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IMPLICIT BIAS, ATTRIBUTIONS, AND EMOTIONS IN DECISIONS ABOUT
PARENTS WITH INTELLECTUAL DISABILITIES
BY CHILD PROTECTION WORKERS

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by

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ABSTRACT

Several epidemiological studies suggest that individuals with intellectual disabilities (IDs) constitute a higher proportion of child protective services (CPS) cases than would be expected based on the prevalence of IDs in the general population. Researchers have suggested that the stereotypic assumptions and expectations that CPS workers' have about parents with IDs might influence decisions and responses to parents with IDs. The goal of this study was to examine the social-cognitive and emotion factors associated with CPS worker's investigative decisions and treatment of parents with IDs during child neglect situations. Of particular interest were CPS workers stereotypes and attitudes about parents with IDs, attributions about their disability, and their emotional reactions (anger, disgust, pity) to parents' behavior. Each factor, along with the potential buffering effect of workers' perspective taking ability, were examined to determine their association with workers' decisions about future risk to the child, removal recommendations, and their general willingness to help the parents with IDs. Second, this study examined whether parents' ID status (having an ID versus not) had an effect on CPS workers' emotional reactions, attributions, and decisions about risk, removal, and help. The present research had several important findings. First, findings supported only the association between workers' emotional responses to (rather than their stereotypes about, attitudes toward, or attributions for) the behavior of parents with IDs with their decisions. Second, findings supported the effect of parental ID status on child protection workers' emotional reactions, risk assessments, and willingness to help. Limitations and clinical implications of findings are discussed.

TABLE OF CONTENTS

LIST OF TABLES	vi
Introduction	1
Parents with Intellectual Disabilities- Historical Perspective on their Treatment	5
Child Protective Service Decisions	9
Understanding the Potential for Bias in Decision-Making via a Social-Cognitive Emotion Framework	10
Schemas	12
Stereotypes and Attitudes	13
Implicit Bias and Child Protection Decisions	16
Attributions	18
Emotions	21
Stereotypes, Attributions, Emotions: Exploring their Interrelationships	24
Perspective Taking	26
Effect of ID Status on Child Protection Decisions	28
The Current Study	32
Aim 1	33
Aim 2	34
Aim 3	34
Aim 4	34
Aim 5	35
Method	35
Participants	35
Research Procedure	37
Measures	38
Background Information	38
Neglect Vignettes	38
Dispositional Attributions	39
Emotions	40
CPS Decisions	41
Willingness to Help	42
Implicit Bias	42
Perspective Taking	45
Results	46
Results Overview	46
Descriptive Analyses	46
Aim 1: Associations among Implicit Bias, Emotion, Attributions, and Decisions Regarding Parents with IDs	48
Implicit Bias and Decision-making	48
Attributions and Decision-making	49
Emotions and Decision-making	49
Aims 2: Additional Associations among Implicit Bias, Emotion, Attributions, and Decisions Regarding Parents with IDs	50
Aims 3: Combining Aims 1 and 2 into a Model	50

Aim 4: Moderating Role of Perspective Taking in the Associations between Social-Cognitive and Emotion Factors with Decisions Regarding Parents with IDs.	51
Aim 5: The Associations between Parents' ID status with Attributions, Emotions, Decisions, and Help	52
Decision Ratings.....	53
Dispositional Attribution Ratings.....	53
Emotion Ratings.	53
Exploratory Results.....	54
Moderating Analyses for Aim 1: Associations with Age and Years in Child Welfare.	54
Associations among Implicit Bias, Emotion, Attributions, and Decisions for the Whole Sample for Aim 1.....	55
Mediating Role of Emotions between ID Status and CPS Decisions.	57
Discussion	58
Effect of Parental ID Status on Social-Cognitions, Emotions, and CPS Decisions.....	58
Associations among Social-cognitions and Emotions with Decisions Regarding Parents with IDs.....	62
A Model of Decision-Making?	67
The Role of Perspective Taking.....	69
Universal Associations	70
Limitations	71
Clinical Implications	74
Appendix A: Tables	78
Appendix B: Neglect Vignettes	85
Appendix C: Stereotype and Attitude IAT Categories and Labels.....	88
Appendix D: Interpersonal Reactivity Index	89
Bibliography	90

LIST OF TABLES

Table 1: T-test of Sample Demographics	78
Table 2: Chi-square of Sample Demographics by Condition	79
Table 3: Chi-square of Recruitment States by Condition	80
Table 4: Correlations between Variables and Demographic Characteristics for the ID Condition	81
Table 5: Correlations between Variables for the ID Condition	82
Table 6: Unstandardized Regression Beta Coefficients for Perspective Taking Moderating Anger and Decisions.....	83
Table 7: Unstandardized Regression Beta Coefficients for Perspective Taking Moderating Disgust and Decisions	83
Table 8: GLM Effects of Condition by Dependent Variables	84

Implicit Bias, Attributions, and Emotions in Decisions about Parents with Intellectual Disabilities by Child Protection Workers

Introduction

Researchers have suggested that around the world parents with intellectual disabilities (IDs) are disproportionately represented in child welfare hearings (Booth & Booth, 2005; Booth, Booth, & McConnell, 2005a; Hayman, 1990; McConnell & Llewellyn, 2002; Sheerin, 1998). Exact estimates of parents with IDs' involvement in the child protective services (CPS) system are difficult to determine due to the lack of common definitions among studies, variable screening procedures, and inconsistent record keeping (IASSID Special Interest Research Group on Parents and Parenting with Intellectual Disabilities, 2008). Of the smaller scale studies that have been conducted, the prevalence of parents with IDs in CPS caseloads is between 33 to 78%, of which the most common concerns are about child neglect (Aunos, Goupil, & Feldman, 2003; Ethier, Couture, & Lacharite, 2004; McGaw, Shaw, & Beckley, 2007; Mørch, Skår, & Andersgård, 1997; Schilling, Schinke, Blythe, & Barth, 1982; Tymchuk & Andron, 1990). However, rates of IDs in the general population are much lower than for those suggested in CPS caseloads [e.g., 10.6 per 1,000 children (ACYF, 2007); 1.27% based on a national survey (Fujiura & Taylor, 2003)]. Although exact rates of their involvement in CPS are difficult to estimate, these rates suggest that parents with IDs are highly overrepresented in the child welfare system.

The potential for parents with IDs to be involved in CPS cases at high rates highlights the importance of addressing two questions that have been raised about their treatment within the system. The first question is whether there is an association between

CPS workers' stereotyped-based expectations and reactions to parents with IDs' inability to parent and worker's subsequent decisions (McConnell & Llewellyn, 2000). Such decisions can be harmful because they can lead to inappropriate involvement, possible removal of parents with IDs' children, and possible negative consequences for parents and their children because of such actions (Booth & Booth, 2005). Indeed, within the child welfare system, parents with IDs are at increased risk of being investigated and having their children removed from their custody [i.e., a removal rate of 30%-60% of those parents brought before the court (Booth et al., 2005a; McConnell & Llewellyn, 2002)]. Thus, it is important to examine this question to determine whether these expectations are potentially related to these harmful decisions.

Besides being the targets of potentially harmful decisions, a related question is whether CPS decisions about parents with IDs are different when compared to parents without IDs exhibiting the same behaviors (Hayman, 1990; Levesque, 1996; McConnell & Llewellyn, 2000). This question concerns discrimination such that, all things being equal, CPS workers may make a more harmful decision about a parent when that parent is known to have an ID, whereas the decision would be less harmful if the parent is not known to have an ID. Thus, this other question is related to the first, but extends our examination by determining whether decisions differ between ID and non-ID parents (e.g., by parental ID status).

There is little empirical work to guide answering these two questions. Much of the present study's rationales for examining them is based on findings about decision-making from the rich general social psychology and mental illness literature examining decisions made about other stigmatized groups. In regards to the first question, several

studies show, for example, that stereotypes, attitudes, attributions, and emotional reactions to people with mental illnesses are associated with negative prejudicial treatment toward people with mental illness (Corrigan, Markowitz, Watson, Rowan, & Kubiak, 2003; Peris, Teachman, & Nosek, 2008). For the other question, early evidence for discrimination against minorities in the child welfare system was found in scientific experiments that examined reporting of child maltreatment. One study found that, all things being equal, physicians were more likely to report hypothetical families labeled as being from minority or low socioeconomic backgrounds for abuse than for other families (Turbett & O'Toole, 1980). Such findings of such discrimination have been corroborated by hospital studies of actual injury cases (Lane, Rubin, Monteith, & Christian, 2002). These findings provide a general framework for examining these two questions in detail using a sample of CPS workers who are seen as having greater training and expertise with making these decisions.

The present study was designed to consider the association between social-cognitions, emotions, and parental ID status with CPS worker's decisions. To examine the first question, the present study examined whether a set of worker-based social-cognitive (stereotypes, attitudes, and attributions) and emotional (anger, disgust, and pity) factors were associated with CPS worker's decisions about risk, removal, and their willingness to help parents with IDs. Worker's perspective taking ability was also examined to determine whether increased ability to adopt the perspectives of others was associated with fewer stereotypes and less negative attitudes toward parents with IDs, as well as more positive emotional responses to parents with IDs. To explore the second question about whether parental ID status has a differential (i.e., discrimination) effect on

CPS decisions, the present research examined whether participants would make decisions (attributions, risk, removal, and help) and emotionally respond (anger, disgust, and pity) differently (i.e., *discrimination*) to parents with IDs than they would for parents without IDs.

The present study focused on child investigations involving parents with *Mild* Mental Retardation (e.g., parents with IQ scores between 70-55, who typically require limited support, and living independently) in child neglect incidents, wherein the parents of a young child have failed to give their child the necessities of life (i.e., proper supervision, medical care, housing, nutrition, and hygienic care). Neglect was chosen over other forms of maltreatment (e.g., physical abuse, sexual abuse) because most concerns about parents with IDs focus on their capacity to fulfill their own and their child's basic needs (Glaun & Brown, 1999; McConnell & Llewellyn, 2002) rather than on intentional physical harm. Neglect is also the most common form of child maltreatment and accounts for 64% of all maltreatment cases in the U.S. (U.S. Department of Health and Human Services Administration on Children Youth and Families, 2008).

The following sections provide a literature-based rationale for the present study. It begins with a discussion contextualizing the experience of parents with IDs and the decision-making process involved in child protection. Next, the potential role of stereotypes, negative attitudes, attributions, and emotions on decision-making and treatment of parents with IDs is introduced. I then, based on the extant literature, suggest that perspective taking may function to reduce the association between these four factors. Finally, a rationale is introduced for how parent's ID status may be associated with

differential responses in their child investigation decisions (explained in more detail later), attributions, and emotional responses.

Parents with Intellectual Disabilities- Historical Perspective on their Treatment

Individuals with IDs have endured a long history of mistreatment beginning with compulsory institutionalization and eugenic sterilization. For example, during the seminal case of *Buck v. Bell* in 1927, the United States Supreme Court upheld a Virginia state statute that legalized the eugenic sterilization of Carrie Buck, a pregnant young woman who allegedly had an ID (Hayman, 1990). In the ruling written by Justice Holmes, he affirmed that the State's interests in maintaining a "pure" gene pool outweighed individuals' bodily integrity ("*Buck v. Bell*," 1927). Of course, there is no doubt that the civil rights movements of the latter half of the 20th century have led to improvements in attitudes for many marginalized groups, including individuals with IDs (Hayman, 1990).

Importantly, individuals with IDs have gained legal rights (except parenting rights) since the days of compulsory sterilization (e.g., passage of legislature such as the ("*Americans with Disabilities Act of 1990*,") and the ("*Individuals with Disabilities Education Act*," 1997, 2003). However, there are suggestions that parents with IDs continue to be mistreated with most evidence supporting the presence of possible discrimination via high rates of maltreatment allegations and child removal. For example, in the United States, Whitman and Accardo (1990) reviewed hospital birth records and found that 45.5% of newborn children were removed from families headed by a parent with an ID. Studies from other countries indicate similar findings. Reviews

of international research studying placements outside the home have indicated removal rates between 30-50% of parents with IDs (Booth et al., 2005a).

One of the most comprehensive examinations of court outcomes involving parents with IDs was undertaken by Booth, Booth, and McConnell (2005a). The authors reviewed court records for 828 children whose families had been processed through the United Kingdom's Family Courts. The authors found that parents with IDs were significantly more likely than were parents without disabilities to be the subjects of freeing orders (i.e., having their parental rights terminated)(41.7% vs. 28.9%). The contrast between these removal rates is more apparent when considering that parents with IDs constitute between 0.2% (Mirfin-Veitch, Bray, Williams, Clarkson, & Belton, 1999) to 1.27% (Fujiura & Taylor, 2003) of the population of most modern countries, but have been documented in some U.S. court samples to constitute as much as 15% of Family Court referrals (Booth, Booth, & McConnell, 2005). As some researchers have argued, "This means that parents with learning difficulties and their children feature in care applications [child welfare referrals] a minimum of 15 times and, more realistically, up to 50 times more often than would be predicted on the basis of their numbers in the population" (Booth et al., 2005a, p. 14). These U.S. and international court data suggest that parents with IDs are disproportionately involved in the child welfare system.

To understand the reasons underlying the disproportionate rates of referral and removal of children from parents with IDs, authors have suggested that these parents are subject to placement decisions that are influenced by biased factors. One such factor is stereotyped beliefs, with two of the most common presumptions of parents with IDs being: (1) that their disability increases the likelihood of them having significant

parenting deficiencies; and (2) that their disability significantly decreases the likelihood that these parents will be responsive to parenting skills interventions (Hayman, 1990). Indeed, such presumptions are treated as “accurate” assessments or even helpful heuristics to guide child protective decisions. As will be argued below, the above presumptions are implausible when one considers the validity of its main premise, namely that *intellectual disability is a valid predictor of child maltreatment (including neglect)*.

To be a valid predictor, decisions based on ID must have an empirical basis. However, researchers have identified several limitations in the quality of studies that examined whether there is a link between parental ID status and various definitions of parenting capacity. A recent literature review of 25 studies about parent with IDs’ involvement in child protection published between 1997-2008 found that only three studies used a comparison group, most studies relied on small sample sizes, and most samples were recruited through social service agencies (Lamont & Bromfield, 2009). In addition, these studies varied in their definitions of ID and parenting capacity. Thus, many of the empirical findings cannot be generalized to parents with IDs as a whole.

Besides methodological shortcomings, there are unknowns in our understanding of what constitutes parental capacity. Both the social welfare and mental health lack clear standards for determining “minimally adequate” parenting (Azar, Lauretti, & Loding, 1998). Legal statutes have identified being an unfit parent as one who is unamenable to intervention as a standard for termination of parental rights; however, there are no universally outlined criteria within the legal or mental health literature about what this specifically means (Azar, Benjet, Fuhrmann, & Cavallero, 1995). Determining

the parental capacity of parents with IDs becomes even more complex given the heterogeneity in defining this group of individuals. Intellectual disabilities are not a single categorical classification, but instead reflect qualitative differences in cognitive ability and self-care skills varying at all levels of the intellectual ability domain. In addition, IQ scores alone fail to reflect an individual's capacity to function in social, environmental, or employment domains (Benjet, Azar, & Kuersten-Hogan, 2003; Lamont & Bromfield, 2009). These points suggest a flaw in the assumption that there is a link between being a parent with IDs and child maltreatment. Given the weak empirical evidence, heterogeneity of the construct of intellectual ability, and no agreed upon standards for adequate parenting, it would mean that a mild ID is a poor indicator of risk for child maltreatment.

Although there is weak evidence to link ID per se to child maltreatment, some evidence suggests that parents with IDs experience more problems and stressors, which are linked with child maltreatment. As with any parent, there are multiple factors that affect one's ability to provide adequate care to one's child. Being a parent with IDs may mean that any problems their disability may be associated with are compounded by other problems that make parenting difficult for all parents. Several studies indicate that these problems include social isolation (Llewellyn & McConnell, 2002), parental stress (Feldman, Leger, & Walton-Allen, 1997), parents previous past histories of being maltreated as children (Dowdney & Skuse, 1993), parental substance abuse (Nicholson, 2007), parental income (Feldman & Walton-Allen, 1997), and both parent's and/or children's physical or mental health problems (Irenyi, Bromfield, Beyer, & Higgins, 2006; Llewellyn, McConnell, & Ferronato, 2003; McGaw et al., 2007).

However, due to the methodological weaknesses of the studies examining the association between ID status and parental capacity, many of these stressor findings cannot be generalized (Lamont & Bromfield, 2009), thus it is unclear whether all parents with IDs experience these problems at higher rates than the general population of parents. Based on the difficulty of assessing parenting capacity and parenting risk, many authors have advocated for evaluating parents on a variety of domains and on a case-by-case basis as opposed to relying on global decisions based on ID status (Azar et al., 1998). More importantly, this argument suggests that whatever heuristics workers are using to make their decisions about parents with IDs are not empirically-based.

Child Protective Service Decisions

CPS worker's role is that of legal gatekeepers who determine whether parents and their children enter the child protection system. In the present study, CPS workers' decisions involved three types: risk, removal, and their willingness to help parents. In particular, the first two refer to the determination about whether a child is *at-risk* for future maltreatment (if left in the home) and whether to recommend *removal* for out-of-home placement (e.g., foster care). Worker's willingness to help refers to workers' general propensity to aid parents. Each of these plays pivotal roles in determining families' legal and non-legal outcomes and each will be examined in the present study.

Decision-making by CPS workers is a complicated process. Child protection cases involve varying levels of ambiguity (Lazar, 2006). During investigations about child neglect, conclusive evidence of imminent harm is often unavailable or uncertain. It is here that subjective factors may come into play. The lack of clear criteria about what constitutes child neglect along with the often high-stress and heightened emotions

expressed by families during investigations may make it difficult for workers to reach unequivocal decisions, thereby increasing the likelihood of decisions being associated with subjective factors such as stereotypes, negative evaluations, misattributions, and workers' own emotions (Lazar, 2006). Thus, this complexity may thereby increase the chances of making unsubstantiated decisions (Arad-Davidson & Benbenishty, 2008; Lazar, 2006; Rossi, Schuerman, & Budde, 1999).

These CPS decisions and their consequences can be experienced as harmful by the families involved [e.g., grief lasting for years after child removal (Booth & Booth, 2005)]. Even though the duty of child protection workers is to protect children from harm, biased decisions and treatment may lead to inappropriate involvement of parents in the CPS system and removals of children from their families, which can make it difficult to impossible for parents to be reunited with their child. Indeed, removals by CPS become self-reinforcing such that subsequent decisions by the court (e.g., length of stay in foster care) can reflect initial removal decisions, regardless of whether the child should have been removed to begin with (Chill, 2004). This process is exemplified in a quote from Justice Marshall who said, "Prejudice, once let loose, is not easily cabined" ("City of Cleburne v. Cleburne Living Center," 1985, p. 464). That these decisions have a compounding and potentially harmful effect on custody decisions points to the importance of both understanding the factors that may bias early child protection decisions while also examining potential ways to mitigate their effects.

Understanding the Potential for Bias in Decision-Making via a Social-Cognitive Emotion Framework

Over 50 years ago, Allport (1954) proposed that cognitive, attitudinal, and emotional prejudices were important in predicting bias and discrimination against outgroup members. Although a host of intra- and interpersonal factors may be relevant, social psychological research has tended to focus on and has found consistent support for the role of four factors: stereotypes, negative attitudes, attributions, and emotions (e.g., Bodenhausen, 2005; Fiske & Taylor, 2008; Greenwald et al., 2002).

Clinical researchers have likewise examined similar constructs to understand professionals' personal reactions to members of stigmatized groups. Azar (1996) suggested that both social-cognitive and emotional factors play roles in professionals' judgments of parents' behaviors. Azar described a common dilemma among professionals wherein difficulties working with stigmatized groups (e.g., parents who are poor) may produce misattributions, negative personal reactions, and ineffective responses. She argued that the "dysfunctional assumptions" or schemas about marginalized groups with which professionals may approach their work could lead to such responses. For example, child protection workers may hold rigid and negative schemas about parents with IDs (e.g., "they are unsafe") or make dispositional misattributions about their behavior (e.g., "their parenting difficulties are due to their intellectual deficits" rather than situational stressors such as isolation), which could potentially lead to harmful transactions and decreased effectiveness in helping parents.

The above social-cognitive and emotional factors have also been conceptualized within Social Information Processing theory (SIP). Models based on SIP theory have been used to understand people's maladaptive interpretations of events in a variety of risk populations including aggressive and antisocial youth (Crick & Dodge, 1994; Crick &

Dodge, 1996; Fontaine, 2008), maltreating parents (Azar, 1986; Crittenden, 1993; Milner, 2003), and people committing inter-partner violence (Johnson & Ward, 1996).

Researchers have also found similar maladaptive interpretations made by other professionals such as sports referees (Plessner & Haar, 2006). Taken together these findings suggest that child protection workers may also exhibit such problems.

Generally, SIP theory as applied to social welfare professionals would argue that a combination of biased *schemas* (e.g., unrealistic expectations, which are reflections of stereotypes; negative attitudes/evaluations), *misattributions*, and *emotional* responses are associated with decisions.

In the following sections each SIP factor (stereotypes, negative attitudes, attributions, emotions) are argued to be associated with workers' perceptions of risk and to be associated with their likelihood of recommending removal in situations involving parents with IDs. Next, the potential buffering role of perspective taking will be introduced as a mitigating factor, which may reduce the association between these SIP factors with CPS workers' decisions about risk, removal, and willingness to help parents with IDs.

Schemas

Schemas are mental structures that represent our understanding of the world (Bartlett, 1995) and are the foundational elements of social-information processing. According to Schema Theory, schemas help us organize current information and provide a framework for understanding future information (Anderson, 1977). Schemas consist of many context-specific knowledge networks that vary based on people's experiences. Schemas include information about the self (self-schema: I am a student), other

individuals (other-schema: She is American), or groups of people (stereotypes: Asians drive slowly). Of interest in the present study are situations in which group-based schemas are over-applied to group members, namely parents with IDs.

Researchers and theorists have conceptualized group-based schema as having two types of cognitive elements: stereotypes and attitudes (Greenwald et al., 2002). As defined herein, a stereotype refers to an association between a social group category and specific traits or descriptive attributes (Lane, Banaji, Nosek, & Greenwald, 2007). For example, linking labels reflecting ID (e.g., mental retardation) with descriptions of neglectful parenting (e.g., inconsistent) would reflect a stereotype. An attitude refers to the association between a social group category and evaluative concepts (intrinsically positive or negative) (Lane et al., 2007). Thus, linking labels reflecting ID with concepts representing general negative valence (e.g., horrible) would illustrate an attitude. Stereotypes and attitudes can be explicitly endorsed or implicitly held [outside of one's awareness (De Houwer, Teige-Mocigemba, Spruyt, & Moors, 2009)]. Implicit measures were used in the present research because research findings indicate that implicit measures (e.g., the Implicit Association Test), on average (meta-analytic data), have better predictive validity to intergroup behavior than explicit questionnaires (De Houwer et al., 2009; Greenwald, Poehlman, Uhlmann, & Banaji, 2009). The present study will use implicit measures of stereotypes and attitudes as empirically supported methods to measure group-based schema about parents with IDs.

Stereotypes and Attitudes.

Stereotypes and attitudes have implications for influencing judgments about and behaviors towards out-group members. For example, the process of stereotyping has

been described as a logical oversimplification of applying group characteristics to individuals. Researchers have found that participants who held higher levels of African American stereotypes were more likely to attribute stereotypic traits to a larger portion of African Americans than to Whites (Kawakami, Dion, & Dovidio, 1998). Stereotyping is problematic for three reasons. First, these schemas typically contain false associations (i.e., illusory correlations) between the group and attributes about them. Second, even if these schemas contained accurate (factual) information about a group, such information describes group members on average, information that cannot be applied to all individual members equally. To illustrate, when we stereotype we tend to view and treat individual members as part of a category (Bodenhausen, 2005). In contrast, the process of individuation involves considering the unique attributes of a person (Bodenhausen, 2005). Third, stereotyping leads to selective attention to only those events or details that fit within our schema of the group (Bodenhausen, 2005)(e.g., confirmation bias); this may influence decisions against members of that group. For example, Bodenhausen and Wyer (1985) conducted a study in which they either activated or did not activate ethnic stereotypes of a hypothetical criminal. Participants who had the stereotype activated were less likely to remember situationally related information for why the criminal committed the crime (selective attention) and were thus less likely to recommend parole (biased decision) than for participants who had no stereotype activated. Thus, stereotypes can be harmful because they typically contain false associations, are over-applied to individuals, and lead to selective attention.

On the other hand, attitudes affect decisions and behaviors by alerting us to the presence of positive or negative consequences (Fazio, Jackson, Dunton, & Williams,

1995). Some authors have argued that these attitudes are formed through classical conditioning whereby positive or negative experiences with members of a group become associated with that group (Bodenhausen, Mussweiler, Gabriel, & Moreno, 2001). Over time, depending on our experiences, characteristics about the group begin to take on a positive or negative valence. Therefore, we become more prepared to avoid those groups for whom we have developed strong negative attitudes. For example, researchers have found that negative attitudes about African Americans predicted less friendly behavior towards an African American experimenter (Fazio et al., 1995). Other research has found that greater implicit negative attitudes were associated with more uncomfortable interactions (e.g., less eye-contact, more blinking) with African American confederates in comparison to White confederates (Dovidio, Kawakami, & Gaertner, 2002; Dovidio, Kawakami, Johnson, Johnson, & Howard, 1997). Thus, negative attitudes appear to link characteristics about members of a group with negative valence and avoidance behaviors.

Authors have found that implicit stereotypes and attitudes are conceptually distinct. Amodio and Devine (2006) have found that attitudes were strongly associated with affect and approach/avoidance tendencies (behaviors), whereas stereotypes were strongly associated with semantically related beliefs and subsequent judgments (cognitions). Specifically, the authors found that implicit stereotypes of African Americans were associated with behaviors such as forming judgments (e.g., evaluation of the African American student's essay). On the other hand, implicit attitudes of African Americans were associated with approach/avoidance behaviors (e.g., desire to befriend the African American student). An association between implicit stereotypes and implicit

attitudes was not found. In addition, implicit stereotypes were not associated with approach/avoidance behaviors and implicit attitudes were not associated with judgments.

Support for this distinction has been found in the neuroscience literature with the amygdala being strongly associated with affective memory (LeDoux, 2001) and the neo-cortex with semantic memory (Rissman, Eliassen, & Blumstein, 2003). This distinction was also supported by a preliminary study examining undergraduate students' decisions about neglectful behavior of parents with IDs. The study found a positive association between implicit stereotypes about parents with IDs and decisions about removal and no such association for implicit attitudes and removal decisions (Proctor, unpublished data). Thus, there is empirical support for treating implicit stereotypes and implicit attitudes as distinct in the present study because each is associated with distinct behavioral and cognitive outcomes.

Implicit Bias and Child Protection Decisions.

The present study examined, with actual CPS workers, whether implicit stereotypes and attitudes were associated with workers' decisions towards parents with IDs. This study followed previous lines of thinking by suggesting that many removal decisions are not entirely grounded in ensuring the safety of the child; rather, they may also be grounded in prejudicial stereotypes and perhaps attitudes about the parenting capacity of parents with IDs (Azar et al., 1995; McConnell & Llewellyn, 2002). Within the CPS system, workers holding biased stereotypes of parents with IDs may be more likely to associate negative parenting attributes (e.g., being unsafe) to parents with IDs than for parents without IDs. In practice, such associations may lead to noticing stereotype-consistent information, while being less likely to notice stereotype-

inconsistent information (Bodenhausen, 2005); thus, negatively influencing decisions. An extensive literature supports such associations with findings that people's stereotypes about individuals with mental illnesses (e.g., schizophrenia) predict prejudicial treatment towards them (Corrigan et al., 2003; Farina & Felner, 1973; Unger, 2002).

Child protection workers and other social service professionals are no more immune from holding negative stereotypes of parents with IDs. For example, a qualitative study of child protection workers, lawyers, and judges revealed that these professionals had strong presumptions such as the idea that these parents need long-term, 24-hour supervision (McConnell, Llewellyn, & Ferronato, 2006). Although many authors have described the content of these stereotypes (Hayman, 1990; Levesque, 1996; Marafino, 1990; Payne, 1978), published quantitative studies have yet to demonstrate whether stereotypes of parents with IDs influence decisions in the child protection system. However, preliminary data from a college sample of 138 students has found that implicit stereotypes of parents with IDs were significantly, positively associated with ratings of increased likelihood of removal ($r = .26$) (Proctor, unpublished data)¹. Although there is not yet evidence showing an association between CPS worker's stereotypes and their decisions, qualitative and preliminary data from college students suggest that such an association could possibly exist.

The present study was interested in extending these findings and those from the stereotype and mental illness literatures and in examining the association between holding implicit stereotypes about parents with IDs and workers' decisions. It was expected that stronger implicit stereotypes of parents with IDs would be associated with

¹ Perceptions of risk were not examined in pilot testing.

an increased likelihood of workers deciding that the child of a parent with ID was at higher risk of future harm and would be associated with an increased likelihood of workers recommending child removal.

Further, it was expected that stronger implicit attitudes about parents with IDs would be associated with decreased willingness to help parents with IDs. For the purposes of the present study, willingness to help was identified as an appropriate approach/avoidance behavior to examine within child welfare because it is consistent with their job role. It was expected that implicit attitudes would operate similarly to implicit stereotypes, but that implicit attitudes would be associated with approach/avoidance behaviors instead of cognitive processes (e.g., decisions). Previous studies have found that implicit attitudes towards African Americans were associated with participants' preference towards having a hypothetical African American as their friend (e.g., approach behavior), but not participants' ratings of how the same student would perform on a writing task (Amodio & Devine, 2006). In addition, studies examining people's behaviors towards individuals with mental illness have consistently evaluated willingness to help as an approach oriented behavior (Corrigan et al., 2003; Weiner, 1985).

Attributions

A second social-information processing factor involves attributions. Attributions refer to how people explain the causes of their own and others' behavior (Heider, 1958). They help people interpret other's behavior and they provide a basis for how to respond. One of the most commonly described attributional biases is called the fundamental attribution error (Heider, 1958; Ross, 1977) or the correspondence bias (Jones & Davis,

1965). These biases refer to the tendency to over-attribute another person's behavior to stable, dispositional causes. In addition, they are less likely to be aware of external forces acting on the other person. The tendency is more likely to operate when people are cognitively busy (Chun, Spiegel, & Kruglanski, 2002) or when they have less time to consider alternative interpretations for others behaviors (Weary, Reich, & Tobin, 2001). Such qualities are characteristic of the complexities in initial decisions about risk and removal in child protection investigations (Lazar, 2006).

Several studies have found that attributional biases have effects on decisions and that they may have major consequences. One study found that people who make more dispositional attributions are more likely to believe that criminal offenders are more blameworthy and deserving of punishment (Carroll, Perkowitz, Lurigio, & Weaver, 1987; Young, 1991). Another study found that increased dispositional attributions were associated with an increased likelihood of recommending capital punishment for individuals with intellectual disabilities (Cochran, Paquette Boots, & Heide, 2003). These studies suggest that attributional biases are associated with important decisions; decisions that may ultimately have negative consequences for others' well-being.

In the present study, attributional biases were expected to be associated with decisions made about parents with IDs. In situations involving these parents, workers' tendency to make dispositional attributions might be associated with an overshadowing of other possible explanations for their parenting behaviors. This idea was articulated well in a quote by Benjet, Azar, and Kuersten-Hogan (2003, p. 238), who argued, "Though parental pathology does influence parenting quality and capabilities, so does poverty, parental stress, and parental physical illness. However, we do not remove

children from their parents solely because their parents are poor, stressed, or physically ill.” In the case of parents with IDs, as noted above, it is thus incorrect based on current scientific knowledge to automatically conclude that intellectual disability *per se* predicts child maltreatment (Azar et al., 1995; McConnell & Llewellyn, 2002).

If child protection workers make more dispositionally-based attributions, then they may also be more likely to perceive more risk to the child and more likely to recommend removing the child. If their decisions are focused primarily on parents’ intellectual disability, their assessments are likely to be less comprehensive and may ignore possibly mitigating information. This decision would be akin to making a custody decision based more on a parent’s gender (as was done in legal decisions making for young children wherein mothers were given legal preference over fathers, e.g., Tender Years Doctrine -The Custody of Infant Acts of 1839 and 1873) and not on a range of information such as the quality of the parents’ home, past parenting behavior, and effect on the child. Thus, in the present study, it was expected that stronger tendencies for workers to make dispositional attributions would be associated with an increased likelihood of workers deciding that the child of a parent with ID is at higher risk of future harm and would predict increased likelihood of workers recommending child removal.

Dispositional attributions may also be associated with workers’ willingness to help. Research examining the association between attributions and willingness to help has been found in studies examining residential care staff’s propensity to help patients with IDs who display challenging behaviors (Willner & Smith, 2008a). Studies in this area have examined attributions in response to adults with IDs’ challenging behaviors such as verbal and physical aggression (Dagnan & Weston, 2006) and inappropriate

sexual behavior (Willner & Smith, 2008b). There was partial support for attributions predicting willingness to help (Willner & Smith, 2008a). However, these studies only examined attributions of control/responsibility and not dispositional attributions.

Of studies that have examined the association between dispositional attributions and willingness to help (which was the object of the present study), findings have been mixed (Dagnan & Cairns, 2005; Lucas, Collins, & Langdon, 2009). For example, in a study that examined teaching staff's willingness to help children with IDs who exhibit aggressive behavior, no significant association was found between dispositional attributions and willingness to help in response to actual and vignette incidents of aggressive behavior (Lucas et al., 2009). However, in a larger study examining public perceptions of mental illness (i.e., Schizophrenia, Major Depression), researchers found that the more participants made dispositional attributions about the causes of mental illnesses, the more likely they were to prefer greater levels of social distance (e.g., willingness to make friends, work closely with them)(Martin, Pescosolido, & Tuch, 2000). These mixed finding suggest that more research is needed to identify whether an association between dispositional attributions and willingness to help holds for other samples. In the present study, it was expected that stronger tendencies for workers to make dispositional attributions would be associated with increased likelihood of workers deciding to help parents with IDs.

Emotions

Finally, a third social-information processing factor involves emotions. In the legal decision making literature on the role of emotions in judgments, authors have found that emotions bias judgments in a number of ways, including affecting information

processing strategies, swaying judgments in the direction of the emotion's valence, and by providing cues as to how to make a decision (Feigenson & Park, 2006). Both higher (accessible to conscious experience) and lower-order (neurobiological activity) emotions are said to be the "the primary motivational component of mental operations and overt behavior" (Izard, 2009, p. 4). They are thought to organize massive amounts of neural impulses into focused cognitive processes and actions (Langer, 1967/1982). In relation, emotions can act as information used to inform subsequent thought and actions (Clore et al., 2001; Schwarz & Clore, 1983). For these reasons, emotions are important to consider when understanding how decisions are made and how they affect behavior.

In terms of CPS decisions, prior findings suggest emotions may have a negative association with how workers feel and ultimately treat parents with IDs. For example, anger ratings are associated with making less complex judgments (Lerner, Goldberg, & Tetlock, 1998) and increased reliance on heuristics (Tiedens & Linton, 2001). In the child welfare literature, however, little work has investigated emotions' association with decisions. Of those studies that have considered which emotions are aroused in child protection workers, the situations were focused only on child sexual abuse (Cheung & Boutte-Queen, 2000; Urquiza, Wyatt, & Goodlin-Jones, 1997). One of the few emotion studies found that social workers responding to hypothetical incidents of child sexual abuse experienced a range of emotional responses including: ambivalence, empathy, fear, revenge, and anger (Cheung & Boutte-Queen, 2000).

Although no studies have directly examined which emotional responses are aroused during child neglect situations, forensic psychiatrists have suggested that neglect situations would certainly arouse strong emotions (Krell & Okin, 1984). For example,

Krell and Okin (1984) described a graphic neglect situation in which a worker found maggots in diapers still being worn by a child. Such a scene might elicit disgust, anger, or even pity towards the parent. In regards to parents with IDs, Contrell and Neuberg (2005) found that reactions to stigmatized groups could also involve many emotions. In the present study, several emotions are expected to be associated with CPS worker's decisions about parents with IDs.

Feelings of pity are one emotion that may be relevant to parents with IDs. One study, conducted by the present investigator, with college students found a negative association between ratings of pity and CPS decisions of risk and removal in regards to the children of parents with IDs (Proctor, unpublished data). Similar findings have been found in other studies showing less likelihood of reporting offending behaviors by individuals with IDs (Lyall, Holland, & Collins, 1995; McBrien & Murphy, 2006) and more active helping behaviors towards individuals with IDs (Cuddy, Fiske, & Glick, 2007) and other mental illnesses (Corrigan et al., 2003). Possible reasons for this association include perceiving individuals as incompetent and friendly (Fiske, Cuddy, Glick, & Xu, 2002) who are in need of genuine assistance (Pollak & Levy, 1989). In the present study, it was expected that the association between increased pity towards parents with IDs and decreased risk and removal decisions would replicate in a sample of CPS workers. It was also expected that increased feelings of pity towards parents with IDs would be associated with increased willingness to help.

Research has found that anger and possibly disgust are also associated with child protection workers' decisions. College students' responses of anger toward parents with ID were significantly associated with increased decisions to remove the child ($r = .27$)

(Proctor, unpublished data). Researchers have also found that anger is associated with people finding others as more guilty of behaviors that are stereotype-consistent than stereotype-inconsistent (Bodenhausen, Sheppard, & Kramer, 1994) and to decreased willingness to help individuals with mental illnesses (Corrigan et al., 2003; Corrigan & Watson, 2002). In addition, increased feelings of disgust have been associated with decreased judgments to help others (Weiner, 1980). To replicate these previous findings with a sample of child protection workers, it was expected for situations involving parents with IDs, that both anger and disgust would be associated with workers' decisions such that increased feelings of anger and disgust would be associated with decisions of increased risk and increased likelihood to remove. It was also expected that increased feelings of anger and disgust would be associated with decreased willingness to help parents with IDs.

Stereotypes, Attributions, Emotions: Exploring their Interrelationships

A number of mediation models have been proposed to explain how each of these factors relates to others in their association with judgments. Similarly, there is an ongoing debate about their order in the decision-making process (Dovidio, Esses, Beach, & Gaertner, 2003; Talaska, Fiske, & Chaiken, 2008). For example, Weiner's (1985, 1995) attribution theory predicts that emotions, such as anger, mediate the association between attributions and decisions. By contrast, the affect-as-information model (Gallagher & Clore, 1985) proposes that attributions mediate the association between emotions and decisions.

A discussion about the implications of these competing models for the current research study follows, but of immediate import is the fact that what is missing from each

of these models is the potential association with implicit stereotypes and attitudes. Research on social information processing, however, has begun to acknowledge the association between schemas and subsequent mental processes (e.g., Crick & Dodge, 1994). Some researchers have conceptualized schemas as latent constructs that do not directly influence in-the-moment decision making processes (Crick & Dodge, 1994). Thus, in the current study, stereotypes and attitudes will be treated as latent (distal) variables with effects on both attributions and emotional responses.

In keeping with the literature about distinct correlates for stereotypes (predicting cognitive processes) and attitudes (predicting affective processes), two separate associations were proposed. First, it was expected that in situations involving parents with IDs that stereotypes would be positively associated with dispositional attributions. Second, it was expected that in these same situations that attitudes would be positively associated with feelings of anger and disgust, and would be negatively associated with feelings of pity.

It is likely that both cognitions and emotions are reciprocally associated (Feigenson & Park, 2006) and indeed research has supported this bi-directionality (Quigley & Tedeschi, 1996). In the present study, it was hypothesized that for situations involving parents with IDs, dispositional attributions would be positively associated with anger and disgust (Weiner, 1985) and negatively associated with feelings of pity.

If all of the mentioned associations were found, the present study would examine a larger model with the inclusion of implicit stereotypes and attitudes to explain workers' decision-making process about parents with IDs. Specifically, it was expected that stereotypes and attitudes would act as separate predictor variables with unique

associations with attributions and emotions, respectively. In addition, attributions were expected to mediate the association between stereotypes and workers decisions about risk and removal. Furthermore, emotions were expected to mediate the association between attitudes and workers' willingness to help parents with IDs.

Perspective Taking

Along with understanding factors of decision-making and responses to parents who have IDs, other factors that may act as buffers and ultimately inform CPS practice. One's ability to take the perspectives of others may be one such factor. Early studies have provided support for perspective taking as a long-lasting, prejudice-reducing factor. For example, Clore and Jeffrey (1972) found that when participants assumed the role of a disabled person in a wheelchair or watching someone else do this, negative attitudes towards people with disabilities were significantly improved both immediately and after a four-month follow-up. Another study by Batson and colleagues (1997) found that instructing participants to take the perspective of a woman with AIDS, a homeless man, and a murderer was associated with more positive attitudes towards people with AIDS, the homeless, and convicted murderers. Thus, perspective taking appears to be useful in reducing prejudice against individuals with various stigmatizing characteristics.

Perspective taking may be an important skill for child protection workers for a number of reasons. For example, families involved in child protection prefer CPS staff who are perceived as empathic, honest, and good listeners (Drake, 1994). In addition, other studies have found that workers who were more open-minded and non-judgmental were likely to work for more years than workers without these qualities were (Ellett, Ellis, Westbrook, & Dews, 2007). These findings suggest that perspective taking may

contribute to a more pleasant working environment with clients, especially for workers in a career plagued with high worker burnout and turnover (Lewandowsky, 2003).

Perspective taking may then act as a potential employee intervention target as has been shown in studies, which found that perspective taking can be improved after participation in empathy training programs (Long, Angera, Carter, Nakamoto, & Kalso, 1999). These studies suggest that perspective taking offers a number of positive benefits for CPS workers and that it can be improved through training.

Findings from several studies (Dovidio et al., 2004; Finlay & Stephan, 2000; Galinsky & Moskowitz, 2000) suggest that increased perspective taking ability not only reduces the association with biases broadly, but more specifically stereotypes, attributions, and emotions. Different levels of perspective taking ability may be associated with different relationships between these SIP factors, worker's decisions, and willingness to help.

In terms of stereotypes, it was expected that increased perspective taking ability would decrease the association between implicit stereotypes of parents with IDs and decisions about their risk and removal. This process was expected to occur because workers with higher perspective taking ability likely view parents with IDs less differently than workers view themselves (Davis, Conklin, Smith, & Luce, 1996). Indeed, research examining this association has found that perspective taking decreased both explicit and implicit stereotypes of elderly individuals (Galinsky & Moskowitz, 2000) and attitudes of European Americans towards African Americans (Dovidio et al., 2002; Finlay & Stephan, 2000). No research has examined the association between implicit attitudes and willingness to help. In keeping with the above reasoning and

findings, it was expected that increased perspective taking ability would decrease the association between implicit attitudes and workers' willingness to help parents with IDs.

In terms of attributions, increased perspective taking ability was likewise expected to reduce the association between dispositional attributions and decisions. For example, workers with higher perspective taking ability may be more likely to interpret behaviors of the out-group as based on the situation, similarly to the way they would interpret behaviors of their own in-group members. As in the stereotype reduction literature cited above, researchers have found that perspective taking leads people to make more situational rather than dispositional attributions (Batson et al., 1997; Mohr, Howells, Gerace, Day, & Wharton, 2007; Vescio, Sechrist, & Paolucci, 2003).

Finally, studies have found that increased perspective taking ability is associated with increased feelings of pity towards the needy (Davis, 1983a) and reduced feelings of anger in response to social transgressions (Mohr et al., 2007). That perspective taking may be associated with anger and pity suggests that perspective taking may play a role in other emotions such as disgust. It was expected that increased perspective taking would reduce the association between the emotions of both anger and disgust towards parents with IDs and decisions about risk and removal and increase this association for willingness to help. These associations were expected to be in the opposite direction for the pity. In sum, it is expected that increased perspective taking will reduce the association between SIP factors and worker's decisions.

Effect of ID Status on Child Protection Decisions

An additional goal of this study was to determine the extent to which ID status had an effect on CPS workers having differential responses and decisions. It is

informative to understand what factors are associated with decisions and treatment. However, such an analysis cannot inform our understanding of whether a parent's disability status in and of itself has a differential association (i.e., discrimination) with CPS workers' approach to parents. Discrimination was defined here as the differential treatment of the individuals based on their group membership (Jones, 1986).

Discrimination was investigated by examining whether attributions, emotions, risk and removal decisions, and willingness to help differ when separate groups of workers are exposed to vignettes describing parents with IDs or parents without IDs. This experimental manipulation aided in determining whether workers not only made risk and removal decisions based on parents ID status, but also whether they differed in the attributions they made, how they responded emotionally and in their willingness to help. By comparing decisions and responses made to different types of parents, the present study was designed to provide empirical evidence for previous suggestions that disparate treatment of such parents is due to their disability status.

The potential effect of ID status on the CPS workers' is consistent with what would be expected by classic theories on public stigma and mental illness. For example, labeling theory states that behaviors labeled as due to mental illness trigger negative stereotypes (Scheff, 1966). In general, *stereotypes* refer to "collectively held beliefs about the members of social groups," that serve to reduce cognitive load by allowing people to "quickly generate impressions and expectations of individuals who belong to those groups" (Corrigan et al., 2003). Common stereotypes of parents with IDs include them being bad parents whose disability prevents them from learning to be better parents. Researchers have argued that when stereotypes are evoked, perceivers tend to react to the

abstract category of the group, with all of its stereotyped characteristics, rather than to the individual (Cauthen, Robinson, & Krauss, 1971). Thus, the label of “intellectual disability” carries a list of attributes that can influence subsequent perceptions of individuals.

A growing literature has provided evidence for the influence of diagnostic labels about mental illnesses behavior (Bordieri & Drehmer, 1986; Farina & Felner, 1973; Link, 1982; Page, 1995; Wahl, 1999). For example, early researchers conducted experiments in which participants were made to believe that a confederate had a history of mental illness (Farina, 1982). In these studies, participants were more likely to treat the confederate with (versus without) a history of mental illness as less adequate in a learning task (Farina, Holland, & Ring, 1966) and administered more painful shocks when the confederate made errors (Farina, Thaw, Felner, & Hust, 1976). Findings show discrimination against job applicants with (versus without) a history of mental illness (Minskoff, Sautter, Hoffman, & Hawks, 1987; Unger, 2002) and searching for housing (Corrigan et al., 2003).

To date, no published studies have examined the effect of ID status in the context of child welfare decisions. The only support for a possible effect of ID status in child welfare has been indirect and based on epidemiological data (Booth & Booth, 2005; McConnell & Llewellyn, 2002; Sheerin, 1998; Whitman & Accardo, 1990). However, a preliminary study with college students has found that people are more likely to recommend child removal for parents with IDs than for parents without IDs (Proctor, unpublished data). Thus, it may be possibly to expect an effect of parental ID status when similar questions are asked to CPS workers.

Based on the mental illness discrimination literature, the proposed study tested the hypothesis that the effect of ID status with risk and removal may operate similarly for CPS workers (who have more experience in making these decisions). Thus, it was expected that CPS workers would be more likely to recommend child removal for parents with IDs than for parents without IDs. Such a finding would add some support for discrimination in decisions than previous studies comparing rates of removal based on epidemiological data. In addition, it was expected that CPS workers would be more likely to perceive risk to the child of parents with IDs than for parents without IDs. Finally, the proposed study also compared workers' willingness to help parents with IDs to workers' willingness to help parents without IDs. It was expected that workers' would be less likely to be willing to help parents with IDs than for parents without IDs.

In terms of attributions, it was expected that workers would be more likely to attribute the behavior of a parent with IDs' to more dispositional causes than they would attribute the behavior of a parents without IDs. This hypothesis is consistent with predictions (Pettigrew, 1979) and findings (Kellow & Dukes, 2008; Swim & Sanna, 1996) based on the concept of the ultimate attribution error (UAE). The UAE proposes that people have a tendency to attribute negative outcomes to an individual's disposition when that individual is an out-group member, and to situational factors when an individual is an in-group member. In-group membership was expected to represent CPS workers given that child protection workers are at least of average intelligence (workers must have at least a college education [e.g., BSW or MSW]).

In the present study, it was expected that workers would report greater feelings of anger and disgust *towards parents without IDs than for parents with IDs*. In addition,

workers would report greater feelings of pity *towards parents with IDs than for parents without IDs*. Emotional responses directed differentially based on group membership have been described as affective biases or emotional prejudice (Talaska et al., 2008). Differences in emotional responses are important to consider because of their impact on behavior. Indeed, a recent meta-analysis that examined effects of differences in emotional responding, found that differences in emotional responses were linked to discriminatory intentions and behaviors (Talaska et al., 2008). The above predictions were based on literature that has found that people are more likely to pity individuals with IDs in comparison to members of other social groups (Fiske et al., 2002). Preliminary data from college students comparing students who made ratings about parents with IDs to other students who made ratings about parents without IDs, found that ratings of emotional reactions of anger and pity supported the above prediction (Proctor, unpublished data). In addition, this same study found that pity was negatively associated with anger ($r = -.52$), thus suggesting that feelings of anger (and possibly disgust) towards parents with IDs are offset by their feelings of pity.

The Current Study

As has been argued throughout this introduction, concerns have been raised that suggest stereotype-based bias and discrimination may exist within the CPS system, such that parents with IDs are disproportionately represented in the child welfare system (Aunos & Feldman, 2002; Booth et al., 2005a; Booth, Booth, & McConnell, 2005b; Hayman, 1990; McConnell & Llewellyn, 2002; Sheerin, 1998). The present study sought to inform the literature on the decision making of child protection workers, which has begun to have a more scientific focus (Arad-Davidson, Segal-Englechin, Wozner, &

Arieli, 2005; Ashton, 1999; Britner & Mossler, 2002; Lazar, 2006). To inform the literature on the decision making of child protection workers, the present work was designed to address five aims.

Aim 1

The first aim was to examine whether, *in situations involving parents with IDs*, implicit stereotypes and attitudes about parents with ID, dispositional attributions regarding their parenting, and workers' emotional reactions to their parenting were associated with decisions towards increased perceptions of risk, recommendations for removal and decreased willingness to help. Based on findings linking implicit stereotypes to decisions about out-group members (Poehlman, Uhlmann, & Greenwald, 2006), the present study expected increased implicit stereotypes of parents with IDs to be associated with increased decisions that the child of a parent with ID was at risk of future harm and would also be associated with increased willingness to recommend child removal. It was also expected that increased implicit attitudes of parents with IDs would be associated with decreased willingness to help parents with IDs. A positive association between dispositional attributions and decisions of increased risk and removal ratings was expected based on the fundamental attribution error work (Heider, 1958; Ross, 1977).

Finally, the emotions of anger, disgust, and pity were also expected to be associated with workers' decisions and willingness to help. Specifically, increased anger and disgust were expected to be associated with increased risk and removal ratings and decreased willingness to help, whereas increased pity was expected to be associated with decreased decisions of risk and removal and decreased willingness to help.

Aim 2

A second aim was to examine whether additional associations between implicit bias, attributions, and emotions exist. It was expected that increased ratings of dispositional attributions would be associated with increased ratings of anger and disgust, and decreased ratings of pity. Based on studies proposing distinct associations between stereotypes and attitudes (Amodio & Devine, 2006), two separate predictions were proposed with increased stereotypes being associated with increased dispositional attribution ratings and increased attitudes being associated with emotions (positively associated with anger and disgust, negatively associated pity). From these associations, it was predicted that dispositional attributions would account for (mediate) the association between stereotypes and CPS decisions (risk and removal) and that emotions would account for the association between attitudes and willingness to help.

Aim 3

If all of the findings from Aims 1 and 2 are supported, additional analyses will be conducted to examine how each of these factors operates in a larger model. Specifically, it was expected that dispositional attributions were expected to mediate the association between implicit stereotypes and workers decisions about risk and removal. Furthermore, emotions were expected to mediate the association between implicit attitudes and workers' willingness to help parents with IDs. Finally, dispositional attributions would be positively associated with anger and disgust and negatively associated with feelings of pity.

Aim 4

The fourth aim was to examine whether perspective taking, a supported prejudice reducing factor (Dovidio et al., 2004; Finlay & Stephan, 2000; Galinsky & Moskowitz, 2000), would decrease the associations among implicit stereotypes and attitudes, dispositional attributions, and emotions with workers' decisions and willingness to help parents with IDs.

Aim 5

The final fifth aim was to examine whether CPS workers responded differently between parents with IDs and those without IDs in their attributions, emotional reactions, decisions about risk and removal, and in their willingness to help. It was expected that decisions about risk and removal, the emotion of pity, and dispositional attributions would be *higher for parents with IDs than parents without IDs*. On the other hand, it was expected that willingness to help and the emotions of anger and disgust would be *higher for parents without IDs than for parents with IDs*. These predictions were based on previous findings from a college student sample that suggest greater feelings of pity towards individuals with IDs than for individuals without IDs, and greater feelings of anger and removal recommendations towards individuals without IDs than for parents with IDs (Proctor, unpublished data).

Method

Participants

Two hundred and thirty CPS workers participated in the study (85% female). Participants were recruited in one of two ways. First, workers were recruited through flyers mailed to 3,000 members of the National Association of Social Workers. Members were randomly selected from a total pool of 4,844. The members who comprised this

initial pool of potential participants included only those workers who functioned as clinical/direct practice in child/family welfare agencies. Response rates from the NASW sample were less than 8% ($N = 18$) and thus, a second recruitment method was chosen. Additional participants included child protection workers who were recruited from 21 state Department of Social Service agencies (e.g., DHHS, CYS, CPS, etc.) after receiving approval from the Directors of each county or State Administrator (see Table 3 for a complete list of States). Response rates for the child protection sample could not be determined because the total number of eligible participants was unknown (i.e., some were sent to participants emails directly, while others were sent directly by agency administrators) and all participants responded anonymously. Random assignment of participants to conditions led to statistically equivalent groups on demographic, child protection, and recruitment state variables (see Table 1, Table 2 and Table 3).

Mean age in years was 43.67 ($SD = 12.59$) for participants in the non-ID condition and 41.69 ($SD = 12.64$) in the ID condition. The majority of the participants were female (85% in both conditions). Most participants were White (84% non-ID condition, 91% ID condition), with the remaining participants identifying as African American, Asian, Native American, Multiracial, or other. Most participants earned either a Bachelors (51% non-ID, 50% ID) or Master's degree (46% non-ID, 49% ID), with the remaining earning a doctorate or other. Over half of the participants were married (55% non-ID, 52% ID) with the remaining participants being single, remarried, separated, partnered, or other. Many participants did not have children (72% non-ID, 67% ID).

Regarding child protection experience, most participants were working in CPS at the time they participated (93% both conditions). Mean number of years working in the

child welfare field was 13 ($SD = 9.97$) for the non-ID condition and 10.98 ($SD = 7.89$) for the ID condition. The number of years participating in child protection investigations was less for both conditions, with an average number of years at 6.94 ($SD = 7.34$) for the non-ID condition and 6.58 ($SD = 6.49$) for the ID condition. Of the 21 states where child protection workers were recruited from, most participants worked in Arizona, Florida, Minnesota, Ohio, and Pennsylvania.

Research Procedure

The present study used a between-subjects design having two independent groups of CPS workers respond to the same neglect vignettes incidents involving either parents with IDs or parents without IDs. Data were collected online using Inquisit Web 3.0, a software package designed for complete administration of questionnaires, surveys, and experiments for social science research purposes. Upon accessing the study from a secure website link provided on a mailed or emailed postcard, participants were asked to read an informed consent document and to indicate their consent to participate by clicking a button labeled “I consent.” Once consent was obtained, the Inquisit Web program randomly assigned participants into one of two conditions, those who read child neglect vignettes (described in Measures section) involving parents with IDs (ID condition) or those who read vignettes involving parents without IDs (non-ID condition).

Participants began the study by completing measures administered in the following order: background information, neglect vignettes (including measures of dispositional attributions, emotions, and CPS decisions), Interpersonal Reactivity Index, and Implicit Association Tests (IATs). The Stereotype and Attitude IAT (described below) order was counterbalanced and the order of vignette questions were randomized.

Debriefing information was provided on-screen to each participant upon completion of the study.

Measures

Background Information.

Participants completed a background information questionnaire in which basic demographic data (i.e., age, gender, race/ethnicity, relationship status, having children, degree earned) were collected. Participants were then asked to provide information about their child welfare experience. The following areas were assessed: whether currently practicing social work, and number of years working in child welfare, in child protection, and in conducting child protection investigations.

Neglect Vignettes.

Five vignettes depicting different categories of neglect (housing, cleanliness, supervision, medical, & nutritional) were selected from a study conducted by Giovannoni and Becerra (1979). These vignettes were originally used to study mandated reporting (Giovannoni & Becerra, 1979) and have been used as a foundation for the development of measures to study perceptions of neglect (Rose & Meezan, 1996). The vignettes were developed from the Child Welfare League of America and Children's Division of the American Humane Association's descriptions of child rearing actions that each organization recommends be considered as grounds for taking protective action (American Humane Association, 1978; Child Welfare League of America, 1973). The content of the incidents were drawn from actual cases, examples found in the literature, and Giovannoni's professional experience. All vignettes were pretested with graduate social work and undergraduate sociology students who rated the seriousness of the

vignettes. Reliability scores for seriousness from the pretest ranged from between .70 to .98 across the five vignettes. One vignette from each of five types of neglect categories of interest (housing, cleanliness, supervision, medical and nutritional) were chosen by selecting those vignettes that a sample of social workers ($N = 113$) rated as in the “grey area” (5 on a 1-9 severity scale) of seriousness. These vignettes were chosen under the assumption that vignettes rated in *mild severity* will allow for individual differences to arise in workers’ responses to the vignettes.

The vignettes provided only a brief description of child neglect. To examine the effect of ID status when comparing participant conditions (ID v. non-ID), vignette content was identical with the exception of the manipulated factor (i.e., parents’ ID status). An example of supervision neglect was, “Two (*mild mentally retarded vs. intellectually average*) parents regularly left their child alone outside the house during the day until almost dark. Neighbors have spotted the child wandering five blocks from home.” The age of the victimized child was indicated as seven years, which is consistent with the vignettes used in Giovanni and Becerra’s (1979) study. National statistics also report that 72% of maltreated children between the ages of 1-3 years are victims of neglect with rates decreasing with age (USDHHS/ACYF, 2008). If younger ages were chosen, there would be less ambiguity regarding whether an incident is reportable, leading to less variability in responses. See Appendix A for a full copy of the vignettes and the ratings made for dispositional attributions, emotions and CPS decisions, and willingness to help.

Dispositional Attributions.

For each vignette, participants were asked to rate three questions regarding the extent to which they thought the neglect situation was caused by factors intrinsic to the parent or to external factors. The questions were created by adapting wording from two popular attribution questionnaires, the Written Attribution Questionnaire (Johnston & Freeman, 1997), which measures parent's attributions of children's misbehaviour and the Relationship Attribution Questionnaire (Baucom et al., 1996), which measures attributions in dating relationships. An example question for the present study's measure was, "To what extent is the parents' behavior due to something about the parents or to the environment?" These questions were asked using a nine-point Likert type scale (1 = "due to internal factors" to 9 = "due to external factors"). For all analyses, ratings were summed across the vignettes to create an index of dispositional attributions with lower scores indicating greater dispositional attributions (possible range was 15-135). In the present study, Cronbach's alpha was .77 for the non-ID condition and .71 for the ID condition.

Emotions.

The three-item **pity** and three-item **anger** scales from the Attribution Questionnaire (AQ; Corrigan et al., 2003), a measure of attributional, emotional, and behavioral responses to the behaviors of people with mental illness, were used to assess participants' feelings of pity and anger towards the parents in each of the vignettes. An additional three items measuring **disgust** were adapted from the AQ and Izards' Differential Emotion Scales (1977). A sample pity item was, "I would feel pity for the parents." A sample anger item was, "I would feel aggravated by the parents." A sample disgust item was, "I would feel disgusted by the parents." Each item was rated using a

nine-point Likert scale type scale (1 = “not at all” to 9 = “very much”). For all analyses, ratings were summed across the vignettes to create separate indices of pity, anger, and disgust (possible range was 15-135).

In previous studies, the internal reliability of the pity index was adequate (.74), good for anger (.89) (Corrigan et al., 2003) and adequate for disgust (.73) (Izard, 1977). Items from the AQ have been used to predict discrimination towards people with mental illnesses (Corrigan et al., 2003). In the present study, Cronbach’s alphas for anger were .88 for the non-ID condition and .80 for the ID condition. Alphas for disgust were .95 for the non-ID condition and .96 for the ID condition. For pity, Cronbach’s alpha was .90 for the non-ID condition and .92 for the ID condition.

CPS Decisions.

To assess CPS decisions, participants responded to two questions for each of the neglect vignettes. The risk question was, “Rate your perception of risk to the child.” Participants assessed future risk to the child in the vignette using a 9-point Likert scale of future risk ranging from 1 (“no risk at all”) to 9 (“very high risk”). The removal question was worded, “How likely is it that you would recommend child removal to out of home placement (e.g., foster care, with other family members)?" Participants then indicated their likelihood of recommending child removal from the home using a 9-point scale ranging from 1-9 (1 = “very unlikely”; 9 = “very likely”). These two questions represented the two most queried decisions in this literature (Benbenishty, Segev, Surkis, & Elias, 2002; Osmo & Benbenishty, 2004; Shapira & Benbenishty, 1993). For all analyses, future risk and recommendation ratings were summed across the five vignettes to create overall risk and recommend scores (possible range was 15-135). These

questions have not been examined for reliability and construct validity by the researcher who constructed them (Benbenishy, personal communication, August 14th, 2008); however, pilot tests using undergraduate samples found that the internal consistency of the removal question was acceptable ($\alpha = .74$). In the present study, Cronbach's alpha was .76 for risk for the non-ID condition and .80 for the ID condition. Alphas for removal were acceptable with .75 for the non-ID condition and .77 for the ID condition.

Willingness to Help.

The three-item helping scale from the Attribution Questionnaire (AQ; Corrigan et al., 2003) was used to assess participants' willingness to help the parents in response to each of the vignettes². It is a measure of attributional, emotional, and behavioral responses to the behaviors of people with mental illness. A sample help item was, "How likely is it that you would help these parents?" Each item was rated using a nine-point semantic-differential type scale (1 = "not at all" to 9 = "very much"). For correlational analyses, ratings were summed across the vignettes to create an index of willingness to help with higher scores indicating greater willingness to help (possible range was 15-135). In previous studies, the internal consistency of the helping index was good (.88) (Corrigan et al., 2003). In the present study, Cronbach's alphas for willingness to help were .94 for the non-ID group and .94 for the ID group. The anger and pity items from the AQ have been found to predict willingness to help people with mental illnesses (Corrigan et al., 2003; Corrigan & Watson, 2002).

Implicit Bias.

² The present study was not capable of measuring actual behavior. What are being measured are workers' intentions to behave in a particular way. A meta-analysis by Shutz & Six (1996) found a medium effect size for the association between discriminatory intentions and actual discriminatory behavior. Such results suggest that the present measure of intentions is an adequate proxy for predicting actual behavior.

All participants completed a reaction time task called the Implicit Association Test (IAT), programmed in Inquisit 3.0.3.0 (Millisecond, 2008), that was used to measure stereotypes and attitudes about parents with ID. The IAT was first developed in 1998 (Greenwald, McGhee, & Schwartz, 1998) and has since been used in numerous studies as a measure of attitudes and stereotypes towards many marginalized groups including individuals with physical disabilities (Pruett & Chan, 2006) and mental illnesses (Teachman, Wilson, & Komarovskaya, 2006). The present study is the first within the area of decision making in child welfare to use the IAT. The IAT was chosen because it is believed to be less susceptible to social desirability biases (Greenwald et al., 1998) as compared to explicit measures.

During the Stereotype IAT task, participants were instructed to respond to a series of word stimuli that were to be classified into four categories, two categories represented the concept discrimination between words describing *good parenting* behaviors (e.g., attentive) and those describing *neglectful parenting* behaviors (e.g., unaware) and two categories represented an attribute discrimination between words describing *people with ID* (e.g., retarded) and *people without ID* (e.g., average). As noted earlier, neglectful parenting was chosen because a common stereotype of parents with ID is that they their cases are more likely to be substantiated for neglect (Glaun & Brown, 1999; McConnell & Llewellyn, 2002). All words were chosen from an independent survey conducted by the present author where undergraduate college students ($N = 55$) classified a list of words into each of the categories on a scale of 1-5, with 5 meaning the word was most representative of the category. Words were chosen from Internet and literature searches of words used to describe each of the categories. The top five most representative words

in each category were included in the proposed study. During the Attitude IAT task, participants categorized the same attribute words (e.g., intellectual disability), but instead categorized evaluations concept words describing *good* (e.g., beautiful) and *bad* (e.g., terrible).

At the beginning of the IAT task, participants were instructed to respond rapidly with the right-hand key press to items representing one concept and one attribute (e.g., *people with ID* and *good parenting*), and with the left-hand key press to items from the remaining two categories (e.g., *people without ID* and *bad parenting*). Participants then performed a second task in which the key assignments for one of the pairs were switched (such as *people with ID* and *neglectful parenting* share a response, likewise *people without ID* and *good parenting*). The later pairing is a stereotype/attitude congruent pairing whereas the former is stereotype/attitude inconsistent. The IAT produced a separate difference score (i.e., IAT score) for both the Stereotype IAT and the Attitude IAT, which was derived from the difference in response latencies (in milliseconds) to the two tasks (congruent minus incongruent). The measures are interpreted in terms of association strengths, which assumes that subjects respond more rapidly when the concept and attribute mapped onto the same response are strongly associated (congruent: e.g., *people with ID* and *neglectful parenting*) than when they are weakly associated (incongruent: e.g., *people without ID* and *good parenting*). Higher scores reflect a relative implicit stereotype/attitude for parents without IDs over parents with IDs. See Appendix B for both IATs' category items.

A meta-analysis of 50 studies using various adaptations of both Stereotype and Attitude IATs (e.g., gender, race, sexuality) found the average internal reliability of IAT

scores to be generally acceptable ($\alpha = .79$; Hofmann, Gawronski, Gschwendner, Le, & Schmitt, 2005). The IAT has been shown to have adequate predictive validity (Poehlman et al., 2006). The internal reliability of IAT scores in the present study's version of the Stereotype IAT was .61 and .67 for the Attitude IAT.

The present study's Stereotype and Attitude IATs were examined for convergent validity by the present author by determining whether each measure correlated with one or two explicit measures of negative attitudes towards individuals with intellectual disabilities, the CLAS (Community Living Attitudes Scale - Short Form; Henry, Keys, Jobb, & Balcazar, 1996) and the MRS (Modern and Classical Attitudes Scale Toward People with Intellectual Disabilities; Akrami, Ekehammar, Claesson, & Sonnander, 2006). These two measures assess the extent to which people hold negative stereotypes of individuals with IDs. The Stereotype IAT (higher scores = stronger stereotypes) was negatively associated the belief that people with IDs should be empowered to make their own decisions (CLAS: $r = -.47, p < .10$). The Stereotype IAT was also positively associated the denial that individuals with IDs continue to face discrimination (e.g., color-blindness) (MRS: $r = .42, p < .05$). The Attitude IAT was positively associated the belief that people with IDs should be excluded from society (CLAS: $r = .28, p < .10$) and negatively associated the belief that people with IDs can have lives like people without IDs (CLAS: $r = -.49, p < .01$). These results provided preliminary support for the convergent validity of the proposed study's versions of the IAT as measures of stereotypes and attitudes towards individuals with IDs.

Perspective Taking.

The Interpersonal Reactivity Index (IRI; Davis, 1980, 1983b) assessed workers' tendency to take the perspective of others. The IRI contains four subscales measured by 7 items each. Of the four subscales, only the perspective taking subscale (7 items), the construct of relevance to this project, was used. Participants rated each item on a 5-point scale ranging from 0 ("does not describe me well") to 4 ("describes me very well"). A sample perspective-taking item was "I try to look at everybody's side of a disagreement before I make a decision." The internal reliability of the subscale is acceptable (.78). Construct validity was established through a factor analysis of 45 total items on the full IRI. Four independent subscales were obtained, with the highest 7 on the perspective taking scale remaining as the final items (Davis, 1980). Validity was further established by finding a significant association between the perspective taking subscale and measures of other-oriented sensitivity (Bernstein & Davis, 1982) and social competence (Davis, 1983b). See Appendix C for a copy of the measure.

Results

Results Overview

In the following sections, descriptive statistics about the sample and design elements are first presented. Then findings are presented to address each of the study's five aims, followed by post-hoc exploratory analyses.

Descriptive Analyses

Table 1 presents t-tests conducted to examine whether the participants in the ID versus non-ID condition differ significantly on relevant demographic conditions. Table 2 also compared the two conditions using a chi-square analysis of categorical demographic

variables. Table 3 compared the non-ID condition to the ID condition based on the number of participants recruited from 21 U.S. states. No significant condition differences were found on participant's age, gender, child welfare experience, race/ethnicity, relationship status, parental status, degree earned, or recruitment state. The lack of significant differences across all three suggests that these two conditions were equivalent in demographic composition, thus random assignment was achieved.

Within the ID condition, correlations among CPS worker background characteristics and decision-making variables were examined (See Table 4). CPS worker's age was significantly associated with implicit stereotypes, implicit attitudes, anger, and risk. Worker's number of years in the child welfare field was significantly associated with implicit attitudes, anger, and disgust. Worker's years working in child investigations was associated with *only* anger, and education was associated with *only* disgust. These results suggest that there are certain associations between CPS characteristics and both implicit bias and emotions. The clinical implications of these findings are discussed in the discussion section. Because both workers' age and years in child welfare were associated with more decision-making variables, they were statistically controlled for using partial correlations. Worker's level of education and years in child investigations are important to consider, but in the present study, each had only one association with the study's variables, each was highly correlated with age ($r = .25$, $r = .32$; respectively), and only years in child investigations was associated with years in child welfare ($r = .55$), respectively. The inclusion of all variables would be redundant and further reduce statistical power.

Aim 1: Associations among Implicit Bias, Emotion, Attributions, and Decisions

Regarding Parents with IDs

Table 5 contains partial correlations for the associations between implicit bias, emotions, attributions, and CPS ratings for the ID condition. These associations were tested to examine whether these social-cognitive and emotional factors had been associated with participants' ratings of risk, removal, and help. The present study expected increased implicit stereotypes of parents with IDs to be associated with increased decisions that the child of a parent with ID was at risk of future harm and would be associated with increased willingness to recommend child removal. It was also expected that increased implicit attitudes of parents with IDs would be associated with decreased willingness to help parents with IDs. A positive association between dispositional attributions and decisions of increased risk and removal ratings was expected. Finally, the emotions of anger, disgust, and pity were also expected to be associated with workers' decisions and willingness to help. Specifically, increased anger and disgust were expected to be associated with increased risk and removal ratings and decreased willingness to help, whereas increased pity was expected to be associated with decreased decisions of risk and removal and decreased willingness to help.

Given that the following hypotheses were directional, one-tailed tests of significance were used. In addition, statistical significance tests were adjusted for multiple comparisons using Bonferroni correction. Partial correlations controlled for participant's age and years working in child welfare as noted above.

Implicit Bias and Decision-making.

Contrary to prediction, the tests of associations between implicit stereotypes and both removal and risk ratings, were not statistically significant. In addition, implicit attitudes were not significantly associated with willingness to help.

Attributions and Decision-making.

The predicted positive associations between ratings for dispositional attributions and both risk and removal ratings were not statistically significant.

Emotions and Decision-making.

Nine additional hypotheses predicted specific associations between ratings of emotions for anger, disgust, and pity with ratings for decisions of risk, removal, and help. Consistent with predictions, both anger and disgust were significantly associated with ratings of risk ($r = .47$; $r = .49$; $p < .004$, respectively) and removal ($r = .51$, $r = .54$; $p < .004$, respectively), but only disgust was associated with help ($r = -.27$; $p < .004$). Contrary to predictions, the associations between pity and ratings of risk, removal, and help were not statistically significant.

In summary, certain emotions were associated with perceiving a parent with IDs as more at risk and being more willing to remove a child and less willing to help the parent. For anger and disgust, higher ratings for each were associated with greater tendencies to perceive risk and remove the child. Higher ratings of disgust were associated with lower ratings of willingness to help. Contrary to predictions, neither implicit stereotypes, nor implicit attitudes, nor dispositional attributions nor pity was associated with ratings of risk and removal. Furthermore, higher ratings for pity were not associated with higher ratings of willingness to help.

Aims 2: Additional Associations among Implicit Bias, Emotion, Attributions, and Decisions Regarding Parents with IDs.

The purpose of Aim 2 was to examine whether additional associations between implicit bias, attributions, emotions, and decisions existed. It was expected that increased ratings of dispositional attributions would be associated with increased ratings of anger and disgust, and decreased ratings of pity. It was also expected that increased stereotypes would be associated with increased dispositional attribution ratings and increased attitudes being associated with emotions (positively associated with anger and disgust, negatively associated pity). From these associations, it was also predicted that dispositional attributions would account for (mediate) the association between stereotypes and CPS decisions (risk and removal) and that emotions would account for the association between attitudes and willingness to help.

Table 5 contains partial correlations for the associations between implicit bias, emotions, attributions, and CPS ratings for the ID condition. The predicted associations between dispositional attributions and emotions were not statistically significant. In addition, the associations between implicit stereotypes and dispositional attributions and the associations between implicit attitudes and emotions were not statistically significant (see Table 5). Without these findings, the present study could not examine the mediating role of dispositional attributions between stereotypes and decisions or the mediating role of emotions between attitudes and willingness to help.

Aims 3: Combining Aims 1 and 2 into a Model.

If all of the findings from Aims 1 and 2 were supported, additional exploratory analyses would have been conducted to examine how each of these factors operates in a larger model. Specifically, it was expected that dispositional attributions were expected to mediate the association between implicit stereotypes and workers decisions about risk and removal. Furthermore, emotions were expected to mediate the association between implicit attitudes and workers' willingness to help parents with IDs. Finally, dispositional attributions would be positively associated with anger and disgust and negatively associated with feelings of pity. However, the correlations needed to test for statistical mediation were non-significant (Aims 2) and thus Aim 3 could not be examined.

Aim 4: Moderating Role of Perspective Taking in the Associations between Social-Cognitive and Emotion Factors with Decisions Regarding Parents with IDs.

This aim examined the question of whether perspective taking reduces (i.e., buffers) the association among social-cognitive and emotional processes with decisions is tested. It was expected that perspective taking would decrease the associations among implicit stereotypes and attitudes, dispositional attributions, and emotions with workers' decisions and willingness to help parents with IDs.

The buffering effect of perspective taking was examined only for anger and disgust because they were the only two variables that predicted risk and removal, and with disgust also predicting help. These were examined using five separate regression analyses. Table 6 contains the regression statistics for the anger and perspective taking interaction predicting risk and removal decisions. Table 7 contains the regression

statistics for the disgust and perspective taking interaction predicting risk, removal, and help decisions. For both ratings of anger and disgust, no significant buffering effects were found for ratings of risk, removal, and help (all resulted in non-significant interaction terms). These results suggest that perspective taking did not act as a moderator of the associations between the emotions of anger and disgust and ratings of risk, removal, and help. Possible interpretations for the lack of findings will be discussed later.

Aim 5: The Associations between Parents' ID status with Attributions, Emotions, Decisions, and Help

These analyses examined whether there is an effect of ID status differences in participants' ratings of attributions, emotions, risk, removal, and help. These findings are presented from the experimental portion of the study, which compared ratings made by participants who were presented with vignettes involving parents with IDs to those participants presented with vignettes involving parents without IDs.

A Multivariate GLM was conducted to determine whether the participants in the ID- and non-ID conditions (ID status) differed in their ratings of anger, disgust, pity, dispositional attributions, willingness to help, risk and removal recommendations. The omnibus effect of ID status was statistically significant, $F(7, 218) = 11.502, p < .001, \eta^2 = .27$. Thus, the following sections present results of the between-subjects effects examining whether condition differences exist in ratings of decisions, attributions, and emotions. Given that the following hypotheses were directional, one-tailed tests of significance were used. See Table 8 for the GLM statistics.

Decision Ratings.

It was predicted that participants' ratings for risk and removal would be higher for the ID condition than for the non-ID condition. Higher ratings for willingness to help were predicted for the non-ID condition than for the ID condition. Contrary to prediction, ratings for willingness to **help**, $F(1, 224) = 10.90, p < .001$, were significantly higher for the ID condition than for the non-ID condition. As predicted, ratings of **risk** for the ID condition, $F(1, 224) = 3.30, p < .04$, were significantly higher than for the non-ID condition. No statistically significant differences were found between the conditions for ratings of **removal**, $F(1, 224) = 1.14, ns$.

Dispositional Attribution Ratings.

It was further expected that ratings for dispositional attributions would be higher for the ID condition than for the non-ID condition. No statistically significant differences were found between the conditions for ratings of **attributions**, $F(1, 224) = .41, ns$.

Emotion Ratings.

Finally, it was predicted that ratings for anger and disgust would be higher for the non-ID condition than for the ID condition. Higher ratings for pity were predicted for the ID condition than for the non-ID condition. Significant differences were found between the conditions across all emotion ratings. Ratings for **anger**, $F(1, 224) = 16.63, p < .001$, **disgust**, $F(1, 224) = 18.37, p < .001$, and **pity**, $F(1, 224) = 32.48, p < .001$, for the ID condition were significantly higher than for the non-ID condition.

In sum, consistent with predictions, ratings for pity and risk were higher for the ID condition than for the non-ID condition. Contrary to prediction, willingness to help was higher for the ID condition than for the non-ID condition. Additional support was

found for predictions of higher ratings for anger and disgust for the non-ID condition than for the ID condition. No significant differences were found between conditions for ratings of removal and attributions.

Exploratory Results

Moderating Analyses for Aim 1: Associations with Age and Years in Child Welfare.

Participant's age and number of years working in child welfare may also modify associations that were examined in Aim 1. For example, the relationship between anger and risk may decrease with age because older workers may have better emotion-regulation skills, or it may decrease with years of experience because more experienced workers may have better risk assessment experience (e.g., dealing with complex cases). It is also possible, however, that these relationships could be found in the opposite directions with increasing age or experience being related to more rigid decision-making styles. Therefore, exploratory moderation analyses were conducted to determine whether the associations between implicit bias, emotions, attributions, with CPS ratings differed based on participant's age or years working in child welfare. Specifically, moderation was tested by examining the significance of the interaction term formed by age or child welfare experience and either implicit bias, emotions, or attributions in predicting risk, removal, and help ratings. Moderation analyses were conducted with statistical methods outlined by Hayes and Matthes (2009). All independent and moderator variables were centered.

Neither CPS workers' age nor years of experience working in child welfare were found to moderate the associations between implicit bias, emotions, attributions, with CPS ratings (All $B < 1.00$, *ns*).

Associations among Implicit Bias, Emotion, Attributions, and Decisions for the Whole Sample for Aim 1.

Although the focus of Aim 1 was to examine the role of social-cognitive and emotional process in decisions made about only parents with IDs, it would be useful to examine whether similar associations are found more generally for situations involving parents with and without IDs. Specifically, it examined whether the same factors that were posited to influence CPS decision making when confronted with a parent with ID operated more strongly or weakly than when CPS workers were confronted with a parent not having an ID or whether these associations existed regardless of the type of parent workers were confronted with. If significant associations were found, regardless of parent ID status, such findings would suggest the presence of universal relationships that are not targeted to one group or another.

To examine whether the above associations were present for the whole sample, exploratory moderation analyses were conducted to determine whether the associations between implicit bias, emotions, and attributions, with CPS ratings differed based on ID status (dummy-coded: non-ID = 0, ID = 1). Significant main effects would suggest that such associations are significant regardless of ID status, whereas significant interactions would indicate whether findings were stronger for one ID status group versus the other. Moderation analyses were conducted with statistical methods outlined by Hayes and

Matthes (2009). All independent and moderator variables were centered. Regressions first controlled for participant's age and years working in child welfare as these demographic factors.

These exploratory analyses indicated several findings. Stronger implicit stereotypes were associated with increased ratings of risk ($B = 3.37, p < .05$) and removal decisions ($B = 4.18, p < .01$), regardless of ID status. Implicit attitudes were not associated help ratings ($B = -2.21, ns$). Higher anger and disgust ratings were associated with higher risk ($B = 0.13, p < .01$; $B = 0.15, p < .01$) and removal ratings ($B = 0.17, p < .01$; $B = 0.18, p < .01$) and with lower help ratings ($B = -0.15, p < .01$; $B = -0.19, p < .01$), respectively. Higher pity ratings were associated with higher risk ($B = 0.08, p < .01$) and removal ratings ($B = 0.07, p < .01$), but had no association with help ratings ($B = 0.03, ns$). These pity findings were not found in Aim 1 (ID-condition only), but were significant when the whole sample was examined. All of these findings are consistent with the expected direction predicted for the ID-condition only. The findings for anger and disgust are consistent with what was found when the ID-condition was examined alone (Aim 1). No associations between dispositional attributions and risk and removal ratings were found (consistent with the lack of findings in Aim 1 for the ID condition alone). In addition, no significant interactions were found between implicit stereotypes, implicit attitudes, anger, disgust, pity, and dispositional attributions with ID status.

In sum, for the whole sample, stronger implicit stereotypes were associated with higher risk and higher removal ratings. As will be discussed later, these findings suggest that implicit stereotypes may be less of a measure of biases against a stigmatized group, but instead a measure of a more rigid thinking style. For anger and disgust, higher ratings

for each were associated with greater tendencies to perceive risk and remove the child, and with lesser tendencies to help. Higher pity ratings were associated with greater tendencies to perceive risk and to remove the child, but were unrelated to one's willingness to help. These emotion findings could suggest that emotions are associated with worker's decisions for all groups, regardless of their ID status. No associations were found for implicit attitudes and dispositional attributions, nor did ID status interact with any of the tested hypotheses of Aim 1.

Mediating Role of Emotions between ID Status and CPS Decisions.

Finally, the associations between ID status and CPS decisions in Aim 5 were re-examined to determine whether this association could be better accounted for by worker's emotions. If found, this mediation would suggest that differences in CPS decisions were not solely due to factors about parents, but are also due to workers' their own emotional reactions. Thus, these analyses examined whether the associations between ID status and CPS decisions (risk, removal, and help), were mediated by emotions. Mediation analyses were conducted using bootstrapping methods with Sobel tests to determine statistical significance of the mediation effect (Preacher & Hayes, 2004) with all three emotions entered on the same regression step.

Emotions accounted for the effect of ID status on removal ($B = -1.64$, $SE = .68$, $z = -2.41$, $p < .02$) and help decisions ($B = 3.83$, $SE = 1.05$, $z = 3.66$, $p < .01$), but not for risk ($B = -0.78$, $SE = .60$, $z = -1.29$, *ns*). Potential explanations for the lack of findings for risk are discussed in the following sections.

Discussion

The goal of the present study was to examine whether implicit biases, emotions, and attributions had an association with CPS worker's decisions about parents with IDs and whether parents' intellectual status was associated with workers' emotional responses and decisions. In this discussion, two sets of findings will be presented. For clarity, the findings for the Aims are presented in a different order than presented in the literature review. First, the associations between ID status with emotions, attributions, and CPS decisions will be presented (Aim 5). These findings are based on direct comparisons between ratings made for parents with IDs versus parents without IDs, which are the core issue of concerns regarding potential bias. Exploratory findings are the presented to elaborate on these core condition difference findings. The next set of findings will present those associations between the social-cognitive and emotional factors with CPS decisions for only those situations when workers are confronted with a parent having an ID (Aims 1–4). Again, exploratory findings are presented to elaborate the associations between social-cognitive and emotional factors with CPS decisions. These second set of findings have implications for the work CPS workers do with parents who have IDs. Each of these two sets of findings will be reviewed, followed by study limitations and clinical implications.

Effect of Parental ID Status on Social-Cognitions, Emotions, and CPS Decisions

The following includes those findings for the examination of differences between the ID and non-ID condition in terms of social-cognitions, emotions, and CPS decisions. In line with hypotheses, parental ID status was associated with differences in child protection worker's ratings of pity, anger, and disgust. Specifically, ratings of anger and

disgust were significantly *higher* for workers confronted with a *parent without IDs* than for those workers confronted with a *parent with IDs*. These findings suggest that parent's ID status has an association with CPS worker's emotional reactions such that workers are significantly more likely to report feeling stronger negative feelings towards parents without IDs than for parents with IDs. On the other hand, ratings of pity were *higher* for workers confronted with a *parent with IDs* than for those workers confronted with a *parent without IDs*. This finding of higher feelings of pity for the ID group is consistent with the findings for disgust and anger such that CPS workers tended to respond with stronger empathic feelings for *parents with IDs* and stronger negative feelings for *parents without IDs* than for their comparison groups. Indeed, a negative association between feelings of pity and feelings of anger has previously been found in a pilot study with an undergraduate sample ($r = -.52$; Proctor, unpublished data), and these results further support their inverse association.

In addition to differences found in workers emotion reactions, when workers were confronted with making the decision to assess risk in neglect situations, workers' decision differed based on whether the parent had an ID or not, with *parents with IDs* being perceived as placing their child at greater future risk than *parents without IDs* were. Given the same behavior was under consideration for both sets of parents, this finding is striking. This finding regarding risk suggests that such judgments may be one indicator for the concerns about disparate treatment of parents with IDs in child welfare. As argued in the literature review, this assumption of bias towards seeing greater risk had yet to be demonstrated with direct empirical support. It is worth noting, however, that this interpretation must be qualified because of a lack of findings for differences in removal

recommendations (discussed later). Thus, these findings provide more direct evidence than epidemiological data and court case reviews that differential “initial” judgments are being made early in the child investigation process, but they do not indicate that ID status influences workers to necessarily behave differently.

Unfortunately, exploratory analyses to determine whether emotions explained this association between ID status and risk, was not supported. Future studies are needed to determine whether other factors, which could not be explored in this study, such as worker’s particular assumptions about parental functioning in a number of domains (e.g., ability to provide cognitive stimulation, monitor for dangers in the home, etc.) account for the association between ID status and their risk assessments.

The association between ID status and willingness to help was contrary to prediction, with workers rating *higher* willingness to help *parents with IDs* than their ratings for *parents without IDs*. Thus, the prediction for worker’s willingness to help was not supported as it was expected to operate opposite to what was predicted, with lower willingness to help parents with IDs (similar to higher ratings of pity) than parents without IDs. That the results were in the opposite direction suggests that workers may have perceived parents with IDs as more deserving of help than parents without IDs. This finding makes sense when considering that by definition individuals with disabilities tend to have disadvantages that increase the likelihood (but not necessarily the certainty) that such individuals may need more assistance than those without disabilities.

In addition to the direct association between ID status and willingness to help, exploratory analyses indicated that emotions accounted for this association. These findings indicate that emotions play an important role in determining CPS worker’s

decisions to help along with determining risk level. Contrary to the expectations outlined from the outset of this study, these exploratory findings indicate that discrimination in helping behavior is more likely to be determined by worker's emotional reactions rather than parents' ID status. Thus, intervening at the level of workers emotional responses might be instrumental in improving equal treatment for all parents, regardless of their ID status.

The predicted association between ID status and dispositional attributions was not supported by these data. The lack of findings for dispositional attributions is contrary to the hypothesis proposed by the ultimate attribution error (Pettigrew, 1979). The extent to which workers believed the cause of parental neglect was due to something about the parents did not depend on whether or not the parent had an ID. Stated differently, these findings suggest that workers assessed the causal explanation (something about the parent versus something about society) of neglect situations no differently for both parents with and without IDs. It is possible that this association was confounded by worker's perceptions of the extent to which poverty was a causal explanation of child neglect. Indeed, poverty is strongly associated with child neglect (Slack, Holl, McDaniel, Yoo, & Bolger, 2004). If this confound was present, workers may have believed that factors such as poverty are more important than ID status when assessing cause, whereas when assessing risk to the child, ID status matters more than other factors. Future studies could clarify this question by assessing worker's perceptions of parents' socioeconomic status, which could then be examined as a moderator between ID status and dispositional attributions.

Despite making stronger judgments of risk for parents with IDs, the predicted, difference between recommendations for removal (i.e., association between ID status and removal) was not supported by these data. However, in an exploratory analysis this difference was found when accounting for the association with emotions. That ID status was only associated with removal recommendations when emotions were taken into consideration illustrates a suppression effect (MacKinnon, Krull, & Lockwood, 2000). Put simply, ID status appeared to predict worker's removal recommendation ratings only when one considered the role of worker's emotional reactions. Thus, unlike the association between ID status and risk, the decisions to remove or help were not based solely on a cognitive (unemotional) level, but instead on the relative emotional impact it has on the worker making the decision. These findings seem to suggest tentative support for the contention that discrimination is present in decisions about parents with IDs in child welfare cases. However, when considering these findings and those for willingness to help, such an important role for emotions suggests that discrimination against parents with IDs can be influenced by more than just their disability status.

The results examining the influence of ID status provide data to support the hypothesis that parents with IDs are being assessed and treated differently, sometimes because of their status and other times because of worker's emotional reactions. What these results cannot provide is how decisions are being made in the moment when workers are confronted with making CPS decisions about a parent with IDs. The next section will discuss these findings.

Associations among Social-cognitions and Emotions with Decisions Regarding Parents with IDs.

This next group of findings presents those analyses that examine the association between social-cognitions and emotions with CPS decisions when workers are confronted with a parent having an ID (Aim 1). As predicted, *higher* ratings of anger were associated with *higher* ratings of risk and *increased* removal ratings. In addition, *higher* ratings of disgust were associated with *higher* ratings of risk, *increased* removal ratings, and *decreased* willingness to help. These findings suggest that when CPS workers are making decisions about parents with IDs that both feelings of anger and disgust tend to co-occur with less willingness to help a parent, viewing the parent as placing their child at greater future risk, and being more likely to make a removal decision.

Exploratory analyses to elaborate these findings did not find support for the role of worker's age and years in child welfare in influencing these findings. Nonetheless, the hypothesized findings provide data that is consistent with previous findings in the legal decision making literature around criminal behavior, which find an association between negative emotions and a range of similar decisions including determining guilt (Bodenhausen et al., 1994), punishment (Lerner et al., 1998), perceptions of risk (Lerner & Keltner, 2000), and willingness to help (Weiner, 1980).

Because these data are correlational in nature, we cannot determine whether the CPS decision or emotion comes first. Nonetheless, such data suggest that CPS decisions are at least associated with a subjective element that can bias decisions. As explained in the literature review, these early decisions may lead to a cascade of negative consequences for parents with IDs. Furthermore, parents with IDs may be at greater risk for negative outcomes because they represent a disproportionate percentage in CPS caseloads relative to parents without IDs whose involvement in CPS is a smaller

percentage of their total population (Aunos et al., 2003; Ethier et al., 2004; McGaw et al., 2007; Mørch et al., 1997; Schilling et al., 1982; Tymchuk & Andron, 1990).

While findings between certain emotions and decisions were found, others were not found, thus highlighting the heterogeneity of how emotions are associated with decisions. In particular, for the ID condition, feelings of anger were not associated with willingness to help and feelings of pity were not associated with risk, removal, or help decisions. These lack of findings are inconsistent with previous studies (Corrigan et al., 2003; Corrigan & Watson, 2002; Weiner, 1996). As discussed above, determining when an association is likely to be found is important in both clarifying existing findings as well as understanding the reasons for unexpected findings.

Exploratory analyses did not provide support for the influence of worker's age or years working in child welfare with emotions. Other explanations may account for this lack of findings, which could not be explored in detail with these data. For example, in regards to parents with IDs, the prediction that feelings of pity were associated with CPS workers' decisions may need to be reconsidered. For incidents of child neglect involving parents with IDs, disgust tends to be a more appropriate emotional response to events or actions that are perceived as repulsive. Feelings of anger and pity, on the other hand, tend to be evoked when events are perceived as blocking a desired goal or because events are perceived as due to uncontrollable conditions, respectively (Cottrell & Neuberg, 2005) and as such may have been irrelevant to neglect. Indeed, the consistent findings for disgust as opposed to anger and pity supports discrete emotions theory, which states, "different events evoke different emotions" (Allport, 1954; Cottrell & Neuberg, 2005, p.

772). Thus, future examinations regarding the role of emotions may need to be consistent with the context of the situations in which they are being evoked.

When workers were confronted with making a decision about a parent with ID, implicit stereotypes and attitudes were not associated with risk, removal, or help decisions. The lack of findings for implicit stereotypes and attitudes is inconsistent with literature finding an association between implicit stereotypes and decisions regarding members of stigmatized groups (e.g., removal of children; Proctor, unpublished data) and between implicit attitudes and behaviors towards members of stigmatized groups (i.e., help) (Amodio & Devine, 2006; Proctor, unpublished data). In addition, these findings are not consistent with the general Implicit Association Test literature supporting the use of the IAT measure across a variety of other marginalized groups (De Houwer et al., 2009; Greenwald et al., 2009). The lack of consistency between findings in other studies and the lack of findings here suggests that certain factors are moderating this difference. Exploratory analyses did not support the role of age or years of experience in child welfare with implicit bias. However, certain other factors that were not examined in the current study may provide alternative factors to examine in future studies. In two studies, researchers found that contrary to their predictions; higher IAT scores were associated decreased bias or even had no association with decisions and behavior about members in stigmatized groups. Two of these studies included measures of participants' knowledge of the experiment's goals (Green et al., 2007) and participant's motivation to control prejudice (Glaser & Knowles, 2008). They concluded that increased motivation to reduce bias on participants' parts influenced their results such that participants did not exhibit bias in their subsequent decisions.

It is possible that the participants in the present study reacted to the explicit label of “mild intellectual disability” and were thus more motivated than were participants in the non-ID condition to reduce bias in their decisions. It should be reiterated that the present study administered the vignettes before the IATs; this is the same administration order as Green and colleagues’ study (2007)(Green, 2010, personal communication). Another study that used explicit and subliminally primed racial labels along with an IAT measure found no association between participants’ (trial judges) IAT and explicit labels in vignettes, but it did find an association with the IAT and primed labels (Rachlinski, Johnson, Wistrich, & Guthrie, 2009). This finding makes sense when considering that the actual purpose of the IAT is to “bypass” conscious motivation to give social unacceptable responses about members in stigmatized groups. Future studies should likewise be aware that if their outcome measure is explicit, then using the IAT is only half as effective because participants can still modify their responses to the explicit outcome measure.

In addition to a lack of findings for implicit bias, no association was found between dispositional attributions and CPS decisions. The lack of findings for dispositional attributions is contrary to previous studies finding that dispositional attributions are associated with greater punishment decisions for individuals with IDs (Cochran et al., 2003) and without IDs (Carroll et al., 1987; Young, 1991) and less willingness to help individuals with IDs (Willner & Smith, 2008a). Exploratory analyses to examine whether moderation was present showed no such effect. Although other, unmeasured variables may account for this lack of findings, it is also possible that

dispositional attributions are not useful in understanding the CPS decision-making process about parents with IDs.

The findings as discussed thus far (Aim 1), suggest that emotions tend to co-occur more consistently with risk, removal and help decisions. If future studies continue to find a consistent association between emotions and decisions rather than social-cognitions (e.g., implicit biases, attributions), further support would be obtained for previous studies finding that emotions are primary in decision-making (Talaska et al., 2008). However, the absence of evidence for social-cognitive factors does not prove that social-cognitive factors are not associated with these decisions. Indeed, some evidence for the effect of stereotypes (labels) was found in the present study's experimental manipulation of parental ID status. There were no demographic differences between workers in the two conditions and there were no differences between parenting scenarios besides that of ID status. This controlled situation provides strong support for the association between stereotypes and decisions. Future studies replicating these associations are needed to determine whether the association between social-cognitive processes and CPS decisions is useful in understanding decision-making processes about parents with IDs.

A Model of Decision-Making?

Using social information processing theory as a general framework, several causal models were proposed (Aims 2 & 3). These included Weiner's attribution model (1985, 1995), the affect-as-information model (Gallagher & Clore, 1985), and the dual process model of implicit associations (Amodio & Devine, 2006). Unfortunately, the models could not be examined because their component associations were not found. Although

this cannot be taken as evidence for no support for these models, possible limitations of current decision-making process models are discussed below.

When workers were confronted with making decisions about a parent with IDs (Aim 1), the lack of findings for social-cognitive as opposed to emotional factors suggests that decision-making models might increase their predictive validity by placing more weight on their associations with emotions. Indeed, a recent meta-analysis of racial discrimination studies found that emotions were more strongly associated with discriminatory behavior and discriminatory intentions than stereotypes and beliefs (Talaska et al., 2008). If asked to predict at what point to intervene in the causal decision-making process, the present findings and other studies would suggest increasing the focus on targeting the emergence of emotion.

However, the current findings cannot discount strong support for models such as Weiner's (Rudolph, Roesch, Greitemeyer, & Weiner, 2004; Willner & Smith, 2008b). Several limitations to the measurement of implicit bias, dispositional attributions, and decisions are discussed in the Limitations section. If the measurement of these factors were improved, it is may be possible for implicit bias to be included as a distal predictor in Weiner's attribution model (1985, 1995). There has been a call for the inclusion of stereotypes in attribution models (Reyna, 2000); however, only one study to date has examined them (Rusch, Todd, Bodenhausen, & Corrigan, 2010). This study examined the association between an implicit measure, attributions, emotions, and behavior. No association was found between implicit stereotypes and the other measures or between attributions and emotions. This study, however, measured attributions, emotions, and behavioral intentions using explicit ratings scales, thus increasing the susceptibility of

being influenced by social desirability effects. More research using methods that reduce the effect of social desirability (e.g., between-subjects or counterbalanced within-subjects designs) may help clarify whether the addition of implicit stereotypes aids attribution models in understanding their association with decisions and behaviors against members of stigmatized groups.

The Role of Perspective Taking

Contrary to prediction, perspective taking did not play a role in moderating the association between the anger and disgust with workers' decisions about parents with IDs. Several researchers have found that perspective taking reduced the association of attributions (Batson et al., 1997; Mohr et al., 2007; Vescio et al., 2003) and stereotypes (Dovidio et al., 2004; Finlay & Stephan, 2000; Galinsky & Moskowitz, 2000). On the other hand, previous studies examining the moderating role of perspective taking have not found that perspective taking plays a role in affecting emotion on behavior or decisions (Lindsey, Yun, & Hill, 2007; Mohr et al., 2007; Rupp, McCance, Spencer, & Sonntag, 2008). Researchers such as Lindsey and colleagues (2007), for example, did not find that perspective taking moderated the association between a stimulus designed to induce feelings of guilt and participant's subsequent feelings of guilt. Two other studies found no significant interaction between perspective taking and anger (Mohr et al., 2007; Rupp et al., 2008). It was expected that perhaps these lack of findings would differ in the current study because of differences in research questions and population examined.

Some reasons may account for the lack of moderation for perspective taking in the ID condition found in this and prior studies. Perspective taking may have a general (main) effect on emotions and decisions, rather than a conditional (interaction)

association. This would suggest examining perspective taking as a mediator in future studies. Indeed, a closer examination of Table 6 and Table 7 shows that in the current study, both perspective taking and anger were associated with removal decisions, and both perspective taking and disgust was associated with willingness to help. That perspective taking was associated with workers' decisions is consistent with research findings that increased perspective taking is associated with reductions in prejudice (Batson et al., 1997; Dovidio et al., 2004; Finlay & Stephan, 2000; Galinsky & Moskowitz, 2000; Pettigrew & Tropp, 2008). Thus, the lack of moderation findings may indicate that perspective taking should be considered as a direct contributor to the SIP process rather than an indirect buffer.

Universal Associations

Aims 1-3 of the present study were to determine how decision-making processes operated at times when workers were confronted with parents with IDs. The present study, however, did not explicitly propose the possibility that social-cognitive and emotional factors may also be associated with CPS decisions regardless of parents' ID status. If certain associations were more universal within this sample, it would suggest that interventions to reduce the association between these factors would need to be broadened beyond parents with IDs.

Through exploratory analyses, when the sample of workers making decisions about parents with IDs was combined with the sample of workers making decisions about parents without IDs, several important results were found. Stronger implicit stereotypes were associated with increased risk and removal ratings. These findings further suggest that the association between implicit stereotypes with risk and removal decisions is not

limited to whether parents have an ID. Thus, implicit stereotypes may be less of a measure of bias against a stigmatized group, but more of a measure of the extent to which someone has a general rigid thinking style (Cunningham, Nezlek, & Banaji, 2004).

Additional support was found for a universal association between emotions and CPS decisions. Exploratory analyses examining the combined parent with ID and parent without ID samples found that anger and disgust were associated with risk, removal, and help ratings. In addition, pity was associated with both risk and removal ratings. These exploratory findings suggest that the association between emotions and CPS decisions is not a unique association when confronted with parents with IDs. Indeed, it suggests that for CPS workers, such workers are likely to experience a range of emotions regardless of parent's ID status. This finding is not surprising, as the association between emotions and decisions has been found for a number of stigmatized and non-stigmatized groups.

Limitations

While the present study attempted to add to the child protection and decision-making literature in important ways, there were important limitations that must be acknowledged. First, because data were collected at only one time point, the current findings are correlational in nature and cannot inform questions about the causality. Second, a focus on only parents' intellectual ability without also including other identifying factors limited our ability to unpack the elements included in people's assumptions and perceptions of ID to see where discrimination, if present, may be most concentrated and when the influence of social-cognitive and emotional factors would be likely to operate. The study limited the focus to parents with IDs because there was little information about how they are treated within the child protection system. Any

findings in this area would have provided the empirical foundation for more nuanced studies.

Future studies examining decisions about this population should parse this label to examine the confluence of other demographic (e.g., race, age, gender income), historical (e.g., CPS history, own neglect history), mental health (e.g., substance abuse, depression), and child (age, gender) factors. Indeed, epidemiological studies examining people with IDs finds wide heterogeneity in demographic characteristics within this group (Fujiura & Taylor, 2003; McDermott, Martin, & Butkus, 1999; Snell et al., 2009). Such findings would help to provide evidence about the specificity of whether discrimination is truly present and about the social-cognitive and emotional associations with decisions about parents with IDs, thus supporting reduced reliance on viewing such parents as a monolithic class.

A related limitation is that the examination of only mild neglect severity might obscure findings for emotions, stereotypes or attributions that operate at higher or lower levels of severity. For example, it is possible that mild neglect severity placed a higher salience on the situational features of the vignettes rather than the parental characteristics. This overshadowing would likely highlight the well-established association between child neglect and poverty (Slack et al., 2004), which would produce similar ratings for parents with and without IDs. To clarify whether the present factors have a conditional effect on possible discrimination and prejudice, future work should vary the severity of neglect vignettes.

Issues of measurement may account for the lack of findings for certain variables. For example, measuring dispositional attributions on a bipolar likert scale goes against

arguments that the dimensions of internal and external attributions should be measured separately (Hewstone, 1990; Unnever, Cochran, Cullen, & Applegate, 2010). The effect of social desirability must always be acknowledged when using self-report measures, especially for behaviors and attitudes that are socially (and organizationally) unacceptable. Although steps were taken to reduce the influence of social desirability in child protection workers' responses (e.g., use of IAT, experimental manipulation, anonymity of responses), it is possible that some findings reflected a desire to appear less prejudiced. Indeed, a large part of the present study was based on responses to the vignettes, which due to their explicit nature, are highly susceptible to demand characteristics. Future studies in this area may need to consider the value of using measures of social desirability or motivation to reduce prejudice if concerns about the validity of responses continue to be out of line with epidemiological data about discrimination in removal rates.

In terms of statistical analyses, low statistical power might have accounted for the lack of some findings for correlations and moderation analyses. Larger sample sizes will be needed in future studies especially if a large number of associations are proposed and moderation effects are expected. An alternative solution is to change the experimental design from between- to within-subjects. A within-subjects design addresses concerns about low power because fewer participants are needed since they can participate in more than one condition. Future work should utilize within-subject designs such as factorial surveys, which have recently been used in the social work literature (e.g., Taylor, 2006).

Finally, the current study was unique in its prediction that certain social-cognitive and emotional factors would be associated with CPS workers' decisions. This study

introduced many firsts by using a sample of child protection workers, inquiring about child neglect (as opposed to physical aggression in some studies), focusing on parents with IDs as compared to general mental illness or schizophrenia in prior studies), and designing new or modifying established measures (i.e., Intellectual Disability IAT, vignettes). This extension into new territory may have increased the uncertainty of direct and mediated findings. For example, the inclusion of implicit bias in the prediction of decisions is still nascent with valid criticisms raised about its underlying theory and measurement (Arkes & Tetlock, 2004; Blanton & Jaccard, 2006; Fiedler, Messner, & Bluemke, 2006; Olson & Fazio, 2004). In addition, the universal predictions of attribution theory have been shown to be conditional and dependent on the emotions, decisions/behaviors, sample participants, and stigmatized group assessed (Rudolph et al., 2004; Willner & Smith, 2008a). The risks of answering unexamined questions, however, were out-weighed by the importance of identifying ways to understand and reduce the associations among decision-making factors and ID status within the child welfare system.

Clinical Implications

Despite these limitations, the findings from the present study have some important implications for child welfare decision-making. The present study found evidence that parents with IDs are responded to differently than parents without IDs based on their ID status, but also based on workers' emotional responses to them. Both ID status and emotional reactions were associated with significant differences in risk assessments and willingness to provide help (Aim 5). In addition, worker's emotions were associated with risk, removal, and help decisions, for both parents with and without IDs (Aim 1).

Although implicit stereotypes were not associated decisions for parents with IDs alone, they were associated with decisions for the whole sample. The potential negative consequence of the decisions that were studied suggests that CPS workers could benefit from improvements in their decision-making no matter who the target group is.

Two potential targets would be appropriate for intervention: stereotypes and emotional responses. Training programs for CPS workers could help workers to first become aware of whether they hold stereotypes (or have rigid thinking styles) and to become more cognizant of their emotional responses in the moment. If future studies do find an association between implicit bias and workers' decisions, research instruments such as the Implicit Association Test might be used as an assessment tool to assess for workers who have inflexible beliefs (a trend which is beginning to be seen in the literature).

Possibly one of the most crucial aspects of true attitude change is increased interpersonal contact with individuals with ID *outside* of child protection settings. If workers are to have sustained and lasting change in their beliefs and feelings about parents with IDs, their experience with them should not only include those circumstances when parents are at their worst (i.e., the focus of CPS investigation). Indeed, recent meta-analyses of research studies (Pettigrew & Tropp, 2006) and multicultural training programs (Smith, Constantine, Dunn, Dinehart, & Montoya, 2006) based on Allport's (1954) contact hypothesis theory provide strong support for the effectiveness of increasing knowledge about and reducing stigma towards members of out-groups. Other potential targets for intervention include values assessments (self-exploration into one's biases about individuals with IDs) and ongoing consultation with professionals who work

directly with individuals with IDs (e.g., DMR or special education staff) (Azar & Read, 2009). It may be possible that many of the training techniques used in these programs could be adapted for training child protection workers.

While one route to reduce the association with biasing factors is to improve workers' knowledge and responses to stigmatized groups, an alternative perspective would be to reduce the impact of emotions by relying less on workers to make CPS decisions. Indeed, there is much evidence in the decision-making literature supporting the poor predictive validity of future behavior for clinicians (Dawes, 1996; Dawes, Faust, & Meehl, 1989) and both risk assessments (Nair & Ramnarayan, 2000) and placement decisions (Rossi et al., 1999) by child protection workers. CPS workers must organize vast amount of "risk factors" during initial assessments to make quick assessments of future risk in a relatively short time span. Because of the potential for errors in decision-making, it is no surprise that over 42 states routinely use risk assessment instruments to identify children who are high at risk for future abuse and neglect (U.S. Department of Health and Human Services, 2003). Studies comparing actuarial risk assessments to consensus-based (professional agreement) instruments have found actuarial models to be more reliable (Baird, Wagner, Healy, & Johnson, 1999) and accurate (Baird & Wagner, 2000) in predicting risk. While actuarial risk assessments are not infallible estimates of future risk (e.g., data coming out only as good as data coming in) (Rycus, Hughes, & Policy, 2003), they are constantly being improved upon [e.g., Classification and Regression Trees that weight a constellation of risk factors and allow for interactions among them (Johnson, Brown, & Wells, 2002; Sledjeski, Dierker, Brigham, & Breslin, 2008)]. Future work and development of these actuarial assessments will add more

literature to the debate about whether reliance on unassisted assessments produces greater or lesser risk to the lives of many families, especially for those involving parents with IDs.

Appendix A: Tables

Table 1: T-test of Sample Demographics

Characteristic	Statistic	Non-ID Condition	ID Condition	<i>t</i> (<i>df</i>)
Age (years)	Mean	43.67	41.69	1.18 (223) ^{ns}
	Std. Deviation	12.59	12.64	
Years Working in Child Welfare Field	Mean	13.00	10.98	1.68 (227) ^{ns}
	Std. Deviation	9.97	7.89	
Years Worked in Child Protection Field	Mean	9.14	7.9	1.32 (226) ^{ns}
	Std. Deviation	7.85	6.31	
Years Participating in Child Protection Investigations	Mean	6.94	6.58	0.39 (225) ^{ns}
	Std. Deviation	7.34	6.49	

Note: ns = non-significant.

Table 2: Chi-square of Sample Demographics by Condition

Characteristic	Non-ID Condition <i>n</i> = 115	ID Condition <i>n</i> = 100	χ^2	<i>p</i>
Gender			.01	.99
Female (%)	102 (85.7)	95 (85.6)		
Male (%)	17 (14.3)	16 (14.4)		
Currently Practicing Social Work			0	.99
Yes (%)	107 (93.0)	93 (93.0)		
No (%)	8 (7.0)	7 (7.0)		
Race/Ethnicity			5.4	.37
American Indian/Alaska Native (%)	3 (2.5)	0		
East Asian (%)	1 (0.8)	0		
Black or African American (%)	5 (4.2)	5 (4.5)		
White or Caucasian (%)	100 (84.0)	101 (91.0)		
Biracial/Multiracial (%)	4 (3.4)	2 (1.8)		
Other (%)	6 (5.0)	3 (2.7)		
Relationship Status			3.52	0.62
Single (%)	29 (24.4)	33 (29.7)		
Married (%)	66 (55.5)	58 (52.3)		
Remarried (%)	8 (6.7)	4 (3.6)		
Separated (%)	2 (1.7)	3 (2.7)		
Partnered (%)	9 (7.6)	11 (9.9)		
Other (%)	5 (4.2)	2 (1.8)		
Degree Earned			1.90	.59
Other (%)	1 (0.9)	1 (1.0)		
Bachelors (%)	59 (51.3)	51 (50.0)		
Masters (%)	53 (46.1)	50 (49.0)		
Doctorate (%)	2 (1.7)	0		
Have Children			2.71	.12
Yes (%)	32 (26.6)	42 (37.6)		
No (%)	84 (72.4)	69 (67.4)		

χ^2 , Fisher's Exact Test (two-tailed). Changes in sample size are due to missing data.

Table 3: Chi-square of Recruitment States by Condition

Characteristic	Non-ID condition (<i>n</i> = 119)	ID Condition (<i>n</i> = 111)	χ^2	<i>p</i>
State			12.03	.92
Arizona	20 (16.8)	19 (17.1)		
California	6 (5.0)	5 (4.5)		
Connecticut	0 (0.0)	1 (0.9)		
Delaware	0 (0.0)	1 (0.9)		
Florida	11 (9.2)	13 (11.7)		
Hawaii	1 (0.8)	0 (0.0)		
Indiana	1 (0.8)	0 (0.0)		
Maryland	1 (0.8)	2 (1.8)		
Michigan	0 (0.0)	1 (0.9)		
Minnesota	13 (10.9)	8 (7.2)		
New Jersey	3 (2.5)	2 (1.8)		
New York	5 (4.2)	4 (3.6)		
North Carolina	9 (7.6)	7 (6.3)		
North Dakota	1 (0.8)	1 (0.9)		
Ohio	12 (10.1)	9 (8.1)		
Pennsylvania	26 (21.8)	29 (26.1)		
Tennessee	2 (1.7)	2 (1.8)		
Texas	2 (1.7)	1 (0.9)		
Utah	0 (0.0)	2 (1.8)		
Virginia	6 (5.0)	3 (2.7)		
Washington	0 (0.0)	1 (0.9)		

Table 4: Correlations between Variables and Demographic Characteristics for the ID Condition

Measure	1. Stereotypes	2. Attitudes	3. Anger	4. Disgust	5. Pity	6. Attribution	7. Removal	8. Risk	9. Help	10	11	12	13
10. Age	-.20*	-.32**	-.22*	-.17	.09	-.08	.10	.23*	-.03	–			
11. Education	-.03	-.06	.12	.22*	.14	-.16	.01	.12	-.01	.25*	–		
12. Yrs. in Child Welfare	-.17	-.21*	-.28**	-.28**	.08	-.07	-.13	.02	.04	.60**	.20	–	
13. Yrs. in Child Investigations	-.04	-.04	-.20*	-.15	.05	.06	-.03	.15	.05	.32**	.19	.55**	–

Note: For all scales, higher scores are indicative of more extreme responding in the direction of the construct assessed.

Two-tailed: * $p < .05$, ** $p < .01$.

Table 5: Correlations between Variables for the ID Condition

Measure	1	2	3	4	5	6	7	8	9
1. Stereotypes	–								
2. Attitudes	.85**	–							
3. Anger	.06	-.04	–						
4. Disgust	.05	-.04	.94**	–					
5. Pity	-.09	-.05	.14	.11	–				
6. Attributions	.00	-.04	.04	.03	-.22**	–			
7. Removal	.18*	.16	.51**	.54**	.21**	.07	–		
8. Risk	.06	.04	.47**	.49**	.18**	.14	.63**	–	
9. Help	-.26**	-.20*	-.24**	-.27**	.23**	-.07	-.16	-.06	–

Notes: Controlling for Age and Years in Child Welfare.

For all scales, higher scores are indicative of more extreme responding in the direction of the construct assessed.

Bold indicate remaining significant after Bonferroni-correction applied ($p < .004$).

One-tailed: * $p < .05$, ** $p < .01$.

Table 6: Unstandardized Regression Beta Coefficients for Perspective Taking Moderating Anger and Decisions

	Risk	Removal
	B	B
Age	.19**	.20**
Yrs. in Child Welfare	-.07	-.21*
Anger	.14**	.16**
Perspective Taking (PT)	-.23	-.34*
Anger × PT	.00	.00
R^2	.30	.34
f^2	.43	.52
<i>p of model</i>	.00	.00

One-tailed: * $p < .05$, ** $p < .01$.

Table 7: Unstandardized Regression Beta Coefficients for Perspective Taking Moderating Disgust and Decisions

	Risk	Removal	Help
	B	B	B
Age	.18**	.18**	-.12
Yrs. in Child Welfare	-.06	-.19*	.15
Disgust	.15**	.17**	-.12*
Perspective Taking (PT)	-.21	-.31	.75**
Disgust × PT	.00	.00	.02 [†]
R^2	.32	.36	.20
f^2	.46	.57	.26
<i>p of model</i>	.00	.00	.00

One-tailed: [†] $p < .1$, * $p < .05$, ** $p < .01$.

Table 8: GLM Effects of Condition by Dependent Variables

Dependent Variables	Non-ID Condition	ID Condition	<i>df</i>	<i>F</i>	<i>p</i>
	Mean (<i>std.</i>)	Mean (<i>std.</i>)			
Anger	55.36 (27.69)	41.73 (21.97)	224	16.63**	.00
Disgust	49.70 (24.24)	36.73 (20.98)	224	18.37**	.00
Pity	58.83 (18.12)	73.77 (21.25)	224	32.48**	.00
Attributions	86.87 (13.43)	85.84 (10.43)	224	.41	.26
Help	119.31 (14.75)	124.95 (10.38)	224	10.90**	.00
Risk	24.95 (6.86)	26.59 (6.67)	224	3.30*	.04
Removal	16.39 (7.32)	17.43 (7.28)	224	1.14	.15

Note: For all scales, higher scores are indicative of more extreme responding in the direction of the construct assessed.
 One-tailed: * $p < .05$, ** $p < .01$.

Appendix B: Neglect Vignettes

These case summaries are of situations involving child neglect. Please read through the incidents, and then answer the questions that follow. The only information available to you is a brief description of the incident and that the child involved in each incident is seven years old. We realize that when making actual case decisions you would be basing your decision on the entire case file, not just on a few relevant facts. There are times when you are asked to make decisions about a case when you do not have all the relevant facts available to you. This study is interested in how people assess these situations when all the relevant facts are not there. Please do the best you can to answer the questions given the information provided to you.

Incident #1

Two (*mild mentally retarded/intellectually average*) parents live with their child in an old house. Two windows in the living room where the child plays have been broken for some time, and the glass has very jagged edges. The child cut his hand on the jagged edges, requiring three stitches. (Housing, Mean Seriousness = 5.11).

Incident #2

Two (*mild mentally retarded/ intellectually average*) parents make no effort to keep their child clean. The child's hair is matted with bits of old food. (Cleanliness, Mean Seriousness = 5.50)

Incident #3

Two (*mild mentally retarded/ intellectually average*) parents regularly left their child alone outside the house during the day until almost dark. Neighbors have spotted the child wandering five blocks from home. (Supervision, Mean Seriousness = 5.33)

Incident #4

Two (*mild mentally retarded/ intellectually average*) parents have not taken their child to a dentist. The child has difficulty eating. (Medical, Mean Seriousness = 5.96)

Incident #5

Two (*mild mentally retarded/ intellectually average*) parents always insist that their child clean his plate, which they keep full of food. Doctors have warned that the child's health will suffer if he continues to eat so much. (Nutritional Neglect, Mean Seriousness = 5.72)

Please indicate your response by clicking the appropriate number.

(Dispositional Attributions)

To what extent is the parent's behavior due to something about the parents or to the environment?

1	2	3	4	5	6	7	8	9
due to internal factors						due to external factors		

Appendix C: Stereotype and Attitude IAT Categories and Labels

Stereotype IAT

<i>Category</i>	<i>Items</i>				
People with ID	Retarded	Impaired	Deficient	Slow	Limited
People without ID	Average	Sharp	Intelligent	Normal	Smart
Good Parenting	Nurturing	Aware	Responsible	Encouraging	Available
Neglectful Parenting	Abandoning	Inattentive	Inconsistent	Unsafe	Ignoring

Attitude IAT

<i>Category</i>	<i>Items</i>				
People with ID	Retarded	Impaired	Deficient	Slow	Limited
People without ID	Average	Sharp	Intelligent	Normal	Smart
Good	Marvelous	Superb	Pleasure	Beautiful	Joyful
Bad	Tragic	Horrible	Agony	Painful	Terrible

Appendix D: Interpersonal Reactivity Index

The following statements inquire about your thoughts and feelings in a variety of situations. For each item, indicate how well it describes you by choosing the appropriate letter on the scale at the top of the page: A, B, C, D, or E. When you have decided on your answer, fill in the letter next to the item number. **READ EACH ITEM CAREFULLY BEFORE RESPONDING.** Answer as honestly as you can. Thank you.

ANSWER SCALE:

A	B	C	D	E
DOES NOT				DESCRIBES ME
DESCRIBE ME				VERY
ME WELL				WELL

1. I sometimes find it difficult to see things from the "other guy's" point of view. (-) (3)
2. I try to look at everybody's side of a disagreement before I make a decision. (8)
3. I sometimes try to understand my friends better by imagining how things look from their perspective. (11)
4. If I'm sure I'm right about something, I don't waste much time listening to other people's arguments. (-) (15)
5. I believe that there are two sides to every question and try to look at them both. (21)
6. When I'm upset at someone, I usually try to "put myself in his shoes" for a while. (25)
7. Before criticizing somebody, I try to imagine how I would feel if I were in their place. (28)

NOTE: (-) denotes item to be scored in reverse fashion
 (#) = Full scale item number

A = 0
 B = 1
 C = 2
 D = 3
 E = 4

Except for reversed-scored items, which are scored:

A = 4
 B = 3
 C = 2
 D = 1
 E = 0

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