities". Scores between 10 and 50, 4 and 20, and 3 and 15 may be obtained indicating a minimum to a maximum quantity of contact, positive contact, and negative contact experience. The camp group participants were asked to complete the CDP scale before the intervention.

**Marlowe–Crowne Social Desirability Scale–Short Form 2 (MCSDS-SF2).** A social desirability measure was included to measure the participant's tendency to select a socially acceptable response because the change in the attitudes following the intervention might be due to socially desirablilty rather than genuine attitude change. The 10-item version of the MCSDS-SF (Strahan & Gerbasi, 1972) has a correlation of 0.96. Participants responded by indicating "True" or "False" as to how each item applied to them. Half of the items are reverse-scored, and higher scores indicate a greater tendency to select socially desirable responses.

**Bond Subscale of the Working Alliance Inventory-Short Revised (WAI-SR).** Horvath and Greenberg (1986) developed the Working Alliance Inventory (WAI) for the psychotherapy literature. Among three subscales for the WAI, only the bond subscale of WAI-SR (Hatcher & Gillaspy, 2006) was used for this study because the other two are only applicable in therapeutic contexts. The bond subscale consists of four items to measure the strength of the bond between the paired camp participant and his/her paired buddy (a person with IDD). Modifications in the scale were made such that the term 'a therapist' was changed to 'the Camp Agape buddy'. The participants rated statements on a Likert-type scale of one to five. Higher scores reflect a stronger bond.

IRB Approval for the present study was obtained before beginning data collection. Before administering survey questionnaire, written informed consents from a potential participant were obtained. The informed content form is presented in Appendix C. The packet of the questionnaires is presented in Appendix D. For the camp group, the ATTID (Section A, B, and C), Background Information (Section D and E), and Contact with Disabled Persons scale (Section F), were collected at pre-test. The ATTID, Social Desirability scale (Section G), the

Bond Subscale of the Working Alliance Inventory–SR (Section H) were collected after the intervention.

**Quantitative Data Analysis**

A series of Chi-square analyses, independent samples t-tests, and One-Way analyses of variance (ANOVA) were conducted to test for differences between camp group and comparison group.

Mean scores and standard deviations from affective (Discomfort/Sensibility), behavioral (Interaction), and cognitive (Capacity/Causes) factors describe the attitudes toward persons with IDD. A series of independent samples t-tests and ANOVA on the pre-test attitudes were carried out to assess the baseline attitudes along demographic characteristics (age, gender, highest level of education and acculturation) and knowledge- and media-related (the degree of knowledge about IDD, attendance of disability-related educational program, media exposure) and previous contact-related variables (the relationship of persons with IDD known to the participant, camp participation, and volunteer experience). Post-hoc tests were performed on statistically significant factors. Pearson correlation tests were conducted to examine associations between the mean scores of the baseline attitudes and age, acculturation, times of previous camp participation, months of volunteering experience, and frequency and quality of previous contacts. When several variables were significantly related ($p < 0.05$) to one of the factors measured by the ATTID, multiple regression analyses were performed to investigate the effect of the previous camp participation, controlling for other variables.

To investigate the effect of interpersonal contact intervention, a series of paired samples t-tests were conducted by comparing differences between the pre-test and the post-test scores of attitude among the camp group participants. Since the camp group participants included those

who have previously participated in Camp Agape, this study divided the camp group into three subgroups: (1) participants without prior camp and weekly volunteer experience; (2) participants with no prior camp but weekly volunteer experience; and (3) participants with prior camp experience. Paired samples t-tests were conducted for each subgroup. One-way ANOVAs were carried out to determine if there was any significant difference between the subgroups on each attitude factor at the pre-test and the post-test.

To examine the hypothesis that the strength of the bond formed between the camp participants and their buddies would affect the attitude change, multiple regression analyses were conducted, controlling for social desirability.

Repeated measures Analysis of Variance (ANOVA) was used to examine change in attitudes scores from the pre- to post-tests and how this difference varied by the independent variables of interests, which were the times of camp participation and demographic variables. All variables were entered into the model simultaneously. This procedure assesses not only for differences in time point, from pre- to post-test, but also if the change in attitudes between time points varies by the independent variables while controlling for other factors.

Finally, on question 7, a series of t-tests were used to compare attitudes toward persons with low and high levels of functioning.

Preliminary analyses were conducted to ensure no violation of the assumptions of normality, linearity, multicollinearity and homoscedasticity. All analyses were conducted in STATA version 12 (StataCorp., 2011).

**Qualitative Data Analysis**

This study is guided by a case study research approach that is best suited to answer the proposed research questions. As defined by Simons (2009), “a case study is an in-depth

exploration from multiple perspectives of the complexity and uniqueness of a particular project in a real-life context." A case study approach is expected to generate an in-depth understanding of the effect of contacts on attitude change toward persons with IDD. The findings from the study would subsequently inform policy development, professional practice, and community action (Creswell, 2012). Furthermore, a case study can yield a better understanding of the processes and dynamics of attitude changes and requires this project to closely describe, document, and interpret the data (Creswell, 2012). Thus, this case study through Camp Agape allows to test Intergroup Contact Theory and to provide corroborating evidence for a causal argument between interpersonal contact experience and attitude change toward persons with IDD. Considering the contrasts between formulating a standardized survey for a large group of respondents and formulating an in-depth interview for a small set of subjects, the latter is able to probe for details that would be impossible to investigate in a standardized survey.

The present study followed the steps for coding suggested by Bogdan and Biklin (1998). First, the interview transcripts were chronologically and carefully ordered, and this researcher read all of the data at least twice in order to become familiar with the interview information. Next, the researcher conducted initial coding as reading responses and labeling the themes from the data that answer the major research questions. Last, the researcher eliminated or combined coding categories and look for repeating ideas and larger themes that connect codes. Then, the patterns and trends emerged from the data were assessed. After developing the themes and sub-themes, quotes that best illustrate the meaning of the category were also selected.

For analyzing the participants' essays, a formal inductive process of breaking down data into segments were used to compile the comprehensive set statements on the interpersonal

contact experience and quality factor of contacts for each participant and 2) identify and categorized based on themes and sub-themes.

Thus, data analysis included quantitative analysis followed by qualitative data analysis. After both types of data analysis are presented, a synthesis phase will discuss how the qualitative findings help explain, elaborate, or provide implications for the quantitative results.

# CHAPTER 5: RESULTS

This chapter, which is divided into two sections, presents the findings of this study to address this study's eight main research questions. The first section describes statistical analysis results from the quantitative data. The second section describes qualitative data results from the analysis on the participants' subjective responses to their interpersonal contact experience.

## Quantitative Data Results

### Descriptive Analysis

A summary of characteristics for the camp and comparison groups is presented in Table 1 to 3. A series of Chi-square analyses, independent samples t-tests, and ANOVAs were conducted to test for differences between the camp group and comparison group.

Table 1 presents demographic characteristics of participants. Approximately half of the camp group participants were male (n=118), the other half were female (n=117). On age, the majority of the participants (88%) were between 14 and 19 years old and the greatest percentage (73.6%) reported attending high school. 78.7% of the participants were Protestant. Half of participant reported to born in the U.S. Mean of years staying in the U.S. are 12.9 years.

As seen on Table 1, the results of chi-square analyses on the demographic variables shows the percentage of those who participated in the camp and comparison groups did not differ by gender ($\chi^2$ (1, 475) = 1.99, p > .05), age ($\chi^2$ (7, 475) = 5.64, p > .05), education ($\chi^2$ (4, 475) = 4.95, p > .05), and whether they born in the U.S ($\chi^2$ (1, 475) = 2.54, p > .05). Two tailed t-tests revealed that the two groups did not differ on age (t = -1.18, p > .05) and years of stay in the U.S. (t = -0.11, p > .05). However, significant percentage differences between the camp and comparison groups were found for types of religious preference ($\chi^2$ (4, 475) = 26.04, p < .001) and the region where the participants live ($\chi^2$ (1, 475) = 5.15, p < .05).

Table 1

*Demographic Characteristics of Participants*

| | Camp Group (n = 235) | | Comparison Group ( n= 240) | | |
|---|---|---|---|---|---|
| Independent Variables | N | % | n | % | $\chi^2$ |
| Gender | | | | | 1.99 |
| Male | 118 | 50.2 | 105 | 43.8 | |
| Female | 117 | 49.8 | 135 | 56.2 | |
| Age | | | | | 5.64 |
| 14 | 8 | 3.4 | 8 | 3.3 | |
| 15 | 35 | 14.9 | 47 | 19.6 | |
| 16 | 58 | 24.7 | 46 | 19.1 | |
| 17 | 64 | 27.2 | 60 | 25.0 | |
| 18 | 31 | 13.2 | 29 | 12.1 | |
| 19 | 11 | 4.7 | 13 | 5.4 | |
| 20-24 | 22 | 9.4 | 25 | 10.4 | |
| 25-29 | 6 | 2.6 | 12 | 5.0 | |
| Education | | | | | 4.95 |
| HS students | 173 | 73.6 | 173 | 72.1 | |
| HS graduates | 46 | 19.6 | 38 | 15.8 | |
| 2-year college | 5 | 2.1 | 7 | 2.9 | |
| 4-year college | 10 | 4.3 | 21 | 8.8 | |
| Graduate | 1 | 0.4 | 1 | 0.4 | |
| Religion | | | | | 26.04*** |
| Protestant | 185 | 78.7 | 203 | 84.6 | |
| Catholic | 26 | 11.1 | 8 | 3.3 | |
| Buddhism | 5 | 2.1 | 1 | 0.4 | |
| No Preference | 18 | 7.8 | 13 | 5.4 | |
| Others | 1 | 0.4 | 15 | 6.3 | |
| Born in the U.S. | | | | | 2.54 |
| Yes | 117 | 49.8 | 137 | 57.1 | |
| No | 118 | 50.2 | 103 | 42.9 | |
| Years of stay in U.S. | | | | | 7.03 |
| <= 5 | 24 | 10.2 | 24 | 10.0 | |
| 6 – 10 | 54 | 23.0 | 34 | 14.2 | |
| 11 – 15 | 61 | 26.0 | 73 | 30.4 | |
| 16 – 20 | 88 | 37.5 | 103 | 42.9 | |
| 21 and above | 8 | 3.4 | 6 | 2.5 | |
| Region of residence | | | | | 5.15* |
| West | 138 | 58.7 | 116 | 48.3 | |
| East | 97 | 41.3 | 124 | 51.7 | |
| | Mean (SD) | | Mean (SD) | | *t* |
| Age | 17.3 (2.5) | | 17.6 (3.0) | | -1.18 |
| Years of stay in U.S. | 12.9 (5.0) | | 13.6 (4.9) | | -0.11 |

*p < .05. **p < .01. ***p <. 001, ns = non-significant

Characteristics of the participants' previous experiences are presented in Table 2. Separate statistics are displayed for each group, as significant differences between the camp and comparison groups emerged for 'knowing persons with IDD through volunteer work' ($\chi^2$ (1, 475) = 70.72, p < .001), 'no relationship with a person with IDD' ($\chi^2$ (1, 475) = 9.94, p < .01), 'perceived general knowledge about IDD' ($\chi^2$ (3, 475) = 13.78, p < .01), 'attendance of disability-related educational programs' ($\chi^2$ (1, 475) = 13.76, p < .01), and 'volunteer experiences' ($\chi^2$ (1, 475) = 35.01, p < .001).

Most camp group participants (83.8%) had had previous contact with persons with IDD through volunteer experience. Almost all participants reported having a relationship with a person with IDD (95.6%, n = 220). Among these, 41% reported that they did not know the types of IDD. The camp group participants tend to report having more 'Quite a bit' knowledge about IDD than did the comparison group participants (37.9% vs. 25.0%). Interestingly, the camp group participants reported significantly less to having attended the disability-related education programs than did the comparison group (55.7% vs. 72.1%). The camp group participants reported significantly more months to volunteer for people with IDD than comparison group (approximately 15 months vs. 4 months) ($t$ = 6.09, $p$ < .001).

On the motivations for the camp volunteer, 65% of the camp group participants began to volunteer because of family or friends' recommendation and only 20% of participants reported because of their self-interests. Among the camp group participants, 56% reported to have never preciously volunteered at Camp Agape and 29.3% reported having once or twice volunteered at Camp Agape.

Table 2

*Characteristics of Participants' Previous Contact Experiences*

| Independent Variables | Camp Group (n=235) n | % | Comparison Group (n=240) n | % | $\chi^2$ |
|---|---|---|---|---|---|
| Relationship with persons with IDD | | | | | |
| Immediate family | 11 | 4.7 | 19 | 7.9 | 2.10 |
| Extended family | 34 | 14.5 | 30 | 12.5 | 0.39 |
| Neighbor | 33 | 14.0 | 49 | 20.4 | 3.37 |
| Classmate | 86 | 36.6 | 89 | 37.1 | 0.01 |
| People for whom they volunteer | 197 | 83.8 | 113 | 47.1 | **70.72*** ** |
| People for whom they work | 41 | 17.5 | 43 | 17.9 | 0.02 |
| People during leisure activities | 71 | 30.2 | 85 | 35.4 | 1.46 |
| No relationship | 15 | 6.4 | 37 | 15.4 | **9.94** ** |
| Know the types of IDD | | | | | 0.49 |
| No | 98 | 41.7 | 94 | 39.2 | |
| Yes | 122 | 51.9 | 103 | 42.9 | |
| Autism | 71 | 31.2 | 61 | 25.4 | 8.00 |
| Down Syndrome | 24 | 10.2 | 13 | 5.4 | |
| Intellectual disability | 18 | 7.7 | 11 | 4.6 | |
| ADHD | 2 | 0.9 | 6 | 2.5 | |
| Brain Injury | 2 | 0.9 | 6 | 2.5 | |
| Cerebral Palsy | 5 | 2.1 | 5 | 2.1 | |
| Missing | 15 | 6.4 | 44 | 18.3 | |
| Perceived severity of IDD | | | | | 1.63 |
| Mild | 48 | 20.4 | 55 | 22.9 | |
| Moderate | 130 | 55.3 | 114 | 47.5 | |
| Severe | 30 | 12.7 | 24 | 10.0 | |
| Missing | 27 | 11.5 | 47 | 19.6 | |
| General Knowledge about IDD | | | | | **13.78** ** |
| Nothing | 17 | 7.2 | 37 | 15.4 | |
| Not much | 126 | 53.6 | 139 | 57.9 | |
| Quite a bit | 89 | 37.9 | 60 | 25.0 | |
| A lot | 3 | 1.3 | 4 | 1.7 | |
| Attendance of educational programs | | | | | **13.76*** ** |
| No | 131 | 55.7 | 173 | 72.1 | |
| Yes | 104 | 44.3 | 67 | 27.9 | |
| Media exposure about IDD | | | | | 0.36 |
| No | 58 | 24.7 | 65 | 28.1 | |
| Yes | 177 | 75.3 | 175 | 72.9 | |
| Characters in media | | | | | 5.36 |
| Super hero | 55 | 23.4 | 40 | 16.7 | |
| Victim | 70 | 29.8 | 90 | 37.5 | |
| Appropriately act | 52 | 22.1 | 45 | 18.8 | |
| Volunteer experience | | | | | **35.01*** ** |
| No | 87 | 37.0 | 154 | 64.2 | |
| Yes | 148 | 63.0 | 86 | 35.8 | |
| Less than 6 months | 31 | 13.2 | 42 | 17.5 | **54.70*** ** |
| 7 – 12 months | 34 | 14.5 | 15 | 6.3 | |

| | | | | | |
|---|---|---|---|---|---|
| 1 - 2 years | 36 | 15.3 | 16 | 6.7 | |
| 2 – 3 years | 25 | 10.6 | 6 | 2.5 | |
| More than 3 years | 22 | 9.4 | 7 | 2.9 | |
| Mean (SD) | 235 | 15.5 (22.7) | 240 | 5.1 (13.6) | **6.09*** ** |
| (For Camp group only) | | | | | |
| Motivations for Camp | | | | | |
| Parents recommendation | 72 | 30.6 | | | |
| Friends or siblings recommendation | 84 | 35.7 | | | |
| To earn community service credits | 30 | 12.8 | | | |
| Self-interests | 49 | 20.9 | | | |
| Previous camp experience | | | | | |
| No | 131 | 55.7 | | | |
| Once | 45 | 19.2 | | | |
| 2 – 3 times | 45 | 19.2 | | | |
| More than 4 times | 14 | 6.0 | | | |

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

Mean scores of the scaled tests are presented in Table 3. Not surprisingly, the camp group participants reported significant more frequent, more positive, and more negative experiences from previous contact with people with IDD, compared to the comparison group participants. As of social disability test, the comparison group participants had significantly higher tendency to select significantly more socially acceptable responses.

Table 3

*Compare Mean Scores of the Scaled Tests between Camp Group and Comparison Group*

| | Camp Group (n=235) | | | Comparison Group (n=240) | | | |
|---|---|---|---|---|---|---|---|
| Independent Variables | M (SD) | Min | Max | M (SD) | Min | Max | *t* |
| Contact with Disabled Persons Scale | | | | | | | |
| Frequency of previous contact | 22.89 (7.20) | 10 | 48 | 19.22 (7.86) | 10 | 48 | 5.30*** |
| Positive experience of previous contact | 11.75 (4.01) | 4 | 20 | 9.37 (4.27) | 4 | 20 | 6.27*** |
| Negative experience of previous contact | 6.34 (2.42) | 3 | 14 | 5.83 (2.47) | 3 | 13 | 2.31* |
| Social Desirability | 4.20 (1.44) | 0 | 8 | 4.62 (1.50) | 1 | 9 | -3.12** |
| (For Camp group only) | | | | | | | |
| Bond of intervention contact | 13.68 (4.23) | 4 | 20 | | | | |
| Quality of program | 9.32 (2.59) | 5 | 22 | | | | |

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

Since this study sample consists of persons who had volunteered to interact with persons with IDD at Camp Agape, it is possible that this sample demonstrates selection bias or sample bias. They may already have a higher degree of awareness, be more willingness to interact with, or be have more interest in persons with IDD regardless of whether they have had prior contact with them or not. Thus, a series of Independent samples t-tests were conducted to investigate the difference in the baseline attitudes between the camp and comparison group. As shown on Table 4, although most of mean scores of the comparison group were higher than those of the camp group, a series of independent samples t-tests found that there were no significant differences in the baseline attitudes except the Cognition of capacity factor between the camp group and comparison group. The mean score of the Cognition of capacity factor for comparison group (M = 2.16, SD = 0.47, N = 240) was lower than that for the camp group (M = 2.26, SD = 0.44, N = 235), indicating that the comparison group had more positive cognition of capacity than did the camp group, while the camp group participants reported having more knowledge about IDD than did the comparison group participants.

Table 4

*Compare Mean Scores of Baseline Attitudes between Camp Group and Comparison Group*

| | Comparison Group (n=240) | Camp Group Pre-test (n=235) | | |
|---|---|---|---|---|
| | M (SD) | M (SD) | *t* | *p* |
| Affect (Discomfort) | 2.23 (0.55) | 2.20 (0.52) | -0.58 | 0.562 |
| Affect (Sensibility) | 2.90 (0.79) | 2.77 (0.78) | -1.89 | 0.060 |
| Behavior (Interaction) | 2.36 (0.61) | 2.31 (0.56) | -0.95 | 0.344 |
| Cognition (Capacity) | 2.16 (0.47) | 2.26 (0.44) | 2.56 | 0.010* |
| Cognition (Causes) | 2.27 (0.67) | 2.24 (0.58) | -0.48 | 0.631 |

**Research Question 1: What are baseline attitudes Korean-American adolescents and young adults held toward people with IDD?**

The descriptive results are presented for the five factors of attitudes: (1) Affect (Discomfort); (2) Affect (Sensibility); (3) Behavior (Interaction); (4) Cognition (Cognition of capacity and rights); and (5) Cognition (Cognition of causes). Table 5 presents all items of the ATTID, their mean scores, standard deviations, and percentage of participants by responses (positive, neutral, and negative attitude) for each factor. Attitudes were divided into three categories: more positive (scores of 1 and 2), more neutral (score of 3) and more negative (scores of 4 and 5). The items are presented by order from higher means, which reflects more negative attitudes, to lower means, which reflects more positive attitudes. The items, which were higher than the factor mean are presented in bold in the table.

On the Discomfort toward a person with IDD factor, participants reported a mean score of 2.20 (SD = 0.52), ranging from 1.64 to 3.95, where a score of 1 indicates low or no discomfort and 5 indicates strong discomfort. Among the 17 items, six items had a mean score above the factor's mean (2.20). The following items were associated with a more negative attitude: 'if Raphael asked you a question on the bus, would you answer him', 'be wary' for both IDD persons described (lower and higher levels of functioning), 'experience anxiety' only with the person with a lower level of functioning', 'agree to work with', and 'feel comfortable talking to' the person with a higher level of functioning. Only one item scored higher than one standard deviation from the factor's mean, which was 'would you answer him if Raphael (lower level of functioning) asked a question'; 78% of participants reported strong disagreement with this statement, therefore conveying a negative attitude.

Table 5

*Mean, Standard Deviation and Percentage of Participants with a Positive, Neutral or Negative Attitude on Items Reported by Five Factors at the Pre-Test (n=235)*

| | M | SD | % positive | % neutral | % negative |
|---|---|---|---|---|---|
| *FACTOR 1: DISCOMFORT* | *2.20* | *0.52* | *69%* | *18%* | *13%* |
| **If Raphael asked you a question on the bus, would you answer him** | **3.95** | **0.92** | **11%** | **11%** | **78%** |
| **Be wary (Raphael)** † | **2.62** | **1.10** | **47%** | **26%** | **27%** |
| **Be wary (Dominic)** † | **2.42** | **1.06** | **55%** | **26%** | **19%** |
| **Experience anxiety (Raphael)** † | **2.33** | **0.99** | **60%** | **25%** | **15%** |
| **Agree to work with Dominic** | **2.27** | **0.89** | **65%** | **26%** | **9%** |
| **Feel comfortable talking to Dominic** | **2.21** | **0.82** | **71%** | **22%** | **7%** |
| Feel afraid (Raphael) † | 2.15 | 0.95 | 70% | 18% | 12% |
| Experience anxiety (Dominic) † | 2.14 | 0.97 | 67% | 23% | 11% |
| Feel insecure (Raphael) † | 2.14 | 0.93 | 69% | 21% | 10% |
| Feel embarrassed (Raphael) † | 2.06 | 0.87 | 71% | 24% | 6% |
| Move away if Raphael was next to you on a bus † | 2.05 | 0.92 | 78% | 11% | 11% |
| Accept being served in a café by Dominic | 1.98 | 0.72 | 84% | 13% | 3% |
| Feel insecure (Dominic) † | 1.97 | 0.86 | 76% | 18% | 6% |
| Feel afraid (Dominic) † | 1.88 | 0.83 | 84% | 10% | 6% |
| Move away if Dominic was next to you on a bus † | 1.84 | 0.92 | 83% | 10% | 7% |
| Feel embarrassed (Dominic) † | 1.84 | 0.78 | 82% | 15% | 3% |
| If Dominic asked you a question on the bus, would you answer | 1.64 | 0.64 | 94% | 5% | 1% |
| *FACTOR 2: SENSIBILITY / TENDERNESS* | *2.77* | *0.78* | *41%* | *29%* | *30%* |
| **Feel touched, moved (Dominic)** † | **3.07** | **1.01** | **26%** | **39%** | **34%** |
| **Feel touched, moved (Raphael)** † | **2.99** | **1.02** | **31%** | **36%** | **32%** |
| **Feel pity (Raphael)** † | **2.83** | **1.15** | **41%** | **22%** | **38%** |
| Feel sad (Raphael) † | 2.71 | 1.13 | 46% | 23% | 30% |
| Feel pity (Dominic) † | 2.56 | 1.09 | 49% | 27% | 24% |
| Feel sad (Dominic) † | 2.47 | 1.06 | 55% | 24% | 21% |
| *FACTOR 3: INTERACTION* | *2.31* | *0.56* | *62%* | *25%* | *13%* |
| **Agree to supervising Raphael at your work** | **3.08** | **1.01** | **27%** | **38%** | **35%** |
| **Rent to Raphael** | **2.99** | **1.13** | **32%** | **35%** | **33%** |
| **Could adopt Dominic** | **2.80** | **1.13** | **37%** | **38%** | **25%** |
| **Accept Raphael working at your child's daycare center or school** | **2.57** | **0.94** | **48%** | **35%** | **17%** |
| **Accept Dominic working at your child's daycare center or school** | **2.54** | **0.90** | **48%** | **39%** | **12%** |
| **Feel comfortable talking to Raphael** | **2.49** | **1.00** | **56%** | **26%** | **17%** |
| **Accept Raphael as your son or daughter's friend** | **2.43** | **0.96** | **57%** | **29%** | **14%** |
| **Should be paid the same wage as other employees even if they are less productive** | **2.43** | **1.03** | **55%** | **29%** | **16%** |

*(Table 5 Continues)*

*(Table 5 Continued)*

| | | | | | |
|---|---|---|---|---|---|
| **Accept being advised by Dominic in an electronics store** | **2.37** | **0.90** | **58%** | **34%** | **8%** |
| Accept being advised by Dominic in a clothing store | 2.29 | 0.87 | 63% | 29% | 7% |
| Agree to supervising Dominic at your work | 2.10 | 0.83 | 72% | 23% | 5% |
| Could you adopt Raphael | 2.09 | 0.96 | 76% | 15% | 9% |
| Rent to Dominic | 2.05 | 0.85 | 75% | 19% | 5% |
| Agree to work with Raphael | 1.85 | 0.77 | 88% | 9% | 3% |
| Accept Dominic as your son or daughter's friend | 1.79 | 0.76 | 87% | 11% | 2% |
| Children with id should have the opportunity of attending a regular elementary school | 1.75 | 0.79 | 86% | 10% | 4% |
| Adolescents with id should have the opportunity of attending a regular secondary school | 1.75 | 0.75 | 86% | 12% | 2% |
| | | | | | |
| *FACTOR 4: KNOWLEDGE OF CAPACITY AND RIGHTS* | *2.26* | *0.44* | *65%* | *23%* | *12%* |
| **To walk about town unaccompanied** | **3.09** | **0.97** | **27%** | **40%** | **33%** |
| **To handle money** | **3.01** | **0.90** | **33%** | **35%** | **33%** |
| **To hold down a job** | **3.00** | **0.91** | **30%** | **40%** | **30%** |
| **To use public transport on their own** | **2.81** | **0.90** | **43%** | **32%** | **25%** |
| **To report their physical problems** | **2.76** | **0.92** | **43%** | **34%** | **23%** |
| **Should have the right to drink alcohol** | **2.68** | **1.19** | **44%** | **29%** | **27%** |
| **To carry on a conversation** | **2.37** | **0.86** | **62%** | **27%** | **11%** |
| **To play sports** | **2.36** | **0.86** | **65%** | **23%** | **12%** |
| Should give their consent to receive medical care | 2.24 | 0.79 | 68% | 27% | 5% |
| To make decisions | 2.13 | 0.84 | 73% | 22% | 6% |
| To read short sentences | 2.08 | 0.74 | 79% | 17% | 4% |
| Should have the opportunity of working in a ordinary workplace | 2.06 | 0.86 | 73% | 22% | 6% |
| Should have the right to vote | 1.99 | 0.91 | 75% | 20% | 6% |
| Should have the right to have children | 1.98 | 0.96 | 75% | 19% | 7% |
| Should have the right to have sex | 1.97 | 0.85 | 73% | 24% | 3% |
| Should participate in community leisure activities | 1.85 | 0.80 | 81% | 16% | 3% |
| To learn | 1.85 | 0.73 | 87% | 10% | 3% |
| Have just as much right as people who don't have id to make decisions about their life | 1.83 | 0.78 | 83% | 14% | 3% |
| Should have the right to get married | 1.60 | 0.70 | 91% | 7% | 1% |
| Should have the same rights as everyone else | 1.59 | 0.77 | 87% | 11% | 2% |
| | | | | | |
| *FACTOR 5: KNOWLEDGE OF CAUSES* | *2.24* | *0.58* | *68%* | *20%* | *12%* |
| **ID is more common in underprivileged setting** | **2.93** | **0.91** | **33%** | **42%** | **25%** |
| **Lack of stimulation during childhood** | **2.63** | **1.00** | **51%** | **30%** | **19%** |
| **Malnutrition in the mother** | **2.35** | **1.02** | **66%** | **19%** | **15%** |
| Chemicals in the environment | 2.16 | 0.92 | 71% | 20% | 9% |
| Serious head injury in a child | 2.06 | 0.91 | 77% | 14% | 9% |
| Problems during birth | 1.92 | 0.89 | 82% | 12% | 6% |
| Consumption of drugs or alcohol by the mother during pregnancy | 1.65 | 0.78 | 90% | 7% | 3% |

† Reversed responses

*Note:* Raphael is the name of a person (female or male) with severe IDD
Dominic is the name of a person (female or male) with mild IDD

On the second factor, six items evaluated sensibility or compassion toward persons with IDD. Their mean score was 2.77 (SD = 0.78), ranging from 1.00 to 4.67. Three items were above the mean: ‘feel touched, moved (Dominic)’, ‘feel touched, moved (Raphael)’, and ‘feel pity (Raphael)’. Although none were above one standard deviation, in all items, about 30% of participants had a more negative attitude (higher scores of 4 or 5), which was the highest percent of negative response among the five factors.

On the behavioral attitude (Interaction factor) toward persons with IDD, the mean score for the 17 items making up this factor was 2.31 (SD = 0.56), ranging from 1.00 to 4.35. Nine items stood out as being above the mean: ‘agree to supervise Raphael at your work’, ‘rent to Raphael’, ‘adopt Dominic’, ‘accept Raphael working at your child’s daycare center or school, ‘accept Dominic working at your child’s daycare center or school’, ‘feel comfortable talking to Raphael’, 'accept Raphael as your son or daughter’s friend’, ‘should be paid the same wage as other employees even if they are less productive’, and ‘accept being advised by Dominic in an electronics store’. Two items scored higher than one standard deviation from the factor’s mean, which was ‘agree to supervise Raphael at your work’ and ‘rent to Raphael’; over 30% of participants disagreed or disagreed strongly, therefore conveying a negative attitude.

On the Cognition of capacity and rights factor, item scores ranged from 1.00 to 3.5, and the mean score was 2.26 (SD = 0.44). Among the 20 items making up this factor, the following eight items scored higher than the factor’s mean; ‘to walk about town unaccompanied’, ‘to handle money’, ‘to hold down a job’, ‘to use public transport on their own’, ‘to report their physical problems’, ‘should have the right to drink alcohol’, ‘to carry on a conversation’, and ‘to play sports’. More than 30% of participants disagreed or disagreed strongly with the first three items.

Finally, the Cognition of causes of ID, scores ranged from 1.00 to 4.71, and the mean score was 2.24 (SD = 0.58). Among the seven items, three items had a mean score above the factor's mean. Among the participants, the followings were the least frequently identified as causes of ID; 'ID is more common in underprivileged setting', 'lack of stimulation during childhood', and 'malnutrition in the mother'. None was above one standard deviation.

**Research Question 2: Are there differences in attitudes toward persons with IDD according to various individual characteristics?**

Table 6 displays that the baseline attitudes toward persons with IDD differed based on participants' socio-demographic characteristics, such as gender, levels of education attainment, and religion preference. Gender was significantly associated with the Discomfort factor ($t = 2.33$, $p < .01$), the Interaction factor ($t = 3.94$, $p < .001$), and the Cognition for causes ($t = 3.47$, $p < .001$). The analyses indicated that males were likely to have more discomfort toward, less willingness to interact with, and more negative cognition of capacity and rights of persons with IDD at the pre-test than did females.

Education attainment was also significantly associated with both of affective attitudes (Discomfort, $F(2, 232) = 4.58$, $p < .01$; Sensibility, $F(2, 232) = 3.11$, $p < .01$). Post hoc analyses were conducted to determine where the significant differences were (Howell, 2002). Multiple comparisons with Bonferroni adjustments, not included here, found that participants having college and above education had significantly more positive attitude in the Discomfort factor ($t = -2.78$, $p < .05$) than did high school students and significantly more positive attitude in the Sensibility factor ($t = -2.49$, $p < .05$) than did high school graduates.

Religious preference was significantly associated with the Interaction factor ($F(3, 230) = 3.38$, $p < .05$). Post hoc tests, not included here, demonstrated that participants identifying with

Buddhism were significantly less willing to interact with people with IDD that were Catholic participants ($t = 3.14$, $p < .05$).

Table 6

*Mean differences, T-tests, and ANOVA on Attitudes by Socio-demographic Characteristics of the Camp Participants at the Pre-test (n=235)*

| | Affect (Discomfort) | Affect (Sensibility) | Behavior (Interaction) | Cognition (Capacity) | Cognition (Causes) |
|---|---|---|---|---|---|
| | M (SD) | M (SD) | M (SD) | M (SD) | M (SD) |
| Gender | | | | | |
| Male (n=118) | 2.28 (0.51) | 2.76 (0.81) | 2.45 (0.51) | 2.36 (0.41) | 2.20 (0.47) |
| Female (n=117) | 2.13 (0.53) | 2.78 (0.76) | 2.17 (0.58) | 2.17 (0.45) | 2.28 (0.67) |
| *t* | **2.33*** | -0.14 | **3.94***** | **3.47***** | -1.02 |
| Education Attainment | | | | | |
| HS Students (n=173) | 2.26 (0.51) | 2.77 (0.74) | 2.34 (0.56) | 2.28 (0.45) | 2.26 (0.56) |
| HS graduates (n=46) | 2.12 (0.51) | 2.91 (0.83) | 2.20 (0.54) | 2.18 (0.34) | 2.21 (0.60) |
| College and above | 1.88 (0.55) | 2.34 (0.92) | 2.27 (0.56) | 2.32 (0.47) | 2.14 (0.63) |
| *F* | **4.58*** | **3.11*** | 1.20 | 1.20 | 0.39 |
| Born in US | | | | | |
| Yes (n=117) | 2.19 (0.51) | 2.76 (0.73) | 2.25 (0.56) | 2.28 (0.45) | 2.20 (0.55) |
| No (n=118) | 2.22 (0.52) | 2.77 (0.82) | 2.37 (0.54) | 2.25 (0.41) | 2.289 (0.59) |
| *t* | -0.45 | -0.20 | -1.65 | 0.39 | -1.23 |
| Religious preference | | | | | |
| Protestant (n=185) | 2.20 (0.51) | 2.79 (0.77) | 2.32 (0.55) | 2.28 (0.43) | 2.24 (0.60) |
| Catholic (n=26) | 2.18 (0.58) | 2.76 (0.76) | 2.13 (0.62) | 2.10 (0.47) | 2.29 (0.39) |
| Buddhism (n=5) | 2.25 (0.39) | 2.00 (0.77) | 2.98 (0.48) | 2.53 (0.31) | 1.94 (0.53) |
| No Preference (n=19) | 2.19 (0.56) | 2.78 (0.87) | 2.28 (0.44) | 2.30 (0.45) | 2.28 (0.51) |
| *F* | 0.04 | 1.66 | **3.38*** | 1.94 | 0.57 |
| Residence Area | | | | | |
| West (n=138) | 2.23 (0.51) | 2.74 (0.74) | 2.36 (0.58) | 2.30 (0.46) | 2.29 (0.57) |
| East (n=97) | 2.17 (0.53) | 2.81 (0.83) | 2.25 (0.52) | 2.22 (0.38) | 2.17 (0.58) |
| *t* | 0.94 | -0.62 | 1.44 | 1.36 | 1.61 |

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

Table 7 displays that the types of relationships from previous contacts were also associated with attitudes. Having an immediate family member or neighbor with IDD did not significantly affect any factors of attitudes. Participants who had an extended family member with IDD were significantly less willing to interact with people with IDD than were those who had no extended family member with IDD ($t = 2.08$, $p < .05$). Participants having a classmate with IDD were significantly more willing to interact people with IDD ($t = -2.31$, $p < .05$) and more positive cognition of capacity ($t = -2.06$, $p < .05$) than were those who never have a classmate with IDD. Knowing people with IDD through their volunteer work significantly affected to have less discomfort ($t = -2.78$, $p < .05$) and more negative cognition of capacity ($t = 3.08$, $p < .001$) than did the counterpart. Finally, participants reported knowing, at least, one person with IDD had significantly less discomfort ($t = -2.84$, $p < .001$), more positive sensibility ($t = -2.37$, $p < .05$), and more negative cognition of capacity ($t = 1.99$, $p < .05$) than did those reported not knowing a person with IDD.

Table 7

*Mean differences and T-tests on Attitudes by Relationships from Previous Contacts among the Camp Participants at the Pre-test (n=235)*

| | Affect (Discomfort) | Affect (Sensibility) | Behavior (Interaction) | Cognition (Capacity) | Cognition (Causes) |
|---|---|---|---|---|---|
| | M (SD) | M (SD) | M (SD) | M (SD) | M (SD) |
| Immediate Family | | | | | |
| Yes (n=11) | 2.07 (0.55) | 2.97 (0.83) | 2.34 (0.40) | 2.30 (0.52) | 2.23 (0.41) |
| No (n=224) | 2.21 (0.52) | 2.76 (0.78) | 2.31 (0.56) | 2.26 (0.43) | 2.24 (0.58) |
| *t* | -0.88 | 0.87 | 0.14 | 0.24 | -0.08 |
| Extended family | | | | | |
| Yes (n=34) | 2.07 (0.56) | 2.67 (0.80) | 2.13 (0.62) | 2.18 (0.41) | 2.19 (0.59) |
| No (n=201) | 2.23 (0.51) | 2.79 (0.78) | 2.34 (0.54) | 2.28 (0.44) | 2.25 (0.57) |
| *t* | -1.57 | -0.78 | **2.08*** | -1.28 | -0.52 |

*(Table 7 Continued)*

| | | | | | |
|---|---|---|---|---|---|
| Neighbors | | | | | |
| Yes (n=33) | 2.10 (0.53) | 2.74 (0.79) | 2.22 (0.69) | 2.24 (0.47) | 2.26 (0 .54) |
| No (n=202) | 2.22 (0.51) | 2.77 (0.78) | 2.32 (0.53) | 2.27 (0.43) | 2.24 (0.58) |
| *t* | -1.22 | -0.27 | -0.99 | -0.28 | 0.14 |
| Classmate | | | | | |
| Yes (n=86) | 2.13 (0.54) | 2.67 (0.77) | 2.20 (0.62) | 2.19 (0.45) | 2.33 (0.62) |
| No (n=149) | 2.25 (0.50) | 2.83 (0.78) | 2.37 (0.50) | 2.31 (0.42) | 2.19 (0.54) |
| *t* | -1.77 | -1.49 | **-2.31*** | **-2.06*** | 1.73 |
| Volunteer Work | | | | | |
| Yes (n=197) | 2.16 (0.51) | 2.74 (0.79) | 2.32 (0.56) | 2.30 (0.43) | 2.23 (0.58) |
| No (n=38) | 2.42 (0.51) | 2.94 (0.72) | 2.26 (0.51) | 2.07 (0.42) | 2.31 (0.52) |
| *t* | **-2.78**** | -1.45 | 0.57 | **3.08**** | -0.79 |
| Know anyone with IDD | | | | | |
| Yes (n=220) | 2.18 (0.51) | 2.74 (0.78) | 2.31 (0.56) | 2.28 (0.43) | 2.24 (0.57) |
| No (n=15) | 2.57 (0.57) | 3.23 (0.67) | 2.37 (0.53) | 2.05 (0.46) | 2.33 (0.57) |
| *t* | **-2.84**** | **-2.37*** | -0.42 | **1.99*** | -0.58 |

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

Table 8 shows that among the participants reported knowing at least one person with IDD, knowing the types of disabilities and the severity of IDD from previous contacts were significantly associated with the Discomfort and Cognition of capacity factor. Participants reported knowing the type of disabilities had significantly less discomfort ($t = -2.73$, $p < .01$) than did those who did not know the types of IDD. However, there was no significant difference in the mean scores of the Discomfort factor based on the different types of disabilities. Perceived severity of IDD significantly affected the Cognition of capacity factor ($F(2, 232) = 3.70$, $p < .05$). Post hoc tests, not included here, revealed that the participants reported that the previously contacted person's disability was perceived as severe had significantly more negative cognition of capacity ($t = 2.60$, $p < .05$) than did participants reported to contact a person with mild IDD.

Table 8

*Mean differences, T-tests, and ANOVA on Attitudes by Types and Severity of IDD from Previous Contact among the Camp Participants at the Pre-test (n=235)*

| | Affect (Discomfort) | Affect (Sensibility) | Behavior (Interaction) | Cognition (Capacity) | Cognition (Causes) |
|---|---|---|---|---|---|
| | M (SD) | M (SD) | M (SD) | M (SD) | M (SD) |
| Types of disabilities | | | | | |
| Don't know (n=122) | 2.10 (0.51) | 2.69 (0.76) | 2.26 (0.53 | 2.26 (0.38) | 2.26 (0.61) |
| Know type (n=98) | 2.28 (0.48) | 2.80 (0.80) | 2.36 (0.58) | 2.31 (0.48) | 2.21 (0.54) |
| t | **-2.73**** | -0.98 | -1.26 | -0.82 | 0.64 |
| | | | | | |
| Autism (n=71) | 2.12 (0.52) | 2.66 (0.71) | 2.32 (0.50) | 2.24 (0.40) | 2.30 (0.57) |
| Down Syndrome (n=24) | 2.07 (0.48) | 2.66 (0.79) | 2.10 (0.59) | 2.20 (0.35) | 2.07 (0.50) |
| Intellectual Disability | 2.00 (0.55) | 2.88 (0.00) | 2.30 (0.52) | 2.40 (0.35) | 2.36 (0.79) |
| ADHD (n=2) | 2.03 (0.62) | 2.67 (0.94) | 2.18 (0.08) | 2.08 (0.53) | 2.50 (0.70) |
| Brain Injury (n=2) | 2.71 (0) | 3.00 (0) | 2.85 (0.12) | 2.63 (0.07) | 2.36 (0.70) |
| Cerebral Palsy (n=5) | 1.96 (0.54) | 2.43 (0.53) | 1.98 (0.81) | 2.21 (0.39) | 2.09 (0.90) |
| *F* | 0.80 | 0.41 | 1.39 | 1.12 | 0.78 |
| | | | | | |
| Perceived severity of IDD | | | | | |
| Mild (n=48) | 2.13 (0.54) | 2.77 (0.87) | 2.19 (0.57) | 2.13 (0.43) | 2.38 (0.55) |
| Moderate (n=130) | 2.18 (0.49) | 2.69 (0.71) | 2.33 (0.56) | 2.29 (0.42) | 2.20 (0.60) |
| Severe (n=30) | 2.19 (0.53) | 2.66 (0.89) | 2.93 (0.51) | 2.40 (0.49) | 2.22 (0.56) |
| *F* | 0.17 | 0.25 | 1.57 | **3.70*** | 1.57 |

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

Table 9 presents the results of t-tests and one-way ANOVAs on the baseline attitudes by knowledge- and media-related variables. Surprisingly, there were no significant differences in any factors of attitudes based on the perceived levels of general knowledge about IDD. Participants reported that they had never attended a disability-related educational program had significantly more discomfort toward IDD ($t = 2.60$, $p < .01$) than did those who had attended.

Participants reported that they had never watched a movie or television show in which a character with IDD had significantly more discomfort toward IDD ($t = 3.53$, $p < .001$), more positive sensibility ($t = 3.53$, $p < .001$), and more willingness to interact ($t = 3.53$, $p < .001$) than

did those who have watched. However, the attitudes did not significantly differ from the different types of characters that a person with IDD was depicted as in media.

Table 9

*Mean differences, T-tests, and ANOVA on Attitudes by Knowledge- and Media-related Aspects among the Camp Participants at the Pre-test (n=235)*

| | Affect (Discomfort) | Affect (Sensibility) | Behavior (Interaction) | Cognition (Capacity) | Cognition (Causes) |
|---|---|---|---|---|---|
| | M (SD) | M (SD) | M (SD) | M (SD) | M (SD) |
| Knowledge about IDD | | | | | |
| Nothing (n=17) | 2.26 (0.43) | 3.05 (0.93) | 2.50 (0.65) | 2.41 (0.380 | 2.02 (0.45) |
| Not much (n=126) | 2.27 (0.51) | 2.77 (0.70) | 2.30 (0.56) | 2.21 (0.41) | 2.23 (0.58) |
| Quite a bit (n=89) | 2.12 (0.53) | 2.73 (0.85) | 2.29 (0.53) | 2.31 (0.46) | 2.29 (0.59) |
| A lot (n=3) | 1.71 (0.45) | 2.11 (0.34) | 2.43 (0.24) | 2.08 (0.52) | 2.42 (0.61) |
| *F* | 2.39 | 1.53 | 0.76 | 1.69 | 1.15 |
| Attendance of disability-related educational program | | | | | |
| No (n=131) | 2.28 (0.49) | 2.83 (0.75) | 2.32 (0.58) | 2.30 (0.43) | 2.20 (0.56) |
| Yes (n=104) | 2.11 (0.53) | 2.69 (0.81) | 2.30 (0.52) | 2.22 (0.44) | 2.30 (0.58) |
| *t* | **2.60**** | 1.36 | 0.23 | 1.24 | -1.36 |
| Media Exposure about IDD | | | | | |
| No (n=58) | 2.41 (0.49) | 2.95 (0.74) | 2.47 (0.60) | 2.31 (0.43) | 2.20 (0.63) |
| Yes (n=177) | 2.14 (0.51) | 2.71 (0.78) | 2.26 (0.53) | 2.25 (0.43) | 2.26 (0.56) |
| *t* | **3.53***** | **2.02*** | **2.51*** | 0.95 | -0.70 |
| Characters in media | | | | | |
| Super hero (n=55) | 2.16 (0.53) | 2.70 (0.75) | 2.34 (0.47) | 2.26 (0.43) | 2.32 (0.66) |
| Victim (n=70) | 2.16 (0.49) | 2.85 (0.77) | 2.24 (0.58) | 2.27 (0.48) | 2.19 (0.47) |
| Appropriately act (n=52) | 2.08 (0.51) | 2.52 (0.81) | 2.21 (0.51) | 2.21 (0.37) | 2.28 (0.55) |
| *F* | 0.43 | 2.67 | 0.87 | 0.28 | 0.94 |

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

Table 10 shows mean differences in five factors of attitudes along the volunteer-related variables. Having weekly volunteer experiences for persons with IDD at Class Agape was

significantly associated with less discomfort ($t = 3.51$, $p < .001$) than having no weekly volunteer experiences for persons with IDD. A One-Way ANOVA revealed that the motivations for the camp were significantly associated with the Discomfort factor ($F(2, 232) = 4.74$, $p < .01$). Post hoc tests, not included here, demonstrated that the participants reported to volunteer at Camp Agape because of their self-interest had significantly less discomfort ($t = -3.05$, $p < .01$) than did the participants reported to volunteer because of earning community service credits.

Table 10

*Mean differences, T-tests, and ANOVA on Attitudes by Volunteer-related Aspects among the Camp Participants at the Pre-test (n=235)*

| | Affect (Discomfort) | Affect (Sensibility) | Behavior (Interaction) | Cognition (Capacity) | Cognition (Causes) |
|---|---|---|---|---|---|
| | M (SD) | M (SD) | M (SD) | M (SD) | M (SD) |
| Volunteer experience | | | | | |
| No (n=87) | 2.36 (0.50) | 2.88 (0.77) | 2.37 (0.54) | 2.23 (0.48) | 2.23 (0.54) |
| Yes (n=148) | 2.11 (0.51) | 2.70 (0.78) | 2.28 (0.56) | 2.28 (0.40) | 2.25 (0.59) |
| *t* | **3.51*** ** | 1.64 | 1.24 | -0.79 | -0.34 |
| Motivations for Camp | | | | | |
| Recommendation (n=156) | 2.21 (0.51) | 2.76 (0.78) | 2.32 (0.55) | 2.25 (0.45) | 2.24 (0.55) |
| To earn credits (n=30) | 2.41 (0.43) | 2.89 (0.74) | 2.43 (0.40) | 2.38 (0.38) | 2.25 (0.75) |
| Self-interests (n=49) | 2.05 (0.55) | 2.71 (0.81) | 2.22 (0.63) | 2.24 (0.42) | 2.25 (0.53) |
| *F* | **4.74**** | 0.47 | 1.32 | 1.16 | 0.01 |
| Previous camp participation | | | | | |
| Never (n=131) | 2.28 (0.50) | 2.83 (0.77) | 2.39 (0.56) | 2.30 (0.44) | 2.30 (0.44) |
| Once or twice (n=69) | 2.16 (0.51) | 2.71 (0.75) | 2.27 (0.56) | 2.25 (0.45) | 2.30 (0.63) |
| Three times and above (n=35) | 2.02 (0.56) | 2.66 (0.86) | 2.09 (0.48) | 2.16 (0.37) | 2.19 (0.42) |
| *F* | **3.83*** | 0.92 | **4.41*** | 1.45 | 0.50 |

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

Table 11 provides correlations between the five factors of the baseline attitudes and continuous variables (age, years of stay in the U.S., times of previous camp participation, months

of volunteering experience, frequency, positive and negative experiences from previous contacts, and social desirability). Age and social desirability were not significantly correlated to any of the attitude factors.

Weak correlations in length of stay in the U.S. were found for the Discomfort factor ($r = -0.14$, $p < .05$), Interaction factor ($r = -0.17$, $p < .05$), and Cognition of causes factor ($r = -0.20$, $p < .01$). These indicated that the longer they have stayed in the U.S., the more positive attitudes in the Discomfort, Interaction, and Cognition of causes factors they held. The times of participation in Camp Agape were significantly correlated to less discomfort ($r = -0.18$, $p < .01$) and more willingness to interact with persons with IDD ($r = -0.14$, $p < .05$). Similarly, months of volunteer experience at Class Agape were significantly correlated to less discomfort ($r = -0.30$, $p < .001$) and more willingness to interact with persons with IDD ($r = -0.16$, $p < .05$).

Significant correlations in frequency of previous contacts were found for the Discomfort ($r = -0.38$, $p < .001$), Sensibility ($r = -0.19$, $p < .01$), Interaction ($r = -0.28$, $p < .001$), and Cognition of causes factors ($r = -0.15$, $p < .05$). These indicated that the more frequent contacts they had, the more positive attitudes in the Discomfort, Sensibility, Interaction, and Cognition of causes factors they held. A similar pattern was found in positive experiences from previous contacts. The more positive experiences they had, the more positive attitudes they held in the Discomfort ($r = -0.48$, $p < .001$), Sensibility ($r = -0.20$, $p < .05$), Interaction ($r = -0.50$, $p < .001$), and Cognition of causes factors ($r = -0.17$, $p < .05$). Negative experience from previous contacts was significantly correlated with the Interaction factor ($r = 0.30$, $p < .001$) and Cognition of causes factor ($r = 0.18$, $p < .05$), indicating the more negative experience they had, the less willingness to interact and worse Cognition of capacity they had.

Table 11

Pearson Correlations among Background Variables and Pre-test attitudes (n=235)

| | Affect (Discomfort) | Affect (Sensibility) | Behavior (Interaction) | Cognition (Capacity) | Cognition (Causes) |
|---|---|---|---|---|---|
| Age | -0.12 | -0.05 | -0.01 | 0.03 | -0.09 |
| Length of stay in US | **-0.14*** | -0.02 | **-0.17*** | -0.01 | **-0.20**** |
| Camp participation (times) | **-0.18**** | -0.11 | **-0.14*** | -0.10 | 0.04 |
| Volunteer Experience (months) | **-0.30***** | -0.12 | **-0.16*** | 0.01 | -0.01 |
| Frequency of previous contacts | **-0.38***** | **-0.19**** | **-0.28***** | **-0.15*** | -0.04 |
| Positive previous contacts | **-0.48***** | **-0.20*** | **-0.50***** | **-0.17*** | 0.01 |
| Negative previous contacts | 0.05 | 0.02 | **0.30***** | **0.18**** | -0.02 |
| Social Desirability | -0.04 | 0.06 | -0.10 | -0.10 | 0.10 |

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

**Research Question 3: Is there a significant association between previous camp participation and their baseline attitudes toward people with IDD, while controlling for other background variables? What are significant factors predicting their baseline attitudes toward people with IDD, while controlling for variables?**

Table 12 to 13 present the results of the multiple regression models in which this study examined the association between the previous participation in the camp and the attitudes toward people with IDD, controlling for other background variables. Two models were tested for each factor of the attitudes: the first model consisted of the demographic variables and the second model consisted of all variables, which were found as significantly related to the attitudes at research question 2.

**Discomfort factor.** As seen Table 12, the Model 1 was statistically significant ($F(11, 223) = 2.72$, $p < .01$), with the model explaining approximately 12% of the variance ($R^2 = 0.12$). The effect of previous camp participation was statistically significant ($B = -0.13$, $p < .05$). Those

who had previously participated in Camp Agape were expected to hold less discomfort than were the counterpart. Gender, education, age, and acculturation were also significant factors predicting the Discomfort factor. Women were more likely than men to have less discomfort ($B = -0.16$, $p < .05$). Participants who graduated from high school ($B = -0.18$, $p < .05$) or college and above ($B = -0.36$, $p < .01$) had less discomfort than did high school students. Age was reversely associated with the Discomfort factor ($B = 0.25$, $p < .05$); that is, being older was associated with having more discomfort toward people with IDD. Finally, those who lived longer in the U.S. were expected to have less discomfort toward people with IDD ($B = -0.24$, $p < .05$). The Model 2 was statistically significant ($F(20, 214) = 6.19$, $p < .001$), with the model explaining approximately 33% of the variance ($R^2 = 0.33$).

In the Model 2, when controlling for all other background variables, the previous camp participation was not significantly associated with the Discomfort factor. Among the demographic variables, only 'college and above education attainment' was significantly related to the Discomfort factor ($B = -0.24$, $p < .05$), indicating that those with 'college and above education attainment were expected to have less discomfort. Positive and negative experiences from previous contacts were significantly associated with the Discomfort factor (respectively, $B = -0.34$, $p < .01$; $B = 0.20$, $p < .001$). Those who had the more positive and the less negative experiences with people with IDD were expected to have less discomfort toward people with IDD.

Table 12

*Results of Multiple Regressions: Predicting the Affective Attitudes at the Pre-test (n=235)*

| | Affect (Discomfort) | | Affect (Sensibility) | |
|---|---|---|---|---|
| | Model 1: Demographic | Model 2: Full | Model 1: Demographic | Model 2: Full |
| | B (SE) | B (SE) | B (SE) | B (SE) |
| Previous camp participation (No) | | | | |
| Yes | **-0.13 (0.07) *** | -0.09 (0.06) | -0.11 (0.10) | -0.08 (0.10) |
| Gender (male) | | | | |
| Female | **-0.16 (0.07) **** | -0.08 (0.06) | -0.01 (0.10) | 0.03 (0.10) |
| Education (HS Students) | | | | |
| HS graduates | **-0.18 (0.11) *** | -0.10 (0.10) | 0.02 (0.17) | 0.05 (0.17) |
| College and above | **-0.36 (0.23) **** | **-0.24 (0.21)*** | -0.24 (0.36) * | -0.20 (0.37) |
| Age | **0.25 (0.03) *** | 0.21 (0.02) | 0.12 (0.04) | 0.11 (0.04) |
| U.S. Born | -0.10 (0.11) | -0.05 (0.10) | 0.03 (0.17) | 0.06 (0.17) |
| Acculturation | **-0.24 (0.01) *** | -0.15 (0.01) | -0.02 (0.02) | 0.03 (0.02) |
| Religion (Protestant) | | | | |
| Catholic | -0.03 (0.10) | -0.01 (0.08) | -0.02 (0.16) | -0.00 (0.16) |
| Buddhism | -0.02 (0.21) | -0.03 (0.02) | -0.16 (0.35) * | **-0.18 (0.36)**** |
| No preference | 0.00 (0.12) | 0.00 (0.06) | 0.01 (0.19) | 0.02 (0.18) |
| Social Desirability | -0.04 (0.02) | 0.01 (0.02) | 0.08 (0.04) | 0.12 (0.04) |
| Attendance of disability awareness program (No) | | | | |
| Yes | | -0.00 (0.06) | | -0.01 (0.11) |
| Media exposure (No) | | | | |
| Yes | | -0.10 (0.07) | | -0.10 (0.13) |
| Motivation (External) | | | | |
| Self-interest | | -0.09 (0.07) | | 0.00 (0.13) |
| Volunteer experience (No) | | | | |
| Yes | | -0.08 (0.07) | | -0.10 (0.12) |
| Frequency of previous contacts | | -0.11 (0.01) | | -0.07 (0.01) |
| Positive previous contacts | | **-0.34 (0.01)**** | | -0.11 (0.02) |
| Negative previous contacts | | **0.20 (0.01)***** | | **0.11 (0.02)*** |
| Cons | 2.21 | 2.45 | 2.24 | |
| R-squared | 0.12 | 0.33 | 0.07 | 0.12 |
| Adjusted R-squared | 0.07 | 0.28 | 0.02 | 0.06 |
| *F* | **2.72**** | **6.19***** | 1.49 | **1.82*** |

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

**Sensibility factor.** As seen Table 12, the Model 1 examined the relationship between previous camp participation and sensibility attitude toward people with IDD, controlling for the demographic variables. This model was not statistically significant ($F(11, 223) = 1.49$, $p > .05$), with the model explaining only 7% of the variance ($R^2 = 0.07$).

The Model 2 was statistically significant ($F(20, 214) = 1.82$, $p < .05$), with the model explaining approximately 12% of the variance ($R^2 = 0.12$). The Model 2 revealed that previous camp participation was not significantly associated with sensibility attitude toward people with IDD when controlling for all other variables. The Buddhist participants were expected to hold more positive sensibility attitude than were the Protestant participants ($B = -0.18$, $p < .01$). Those who had more negative experience from previous contacts were expected to have more negative sensibility attitude toward people with IDD when controlling for other variables.

**Interaction factor.** Table 13 shows the results of multiple regressions of the behavioral attitude on previous camp participation. The Model 1 was statistically significant ($F(11, 223) = 4.99$, $p < .001$), with the model explaining approximately 20% of the variance ($R^2 = 0.20$). The Model 1 of the Interaction factor revealed the similar results to the first model of the Discomfort factor. When controlling for the demographic variables, previous camp participation, gender, education, age, and acculturation were significant factors predicting the behavioral attitude. Those who had previously participated in Camp Agape were expected to be more willing to interact with people with IDD than were those who have never participated before ($B = -0.15$, $p < .05$). Women ($B = -0.24$, $p < .001$), participants who graduated from high school ($B = -0.23$, $p < .01$) or college and above ($B = -0.30$, $p < .01$), and those who had lived longer in the U.S. ($B = -0.22$, $p < .05$) were likely to have more willingness to interact with people with IDD than were their reference groups. Being older was also associated with less willingness to interact with

people with IDD (B = 0.36, p < .001). The Buddhist participants were expected to be less willing to interact with people with IDD than were the Protestant participants (B = 0.13, p < .05).

The Model 2 was statistically significant (F(20, 214) = 10.02, p < .001), with the model explaining approximately 45% of the variance ($R^2$ = 0.45). The results were consistent with the Model 1 except acculturation. When controlling for all other variables, previous camp participation was significantly related to have more willingness to interact with people with IDD (B = -0.11, p < .05). Using predictive margins, this would translate to a mean score of the Interaction factor of 2.24 (95% CI = [2.16, 2.32]) for participants with previous camp experience compared with a mean score of the Interaction factor of 2.37 (95% CI = [2.29, 2.44]) for participants without previous camp experience. Unlikely to the Model 1, living longer in the U.S was not significantly associated with the Interaction factor, when controlling for all other variables. Having more frequent previous contacts and more positive experience from previous contacts were significantly associated with more willingness to interact with people with IDD (respectively, B = -0.19, p < .05; B = -0.36, p < .01). Having more negative experience from previous contacts was significantly related to less willingness of interaction with people with IDD (B = 0.40, p < .001).

Table 13

*Results of Multiple Regressions: Predicting the Behavioral Attitude at the Pre-test (n=235)*

| | Behavior (Interaction) | |
|---|---|---|
| | Model 1: Demographic | Model 2: Full |
| | B (SE) | B (SE) |
| Previous camp participation (No) | | |
| Yes | **-0.15 (0.07)** * | **-0.11 (0.06)** * |
| Gender (male) | | |
| Female | **-0.24 (0.07)** *** | **-0.15 (0.06)** ** |
| Education (HS Students) | | |
| HS graduates | **-0.23 (0.11)** ** | **-0.15 (0.10)** * |
| College and above | **-0.30 (0.24)** ** | **-0.20 (0.21)** * |
| Age | **0.36 (0.03)** ** | **0.33 (0.02)** ** |
| U.S. Born | -0.03 (0.11) | -0.05 (0.10) |
| Acculturation | **-0.22 (0.01)** * | -0.17 (0.01) |
| Religion (Protestant) | | |
| Catholic | -0.11 (0.11) | -0.08 (0.09) |
| Buddhism | **0.13 (0.23)** * | **0.12 (0.02)** * |
| No preference | -0.02 (0.12) | -0.02 (0.11) |
| Social Desirability | -0.11 (0.02) | -0.08 (0.02) |
| Attendance of disability awareness program (No) | | |
| Yes | | 0.09 (0.06) |
| Media exposure (No) | | |
| Yes | | -0.03 (0.07) |
| Motivation (External) | | |
| Self-interest | | -0.02 (0.07) |
| Volunteer experience (No) | | |
| Yes | | 0.03 (0.07) |
| Frequency of previous contacts | | **-0.19 (0.01)** * |
| Positive previous contacts | | **-0.36 (0.01)** ** |
| Negative previous contacts | | **0.40 (0.01)** *** |
| Cons | 1.97 | 2.02 |
| R-squared | 0.20 | 0.45 |
| Adjusted R-squared | 0.16 | 0.41 |
| *F* | **4.99*** ** | **10.02*** ** |

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

**Cognition of capacity and rights factor.** Table 14 presents the multiple regression analyses of the cognitive attitudes on the previous camp participation. The Model 1 was statistically significant ($F(11, 223) = 2.49$, $p < .01$), with the model explaining approximately 11% of the variance ($R^2 = 0.11$). This model revealed the previous camp participation was not significantly associated with the cognition of the capacity and rights of people with IDD, controlling for the demographic variables. Women were likely to hold more positive cognition of capacity and rights than were men ($B = -0.21$, $p < .01$). Participants with high school diploma were expected to have more positive cognition of capacity and rights than did high school students ($B = -0.20$, $p < .05$). Age was also associated with this factor ($B = 0.26$, $p < .05$); that is, being older was associated with more negative cognition of capacity.

The Model 2 was statistically significant ($F(20, 214) = 2.80$, $p < .001$), with the model explaining approximately 19% of the variance ($R^2 = 0.19$). In the Model 2, only gender and negative experiences from previous contacts were significantly associated with the Cognition of capacity and rights factor. Women were more likely to hold more positive cognition of capacity ($B = -0.18$, $p < .001$) than were men. Having more negative experiences from previous contacts was significantly related to having more negative cognition of capacity and rights ($B = 0.21$, $p < .001$).

**Cognition of causes factor.** Both of the multiple regression models indicated that, as a set, previous camp experience did not explain a significant amount of the variance in the dependent variable, the Cognition of causes of ID ($R^2 = 0.07$, $p > 0.05$ for the Model 1; $R^2 = 0.09$, $p > 0.05$ for the Model 2).

Table 14

*Results of Multiple Regressions: Predicting the Cognitive Attitudes at the Pre-test (n=235)*

| | Cognition (Capacity) | | Cognition (Causes) | |
|---|---|---|---|---|
| | Model 1: Demographic | Model 2: Full | Model 1: Demographic | Model 2: Full |
| | B (SE) | B (SE) | B (SE) | B (SE) |
| Previous camp participation (No) | | | | |
| Yes | -0.07 (0.07) | -0.06 (0.06) | 0.04 (0.08) | 0.04 (0.08) |
| Gender (male) | | | | |
| Female | **-0.21 (0.06) **** | **-0.18 (0.06)**** | 0.05 (0.08) | 0.04 (0.08) |
| Education (HS Students) | | | | |
| HS graduates | **-0.20 (0.09) *** | -0.16 (0.09) | 0.04 (0.13) | 0.04 (0.13) |
| College and above | -0.16 (0.19) | -0.09 (0.20) | 0.01 (0.27) | 0.10 (0.28) |
| Age | **0.26 (0.02) *** | 0.22 (0.02) | -0.08 (0.03) | -0.06 (0.03) |
| U.S. Born | -0.09 (0.09) | -0.09 (0.09) | -0.12 (0.13) | -0.15 (0.13) |
| Acculturation | -0.09 (0.01) | -0.05 (0.01) | -0.28 (0.01) * | 0.32 (0.01)** |
| Religion (Protestant) | | | | |
| Catholic | -0.12 (0.09) | -0.10 (0.09) | 0.03 (0.12) | 0.03 (0.12) |
| Buddhism | 0.06 (0.19) | 0.07 (0.02) | -0.07 (0.26) | -0.07 (0.27) |
| No preference | 0.00 (0.10) | 0.02 (0.10) | 0.04 (0.14) | 0.02 (0.13) |
| Social Desirability | -0.09 (0.02) | -0.07 (0.02) | 0.07 (0.03) | 0.05 (0.03) |
| Attendance of disability awareness program (No) | | | | |
| Yes | | -0.06 (0.06) | | 0.12 (0.08) |
| Media exposure (No) | | | | |
| Yes | | 0.05 (0.07) | | 0.02 (0.09) |
| Motivation (External) | | | | |
| Self-interest | | 0.02 (0.07) | | -0.02 (0.10) |
| Volunteer experience (No) | | | | |
| Yes | | 0.14 (0.07) | | 0.14 (0.09) |
| Frequency of previous contacts | | -0.17 (0.01) | | -0.11 (0.01) |
| Positive previous contacts | | -0.13 (0.01) | | 0.08 (0.01) |
| Negative previous contacts | | **0.21 (0.01) ***** | | -0.02 (0.02) |
| Cons | 2.07 | 2.01 | 2.94 | 2.87 |
| R-squared | 0.11 | 0.19 | 0.07 | 0.09 |
| Adjusted R-squared | 0.07 | 0.12 | 0.02 | 0.01 |
| *F* | **2.49**** | **2.80***** | 1.49 | 1.82 |

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

**Research Question 4: Does the interpersonal contact intervention have an effect on attitude change toward persons with IDD?**

Table 15 presents the results of comparisons between the pre-test and post-test of the total camp group participants using paired samples t-tests. The results indicated that there were significant mean differences in both of the affective attitudes (Discomfort and Sensibility factor) and were no significant differences in the behavioral and cognitive attitudes. The previous analyses from this study found that the previous camp participation and prior volunteer experiences for people with IDD were significantly correlated with the attitudes toward them. The camp group participants included those who have previously participated in Camp Agape. Thus, to examine the clearer effect of the camp intervention, this study divided the camp group into three subgroups: 1) participants who came to Camp Agape for the first time, (2) participants who came to Camp Agape for the first time but had weekly volunteer experiences at Class Agape; and (3) participants who had participated in Camp Agape at least once or above.

Table 15 shows the results of the paired samples t-tests by comparing differences between the pre-test and the post-test scores for each subgroup. One-way ANOVAs were conducted to determine if there were any significant differences between the subgroups on each of the five factors at the pre-test and post-test.

**Discomfort factor.** T-test results indicated that the discomfort scores of the Subgroup 1 and the Subgroup 2 were significantly reduced at the post-test ($t = 3.41$, $p < .01$ for Subgroup 1; $t = 2.15$, $p < .05$ for Subgroup 2), meaning that the participants who participated in the camp for the first time experienced a positive attitude change in the Discomfort factor after the intervention. Subgroup 3, those with previous camp experience showed no significant change in the Discomfort factor from the pre-test to the post-test.

Table 15

*Compare Adjusted Mean Scores of Pre-test and Post-test by Subgroups*

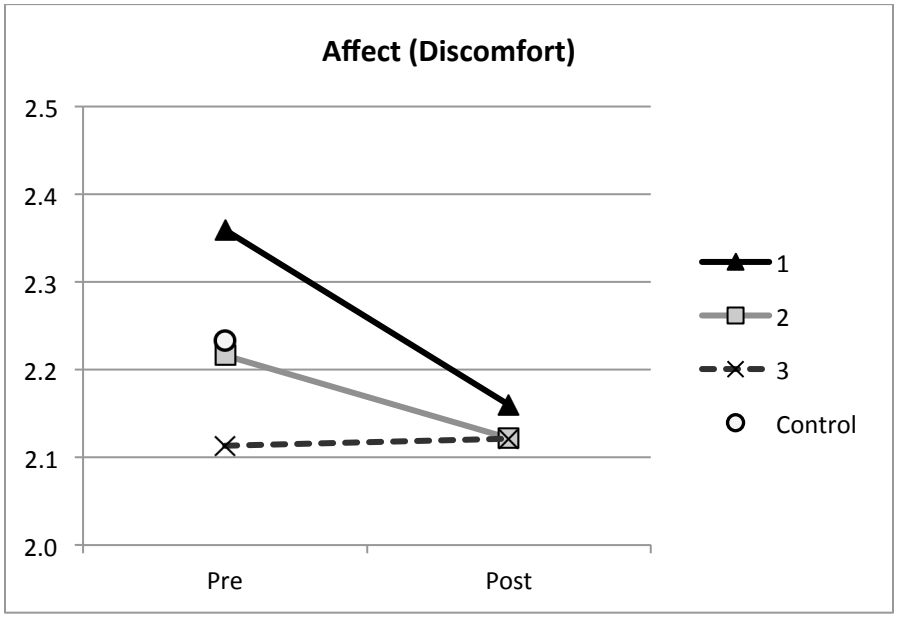
| | Total | Subgroups | | | *F* (2, 235) |
|---|---|---|---|---|---|
| | (n= 235) | 1 (n = 55) | 2 (n = 76) | 3 (n = 104) | |
| | M (SD) | M (SD) | M (SD) | M (SD) | |
| *Affect (Discomfort)* | | | | | |
| Pre-test | 2.20 (0.52) | 2.36 (0.50) | 2.22 (0.50) | 2.11 (0.53) | **4.16*** |
| Post-test | 2.13 (0.50) | 2.16 (0.47) | 2.12 (0.49) | 2.12 (0.53) | 0.13 |
| *t* | **2.64**** | **3.41**** | **2.15*** | -0.19 | |
| *Affect (Sensibility)* | | | | | |
| Pre-test | 2.77 (0.78) | 2.90 (0.76) | 2.78 (0.78) | 2.69 (0.79) | 1.31 |
| Post-test | 2.58 (0.77) | 2.58 (0.84) | 2.63 (0.70) | 2.54 (0.78) | 0.28 |
| *t* | **4.93***** | **3.99***** | **2.07*** | **2.77**** | |
| *Behavior* | | | | | |
| Pre-test | 2.31 (0.56) | 2.35 (0.54) | 2.42 (0.58) | 2.21 (0.54) | **3.44*** |
| Post-test | 2.29 (0.58) | 2.35 (0.54) | 2.35 (0.64) | 2.21 (0.55) | 1.63 |
| *t* | 0.88 | -0.02 | 1.64 | 0.01 | |
| *Cognition (Capacity)* | | | | | |
| Pre-test | 2.26 (0.44) | 2.21 (0.51) | 2.37 (0.38) | 2.22 (0.43) | 3.03 |
| Post-test | 2.25 (0.49) | 2.23 (0.51) | 2.35 (0.46) | 2.18 (0.49) | 2.92 |
| *t* | 0.64 | -0.33 | 0.25 | 1.04 | |
| *Cognition (Causes)* | | | | | |
| Pre-test | 2.24 (0.58) | 2.28 (0.53) | 2.23 (0.62) | 2.26 (0.57) | 0.12 |
| Post-test | 2.24 (0.64) | 2.18 (0.52) | 2.21 (0.60) | 2.30 (0.73) | 0.88 |
| *t* | 0.00 | 0.69 | 0.28 | -0.70 | |
| *Pre-Post difference* | | | | | |
| Affect (Discomfort) | 0.07 (0.42) | 0.20 (0.43) | 0.09 (0.38) | -0.01 (0.44) | **4.56*** |
| Affect (Sensibility) | 0.19 (0.60) | 0.32 (0.60) | 0.15 (0.63) | 0.15 (0.57) | 1.73 |
| Behavior | 0.02 (0.43) | -0.001 | 0.08 (0.42) | 0.0004 | 0.83 |
| Cognition (Capacity) | 0.01 (0.41) | -0.02 (0.44) | 0.01 (0.41) | 0.04 (0.40) | 0.39 |
| Cognition (Causes) | 0.00 (0.57) | 0.05 (0.54) | 0.02 (0.57) | -0.04 (0.58) | 0.52 |

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

A One-way ANOVA at the pre-test indicated that there were significant differences between subgroups ($F = 4.16$, $p < .05$). Post hoc test, not included here, revealed that Subgroup 3 had significantly less discomfort ($t = -2.87$, $p < .05$) than did Subgroup 1. After the intervention, the differences in the Discomfort factor between subgroups vanished ($F = 0.13$, $p > .05$).

Figure 2 displays the predictive margins for the Discomfort factor and time by subgroups. The average scores on both the pre- and post- test was lower for Subgroup 3 than Subgroup 1 and 2, but the magnitude of the differences decreased from pre- to post-test as a result of the camp participation. At the pre-test, the difference between Subgroup 3 and Subgroup 1 was 0.25 points and at the post-test it was only 0.04 points. It would be interpreted that those who participated in the camp for the first time experienced greater improvement in the discomfort attitude and the intervention offset significant differences exited at the pre-test between the participants with and without the previous camp experience.

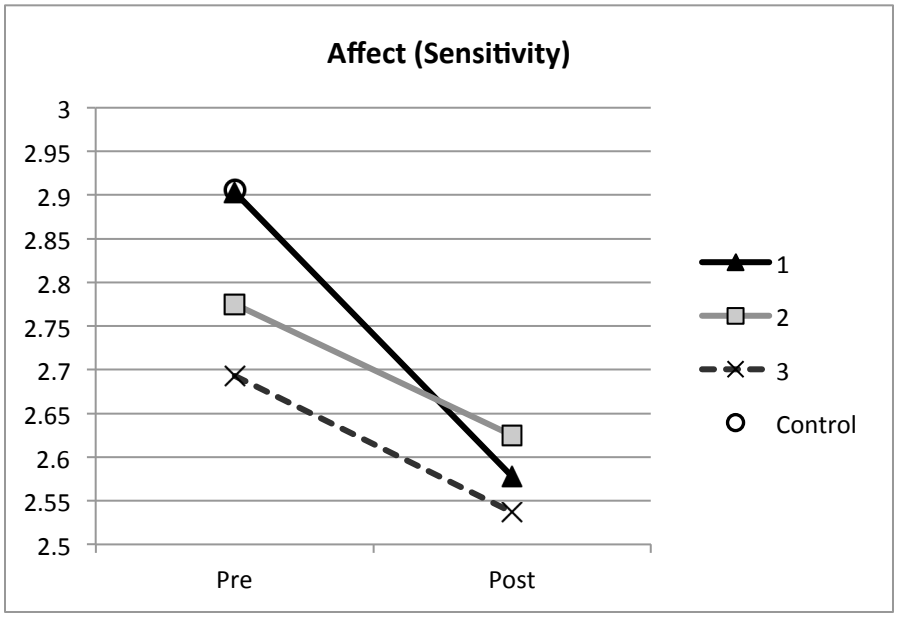
Figure 2 *Predictive Margins and Affect (Discomfort) Attitude*



**Sensibility factor.** T-test results indicated that all of the subgroups had significant differences between the pre- and post-test, meaning that the sensibility of those with and without previous camp participation became more positive sensibility toward people with IDD after the intervention ($t = 3.99$, $p < .001$ for Subgroup 1; $t = 2.07$, $p < .05$ for Subgroup 2; $t = 2.77$, $p < .01$ for Subgroup 3), suggesting that this factor was most sensitive to the intervention. Not surprisingly, both of the One-way ANOVAs both at the pre- and post-test indicated that there were no significant differences between the subgroups ($F = 1.31$, $p > .05$; $F = 0.28$, $p > .05$).

Figure 3 displays the predictive margins for the Sensibility factor and time by subgroups. Although there were the improvements from pre- to post-test for all the subgroups, the magnitudes were not the same across the subgroups. The differences from the pre-test and post-test were respectively 0.32 for Subgroup 1, 0.15 for Subgroup 2, and 0.15 for Subgroup 3, indicating that the participants without previous camp and volunteer experiences had greater improvement in sensibility attitude.

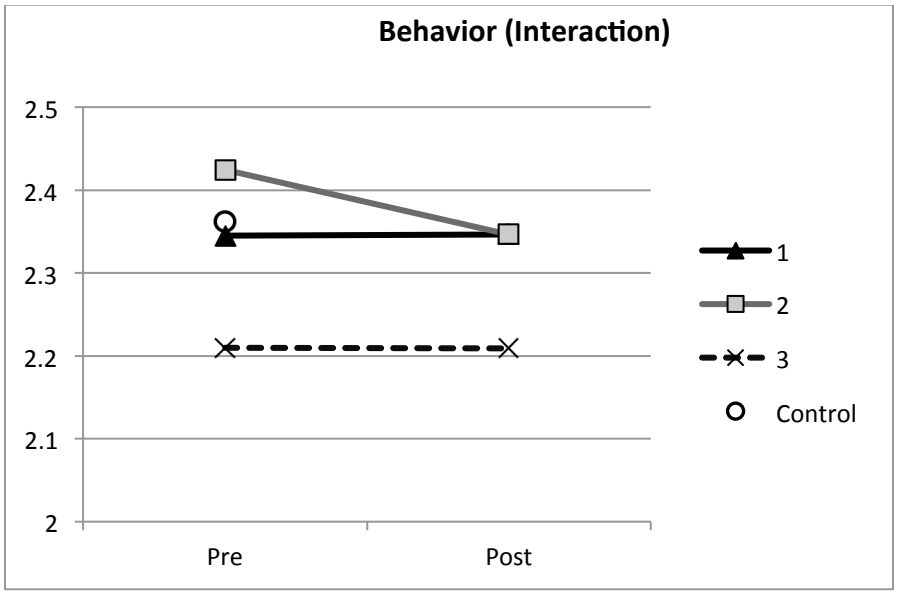
Figure 3 *Predictive Margins and Affect (Sensitivity) Attitude*



**Interaction factor.** T-test results indicated that the scores of each subgroup were not significantly changed from the pre-test to the post-test. However, One-way ANOVA at the pre-test showed that there were significant differences between the subgroups ($F = 3.44$, $p < .05$). Post hoc test, not included here, revealed that the Subgroup 3 had significantly more willingness to interact than did Subgroup 2 ($t = -3.65$, $p < .01$). After the intervention, the differences in the interaction factor between subgroups vanished ($F = 1.63$, $p > .05$). It would be interpreted that the intervention offset the significant differences at the pre-test between the participants with and without previous camp experience.

Figure 5 displays the predictive margins for the Interaction factor and time by subgroups. The average scores on both the pre- and post- test was lower for Subgroup 3 than Subgroup 1 and 2, but the magnitude of differences decreased from pre- to post-test as a result of the camp participation. At the pre-test, the difference between Subgroup 3 and Subgroup 2 was 0.21 points and at the post-test it was only 0.14 points.

Figure 4 *Predictive Margins and Behavior (Interaction) Attitude*



**Cognition of capacity factor.** T-test results indicated that the mean scores of each subgroup were not significantly changed from the pre-test to the post-test. One-way ANOVAs at the pre-test and the post-test indicated that there were no significant differences between the subgroups ($F = 3.03$, $p > .05$; $F = 2.92$, $p > .05$).

**Cognition of causes factor.** T-tests on the Cognition of causes factor revealed that there were no significant changes from the pre-test to the post-test. One-way ANOVAs also indicated that the mean scores of each subgroup both at the pre-test and the post-test did not statistically differ ($F = 0.12$, $p > .05$; $F = 0.88$, $p > .05$).

**Time Effects by Subgroups.** Repeated measures ANOVAs were conducted to look at the time effects by subgroups on the five attitude factors (see Table 19). Results demonstrated no significance among subgroups by time effects for the Sensibility factor ($F = 1.73$, $p > .05$), the interaction factor ($F = 0.83$, $p > .05$), the Cognition of capacity factor ($F = 0.39$, $p > .05$), and the Cognition of cause factor ($F = 0.52$, $p > .05$). Only the Discomfort factor had significant differences in subgroups by time interaction ($F = 4.56$, $p < .05$).

**Research Question 5: Is there a significant association between attitude change and the bond between the non-disabled camp participants and their buddies?**

When Pearson correlations were conducted to study whether changes in attitudes were related to the strength of the bond formed between the camp participants and their buddies (persons with IDD), the results, not included here, indicated that significant associations of the Bond scale emerged between the Cognition of capacity factor ($r = 0.15$, $p < .05$) and the Cognition of causes factor ($r = 0.14$, $p < .05$). However, when multiple regressions analyses found no significant relationships between the strength of the bond and changes in any factor of attitudes after controlling social desirability.

**Research Question 6: Are there differences in attitude change by previous camp participation and the demographic variables, while controlling for other factors?**

Table 16 presents the results of repeated measures ANOVAs, which indicated that there were significant differences in the attitude change from the pre-test to the post-test based on the participants' characteristics, while controlling for other factors including social desirability. There were four significant interactions involving previous camp experience, acculturation, religion, and levels of education. Gender, age, and born in the U.S. did not emerge as predictors of attitude change in any factors when other factors were controlled.

Charts present the adjusted means to assist with interpreting the interactions found (see Figure 5 to 8). When comparing two or more groups, a significant interaction can be interpreted by significantly different slopes. An alternative explanation for a significant interaction is a difference of differences, where the pre-test and post-test groups are very different.

Table 16

*Test of within subjects effects (interactions) from repeated measure ANOVA (n=235)*

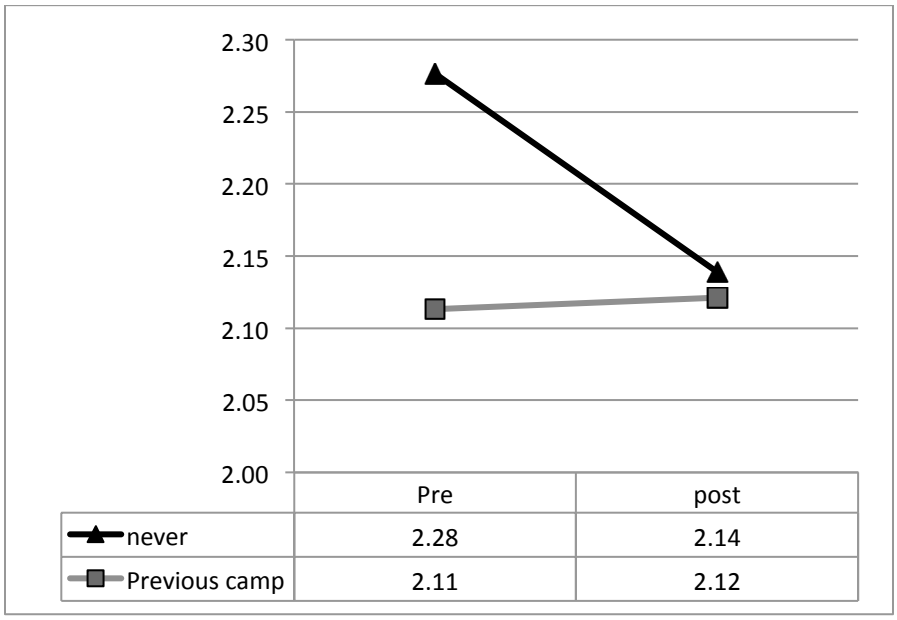
| | F | df |
|---|---|---|
| Affect (Discomfort) pre-post × Previous camp participation | 7.29** | 1 |
| Affect (Discomfort) pre-post × Acculturation | 3.27* | 4 |
| Behavior (Interaction) pre-post × Education | 3.62* | 2 |
| Behavior (Interaction) pre-post × Religion | 3.49* | 3 |

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

There was a significant interaction such that previous camp experience affected the discomfort attitude scores differentially over time (F= 7.29, p < .01) while controlling for the demographic variables and social desirability. As can be seen in Figure 6, the average discomfort

factor score of those who have never previously experienced in the camp at the pre-test was higher than those who had previously experienced, meaning those without previous camp experience had more discomfort toward people with IDD before the camp intervention. The magnitude of that difference between participants with and without previous camp experience decreased significantly from pre- to post-test as a result of the camp intervention. At the pre-test, the difference between those with and without previous camp experience was 0.17 points and at the post-test it was only 0.12 points.

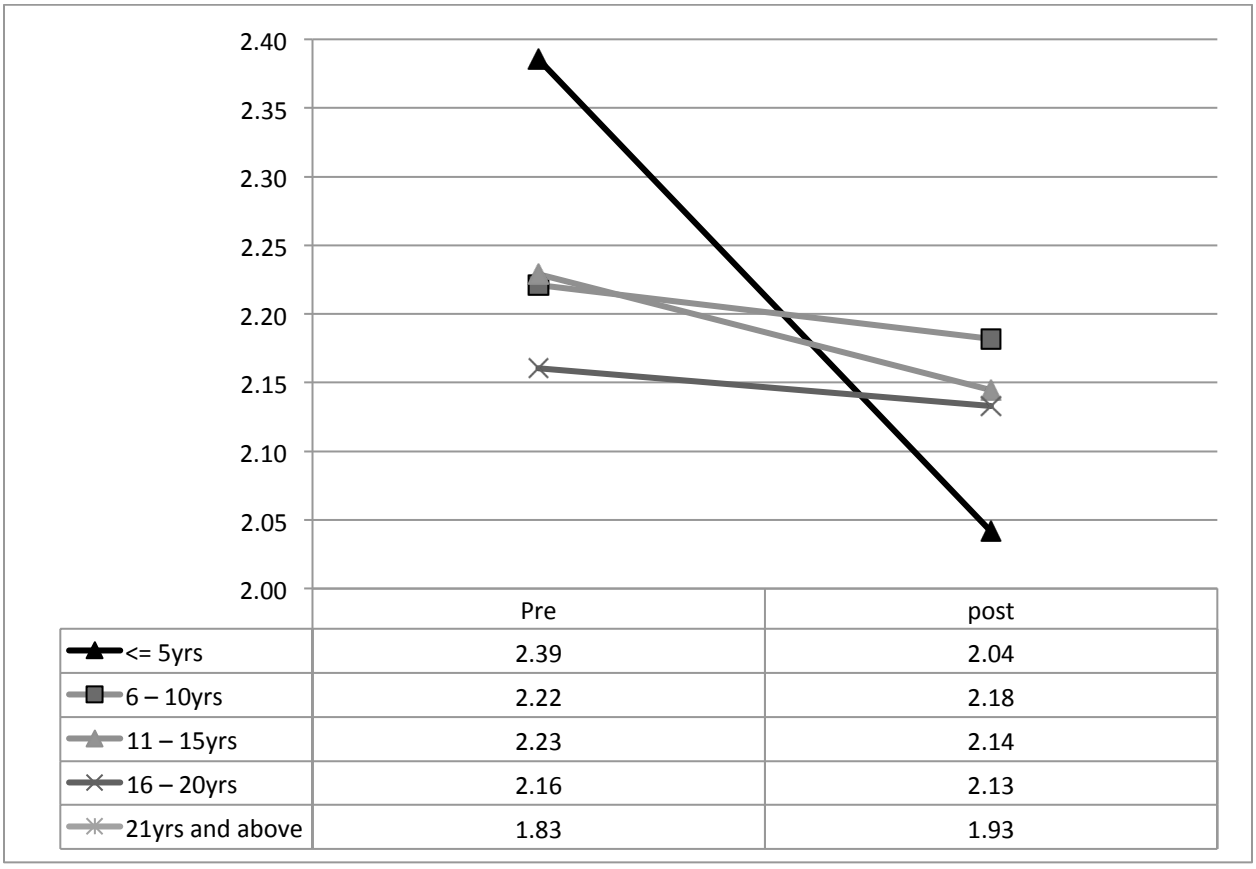
Figure 5 *Affective Attitude (Discomfort) and Previous Camp Participation*




Acculturation is also a significant predictor of the Discomfort factor and an interaction was found by time point ($F = 3.27$, $p < .01$) while controlling for the demographic variables and social desirability. The means at the pre-test were as expected; those who have lived longer in the U.S. hold more positive attitudes in discomfort factor (see Figure 7). Post hoc analysis, not

included here, demonstrated that there were two significant interactions, both involving individuals with those who have lived for below five years. The first interaction is between participants who have stayed for below five years and those who have stayed for 6 to 10 years ($t = -3.03$, $p < .05$). The second interaction is between participants who have stayed for below five years and those who have stayed for more than 21 years ($t = -2.95$, $p < .5$). The discomfort attitudes of participants who have stayed for below five years was significantly improved from pre- to post-test as a result of the camp intervention more than those who have stayed for 6 to 10 years or more than 21 years in both a relative and absolute sense.

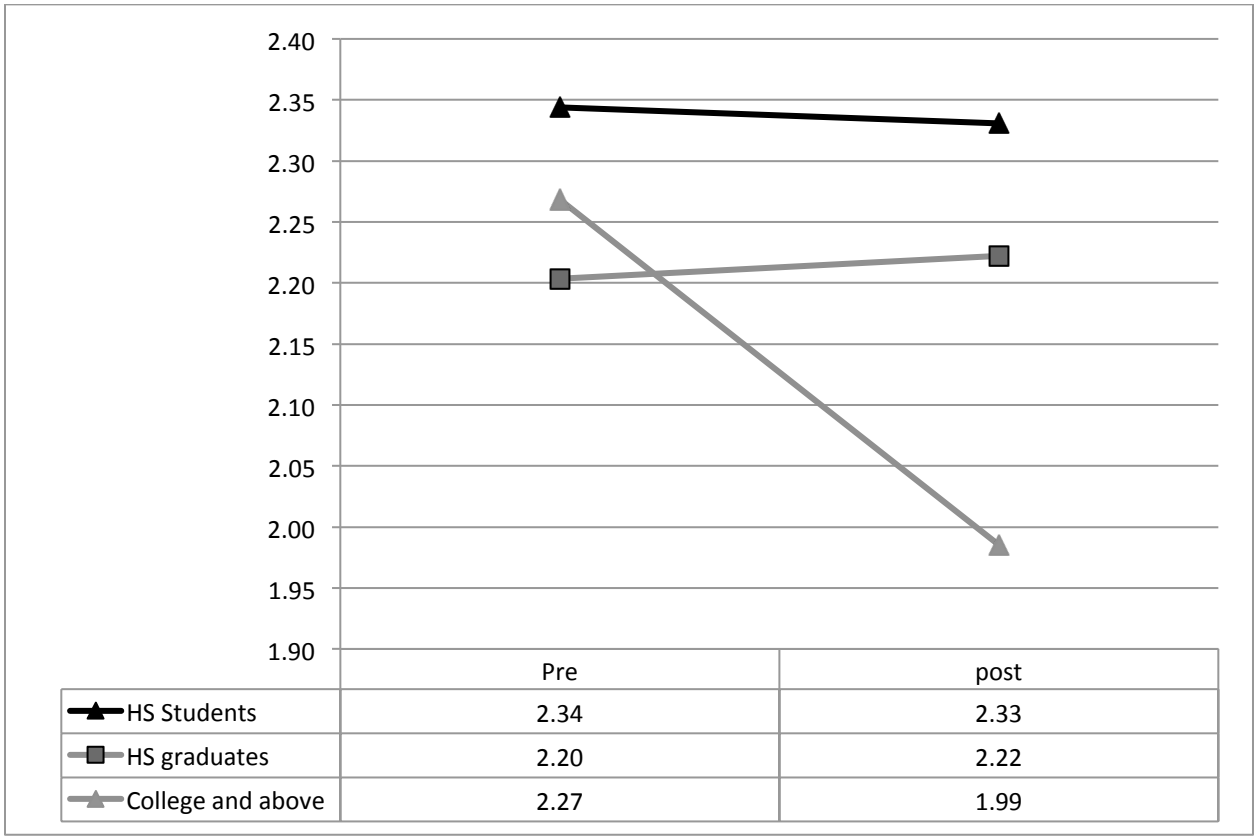
Figure 6 *Affective Attitude (Discomfort) and Acculturation*




| | Pre | post |
|---|---|---|
| <= 5yrs | 2.39 | 2.04 |
| 6 – 10yrs | 2.22 | 2.18 |
| 11 – 15yrs | 2.23 | 2.14 |
| 16 – 20yrs | 2.16 | 2.13 |
| 21yrs and above | 1.83 | 1.93 |

Education is a significant predictor of the behavioral attitude and an interaction was found by time point ($F= 3.62$, $p< .05$) while controlling for the demographic variables and social desirability. High school graduates were more willing to interact with people with IDD than those who had college and above level of education at the pre-test. Post hoc analyses, not included here, demonstrated that there were two significant interactions, both involving individuals with college and above education attainment. The magnitude of that difference from the pre- to post-test was the biggest among those who had college and above level of education while high school students and high school graduates showed slight changes in the behavioral attitude after the intervention.

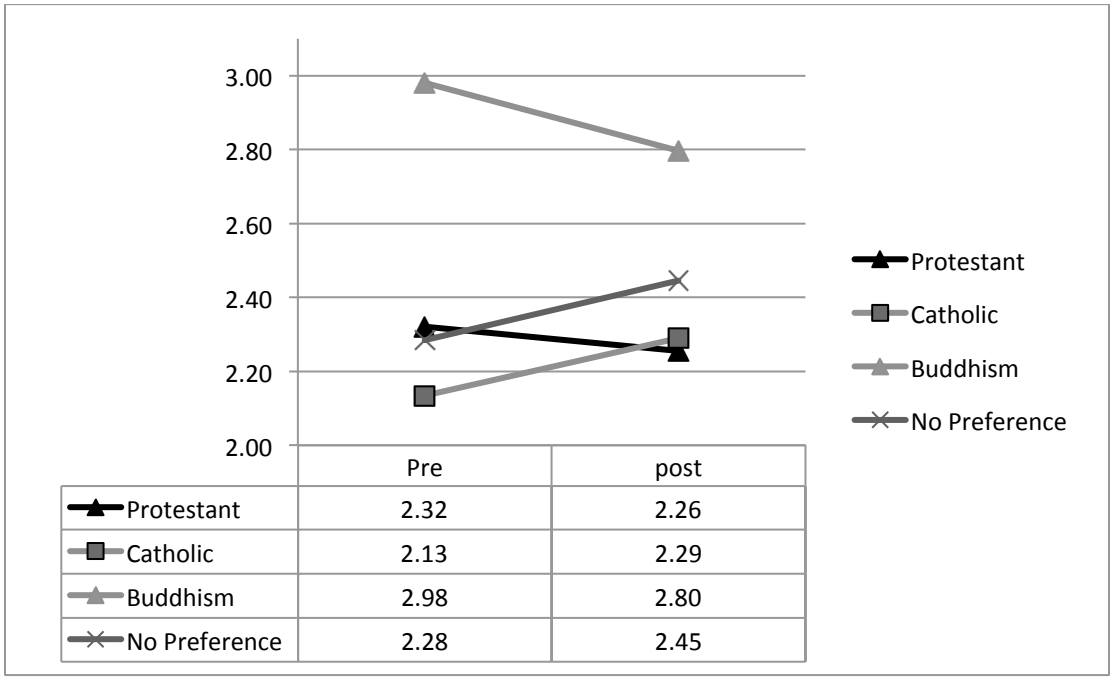
Figure 7 *Behavioral Attitude (Interaction) and Education*




| | Pre | post |
|---|---|---|
| HS Students | 2.34 | 2.33 |
| HS graduates | 2.20 | 2.22 |
| College and above | 2.27 | 1.99 |

Concerning religious preference, there is a significant difference in the behavioral attitude from the pre-test to the post-test ($F = 3.49$, $p < .05$), while controlling for the demographic variables and social desirability. The changes from pre- to post-test were not the same across the groups. While the scores of Protestant and Buddhist groups decreased at the post-test, the scores of the Catholic and No preference groups, which were the two lowest scores, increased. The difference between the religion groups (the highest score and the lowest score), which ranged from 2.98 for the Buddhist group to 2.13 for the Catholic group, was 0.85 at the pre-test. This difference decreased to 0.16 points at the post-test, indicating that 1) the behavioral attitude of the Buddhist participants who had the most negative behavioral attitude at the pre-test among groups were improved after the intervention, 2) the behavioral attitude of the Catholic participants who indicated the most positive behavioral attitude at the pre-test were worsened after the intervention, and 3) the differences between two groups decreased (see Figure 8).

Figure 8 *Behavioral Attitude (Interaction) and Religion*




| | Pre | post |
|---|---|---|
| Protestant | 2.32 | 2.26 |
| Catholic | 2.13 | 2.29 |
| Buddhism | 2.98 | 2.80 |
| No Preference | 2.28 | 2.45 |

**Research Question 7: Are there differences in attitudes according to the level of functioning in IDD?**

Participants' scores on the vignettes toward Dominic (a person with mild IDD) were compared to those for Raphael (a person with severe IDD). Table 17 presents the mean scores and standard deviations on both vignettes for all items, as well as the correlations and t-test results. Attitudes toward persons with two levels of severity, Dominic and Raphael, were significantly positively correlated. Thus, overall, participants with a positive attitude toward a person with mild IDD also had a positive attitude toward a person with severe IDD both at the pre- and post-test. However, the t-test results found that the attitudes were significantly different according to the person's level of functioning. Participants tended to have more negative attitudes (more discomfort, more negative sensibility, and less willing to interact with) toward a person with severe IDD than toward a person with mild IDD.

Table 17

*Differences in Attitudes according to the Level of IDD on the Factors (n=235)*

| | Mild IDD | Severe IDD | Correlation | t |
|---|---|---|---|---|
| | M (SD) | M (SD) | | |
| Pre-test | | | | |
| Affect (Discomfort) | 2.02 (0.55) | 2.17 (0.79) | 0.79*** | **-5.51*** ** |
| Affect (Sensibility) | 2.69 (0.83) | 2.85 (0.87) | 0.73*** | **-3.84** ** |
| Behavior (Interaction) | 2.28 (0.65) | 2.59 (0.70) | 0.74*** | **-9.76*** ** |
| Post-test | | | | |
| Affect (Discomfort) | 1.97 (0.55) | 2.04 (0.66) | 0.79*** | **-2.78** ** |
| Affect (Sensibility) | 2.54 (0.78) | 2.62 (0.83) | 0.82*** | **-2.83** ** |
| Behavior (Interaction) | 2.28 (0.66) | 2.50 (0.71) | 0.73*** | **-6.45*** ** |

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

## Qualitative Data Results

The qualitative data analysis aimed to explore how and when the camp intervention affected the participants' attitude to change. All of 12 interview participants responded that they found the experience beneficial; 11 of 12 reported that their attitudes had become more positive, and one participant indicated that she was positive at the start and the camp experience just reinforced those preexisting attitudes.

Table 18 presents seven themes and their sub-themes that emerged from thematic analysis with the frequency of quotes that are related to each theme. The themes were 1) affective attitude change, 2) behavioral attitude change, 3) cognitive attitude change, 4) bond and communication with persons with IDD, 4) comparing the effect of the camp experience on attitude change to other contact experiences, 5) public misconceptions that need to be changed, and 6) attitude differences between the U.S. and Korea. To support the findings in this study, the following discussion will elaborate on the emergent themes using example quotations.

Table 18

*The Five Main Attitude Themes, Sub-Themes, and Frequencies*

| Main Themes | Sub-themes | Frequency |
|---|---|---|
| Affective attitude change | Shocked, overwhelmed when they were screaming out of nowhere | 4 |
| | Scared because I did not know how to do | 5 |
| | Wary | 3 |
| | Surprised because there were a lot of people with IDD | 2 |
| | Frustrated because they had trouble to communication | 2 |
| | Enjoyed being with them | 4 |
| | Became comfortable | 11 |
| | Sometimes sad and sometimes happy | 2 |
| | Become familiar and closed | 8 |
| Behavioral attitude change | Avoided them | 4 |
| | Did not want to interact with them | 6 |
| | Did not care about them | 3 |
| | Helped them upon the request, but did not initiate | 2 |

*(Table 17 Continued)*

| Main Themes | Sub-themes | Frequency |
|---|---|---|
| | Will continue to volunteer for them | 12 |
| | Want to help them | 7 |
| Cognitive attitude change | Did not know there were disabilities that we cannot notice only by appearance | 3 |
| | Did not know there were various types of disabilities | 2 |
| | People with IDD were more capable | 5 |
| | People with disability can be happy | 3 |
| | They are same people, just like us | 12 |
| Bond and communication with persons with IDD | Although they could not speak, felt connected | 5 |
| | Became like friend, sisters, and brothers | 4 |
| | Felt closer when we are doing same activities | 3 |
| Moments that attitudes changed | When finding similarity | 12 |
| | After learning how to react to them | 5 |
| Comparing the effect of the camp experience to other contact experiences | More intimate bonding built | 7 |
| | Get to know more (even sleeping behaviors) | 3 |
| | Not just taking care of them, we had fun by playing together | 2 |
| Comparing the attitudes in the U.S. and Korea | Americans are more generous toward people with disabilities | 1 |
| | Koreans tend to staring at people with disabilities | 1 |
| | More negative connotation on the word of 'disability' in Korea. | 2 |

**Theme 1: Affective Attitude Change**

Most participants responded that their emotional reactions to persons with IDD changed after the camp experience. Many participants expressed that they had experienced fear and discomfort when coming across people with IDD prior to the volunteer experience or during their first contacts with persons with IDD at Class Agape. Negative emotional reactions they had were "shocked, overwhelmed, wary, surprised, or frustrated". They responded that they experienced these negative feelings because they did not know much about people with IDD and

how to react to the behaviors of persons with IDD. However, they reported that as they continued to interact with people with IDD, participants became "comfortable, familiarized, and enjoyed being with them." For instance, a 15-year-old male who participated in the camp for the first time and has volunteered at Class Agape for 6 months responded:

> "When I saw a person with IDD in the community before the camp, I was very uncomfortable. I did not like them because I didn't know how to act or how to talk to them. But, through interacting with them at Milal, now I am able to understand them and also learned how to respond to them and treat them. I became used it. Now I am comfortable and natural."
>
> Another first timer with 5 months of volunteer experience at Class Agape, a 16-year-old female, responded:
>
> " I was scared because they would suddenly scream and yell, and sometimes behave aggressively. But, after continuously spending time with them and learning that they became calm when we soothed them, I became used it and wasn't scared anymore."

In conclusion, the participants' responses demonstrated that the repeated interactions with people with IDD familiarized them and reduced negative emotional reactions to people with IDD.

**Theme 2: Behavioral Attitude Change**

Most participants agreed that interacting with people with IDD had made their behavioral attitude in the presence of a person with IDD more positive. Prior to the camp, they used to avoid, did not want to interact with or, did not care about people with IDD. Some participants also reported that they were too scared to speak to such people within their community. However, after the camp experience, they no longer avoided them and even began to approach

and say hello to people with IDD. For example, a 16-year-old female participant, who has participated in the camp twice, responded:

> "When I saw a person with disabilities on the street before Class Agape experience, I was scared and did not want to walk in that direction, which was so mean. But now I do not avoid them any more. I think I will not hesitate to help them if they seem to need my help."

Another participant, a 16-year-old female first timer, responded:

> "I never thought twice about people with disabilities at school before. But now, when my Korean friends use the words 'disabled' or 'retarded' to make fun of each other or in a joking manner, I get angry and tell them they shouldn't do that. I've become more aware of and interested in those with disabilities and respect them more."

Moreover, when participants were asked if they would continue to volunteer for people with IDD, all the participants responded that they want to volunteer even after going to college. Participants stated that they were exhausted on the first day, but enjoyed being with people with IDD at the camp and wanted it to continue. In sum, the participants' responses demonstrated that interpersonal contact with persons with IDD promoted them to become more willing to interact with people with IDD.

**Theme 3: Cognitive Attitude Change**

It was found that contact experiences with people with IDD influenced changes in participants' thoughts and beliefs about persons with IDD. Most participants agreed that interacting with individuals with IDD increased their knowledge and information about IDD. Some participants responded that they learned that there were various types of disabilities and that some disabilities were not noticeable on the outside. Furthermore, some participants stated

that they learned that people with IDD were more capable than they had thought. Participants reported that prior to interacting with persons with IDD, they believed people with IDD were not able to be independent. For example, a first timer who is a 17-year-old female responded:

> "I used to think there would be many things that they couldn't do by themselves. I'm sure it depends on the individual, but my buddy took showers and organized her things all by herself. I learned a lot."

Another 18-year-old male first timer responded:

> "During this camp, with my autistic buddy, I was able to see what he could actually do on his own and what he needed help on. I noticed he was just as much capable as us, the volunteers, but the buddies were never given the opportunity to show that. I learned that we shouldn't rush to do the buddies' work or activities for them."

Some participants stated that they had thought having a disability meant that people could not to be happy, prior to the camp. For example, a 17-year-old female participant who has participated in the camp twice and volunteered for three years at Class Agape responded:

> "In the beginning, I did not feel anything much. But then as I kept coming to volunteer, I started to realize you don't have to have a disability or something not to be happy about, because they were still happy despite their disabilities. When we sang, he became happy. As I kept seeing him so happy, I guess it made me happy too.

All the participants stated that they realized people with IDD are not different from themselves. For example,

> "Going to camp, I met so many people with IDD. I realized they are people, just like us. They want to have fun just like any other person. They just want to love and to be loved."

"They want to feel encouraged and loved and to get attention. I guess I did not realize that I had sorted them often into different category. I could see they were not different from us through the camp. They are very much like us. They maybe have a lot of trouble in speaking effectively or conforming their body to what they want to be. But it is not by choice. They are not choosing to act like this."

"They sometimes cried. I didn't know why, but I realized they still have feelings and emotions. They are people, just like us. When they cry, they became emotional and sometimes ran away because they could not speak. So, I was just with them."

In sum, participants agreed that the camp provided them with an in-depth understanding of what IDD was, why persons with IDD behave the way they do, and how best to support and bring out the best in people with IDD.

**Theme 4: Bond and communication with persons with IDD**

Participants were asked how the bond with their buddies was like. Many participants stated that they became close to each other although their buddies could not speak. Participants responded that they had developed friendships while playing field-games, eating breakfast and dinner together, and getting ready for bed with their buddies, or that they felt their buddies were like sisters and brothers at the end. For example, participants whose buddies were not able to speak responded:

"When we grow close to people, we talk about our problems. But with my buddy it is not that kind of 'close' because we cannot communicate that way. Laughing together and having fun together brings togetherness. We got close that way. I think communication-wise it was really hard. But she remembered me and started liking me as a person. We feel connected in that way."

"My buddy cannot speak but can communicate by typing. She knows my name and remembers me. While spending time together, I felt like an older sister and wanted to do better for her and protect her. On the last night of the camp, there was a dance party. It was kind of hard for her because she couldn't walk. So I just got her wheelchair and ran with her, as if we were dancing. She liked it very much. We had fun. I felt very close to her."

"Because my buddy could not speak or understand words, communicating with her proved to be more difficult than what was expected. However, as I spent more time with her and tried to talk to her, I started to understand her way of communicating and began to notice how she would act in a certain way to communicate her necessities. By the second day, I could tell what she needed right away and help her out even before it bothered her too much. Spending time with my buddy helped me build a bond with her so I could communicate with her even though she could not verbally speak or understand me. My buddy taught me that communication could be established without verbal communication."

In sum, although some persons with IDD cannot speak, participants were able to learn how to communicate with their buddies in different ways. While participating in the camp activities, they formed strong bonds with their buddies.

**Theme 5: Moments that the attitudes changed**

The fifth theme was the moment when the attitude change occurred. Many participants responded that they came to the camp thinking that people with disabilities were different from "normal" people, but they realized that even though they are on a different intellectual level and need some assistance in certain aspects, people with IDD have the same feelings and desires as

any other human, and then they found out that there were many things they had in common with people with IDD. For example,

> "I learned that they are a human as we were. In case of my buddy, she likes to eat a lot. I get that too. I can totally understand. I like to eat a lot, too. They want to play longer and play what they like to play. I began to see a lot more similarities than I could have ever seen with people with IDD before."
>
> "They wanted to have fun and find joy just like me, just like normal people."
>
> "My buddy and I had to always be engaged in a dialogue in order for him to stay focused and attentive. Sometimes, however, he would not listen to me, or do the opposite of the directions given to be followed, and it caused frustration. […] What caught me off guard was when it struck me that I was just the same. More than often, I need help to be guided toward places that I have to go to, by God. Quite frequently, I disobey instructions from the Lord and chase after my own desires. Through this understanding, I started to see my buddy in a different light. I couldn't draw a line between us anymore. We were simply alike in all ways. Physical or mental disabilities didn't matter anymore when we all are limited in showing our affection to God."

In conclusion, when participants discovered a similarity between themselves and persons with IDD, the attitude of differentiating persons with IDD from the non-disabled appear to have changed positively. This finding supports Yuker and Block (1986) that indicated positive attitudes reflected a perceived similarity between people with and without disabilities. While other aspects of positive attitudes may be debated, the perception of similarity between the disabled and nondisabled appears to be a core component, which can promote acceptance and equality between these two groups.

Moreover, many participants responded that they felt comfortable with people with IDD after they learned how to act and talk to people with IDD. As understanding of their buddy increased and the knowledge of how to interact with them grew through interpersonal contact, their attitudes became more positive toward people with IDD.

**Theme 6: Comparing the effect of the camp experience on attitude change to other contact experiences**

Many participants described the camp experience as a powerful experience that made them have more positive attitudes compared to other contact experiences with people with IDD. A participant who had contacts with peers with disabilities through a school activity responded:

> "I participated in a club activity called 'The Friendship Circle' at school, in which we talked and played card games with students with disabilities during lunch time, but I think the camp had a much greater impact on my attitude change than that. Spending 2-3 days and even sharing a room together created a bond between us, and I learned more about people with disabilities and got rid of any prejudice I had against them."

Another participant who had contacts with peers with disabilities through a school activity responded: "Usually, I only see them once a week at Class Agape. Throughout the camp, I feel like I got closer with all buddies. As time went by, I learned how to treat my buddy. We ended up having a lot of fun together. The most memorable event was swimming with him because I taught him how to swim. At first, he seemed to be afraid of the water, but eventually he was all smiles and giggles. It was a different experience for me because I was able to spend three days straight with them."

In sum, as Weinberg (1978) notes that a very intense contact situation was required to achieve a major change in attitudes, the camp experience can provide an intense contact with persons with IDD and improve the attitudes toward them.

**Theme 7: Comparing the attitude in the U.S. and Korea**

The final theme, attitude differences between the U.S. and Korea, was identified from four out of 12 participants, who have lived in both countries. Participants agreed that Koreans tend to have more negative attitudes toward persons with disabilities compared to Americans. For example, participants responded:

> "I think people in the US are more generous to the disabled. When people come across those with disabilities in Korea, most people avoid and don't approach them first. But in the US, I found that many approached them and offered to help."
>
> "In Korea, I saw many people stare at people with disabilities. And I think that Koreans living in the US also tend to be more negative toward the disabled than Americans. During a Class Agape field trip to an aquarium, it upset me that many Koreans stared at the buddies."
>
> "I think there is a negative connotation on disabilities in Korean culture. Kids use the word 'disabled' to make fun of other people, but I don't think that happens with English. I think the US is more open-minded toward people with disabilities and is a more tolerant society for those that are different from others."

# CHAPTER 6: DISCUSSION

This chapter discusses and summarizes the analysis presented in the preceding chapter. This chapter brings together the discussion of the qualitative and quantitative parts of the research study that investigated the impact of interpersonal contact experience on attitudes toward people with IDD. The central findings from hypothesis testing are restated and followed by a discussion of how these findings relate to the corresponding literature. This chapter addresses the strengths and limitations of this study and concludes with implications of the findings and suggestions for future research.

## Major Findings

This study assessed the baseline attitudes of Korean American adolescents and young adults, and the predictors of their baseline attitudes toward people with IDD. Guided by the Intergroup Contact Theory (Allport, 1954; Amir, 1969; Brewer & Brown, 1998; Pettigrew & Tropp, 2006), this study explored if interpersonal contact experience through a summer camp was effective in improving attitudes toward people with IDD. The study further examined if the bond between persons with and without IDD was associated with the attitude change and how the attitude changes differed by socio-demographic backgrounds. Finally, the study investigated if there were differences in attitudes according to the level of functioning in IDD. The major findings of this study were:

1. Korean American adolescents and young adults had relatively more negative attitudes on the Discomfort factor, similar level of attitudes on the Sensibility, Interaction, and Cognition of capacity factors, and more positive attitudes on the Cognition of cause factor, compared to the norms of the ATTID.

2. Differences in the baseline attitudes were found to be a function of gender, level of education, relationships with a person with IDD, attendance of disability-related education programs, media exposure, volunteer experience, motivation for camp, length of stay in the U.S., frequency of previous camp participation, months of volunteer experience, and frequent, positive, and negative experience from previous contacts.
3. When controlling demographic variables, previous camp participation was associated with more positive attitudes in discomfort and behavioral factors. When controlling all other background variables, previous camp participation was associated with more positive attitudes only in the behavioral factors.
4. The interpersonal contact intervention improved affective and behavioral factors of attitudes toward people with IDD, while interpersonal contact did not affect the cognitive attitudes.
5. The current study found that having contact with a person with IDD, regardless of the strength of the bond between people with and without IDD, improved the attitudes toward them.
6. Previous camp participation, acculturation, religious preference, and levels of education attainment were associated with the attitude change, while controlling for the demographic variables and social desirability.
7. The attitudes were associated with the level of functioning of IDD. Participants tend to have more negative attitudes toward persons with severe IDD than persons with mild IDD.
8. Camp Agape provided favorable conditions to change attitudes toward people with IDD. The intimate contact and bonding between people without and with IDD led the former to perceive similarities between the two groups and learn how to react to people with IDD.

**Research Question 1: The Baseline Attitudes toward People with IDD**

There are no established criteria that define clearly positive and negative attitudes on the ATTID questionnaire since this measurement was recently developed. Morin and her colleagues (2015), however, provide the norms to compare different groups with a representative population sample from Quebec, Canada. The mean score of the Discomfort factor from this study was equivalent to the 76$^{th}$ to 100th percentiles of the norms, which indicated scores over one standard deviation from the mean of 18-29 years old people in Quebec, Canada. This means that the study participants had a more negative attitude in the Discomfort factor compared to the norm group.

In the Sensibility, Interaction, and Cognition of capacity factors, the mean scores of this study (respectively 2.77, 2.31, and 2.26) were equivalent to the 26$^{th}$ to 75$^{th}$ percentiles of the norms, which were the scores around the mean (±one standard deviation). The study participants' attitudes in the Sensibility, Interaction, and Cognition of capacity factors were comparable with these of the norm group.

Finally, the mean score of the Cognition of cause factor was equivalent to the 0 to 25th percentiles of the norms, which indicated scores below one standard deviation from the mean. It means that the study participants had relatively more positive cognition of cause about ID than did the norm group.

These findings highlight the aspect of targeting when planning and implementing intervention programs. The results indicated Korean American adolescents and young adults hold relatively more discomfort toward people with IDD, for example, feeling wary, anxious, and insecure in the presence of persons with IDD, compared to the norm group. It reveals an area that requires effective interventions to decrease negative discomfort toward individuals with IDD.

**Research Question2: Predictors of the Attitudes toward Persons with IDD**

**Gender.** This study found that females had more positive attitudes toward persons with IDD than males, in the Discomfort, Interaction, and Cognition of capacity factors. In respect to the Discomfort factor, this finding is consistent with the first study using the ATTID questionnaire (Morin, Rivard, Crocker, Boursier, & Caron, 2013a). Moreover, the current study finding on the Interaction factor is in line with Findler et al. (2007) where women held more positive behavioral attitudes than men. These findings suggest that education program or intervention strategies should focus on each factor separately when working with both men and women.

**Age.** There is a lack of consistency in prior studies on the impact of age on attitudes toward people with IDD. Some studies found younger people were more accepting of peers with disabilities than older people (e.g., Scior et al., 2010; Yazbeck et al., 2004; Morin et al., 2013a), while other researchers found the opposite trend (e.g., Findler et al., 2007). There also were some studies found no effects of age on attitudes toward people with disabilities (e.g., Hampton & Xiao, 2007). This study found that age was not a significant predictor of attitudes toward people with IDD. Morin et al. (2013a), however, indicated that people 60 years and older had a more negative attitude toward ID while using the same attitude questionnaire as the current study. This difference may be due to the small age variation in the current study. Further studies can be conducted on wide ranges of age to investigate their attitudes toward people with IDD.

**Education Attainment.** This study found that people with college and above education attainment hold more positive attitudes in the affective factors. This is consistent with prior studies that report people with less educational attainment are more likely to have negative attitudes toward persons with IDD than those with higher educational attainment (Lau &

Cheung, 1999; MacDonald & MacIntyre, 1999; Ouellette-Kuntz et al., 2010, Morin et al., 2013a). Contrary to my hypothesis, the level of education attainment was not significantly associated with cognitive factors of attitudes. Thus, even though those who had higher educational attainment reported feeling more comfortable around and experienced greater positive and supportive emotions to promote the autonomy of persons aith IDD, this did not mean that they were necessarily more aware of the capacity, rights, and causes of IDD.

**Religious Preference.** Religion has been an understudied personal variable with respect to attitudes toward persons with disabilities. Only two studies from Findler et al (2007) and Laat, Freriksen, Mathijs, and Vervloed (2013) found religion did not influence attitudes on any of the factors. However, this study found that religious preference was significantly associated with the Interaction factor attitude – participants identifying with Buddhism were significantly less willing to interact with people with IDD than were Catholic participants. Due to the small sample size of Buddhist participants in this study, this finding needs to be interpreted cautiously.

**Acculturation.** Weak but significant correlations in length of stay in the U.S. and the Discomfort, Interaction, and Cognition of causes factors were found. These correlations indicated that the longer the participants stayed in the U.S., the more positive attitudes they held in each of the factors. This is consistent with prior studies that observed that Japanese, Korean, and Hong Kong residents held more negative attitudes toward people with ID when compared to American, Korean American, and British adults who lived in Hong Kong (Horner-Johnson et al., 2000; Choi & Lam, 2001; Scior et al., 2010).

**Knowing a Person with IDD and Relationship.** Findings support the hypotheses that a person who knows and has various types of relationships with a person with IDD will have more positive attitudes than those reporting no relationship. Having an extended family member and a

classmate with IDD are associated with having a more positive behavioral attitude. Having a classmate with IDD is also significantly associated with more positive cognition of capacity. Knowing a person with IDD through their volunteer work was significantly associated with having more positive discomfort and more negative cognition of capacity. Having more negative cognition of capacity may be because those who knew a person with IDD through their volunteer work have met persons with more severe IDD. Although the table was not presented, those reporting to know a person with severe IDD were from those reporting to know a person with IDD through volunteer work. This study found that those who reported knowing a person with severe IDD had significantly more negative cognition of capacity than did those who reported knowing a person with mild IDD. Finally, knowing at least one person with IDD is associated with more positive affective attitudes and more negative cognition of capacity. This is consistent with a prior study that observed students who knew or had a close or casual relationship with a person with IDD could improve attitudes compared to students who did not know or have an intimate relationship with a person with IDD or were merely acquaintances (Al-Kandari, 2014).

**Types and Severity of Disability.** This study found that there were no significant differences in the five factors of attitudes according to the different types of IDD. No association was observed between the perceived severity of IDD and the attitudes, excluding the Cognition of capacity factor. Not surprisingly, participants who reported knowing a person with mild IDD had significantly more positive cognition of capacity than did those who reported knowing a person with severe IDD.

**Knowledge.** Unexpectedly, the knowledge about IDD was not significantly associated with the five factors of attitudes. This study's results show that attitudes toward people with IDD were not significantly different from the perceived levels of knowledge even when it came to the

cognitive factors. This is inconsistent with a prior study that observed having better information about ID was associated with a positive attitude toward individuals with ID (Lau & Cheung 1999; MacDonald & MacIntyre 1999; Hunt & Hunt 2004; Morin et al., 2013a). This inconsistency with other studies might be because this study measured the level of knowledge by directly asking participants about their perceived and self-reported amount of knowledge rather than asking knowledge-based questions, which may be a more accurate way to measure knowledge.

**Disability-related Educational Program.** Although past studies have found an association between educational programs about IDD and improved attitudes toward individuals with ID (Lau & Cheung, 1999; MacDonald & MacIntyre, 1999; Hunt & Hunt, 2004), this study found that participants who reported attending a disability-related educational program had significantly more positive attitudes only on the Discomfort factor than did those who had never attended. This points to the need for targeted teaching to improve the cognitive attitude factors related to the capacity, rights, and causes of IDD. Furthermore, this lack of finding on the other four factors might be because the study only asked whether participants had attended or not, rather than when, how many times, or what type of educational programs they attended.

**Media Exposure.** Findings support the hypotheses that participants who reported having never watched a movie or television show with a character with IDD had more negative attitudes in affective and behavioral factors than those who reported having media exposure. This is consistent with a prior study (Stirling, 1991; Hall & Minnes, 1999). However, the attitudes did not significantly differ according to the different characters with IDD depicted as in media.

**Motivations.** The motivations behind volunteering for the camp were significantly associated with the Discomfort factor. Findings support the hypotheses that participants who

reported intrinsic motives, such as self-interest, had significantly more positive attitudes than those who reported extrinsic motives, such as earning community service credits. This suggests that participants who came because of their self-interests (e.g. like to help others, interests in people with IDD, and so on) may have less discomfort at the pre-test.

**Times of Previous Camp Participation.** The times of participation in Camp Agape were significantly correlated to less discomfort and more willingness to interact with persons with IDD.

**Months of Volunteering Experience.** Having volunteered for a longer period of time at Class Agape was significantly correlated to more positive attitudes in the Discomfort and Interaction factors.

**Frequency.** Consistent with the prior studies, significant correlations in the frequency of the previous contact were observed for attitudes (i.e., Lau & Cheung 1999). This study found that the more frequent contacts they had, the more positive attitudes in Discomfort, Sensibility, Interaction, and Cognition of causes factors they held.

**Positive and Negative Experience from Previous Contacts.** Consistent with prior work by Morin et al. (2013a), this study found that having more positive experiences was correlated with more positive attitudes in all the factors excluding the Cognition of causes factor. Negative experiences from previous contacts were significantly correlated with a decreased willing to interact with people with IDD and more negative cognition of capacity. These findings confirm the importance of the quality of previous contacts. This result is consistent with previous studies suggesting that positive contacts with persons with IDD lead to lower anxiety and discomfort (Hudson-Allez & Barrett, 1996) and reduces unwillingness to interact (MacDonald & MacIntyre, 1999; Ouellette-Kuntz et al., 2010).

**Social Desirability.** Contrary to my hypotheses, social desirability was not significantly correlated to any of the attitude factors.

**Research Question 3: Multiple Regression Analyses of the Baseline Attitudes on the Previous Camp Participation and Other Predictors**

**Discomfort Factor.** While controlling for socio-demographic variables, those who had previously participated in Camp Agape were expected to hold less discomfort than were their counterparts. Gender, education, age, and acculturation were also significant factors predicting the Discomfort factor. Women, participants who graduated from high school or college and above, younger participant, and those who lived longer in the U.S. were expected to have less discomfort toward people with IDD. When controlling for all other background variables, previous camp participation was not significantly associated with the Discomfort factor. Having college and above education attainment and having more positive and having less negative experiences from previous contacts were significantly associated with a more positive attitude on the Discomfort factor.

**Sensibility Factor.** When controlling for all other background variables, previous camp participation was not significantly associated with sensibility toward people with IDD. Buddhist participants were expected to hold more positive sensibility than Protestant participants. As well, having more negative experiences from previous contacts was expected to decrease sensibility.

**Interaction Factor.** When controlling for the demographic variables, previous camp participation, gender, education, age, and acculturation were significant predictors of the behavioral attitude. Those who had previously participated in Camp Agape, women, participants who graduated from high school or college and above, younger participants, and those who lived longer in the U.S. were expected to have a more positive behavioral attitude. Buddhist

participants were expected to have a more negative attitude than Protestant participants. When controlling for all other variables, previous camp participation, being a woman, having an education attainment of high school or college and above, being younger, and having more frequent, more positive, and less negative experiences during previous contacts were significantly associated with a more positive behavioral attitude.

**Cognition of Capacity and Rights Factor.** When controlling for the demographic variables, previous camp participation was not significantly associated with the cognition of the capacity of people with IDD. Women, participants who graduated from high school, and younger participants were significantly more likely to hold more positive cognition of capacity. When controlling for all other variables, only gender and negative experience from previous contacts were significantly associated with cognition of capacity. Being women and having less negative experiences during previous contacts were associated with a significantly more positive cognition of capacity.

**Cognition of Causes Factor.** Both of the multiple regression models indicated that, as a set, previous camp participation did not explain a significant amount of the variance on the Cognition of causes factor.

In summary, when controlling for all other variables, less negative previous contact was significantly associated with positive attitudes on the Discomfort, Sensibility, and Interaction, and Cognition of capacity factor. In line with recent studies (McManus et al. 2011; Morin et al. 2013a, Page & Islam, 2015), this study found that less negative previous contacts was the most important factor in predicting more positive attitudes.

When controlling demographic variables, previous camp participation was associated with more positive attitudes on discomfort and behavioral factors. When controlling all other

background variables, previous camp participation was associated with more positive attitudes only on the behavioral factors. Previous camp participation was predictive of more positive scores in affective or behavioral factors (less discomfort and more willingness to interact).

**Research Question 4: The Effect of Intervention on Attitude Change**

The results partially support the hypothesis that camp intervention will have an effect on attitude change. This study found that there were significant attitude changes in both of the affective attitudes (Discomfort and Sensibility factor), but no significant attitude changes in the behavioral and cognitive attitudes. Although very few studies have investigated the effect of prospective interpersonal contact on attitude change toward people with IDD, this study's findings were consistent with prior observations of the effect of contact-based intervention (Rimmerman et al., 2000; Li & Wang, 2013).

**Discomfort Factor.** This study found that participants who came to Camp Agape for the first time showed a decrease in negative affective attitudes over time, compared to those with previous camp experience who showed marginally no change in affective attitudes. The intervention improved the attitude of participants without previous camp experience and removed the significant mean differences between participants with and without previous camp experience at the pre-test. Furthermore, only the Discomfort factor had significant differences between participants with and without previous camp experience by time interaction. Prospective contact intervention appears to have an effect on attitude change on the Discomfort factor.

**Sensibility Factor.** This study found that both participants with and without previous camp experiences improved the sensibility factor of attitudes toward people with IDD after the intervention. This suggests that this factor was most sensitive to the intervention. The magnitudes of improvement were not the same across the groups and the participants without

previous camp and weekly volunteer experiences showed the greatest change in sensibility attitude among subgroups. Prospective contact intervention appears to have an effect on the Sensibility attitude change.

**Interaction factor.** This study found there were no significant changes in the interaction factor of attitudes from the pre-test to the post-test. However, the intervention offset the differences shown in the pre-test between the participants with and without previous camp experience. The magnitude of the differences between participants with and without previous camp experience decreased significantly from pre- to post-test as a result of the current camp participation.

**Cognitive Factors.** This study found that there were no significant changes from the pre-test to the post-test both in the Cognition of capacity factor and the Cognition of causes factor. There were no significant differences between the subgroups for these factors at the pre-test and the post-test as well.

In summary, consistent with my hypothesis, these findings indicate that interpersonal contact intervention had a great impact on improving attitudes toward people with IDD. For example, there were significant improvements from pre- to post- camp on affective and behavioral factors of attitudes: less discomfort, more positive sensibility, and more willingness to interact with people with IDD. Cognitive factors did not show significant change. This may be because the participants had more positive cognitions before the camp. These results support the Interpersonal Contact Theory that identified the importance of comfortable contact between the majority group and the "outgroup" as a means of reducing prejudicial attitudes. The limited studies have shown that contact-based interventions affect attitude change toward people with IDD through volunteering experience at Special Olympics Games and a tutoring program for

children with ID (Rimmerman et al., 2000; Li & Wang, 2013). Having interpersonal contacts through camp experience can have an impact on attitudinal change. However, it should be noted that the findings of this study are correlational and does not lead to causal conclusions.

**Research Question 5: The Bond of Contact and Attitude Change**

Contrary to my hypothesis, the strength of the bond formed between Camp Agape participants and their buddies was not associated with the attitude change. This is inconsistent with the prior study that observed the significant association between reduction in the affective stigma and the stronger bond between the volunteers and persons with mental illness (Couture & Penn, 2003). Couture and Penn (2003) interpreted the strong association between the bond scale and affective scale to be because both scales measured emotion and emotional attachment. However, their study did not control for any other variables that could affect stigma change – for example, social desirability, demographic variables, and so on. This appears to contribute to an inconsistency of findings.

Moreover, this study measured the bond using the WAI-SR (Hatcher & Gillaspy, 2006), which developed in the context of therapy. The scale might not be accurate or appropriate for measuring the strength of the bond between the camp participant and his/her buddy, because the majority of the buddies could not speak and their relationship defers from the relationship between a therapist and a client. As qualitative data analysis showed, this result may be because although most participants communicated with their buddies in non-verbal ways, they formed strong bonds with their buddies. Overall, this study found that having interpersonal contact with a person with IDD, regardless of the strength of the bond between people with and without IDD, improved the attitudes toward the former.

**Research Question 6: Multivariate analyses of the Attitude Change and the Demographic Characteristics**

This study found that there were four significant interactions involving previous camp participation, acculturation, religious preference, and levels of educational attainment, while controlling for the demographic variables and social desirability.

There was a significant interaction such that previous camp experience affected the Discomfort factor differentially over time. Those without prior camp experience showed a significantly greater decrease in the Discomfort factor over time, compared to those who had experienced the camp, who showed a slight increase in the discomfort attitude.

Acculturation is also a significant predictor of the Discomfort factor and an interaction was found by time point, while controlling for the other demographic variables and social desirability. Those who had lived for less than five years in U.S. showed a significantly greater decrease in negative affective attitudes over time, compared to those who had stayed for 6 to 10 years and those who had stayed for more than 21 years. As qualitative data analysis showed that Koreans tend to have more negative attitudes toward persons with disabilities compared to Americans, those who had lived for less than five years in U.S. indicated to have the most negative attitudes. The interpersonal contact intervention was the most effective on the discomfort attitude change for those who had lived for less than five years in U.S.

Education is a significant predictor of the behavioral attitude, and an interaction was found by time point while controlling for the other demographic variables and social desirability. Those with college and above education attainment showed a significantly greater decrease in negative behavioral attitudes over time, compared to high school students and high school graduates, who showed slight changes in the behavioral attitude after the intervention.

Religious preference was also found to be a significant difference in the behavioral attitude. The attitude of the Buddhist participants were improved after the intervention and the differences between groups decreased from the pre-test to the post-test. However, the small sample size of the Buddhist group may have contributed to such findings. Although these findings approached statistical significance, these results should be interpreted cautiously. Gender, age, and being born in the U.S. did not emerge as predictors of attitude change in any factors when other factors were controlled.

**Research Question 7: Differences in Attitudes according to the Level of Functioning in IDD**

This study found that attitudes toward persons with two levels of functioning were positively correlated, and affective and behavioral attitudes significantly differed according to the severity of IDD. Participants tended to have more negative attitudes (more discomfort, more negative sensibility, and less willing to interact with) toward a person with severe IDD than toward a person with mild IDD. This is consistent with other studies addressing the relation between the level of functioning and attitudes, addressing more negative attitudes are related to more severe level of ID (Ouellette-Kuntz et al., 2010; Morin et al., 2013a). These results shed light on the importance of informing the general public of the various ID profiles and alleviating fears of certain behaviors or differences that may be observed in persons with severe IDD.

**Research Question 8: How and When Interpersonal Contact Affected the Attitude to Change**

From the qualitative data analysis, this study explored how participants described their experience at the camp and how contact with persons with IDD affected the participants' attitude to change. Camp Agape created the conditions that were excellent for optimizing successful personal interactions between people without disabilities and those with disabilities. Camp

participants clearly viewed the camp experience as a valuable opportunity to improve their affective, behavioral, and cognitive attitudes toward persons with IDD. These findings confirmed the intergroup contact theory, which illustrates that the experience of contact reduces prejudice and improves positive attitude (Pettigrew & Tropp, 2008). When participants learned how to interact with people with IDD through interpersonal contact, their attitudes became more positive toward them. Increased awareness through reciprocal learning about people with IDD leads to understanding and acceptance.

The intimate contact and bonding allowed the participants to perceive similarities between people with and without IDD. As noted by previous studies (Helmstetter, Peck, & Giangrego, 1994; Siperstein et al., 2007), the perception of similarity has been found to be an important feature in the development of positive social relationships between people with or without disabilities. Contact experience enhanced participants' ability to take on the perspective of a person with IDD and ability to empathize with them. Perceiving similarity throughout the contacts helped direct the attitudes to a positive path. Clearly, these findings assert that interpersonal contacts between people with and without IDD should be promoted to reduce prejudice and improve attitudes toward people with IDD.

## Strengths and Limitations

### Strengths

This study had several strengths. First, this study added to the body of knowledge of attitudes toward people with IDD and the factors that could be associated with or expected to influence attitudes toward people with IDD among Korean American adolescents and young adults by using the instruments with reported validity and reliability measures. The issue of negative attitudes toward people with IDD is an important topic to study in social welfare in

order to increase awareness of the rights of people with IDD to social integration. Social service professionals can greatly benefit from this study by drawing from the findings to advocate for the inclusion of people with IDD and push for social policy reforms that would lead to the social inclusion of people with IDD and, thereby, achieve social justice.

Second, this study focused on variables that few studies have investigated, such as acculturation, religion, perceived disability status (types and severity of IDD), and media exposure. This study also contributed to our understanding of the effect of direct and indirect contacts by using measures of the quantity (type and frequency) and quality (positive and negative experiences) of previous contacts, rather than dichotomizing contacts as some previous research has done.

Third, this study explored the attitudes of a young immigrant-based population in the U.S. – the Korean-Americans, who were barely studied. With the mix of both contemporary and traditional values of Western and Eastern culture, this study expands this body of research to assess the attitudes of a different ethnic group and to explain the impact of culture on attitudes toward IDD.

Fourth, this study possessed the strengths that address the methodological limitations of previously conducted studies. Most contact studies are measured retrospectively and indicate that previous contacts are associated with attitude toward people with IDD (i.e., Antonak & Harth, 1994; Siperstein et al., 2003; Yazbeck et al., 2004). However, retrospective research cannot identify whether the baseline attitude pre-contact is less negative or not. Thus, this study measured the effect of interpersonal contact prospectively. Moreover, the present study measured the effect of interpersonal contact in the proper context for how contact may work in the real

world, not in artificial situations (e.g., classrooms, laboratory), as the ecological validity of studies of a classroom or laboratory is questionable (Couture & Penn, 2010).

Fifth, very little research about attitudes toward people with IDD tested intergroup contact theory (Allport, 1954; Pettigrew, 1998). Camp Agape provided the opportunity to interact with people with IDD within the four optimal conditions suggested by the intergroup contact theory. This study investigated the effects of interpersonal contact on attitude change toward people with IDD in a non-traditional and non-academic setting. The findings established that one-to-one contact through a summer camp provided opportunities for the non-disabled to socialize and interact with persons with IDD. The study suggests that having interpersonal contact with people with IDD has a significant impact on improving the non-disabled' attitudes toward people with IDD. This study can provide a platform for the development of structured contact programs employing cooperative tasks between individuals with and without IDD, aimed at promoting greater acceptance of individuals with IDD into society.

Finally, this study utilized a mixed methods design, intending to find quantitative and qualitative results that help investigate the effect of interpersonal contact on attitude change. Although the study has limitations regarding sampling, it is one of the few studies that utilized a mixed methods design to study the effect of interpersonal contacts on attitude change. Qualitative data was gathered in the form of an unstructured interview following the intervention. This data provided additional information that was not necessarily reflected by the quantitative measures – in particular, the emotional responses of the participants to their camp experiences. The qualitative data was also very helpful in interpreting the results of the ATTID, and in drawing conclusions regarding the effect of interpersonal contact on attitude change.

Combining the quantitative and qualitative data may help in addressing the limitations of the surveys or scales.

**Limitations**

It should be noted that this study has several limitations. The major limitation of this study is the lack of its generalizability. There is a risk that the units selected in the sample may be somehow exceptional and not representative of the population, since the participants were recruited from the volunteers for the camp rather than randomly assigned into the groups. Sample bias is possible since the individuals had volunteered for the camp. Thus, this study compared the intervention group to the comparison group. These research findings may not generalize to another population group with different characteristics from a culture with different policies on and services for people with IDD. This limitation might be resolved by learning from multiple case studies.

The second limitation was using quasi-experimental methods. Definite cause–and-effect conclusions regarding the effects of interpersonal contact on attitudes cannot be drawn since a true experimental research design was not used in this study, However, the findings provide guidance about possible causal relations that is worthy of further study.

A third limitation was the use of the same measurements at the pre-test and post-test, which can affect the attitudes of the participants who become familiarized to the measurements.

Another limitation is the use of self-reported data. Although it is likely that there may be errors in the responses, it is unlikely that self-reported data introduced bias that would affect the direction of the results. The effects of the intervention could be confounded with the participants' desires to conform and attempt to reflect positive attitude changes, which may not reflect their actual attitudes. Whether participants respond to attitude changes based on their true beliefs or

their desire to create an impression is an important concern in this study. Thus, this study assessed social desirability in order to test whether a participant has a tendency to respond in a socially desirable way. The ATTID also aims to lessen the effect of social desirability by creating a distance between the respondent and the situation – it uses a vignette that allows respondents to decide the feelings, thoughts, and behaviors that a third person ought to have in the situation, rather than themselves being actively involved in the situation.

Qualitative data were drawn from those who volunteered to be interviewed and could not be collected from participants whose attitudes did not change or change negatively. Clearly, the nature of the sample and the methodology means that the findings will not necessarily be representative of the general population and as a result, will not generalize. With such a small sample within a restricted age range, the experience that participants had was also inevitably limited. Previous studies of intergroup contact theory also have not fully explained why contact produces positive change under some conditions and negative change in others. Even within the same contact conditions, different participants experienced different change outcomes. This qualitative study was not able to explore why some camp participants would change negatively under the same conditions of contact, since this study failed to recruit the samples whose attitudes were not changed. This may have significantly biased the results. To confirm the results found in the study, replication with a larger and more broadly based samples of participants will be necessary.

Furthermore, the sole researcher was a social welfare doctoral student who was investigating the effect of contacts on attitude change. While attempting to remain detached from the process of analysis and attempts were made to reduce this bias through consultation, it is

perhaps inevitable that the personal beliefs and experience of the researcher may have influenced the emphasis of certain themes and may have impacted upon the results presented here.

## Implications for Social Work Policy and Practice

Overall, most of the findings support prior research results on attitudes and interpersonal contact theory. The findings also suggest novel and interesting ideas about people with IDD. Multivariate analyses tested a set of demographic variables and known predictors of attitudes toward people with IDD. With the exception of age, it was found that differences in attitudes were a function of gender, education attainment, knowing persons with IDD, frequency of contact, and quality of the previous contact. More frequent and positive previous contact and less negative previous contact were associated with more positive attitudes.

This study's results show that the interpersonal contact with persons with IDD through camp intervention on an equal status basis can improve affective and behavioral dimensions of attitudes, such as feelings of discomfort and sensibility toward persons with IDD and willingness to interact with them. Such results can offer guidance in furthering our understanding of pragmatic ways to improve positive affective and behavioral attitudes toward people with IDD through quality contacts between people with and without IDD, thereby promoting the quality of their integration within the community, daily lives, and social inclusion. However, proper planning is crucial in order to increase the chances of successfully establishing quality interactions. It is also noted that attitude changes only stem from equal status contact in which people with and without IDD both give and receive, and in which the two parties cooperate to accomplish goals that are meaningful to both.

The findings of this study indicate that contact would improve adolescents and young adults' attitudes toward a person with IDD. Based on these findings, social workers in high

school settings should encourage their students to volunteer to work with persons with IDD, so that they come to better understand persons with IDD and have the chance to form friendships with them. Indeed, interventions that target adults in the general population lack a similar ready-made environment. Organizations for people with IDD should provide programs to promote interpersonal contact between people with and without IDD within an equal status context to help minimize the anxiety and uncertainties of interacting with people with IDD.

On the other hand, the results of this study suggest that contact by itself might be insufficient to change cognitive factors of attitudes, such as cognition of causes of IDD and cognition about the capacity and rights of persons with IDD. This result supports the recommendations presented by Siperstein et al. (2007) that intervention programs that aim at improving the attitudes toward people with IDD need to incorporate information-based educational programs on contacts with persons with IDD. Educational programs to promote knowledge exchange about the causes of IDD and the capacity and rights of persons with IDD are needed.

To promote the social inclusion of persons with IDD, public disability-awareness educational programs should be provided to the mainstream community, such as workshops, training programs, or lectures, in varied settings (e.g., schools, the workplace, community centers). Highlighting the strengths and positive characteristics of people with IDD and providing a deeper understanding of people with IDD through educational programs would raise awareness of the capacity and rights of people with IDD and create more empathy for the lives of people with IDD. In turn, this may help the general public to accept and include people with IDD into different mainstream settings, as well as build positive social supports and environment accommodations, which would be indicative of positive attitudes held by the majority.

## Directions for Future Research

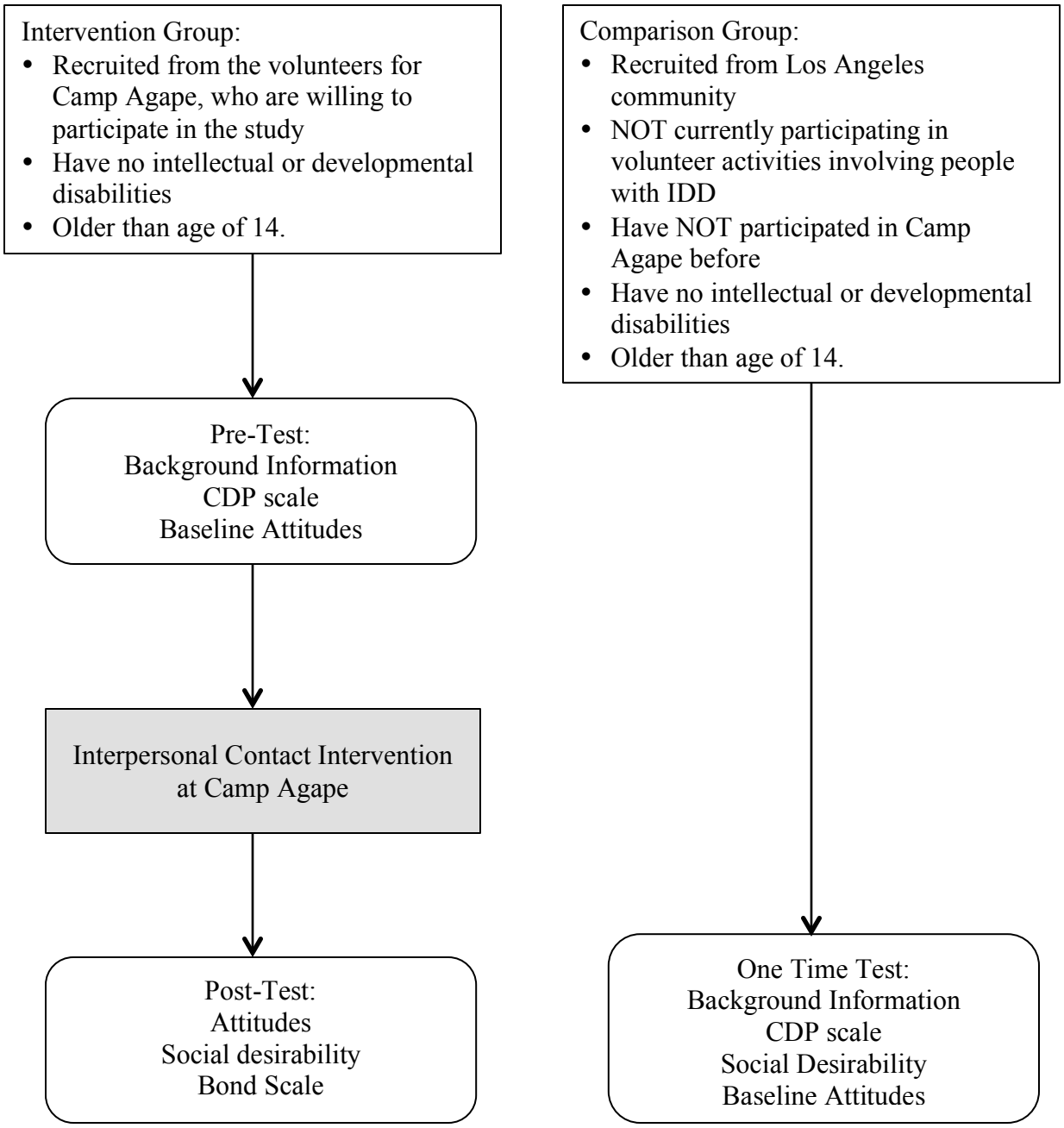
This study provides a conservative test of the Interpersonal Contact Theory in a naturalistic setting. This study was based on convenience samples taken from a pre-existing volunteer program comprised of self-selecting volunteers. Future research investigating the effects of interpersonal contact on more representative samples whose attitudes are less positive at the pre-test is required. Also, since the data from the comparison group in this study, was only collected at the baseline test, the statistical comparisons could only be examined prior to the intervention. Future researchers also should note that reliable evidence about the effects of prospective interpersonal contact can be drawn from studies that use repeated measures designs and if possible, in the context of a randomized, controlled design.

As a follow-up study to the findings presenting here, the attitudes of professionals likely to interact with people with IDD, such as healthcare providers, teachers, employers, the police, and/or other public service providers, should be assessed. Studies on the attitudes and contact should also be extended to include other populations in different settings, such as in the workplace and community and recreation groups that consist of similar proportions of people with and without IDD.

Furthermore, correlations between the attitudes and the following factors should be investigated; the intimacy of previous contact (i.e. intimate, close, casual, and acquaintance), the information of their buddies (i.e. types and severity of IDD), more detailed information of the disability-related educational program (i.e. frequency, duration, and types of program).

This study also assessed short-term attitude change. Long-term maintenance of the changed attitudes toward persons with disabilities has not been systematically studied. A follow-up test to investigate if the attitude change would be maintained over time is recommended.

## APPENDIX A: STUDY PROCEDURE FLOW CHART



## APPENDIX B: CONSENT TO PARTICIPATE IN RESEARCH

**The Effect of Interpersonal Contact on Attitudes Change Toward People with Intellectual or Developmental Disabilities**

*Ji Sun Lee, a Ph.D. Candidate and Professor Ailee Moon, Ph.D.* from the *department of Social Welfare* at the University of California, Los Angeles (UCLA) are conducting a research study.

You were selected as a possible participant in this study because you are 15 years old or older and a volunteer for Camp Agape and engaging interactions with persons with intellectual disability or/and developmental disabilities. Your participation in this research study is voluntary.

**Why is this study being done?**
Negative attitudes create real obstacles to social inclusion of people with intellectual disability or/and developmental disabilities. This study will examine factors affecting attitude changes toward persons with intellectual disability or/and developmental disabilities and explore whether the interpersonal interaction with persons intellectual disability or/and developmental disabilities can reduce negative attitudes and foster positive attitude changes towards persons with intellectual disability or/and developmental disabilities.

**What will happen if I take part in this research study?**
If you volunteer to participate in this study, the researcher will ask you to do the following:

- 30 minutes survey before the camp and 30 minutes survey after the camp
- The pre-survey will ask about your thoughts, feelings, and behavior intentions toward persons with intellectual disability or/and developmental disabilities, and demographic information, for example, gender, age, and the length of stay in US to describe the general characteristics of the participants in the study.
- The post-survey will ask about your thoughts, feelings, and behavior intentions toward persons with intellectual disability or/and developmental disabilities, and your experiences at the camp.
- The pre-survey will be adminstered at the volunteer workshop and the post-survey will be adminstered after the camp.
- If you volunteer to participate in 30 minutes long interview as well, the researcher will interview you about your thoughts and experience at the camp through the phone after the camp.

**How long will I be in the research study?**
Participation will take a total of about an hour to complete both surveys. In case of additional interview participation will take additional 30 minutes.

**Are there any potential risks or discomforts that I can expect from this study?**
*There are no anticipated risks or discomforts* from taking part in this study. If you feel uncomfortable with a question, you can skip that question or withdraw from the study altogether. If you decide to quit at any time before you have finished the questionnaire, your answers will NOT be recorded.

**Are there any potential benefits if I participate?**
You will not directly benefit from your participation in the research. The results of the research may contribute to adding knowledge about attitudes change toward persons with intellectual or developmental disabilities

**Will I be paid for participating?**
You will receive $5 value gift card after you complete the post-test as payment for your participation.

**Will information about me and my participation be kept confidential?**
Any information that is obtained in connection with this study and that can identify you will remain *confidential* in all published and written data analysis resulting from the study. It will be disclosed only with your permission or as required by law. Confidentiality will be maintained by means of coding your responses and using pseudonyms with any quotes attributed to an individual. The code will be assigned by the investigator only to identify the data. Interviewing participant will be conducted in a room or area where others cannot be overheard. Moreover, the collected data will be save as locked file or in a locked room with limited access by authorized personnel.

**What are my rights if I take part in this study?**
- You can choose whether or not you want to be in this study, and you may withdraw your consent and discontinue participation at any time.
- Whatever decision you make, there will be no penalty to you, and no loss of benefits to which you were otherwise entitled.
- You may refuse to answer any questions that you do not want to answer and still remain in the study.

**Who can I contact if I have questions about this study?**
- **The research team:**
  If you have any questions, comments or concerns about the research, you can talk to the one of the researchers. Please contact:
  Ji Sun Lee at (617) 314-1590, ezsun@ucla.edu
  Ailee Moon at at (310) 825-6219, aileem@ucla.edu
- **UCLA Office of the Human Research Protection Program (OHRPP):**
  If you have questions about your rights while taking part in this study, or you have concerns or suggestions and you want to talk to someone other than the researchers about the study, please call the OHRPP at (310) 825-7122 or write to:

  UCLA Office of the Human Research Protection Program
  11000 Kinross Avenue, Suite 211, Box 951694
  Los Angeles, CA 90095-1694

***You will be given a copy of this information to keep for your records.***

**SIGNATURE OF STUDY PARTICIPANT**

_____
Name of Participant

_____ _____
Signature of Participant Date

## APPENDIX C: SURVEY QUESTIONNAIRE

# SURVEY QUESTIONNAIRE

**Please read each statement and answer how much you agree or disagree with the statement.** This survey is not a test but an opinion questionnaire. There are no right or wrong answers. Please circle your most honest answer to each of the following items. **Your honest answer is highly appreciated.**

This survey will use the abbreviation ***'IDD'*** instead of ***intellectual disability or developmental disabilities*** in order to streamline the survey.

| | | Strongly Agree | Agree | Neither Agree nor Disagree | Disagree | Strongly Disagree | N/A Don't know |
|---|---|---|---|---|---|---|---|
| **A1** | **In your opinion, intellectual disability may be caused by:** | | | | | | |
| a. | Malnutrition in the mother. | 1 | 2 | 3 | 4 | 5 | 9 |
| b. | Serious head injury in a child. | 1 | 2 | 3 | 4 | 5 | 9 |
| c. | Lack of stimulation during childhood. | 1 | 2 | 3 | 4 | 5 | 9 |
| d. | Chemicals in the environment. | 1 | 2 | 3 | 4 | 5 | 9 |
| e. | Consumption of drugs or alcohol by the mother during pregnancy. | 1 | 2 | 3 | 4 | 5 | 9 |
| f. | Problems during birth. | 1 | 2 | 3 | 4 | 5 | 9 |
| **A2** | **Do you believe that:** | | | | | | |
| a. | I/DD is more common in underprivileged setting. | 1 | 2 | 3 | 4 | 5 | 9 |
| **A3** | **In your opinion, the *MAJORITY of people with I/DD* are able:** | | | | | | |
| a. | To hold down a job. | 1 | 2 | 3 | 4 | 5 | 9 |
| b. | To use public transport on their own. | 1 | 2 | 3 | 4 | 5 | 9 |
| c. | To handle money. | 1 | 2 | 3 | 4 | 5 | 9 |
| d. | To carry on a conversation. | 1 | 2 | 3 | 4 | 5 | 9 |
| e. | To report their physical problems. | 1 | 2 | 3 | 4 | 5 | 9 |
| f. | To play sports. | 1 | 2 | 3 | 4 | 5 | 9 |
| g. | To walk around town unaccompanied. | 1 | 2 | 3 | 4 | 5 | 9 |
| h. | To read short sentences. | 1 | 2 | 3 | 4 | 5 | 9 |
| i. | To learn. | 1 | 2 | 3 | 4 | 5 | 9 |
| j. | To make decisions. | 1 | 2 | 3 | 4 | 5 | 9 |

| A4 | In your opinion, people with I/DD : | Strongly Agree | Agree | Neither Agree nor Disagree | Disagree | Strongly Disagree | N/A Don't know |
|---|---|---|---|---|---|---|---|
| a. | Should give their consent to receive medical care. | 1 | 2 | 3 | 4 | 5 | 9 |
| b. | His/her work should be paid the same wage as other employees even if they are less productive. | 1 | 2 | 3 | 4 | 5 | 9 |
| c. | Have just as much right as people who don't have I/DD to make decisions about their life. | 1 | 2 | 3 | 4 | 5 | 9 |
| d. | Should have the right to get married | 1 | 2 | 3 | 4 | 5 | 9 |
| e. | Should have the right to have alcohol. | 1 | 2 | 3 | 4 | 5 | 9 |
| f. | Should have the right to have sex. | 1 | 2 | 3 | 4 | 5 | 9 |
| g. | Should have the right to vote. | 1 | 2 | 3 | 4 | 5 | 9 |
| h. | Should have the right to have children. | 1 | 2 | 3 | 4 | 5 | 9 |
| i. | Should have the right to have same rights as everyone else. | 1 | 2 | 3 | 4 | 5 | 9 |
| **A5** | **In your opinion, the MAJORITY** | | | | | | |
| a. | of children with I/DD should have the opportunity of attending a regular elementary school. | 1 | 2 | 3 | 4 | 5 | 9 |
| b. | of adolescents with I/DD should have the opportunity of attending a regular secondary school. | 1 | 2 | 3 | 4 | 5 | 9 |
| c. | of people with I/DD should have the opportunity of working in same settings as the non-disabled's workplace. | 1 | 2 | 3 | 4 | 5 | 9 |
| d. | of adolescents with I/DD should participate in community leisure activities such as a baseball team, the boys/girls scouts, etc. | 1 | 2 | 3 | 4 | 5 | 9 |

For the next sets of questions, it is important to **carefully read both descriptions**. Please read each statement below and **circle the response that comes closest to your own feeling and thought.**

**DESCRIPTION 1: Tom is an adult with intellectual disability. Tom is able to take care of his own health and personal needs (showering, hair, dressing, etc.), but sometimes needs reminding. Tom is able to carry on a conversation, but has difficulty discussing things that are abstract or complex. Tom knows how to use the telephone and can write.**

| B1 | If you met Tom on the street and Tom tried to talk to you, do you think you would: | Strongly Agree | Agree | Neither Agree nor Disagree | Disagree | Strongly Disagree | N/A Don't know |
|---|---|---|---|---|---|---|---|
| a. | feel afraid? | 1 | 2 | 3 | 4 | 5 | 9 |
| b. | feel pity? | 1 | 2 | 3 | 4 | 5 | 9 |
| c. | feel sad? | 1 | 2 | 3 | 4 | 5 | 9 |
| d. | feel embarrassed? | 1 | 2 | 3 | 4 | 5 | 9 |
| e. | experience anxiety? | 1 | 2 | 3 | 4 | 5 | 9 |
| f. | feel insecure? | 1 | 2 | 3 | 4 | 5 | 9 |
| g. | be wary? | 1 | 2 | 3 | 4 | 5 | 9 |
| h. | feel touched, moved? | 1 | 2 | 3 | 4 | 5 | 9 |
| i. | feel comfortable talking to him? | 1 | 2 | 3 | 4 | 5 | 9 |
| **B2** | **In your opinion,** | | | | | | |
| a. | Would you move away if Tom was next to you on a bus? | 1 | 2 | 3 | 4 | 5 | 9 |
| b. | If Tom asked you a question on the bus, would you answer him? | 1 | 2 | 3 | 4 | 5 | 9 |
| c. | Would you agree to work with Tom? | 1 | 2 | 3 | 4 | 5 | 9 |
| d. | Would you accept Tom working at your child's daycare center or school? | 1 | 2 | 3 | 4 | 5 | 9 |
| e. | Would you accept being served in a café by Tom? | 1 | 2 | 3 | 4 | 5 | 9 |
| f. | Would you accept to supervising Tom at your work? | 1 | 2 | 3 | 4 | 5 | 9 |
| g. | Would you accept being advised by Tom in a clothing store? | 1 | 2 | 3 | 4 | 5 | 9 |
| h. | Would you accept being advised by Tom in an electronics store? | 1 | 2 | 3 | 4 | 5 | 9 |
| i. | Would you accept Tom as your son or daughter's friend? | 1 | 2 | 3 | 4 | 5 | 9 |
| j. | If you wanted to adopt a child, could you adopt Tom? | 1 | 2 | 3 | 4 | 5 | 9 |
| k. | If you were a landlord, would you rent to Tom? | 1 | 2 | 3 | 4 | 5 | 9 |

**Please read description and circle the response comes closest to your own feeling and thought.**

DESCRIPTION 2: **George is an adult with intellectual disability. He communicates using sounds and gestures. He is able to show by gestures that he needs to go to the toilet. Since George has major coordination problems, he requires constant assistance when he moves around and always has to be accompanied on outings. He also has trouble with various movements. He is able to feed himself with an adapted spoon, but he drops food.**

| | | Strongly Agree | Agree | Neither Agree nor Disagree | Disagree | Strongly Disagree | N/A Don't know |
|---|---|---|---|---|---|---|---|
| **C1** | **If you met George on the street and George tried to talk to you, do you think you would:** | | | | | | |
| a. | feel afraid? | 1 | 2 | 3 | 4 | 5 | 9 |
| b. | feel pity? | 1 | 2 | 3 | 4 | 5 | 9 |
| c. | feel sad? | 1 | 2 | 3 | 4 | 5 | 9 |
| d. | feel embarrassed? | 1 | 2 | 3 | 4 | 5 | 9 |
| e. | experience anxiety? | 1 | 2 | 3 | 4 | 5 | 9 |
| f. | feel insecure? | 1 | 2 | 3 | 4 | 5 | 9 |
| g. | be wary? | 1 | 2 | 3 | 4 | 5 | 9 |
| h. | feel touched, moved? | 1 | 2 | 3 | 4 | 5 | 9 |
| i. | feel comfortable talking to him? | 1 | 2 | 3 | 4 | 5 | 9 |
| **C2** | **In your opinion,** | | | | | | |
| a. | Would you move away if George was next to you on a bus? | 1 | 2 | 3 | 4 | 5 | 9 |
| b. | If George asked you a question on the bus, would you answer him? | 1 | 2 | 3 | 4 | 5 | 9 |
| c. | Would you agree to work with George? | 1 | 2 | 3 | 4 | 5 | 9 |
| d. | Would you accept George working at your child's daycare center or school? | 1 | 2 | 3 | 4 | 5 | 9 |
| e. | Would you accept to supervising George at your work? | 1 | 2 | 3 | 4 | 5 | 9 |
| f. | Would you accept George as your son or daughter's friend? | 1 | 2 | 3 | 4 | 5 | 9 |
| g. | If you wanted to adopt a child, could you adopt George? | 1 | 2 | 3 | 4 | 5 | 9 |
| h. | If you were a landlord, would you rent to George? | 1 | 2 | 3 | 4 | 5 | 9 |

The following questions are **your familiarity with intellectual or developmental disabilities (IDD)** or **your experience with persons with IDD.**

| **D1 Are the people with IDD that you know…** (Please check yes or no for each with people who have IDD of the following) | Yes | No |
|---|---|---|
| a. Members of your immediate family? | **Y** | **N** |
| b. Members of your extended family? | **Y** | **N** |
| c. Neighbor? | **Y** | **N** |
| d. Classmate? | **Y** | **N** |
| e. People for whom do you do volunteer work? | **Y** | **N** |
| f. People for whom do you work (students, clients, customers)? | **Y** | **N** |
| h. Students in your children's daycare center or school? | **Y** | **N** |
| j. People you have met during leisure or sporting activities | **Y** | **N** |
| k. Other people? (Please, specify) | | |

*If there is at least one YES between D1 a to k, please answer on D2 & D3.*
(If you answered NO on all of D1, you can pass D2 &D3)

**D2. Do you know what disability he/she has?**
*(If you know more than one person, please answer considering a person who you have interacted with the most frequently and closely).*

☐ No ☐ Yes *If yes,* please specify: _____
ex) Autism, Down Syndrome, Brain Injury, Cerebral Palsy, Intellectual Disability, etc.

**D3. How severe do you perceive his/her disability?**
☐ Mild ☐ Moderate ☐ Severe

**D4. In general, how much do you know about the conditions and circumstances of people with IDD?**
☐ Nothing ☐ Not much ☐ Quite a bit ☐ A lot

**D5. Have you attended in any educational program related to disability awareness before?**
☐ No ☐ Yes

**D6. Have you watched a movie or television show in which a character depicted a person with IDD?**
☐ No ☐ Yes

**D7. *If yes on D6*, how was the character with IDD depicted as?** *(Please, choose one)*
☐ Super hero with great achievement despite obstacles
☐ Victim or vulnerable/pitiful character
☐ Character who acted appropriately or engage in mainstream activities
☐ None of above (Please, specify: _____ )

**E. Contact with Disabled Persons**

This set of questions in this page assesses your contact experiences with people with **intellectual or developmental disabilities (IDD)**. Please circle a number indicating your answer to each question.

| | | Never | Once or twice | A few times | Often | Very Often |
|---|---|---|---|---|---|---|
| 1. | How often have you had *a long talk* with a person with I/DD? | 1 | 2 | 3 | 4 | 5 |
| 2. | How often have you had *a brief conversation* with persons with I/DD? | 1 | 2 | 3 | 4 | 5 |
| 3. | How often have you *eaten a meal* with a person with I/DD? | 1 | 2 | 3 | 4 | 5 |
| 4. | How often have persons with I/DD discussed *their* lives or problems with you? | 1 | 2 | 3 | 4 | 5 |
| 5. | How often have you discussed *your* life or problem with a person with I/DD? | 1 | 2 | 3 | 4 | 5 |
| 6. | How often have you tried to help persons with I/DD with *their* problems? | 1 | 2 | 3 | 4 | 5 |
| 7. | How often have persons with I/DD tried to help you with *your* problems? | 1 | 2 | 3 | 4 | 5 |
| 8. | How often have you *worked or studied* with persons with I/DD as a co-worker or classmate? | 1 | 2 | 3 | 4 | 5 |
| 9. | How often has a friend with I/DD visited you in *your* home? | 1 | 2 | 3 | 4 | 5 |
| 10. | How often have you visited friends with I/DD in *their* homes? | 1 | 2 | 3 | 4 | 5 |
| 11. | How often have you met a person with I/DD that you *like*? | 1 | 2 | 3 | 4 | 5 |
| 12. | How often have you met a person with I/DD that you *dislike*? | 1 | 2 | 3 | 4 | 5 |
| 13. | How often have you met a person with I/DD that you *admire*? | 1 | 2 | 3 | 4 | 5 |
| 14. | How often have you been *annoyed or disturbed* by the behavior of a person with I/DD? | 1 | 2 | 3 | 4 | 5 |
| 15. | How often have you been *pleased* by the behavior of a person with I/DD? | 1 | 2 | 3 | 4 | 5 |
| 16. | How often have you had *pleasant* experiences interacting with persons with I/DD? | 1 | 2 | 3 | 4 | 5 |
| 17. | How often have you had *unpleasant* experiences interacting with persons with I/DD? | 1 | 2 | 3 | 4 | 5 |

**F. Social Desirability**

Please read each statement and mark through the "T" if the statement is True for you, or mark through the "F" if the statement is False for you.

There is no right or wrong answer. **Your honest answer is highly appreciated.**

| Statements | True | False |
|---|---|---|
| 1. I never hesitate to go out of my way to help someone in trouble. | **T** | **F** |
| 2. I have never intensely disliked anyone. | **T** | **F** |
| 3. I sometimes feel resentful when I don't get my way. | **T** | **F** |
| 4. There have been times when I felt like rebelling against people in authority even though I knew they were right. | **T** | **F** |
| 5. I can remember "playing sick" to get out of something. | **T** | **F** |
| 6. When I don't know something I don't at all mind admitting it. | **T** | **F** |
| 7. I am always courteous, even to people who are disagreeable. | **T** | **F** |
| 8. I would never think of letting someone else be punished for my wrong-doings. | **T** | **F** |
| 9. There have times when I was quite jealous of the good fortune of others. | **T** | **F** |
| 10. I am sometimes irritated by people who ask favors of me. | **T** | **F** |

***Please, go to the Next page***

The remaining questions will allow us to compare attitudes toward persons with IDD across different groups of the population. Please be assured that **your responses are *confidential.***

**G1. Are you?**

☐ A man ☐ A woman

**G2. In what year were you born?**

_____

**G3. What is your highest level of education completed?**

☐ Elementary School ☐ Middle School ☐ High School / GED

☐ 2-year college degree ☐ 4-year college degree ☐ Graduate School

**G4. What is your religious affiliation?**

☐ Protestant ☐ Catholic ☐ Buddhism

☐ No Preference/No religion ☐ Others (Please, specify: _____)

**G5. Were you born in the United States?**

☐ Yes ☐ No

***If no,* how many years have you been in the United States?**

About _____ years

**G6. Have you volunteered for people with IDD) before?**

☐ No ☐ Yes

***If yes,* how long have you volunteered?**

**_____ Years _____ Months**

## Thank you for your participation!

If you would like to participate in the raffle in which one of every ten participants will be given an **Amazon gift card ($10 value)** as compensation for participation, please provide your e-mail address below. Your email address will be used only for selecting raffle winners and sending the gift card (if you win) as compensation for your participation. This information of email address will be destroyed after sending the gift card to raffle winners.

e-mail address: _____

## APPENDIX D: INTERVIEW PROTOCOL

**Introduction:**

Hello, I appreciate you for coming today to talk about your experience at Camp Agape. The purpose of today's interview is to find out what you believe and feel about persons with intellectual or/and developmental disabilities (IDD) based on your personal experience. I will ask you a series of questions. I am interested in all your thought, feeling, and perspectives. There are no right or wrong answers to the questions. The information you share today will be used only for my research project titled 'Does Interpersonal Contact Change Attitudes Toward Persons with IDD'. This interview will probably take about 30 minutes to complete. The interview is going to be voice-recorded so that I don't have to take notes and can concentrate on what you are saying. I want to emphasize that everything you say will be confidential—no one except for this researcher will listen to the recording. I will not use your name on any written reports. You may refuse to answer any question or withdraw from the interview at anytime. Can we start?

**Questions:**

- Have you interacted with persons with IDD before Camp Agape?
    - Probe: How was the relationship? How close?
- What motivated you to volunteer at Camp Agape? Is this your first time?
- If you learned about persons with IDD during Camp Agape, can you tell me about it?
- Can you tell me about the moments when you were surprised, challenged, touched, or interested in while you were interacted with persons with IDD during the camp?
- Do you think the experience at the camp impacted on your thoughts, feelings, or behaviors about people with IDD?
    - Would you tell me how and what experience changed your thoughts, feelings, or behaviors about people with IDD?
- Can you tell me about the relationship with your buddy during the camp? How do you describe the relationship?
- If you think your attitude toward people with IDD are changed after the camp, what is the major change?

## REFERENCES


Akrami, N., Ekehammar, B., Claesson, M., & Sonnander, K. (2006). Classical and modern prejudice: Attitudes toward people with intellectual disabilities.*Research in developmental disabilities*, *27*(6), 605-617.

Ajzen, I. (1988). *Attitudes, Personality, and Behaviour*. Buckingham: Open University Press.

Ajzen, I., & Fishbein, M. (1980). A theory of reasoned action. *Understanding attitudes and predicting social behaviour*. Prentice-Hall, Englewood Cliffs, NJ.

Allport, G. W. (1954). *The Nature Of Prejudice*. Cambridge, MA: Addison-Welsey.

Amir, V. (1969). Contact Hypothesis In Ethnic Relations. *Psychological Bulletin. 71,* 319-342.

Antonak, R. F. & Harth, R. (1994). Psychometric Analysis and Revision of the Mental Retardation Attitude Inventory. *Mental Retardation*. *32*, 272–280.

Antonak, R. F. (1982). Development and psychometric analysis of the Scale of Attitudes Toward Disabled Persons. *Journal of Applied Rehabilitation Counseling. 13(2),* 22-29.

Antonak, R., Fiedler, C., & Mulick, J. (1989) Misconceptions Relating to Mental Retardation. *Mental Retardation, 27,* 91–97.

Antonak, R., Fiedler, C., & Mulick, J. (1993). A Scale of Attitudes toward the Application of Eugenics to the Treatment of People with Intellectual Disability. *Journal of Intellectual Disability Research, 37,* 75–83.

Barnes, C. (1992). *Disabling Imagery And The Media: An Exploration of The Principles For Media Presentation of Disabled People.* British Council of Organisations of Disabled People, London;United Kingdom.

Barr, J. J., & Bracchitta, K. (2008). Effects of Contact With Individuals With Disabilities: Positive Attitudes and Majoring in Education. *Journal of Psychology*, *142*(3), 225-243.

Beckwith, J., & Mathews, J. (1995). Measurement of attitudes of trainee professionals to people with disabilities. *Journal of Intellectual Disability Research, 39,* 255–262.

Berry, J., & Dalal, A. (1996). *Disability attitudes, beliefs and behaviours: Report on an international project in community based rehabilitation*. Report submitted to International Centre for the Advancement of Community Based Rehabilitation.

Bogdan R. B. & Biklin, S. K. (1998). *Qualitative Research for Education: An Introduction to Theory and Methods*, Third Edition. Needham Heights, MA: Allyn and Bacon.

Boyle, C. A., Boulet, S., Schieve, L. A., Cohen, R. A., Blumberg, S. J., Yeargin-Allsopp, M., ... & Kogan, M. D. (2011). Trends in the prevalence of developmental disabilities in US children, 1997–2008. *Pediatrics*, *127*(6), 1034-1042.

Braddock, D. E. (2002). *Disability at the dawn of the 21st century and the state of the states*. American Association on Mental Retardation.

Brewer, M. B., & Brown, R. J. (1998). Intergroup Relations. In D. T. Gilbert, S. T. Fiske, & G. Lindzey (Eds.), *The handbook of social psychology* (4th ed., Vol. 2, pp. 554–594). New York: McGraw-Hill.

Centers for Disease Control and Prevention. (2004). Developmental disabilities. Retrieved July 7, 2015, from http://www.cdc.gov/ncbddd/dd

Chan, F., Lam, C. S., Wong, D., Leung, P. & Fang, X. F. (1988). Counseling Chinese-Americans with disabilities. *Journal of applied Rehabilitation Counseling. 19(4),* 21-25.

Chan, F., Hedl, J., Parker, H. J., Chan, T. N., & Yu, B. (1988). Differential attitudes of chinese students toward people with disabilities: a cross-cultural perspective. *International Journal of Social Psychiatry, 34*, 267-273.

Chen, R. K., Brodwin, M. G., Cardoso, E., & Chan, F. (2002). Attitudes toward people with disabilities in the social context of dating and marriage: a comparison of American, Taiwanese, and Singaporean college students – attitudes toward disability. *Journal of Rehabilitation, 68(4),* 5-11.

Choi, G. & Lam, C. S. (2001). Korean students' differential attitudes toward people with disabilities: an acculturation perspective. *International Journal of Rehabilitation Research, 24,* 79-81.

Chung, K.F., Chen, E.Y.H., & Liu, C.S.M. (2001). University students' attitudes towards mental patients and psychiatric treatment. *International Journal of Social Psychiatry, 47(2),* 63–72.

Cohen, E. G. (1984). The desegregated school: problems in status power and interethnic climate. In N. Miller & M. Brewer (Eds.), *Groups in contact: The psychology of desegregation* (pp. 77–96). New York: Academic Press.

Corrigan, P., Markowitz, F. E., Watson, A., Rowan, D., & Kubiak, M. A. (2003). An attribution model of public discrimination towards persons with mental illness. *Journal of Health and Social Behavior*, 162-179.

Corrigan, P.W. (2000). Mental health stigma as social attribution: Implications for research methods and attitude change. *Clinical Psychology Science and Practice, 7,* 48–67.

Corrigan, P.W., Edwards, A.B., Green, A., Diwan, S.L., & Penn, D.L. (2001). Prejudice, social distance, and familiarity with mental illness. *Schizophrenia Bulletin, 27,* 219–225.

Couture, S. M., & Penn, D. L. (2006). The effects of prospective naturalistic contact on the stigma of mental illness. *Journal of Community Psychology*,*34*(5), 635-645.

Crandall, C. S., Eshleman, A., & O'Brien, L. (2002). Social norms and the expression and suppression of prejudice: the struggle for internalization. *Journal of personality and social psychology*, *82*(3), 359.

Creswell, J. W. (2012). *Qualitative inquiry and research design: Choosing among five approaches*. Sage.

Desforges, D.M., Lord, C.G., Ramsey, S.L., Mason, J.A., Van Leeuwen, M.D., West, S.C., & Lepper, M.R. (1991). Effects of structured cooperative contact on changing negative attitudes towards stigmatized groups. *Journal of Personality and Social Psychology, 60,* 531–544.

Donaldson, J. (1981). The Visibility And Image Of Handicapped People On Television. *Exceptional Child,* 47(6), 413-416.

Donaldson, J., & Martinson, M. C. (1977). Modifying Attitudes Toward Physically Disabled Persons. *Exceptional Child, 43,* 337-341.

Dorji, S., & Solomon, P. (2009). Attitudes of health professionals toward persons with disabilities in Bhutan. *Asia Pacific Disability Rehabilitation Journal, 20(2),* 32–42.

Elliott, T. R., & Byrd, E. K. (1982). Media and disability. *Rehabilitation Literature, 43(11-12),* 348-355.

Elliott, T. R., & Byrd, E. K. (1983). Attitude change toward disability through television portrayal. *Journal of Applied Rehabilitation Counseling, 14(2),* 35-37.

Findler, L., Vilchinsky, N., & Werner, S. (2007). The Multidimensional Attitudes Scale Toward Persons With Disabilities (MAS) Construction and Validation. *Rehabilitation Counseling Bulletin*, *50*(3), 166-176.

Florian, V., & Katz, S. (1983). The impact of cultural, ethnic, and national variables on attitudes towards the disabled in Israel: a review. *International Journal of Intercultural Relations*, *7*(2), 167-179.

Furnham, A. & Gibbs, M. (1984). School children's attitudes toward the handicapped. *Journal Of Adolescence 7*, 99-117.

Furnham, A., & Chan, E. (2004). Lay theories of schizophrenia: A cross-cultural comparison of British and Hong Kong Chinese attitudes, attributions and beliefs. *Social Psychiatry & Psychiatric Epidemiology, 39,* 543–552.

Furnham, A., & Thompson, R. (1994). Actual and perceived attitudes of wheelchair users. *Counseling Psychology Quarterly, 7,* 35–52.

Gaertner, S.L., Rust, M.C., Dovidio, J.F., Bachman, B.A., & Anastasio, P.A. (1996). *The contact hypothesis: The role of a common ingroup identity on reducing intergroup bias among majority and minority group members.* In J.L. Nye & A.M. Bower (Eds.), What's social about social cognition? (pp. 230–260). Thousand Oaks, CA: Sage.

Gething, L. (1994). The Interaction with Disabled Persons Scale. *Journal of Social Behaviour & Personality, 9,* 23–42.

Gilmore, L., Campbell, J., & Cuskelly, M. (2003). Developmental expectations, personality stereotypes, and attitudes towards inclusive education: community and teacher views of down syndrome. *International Journal of Disability, Development and Education, 50,* 65–76.

Gordon, P. A., Tantillo, J. C., Feldman, D., & Perrone, K. (2004). Attitudes regarding interpersonal relationships with persons with mental illness and mental retardation. *Journal Of Rehabilitation-Washington*, *70*(1), 50-56.

Hall, H., & Minnes, P. (1999). Attitudes Toward Persons with Down Syndrome: The Impact of Television. *Journal of Developmental and Physical Disabilities*, *11*(1), 61-76.

Hampton, N. Z., & Xiao, F. (2007). Attitudes toward people with developmental disabilities in Chinese and American students: The role of cultural values, contact, and knowledges. *Journal of Rehabilitation*, *73*(4), 23.

Harper, D., & Peterson, D. (2001). Children in the Philippines: Attitudes toward visible physical impairment. *Cleft-Palate Craniofacial Journal, 38,* 566–576.

Hastings, R., Sjöström, K., & Stevenage, S. (1998). Swedish and English adolescents' attitudes toward the community presence of people with learning disabilities. *Journal of Intellectual Disability Research, 42*, 314.

Hastorf, A. H., Wildfogel, J., & Cassman, T. (1979). Acknowledgement of handicap as a tactic in social interaction. *Journal of Personality and Social Psychology, 37(10),* 1790-1797.

Hatcher, R. L., & Gillaspy, J. A. (2006). Development and validation of a revised short version of the Working Alliance Inventory. *Psychotherapy Research*,*16*(1), 12-25.

Henry, D., Keys, C., Jopp, D., & Balcazar, F. (1996). The Community Living Attitudes Scale, Mental Retardation Form: Development And Psychometric Properties. *Mental Retardation, 34,* 149–158.

Horner-Johnson, W., Keys, C., Henry, D., Yamaki, K., Oi, F., & Watanabe, K. (2000). Japanese Students' Attitudes Toward People With Intellectual Disabilities. *Journal of Intellectual Disability Research, 44*, 365-378.

Horvath, A. O., & Greenberg, L. S. (1989). Development and validation of the Working Alliance Inventory. *Journal of counseling psychology*, *36*(2), 223.

Hsu, T. H., Huang, Y. T., Liu, Y. H., Ososkie, J., Fried, J., & Bezyak, J. (2015). Taiwanese Attitudes and Affective Reactions Toward Individuals and Coworkers Who Have Intellectual Disabilities. *American journal on intellectual and developmental disabilities*, *120*(2), 110-124.

Hunt, B., & Hunt, C. (2000). Attitudes toward people with disabilities: a comparison of undergraduate rehabilitation and business majors. *Rehabilitation Education, 14,* 269–283.

Hur, S.V., & Hur, B.S. (1999). *Culture shock! Korea*. Portland, OR: Graphic Arts Center Publishing Company.

Jahoda, A., & Markova, I. (2004). Coping with social stigma: People with intellectual disabilities moving from institutions and family home. *Journal of intellectual disability research*, *48*(8), 719-729.

Jaques, M., Burleigh, D. L., & Lee, G. (1973). Reactions to disabilities in China: a comparative, structural and descriptive analysis. *Rehabilitation Counseling. Bulletin, 17,* 206-217.

Kelman, H. C. (1974). Attitudes are alive and well and gainfully employed in the sphere of action. *American Psychologist, 29*, 310-324.

Kim-Rupnow, W. S. (2005). Disability and Korean culture. In J. H. Stone (Ed.), *Culture and disability: Providing culturally competent services* (pp. 115-138). Thousand Oaks, CA: Sage.

Kim, S. J., & Kang, K. A. (2003). Meaning of life for adolescents with a physical disability in Korea. *Journal of Advanced Nursing, 43(2),* 145–55.

Kobe, F.& Mulick, J. (1995). Attitudes towards intellectual disability and eugenics: The role of formal education and experience. *Journal of Developmental and Physical Disabilities, 7,* 1–9.

Kolodziej, M. E., & Johnson, B. T. (1996). Interpersonal contact and acceptance of persons with psychiatric disorders: a research synthesis. *Journal of consulting and clinical psychology*, *64*(6), 1387.

Kraus, S. J. (1995). Attitudes and the prediction of behaviour: a meta-analysis of the literature. *Personality Social Psychology Bulletin, 21,* 58–75.

Kwon, M. O. (2000). A literature review of changing public perspectives of disability in Korea. *The Korean Journal of Special Education 35(3),* 107–36. (In Korean.)

Larson, S., Lakin, C., Anderson, L., Kwak, N., Lee, J. H., & Anderson, D. (2000). Prevalence of mental retardation and/or developmental disabilities: Analysis of the 1994/1995 NHIS-D. *MR/DD Data Brief*, *2*(1), 1-11.

Lau, J. T. F., & Cheung, C. K. (1999). Discriminatory attitudes to people with intellectual disability or mental health difficulty. International Social Work, 42, 431–444.

Li, C., & Wang, C. K. J. (2013). Can exposure to Special Olympic Games change attitudes of volunteers toward inclusion of people with intellectual disabilities? Journal of Applied Research in Intellectual Disability. DOI: 10.1111/jar.12053

Liesenner, J. J., & Mills, J. (1999). An experimental study of disability spread: talking to an adult in a wheelchair like a child. *Journal Of Applied Social Psychology, 29(10),* 2083-2092.

Link, B. G., & Cullen, F. T. (1986). Contact with the mentally ill and perceptions of how dangerous they are. *Journal of Health and Social Behavior*, 289-302.

Livneh, H. (1991). On the origins of negative attitudes toward people with disabilities. In *The Psychological and Social Impact of Disability* Žedited by R. P. Marinelli and A. E. Dell Orto., pp. 181-96. New York: Springer Publishing Company.

MacDonald, J. D., & MacIntyre, P. D. (1999). A rose is a rose: effects of label change, education, and sex on attitudes toward mental disabilities. *Journal on Developmental Disabilities*, *6*(2), 15-31.

Mathison, S. (1998). Why triangulate? *Educational Researcher, 17(2),* 13-17.

McCaughey, T. J., & Strohmer, D. C. (2005). Prototypes as an indirect measure of attitudes toward disability groups. *Rehabilitation Counseling Bulletin*, *48*(2), 89-99.

McGee, K.A. (1989). *Attitudes of the University of Virginia faculty and administration toward disabled college students.* Dissertation Abstracts International, 50, 10A.

McConkey, R. (2015). Measuring public discomfort at meeting people with disabilities. *Research in developmental disabilities*, *45*, 220-228.

McManus, J. L., Feyes, K. J., & Saucier, D. A. (2011). Contact and knowledge as predictors of attitudes toward individuals with intellectual disabilities. *Journal of Social and Personal Relationships*, *28*(5), 579-590.

Mertens, D. M. (2005). *Research and Evaluation in Education and Psychology: integrating diversity with quantitative, qualitative, and mixed methods*: SAGE Publications.

Morin, D., Rivard, M., Crocker, A. G., Boursier, C. P., & Caron, J. (2013a). Public attitudes towards intellectual disability: a multidimensional perspective. *Journal of Intellectual Disability Research*, *57*(3), 279-292.

Morin, D., Crocker, A. G., Beaulieu‐Bergeron, R., & Caron, J. (2013b). Validation of the attitudes toward intellectual disability–ATTID questionnaire. *Journal of Intellectual Disability Research*, *57*(3), 268-278.

Morin, D., Rivard, M., Boursier, C. P., Crocker, A. G., & Caron, J. (2015). Norms of the Attitudes Toward Intellectual Disability Questionnaire. *Journal of Intellectual Disability Research*, *59*(5), 462-467.

Myers, F., Ager, A., Kerr, P. & Myles, S. (1998). Outside looking in? Studies of the community integration of people with learning disabilities. *Disability and Society, 13,* 389–413.

Nabors, L. A., & Keyes, L. A. (1997). Brief report: Preschoolers' social preferences for interacting with peers with physical differences. *Journal of pediatric psychology*, *22*(1), 113-122.

Ng, P., & Chan, K. F. (2000). Sex differences in opinion towards mental illness of secondary school students in Hong Kong. *International Journal of Social Psychiatry, 46,* 79–88.

Olson, J., & Zana, M. (1993). Attitudes And Attitude Change. *Annual Review Of Psychology, 44,* 117–154.

Ouellette-Kuntz, H., Burge, P., Henry, D. B., Bradley, E. A., & Leichner, P. (2003). Attitudes of senior psychiatry residents toward persons with intellectual disabilities. *Canadian Journal of Psychiatry*, *48*(8), 538-545.

Ouellette‐Kuntz, H., Burge, P., Brown, H. K., & Arsenault, E. (2010). Public attitudes towards individuals with intellectual disabilities as measured by the concept of social distance. *Journal of Applied Research in Intellectual Disabilities*, *23*(2), 132-142.

Oskamp, S. (1991). *Attitudes And Opinions*. Englewood Cliffs, NJ: Prentice-Hall. 2nd Ed.

Oskamp, S. (2000). Multiple Paths To Reducing Prejudice And Discrimination, In: Oskamp (Ed.) *Reducing Prejudice And Discrimination*. London; Lawrence Erlbaum Associates.

Pardun, C., Corbin, S. & Engstrom, K. (2005). *Media's Portrayal of People with Intellectual Disabilities. Final Report for Special Olympics, Inc*. Columbia, SC: University of South Carolina.

Patel, M. & Rose, J. (2014). Students' attitudes towards individuals with an intellectual disability. *Journal of Intellectual Disabilities, 18(1),* 90–103.

Pettigrew, T. F. (1998). Intergroup Contact Theory. *Annual Review Of Psychology, 49*, 65–85.

Pettigrew, T. F., & Tropp, L. R. (2005). Allport's intergroup contact hypothesis: Its history and influence. In J. F. Dovidio, P. Glick, & L. A. Rudman (Eds*.), On the nature of prejudice: Fifty years after Allport* (pp. 262-277). Malden, MA: Blackwell.

Pettigrew, T. F., & Tropp, L. R. (2006). A meta-analytic test of intergroup contact theory. *Journal of Personality And Social Psychology, 90*(5), 751-783.

Pettigrew, T. F., & Tropp, L. R. (2008). How does intergroup contact reduce prejudice? Meta-analytic tests of three mediators. *European Journal Of Social Psychology, 38*(6), 922-934.

Plotnik, R. (2005). *Introduction To Psychology* (7th Ed.). Australia: Thomson Wadsworth.

Pruett, S. R., Lee, E. J., Chan, F., Wang, M. H., & Lane, F. J. (2008). Dimensionality of the contact with disabled persons scale results from exploratory and confirmatory factor analyses. *Rehabilitation Counseling Bulletin*, *51*(4), 210-220.

Rao, S. (2004). Faculty attitudes and students with disabilities in higher education: a literature. *College Student Journal*, *38*, 2.

Reinke, R. R., Corrigan, P. W., Leonhard, C., Lundin, R. K., Kubiak, M. A. (2004). Examining two aspects of contact on the stigma of mental illness. *Journal of Social and Clinical Psychology, 23,* 377-389.

Rillotta, F. & Nettelbeck, T. (2007). Effects of an awareness program on attitudes of students without an intellectual disability towards persons with an intellectual disability. *Journal Of Intellectual & Developmental Disability, 32*(1), 19-27.

Roberts C. M. & Lindsell J. S. (1997). Children's attitudes and behavioural intentions toward peers with disabilities. *International Journal of Disability, Development and Education 44,* 133–45.

Rusch, F. R., Wilson, P. G., Hughes, C., & Heal, L. W. (1995). Interaction of persons with severe mental retardation and their nondisabled co-workers in integrated work settings. *Behavior Modification, 19,* 59–77.

Sadlick, M. & Penta, F. B. (1975). Changing nurse attitudes toward quadriplegics through use of television. *Rehabilitation Literature, 36,* 274-283.

Schalock, R. L., Luckasson, R. A., & Shogren, K. A. (2007). The renaming of ''mental retardation'': understanding the change to the term ''intellectual disability.'' *Intellectual And Developmental Disabilities, 45,* 116–124.

Schwartz, C., & Armony-Sivan, R. (2001). Students' attitudes to the inclusion of people with disabilities in the community. *Disability & Society, 16*, 403–413.

Scior, K., Kan, K., McLoughlin, A., & Sheridan, J. (2010). Public Attitudes Toward People With Intellectual Disabilities: A Cross-Cultural Study, *intellectual and developmental disabilities, 48(4)*. 278–289.

Seltzer, M. M. (1984). Correlates of community opposition to community residences for mentally retarded persons. *American Journal Of Mental Deficiency, 89 (1),* 1–8.

Sigafoos, J. (1997). Attitudes and perceptions past and present (Editorial). International *Journal of Disability Development and Education, 44,* 93–95.

Sinson, J. (1993). *Group homes and community integration of developmentally disabled people.* London: Jessica Kingsley.

Simons, H. (2009). *Case study research in practice*. SAGE publications.

Siperstein, G. N., Norins, J., & Mohler, A. (2007). Social acceptance and attitude change. In *Handbook of intellectual and developmental disabilities* (pp. 133-154). Springer US.

Siperstein, G. N., Parker, R. C., Norins, J., & Widaman, K. F. (2011). A national study of Chinese youths' attitudes towards students with intellectual disabilities. *Journal of Intellectual Disability Research*, *55*(4), 370-384.

Siperstein, G., Norins, J., Corbin, S. & Shriver, T. (2003). A national study of youth attitudes toward the inclusion of students with intellectual disabilities. *Exceptional Children, 73*(4), 435-455.

Stirling, P. (1991). *Attitude Change Toward Mentally Retarded Persons Through Television Portrayal.* Unpublished Honours B.A. thesis, Dept. of Psychology, Queen's University, Kingston, Canada.

Strahan R. & Gerbasi K. C. (1972). Short, homogeneous versions of the Marlowe-Crowne Social Desirability Scale. *Journal of Clinical Psychology***,** *28,* 191–193.

Strong, E. (1987). *Attitudes Of Young People Toward Persons With Disabilities: A Study At The High School Level*. Unpublished Honours B.A. thesis. Dept. of Psychology, Queen's University, Kingston, Canada.

Talbott, J. A. (2004). Deinstitutionalization: Avoiding the disasters of the past. *Psychiatric Services, 55,* 1112-1115.

Trute, B., Tefft, B., & Segall, A. (1989). Social rejection of the mentally ill: a replication study of public attitude. *Social Psychiatry and Psychiatric Epidemiology*, *24*(2), 69-76.

Tseng, M. S. (1972). Attitudes toward the disabled—a cross-cultural study. *The Journal of social psychology*, *87*(2), 311-312.

U. S. Department of Health and Human Services. (2005). *The surgeon general's call to action to improve the health and wellness of persons with disabilities.* Rockville, MD: U. S. Government Printing Office. Washington, DC, American Association on Mental Retardation.

Vezzoli, R., Archiati, L., Buizza, C., Pasqualetti, P., Rossi, G., & Pioli, R. (2001). Attitude towards psychiatric patients: A pilot study in a northern Italian town. *European Psychiatry, 16*, 452–458.

Wang, M. H., Thomas, K. R., Chan, F., & Cheing, G. (2003). A conjoint analysis of factors influencing American and Taiwanese college students' preferences for people with disabilities. *Rehabilitation Psychology, 48*, 195–201.

Wehmeyer, M. L., & Bolding, N. (1999). Self-determination across living and working environments: A matched-samples study of adults with mental retardation. *Mental retardation*, *37*(5), 353-363.

Weiserbs, B. & Gottlieb, J. (1995). The perception of risk over time as a factor influencing attitudes toward children with physical disabilities. *The Journal of Psychology, 129,* 689–699.

White, M. J., Jackson, V., & Gordon, P. (2006). Implicit and explicit attitudes toward athletes with disabilities. *The Journal of Rehabilitation*, *72*(3), 33.

Williamson, P.T. (2000). *Attitudes of the Troy State University Dothan faculty toward students with disabilities* (Unpublished Doctoral dissertation, Auburn University).

Won, J. W., Krajicek, M., & Lee, H. (2004). Culturally and linguistically competent care of a Korean-American child with autism. *Illness, Crisis & Loss*, *12*(2), 139-154.

Wright, B. (1983). *Physical Disability: A Psychosocial Approach* (2nd Ed.). New York: Harper & Row.

Wright, B. A. (1988). Attitudes And The Fundamental Negative Bias: Conditions And Corrections. In H. E. Yuker (Ed.), *Attitudes Toward Persons With Disabilities* (Pp. 3-21). New York: Springer.

Yazbeck, M., McVilly, K. & Parmenter, T. (2004). Attitudes towards people with intellectual disability: an Australian perspective. *Journal of Disability Policy Studies, 15,* 97–111.

Yuker, H. & Block, J. (1986) *Research with the attitude toward disabled people scales: 1960–1985.* Hampstead, NY: Holstra University Center for the Study of Attitudes Toward People with Disabilities.

Yuker, H. E. (1988). The effects of contact on attitudes toward disabled persons: Some empirical generalisations. In H. E. Yuker (Ed.), *Attitudes toward people with disabilities* (pp. 262–274). New York: Springer.

Yuker, H. E. (1994). Variables that influence attitudes toward people with disabilities: Conclusions from the data. *Journal of Social Behavior & Personality*. 9(5), 3-22.

Yuker, H., & Block, J. (1986). *Research with the attitude toward disabled people scales: 1960–1985.* Hampstead, NY: Holstra University Center For The Study Of Attitudes Toward People With Disabilities.

Yuker, H., & Hurley, M. (1987). Contact with and attitudes towards persons with disabilities: the measurement of inter-group contact. *Rehabilitation Psychology, 32,* 145–154.

Zanna, M. P. & Rempel, J. K. (1988). Attitudes: a new look at an old concept. In Bar-Tal, D. & Kruglanski, A. W. (Ed.), *The Social Psychology Of Knowledge* (Pp. 315-34). New York: Cambridge University Press.

Zimbardo, P. G. & Leippe, M. R. (1991). *The Psychology Of Attitude Change And Social Influence.* Boston, MA, Mcgraw-Hill.