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INTAKE DECISION-MAKING IN CHILD PROTECTIVE SERVICES: EXPLORING THE INFLUENCE OF DECISION-FACTORS, RACE, AND SUBSTANCE ABUSE

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at Virginia Commonwealth University.

by

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May, 2009

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Dedicated to my parents

Ronald Lee and Sheila Alderman Howell

in recognition of their love and support through this journey.

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It has been quite a journey from applying to Virginia Commonwealth University to graduating with my Ph.D. seven years later. I could never have foreseen the amazing things that would happen over those years—the incredible friendships that would develop with classmates, faculty, colleagues, and people I would meet in Richmond and across the world at professional conferences—people would become so important to me. I never anticipated the depth of personal, emotional, intellectual and professional growth that I have experienced during my time at VCU. The School of Social Work, and particularly the doctoral program, is an outstanding community, unique in social work education. I feel so privileged and thankful to be part of it—and sad that I can no longer be part of it regularly.

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Michael L. Howell, M.S.S.W., Ph.D.

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Abstract

INTAKE DECISION-MAKING IN CHILD PROTECTIVE SERVICES: EXPLORING THE INFLUENCE OF DECISION-FACTORS, RACE, AND SUBSTANCE ABUSE

By Michael Lee Howell, Ph.D.

A dissertation submitted in partial fulfillment of the requirements for the degree of Doctor of Philosophy at Virginia Commonwealth University.

Virginia Commonwealth University, 2009

Major Director: Humberto Fabelo, Ph.D.
Associate Professor of Social Work

Child protective services begin with an intake (screening) decision to accept or reject maltreatment reports. This crucial decision may lead to significant positive or negative outcomes for children and families. Little is known about characteristics that intake decision-makers share or factors that influence the decision-making process.

Racially-biased intake practices have been blamed for contributing to African American children's disproportionate overrepresentation in the child welfare system. Concerns have emerged that social workers may hold negative stereotypes about African

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Americans and parents who use drugs. Stereotypical biases may influence decisions in reports alleging parental drug use and/or involving African American families.

This study was conducted to examine the influence of race and parental drug-use allegations on intake decision-making. It was also conducted to identify factors that influence decision-making and to determine whether concepts drawn from naturalistic decision theory and attribution theory are relevant to intake decision-making. A conceptual model for describing decision-making was proposed and tested.

Equivalent materials design was employed. Respondents completed an on-line questionnaire that included 24 vignettes describing hypothetical maltreatment concerns. Race and drug use were manipulated between two instrument versions. Respondents completed a 45-item scale measuring racial and parental drug use bias. They also described their application of policy to decision-making and the degree to which they engaged in different types of mental simulation (a naturalistic decision theory strategy) in making decisions. Eighty-seven child protective services intake decision-makers in Virginia participated (67% response rate).

The findings suggest that respondents' decisions were not influenced by racial bias but were influenced by parental drug use bias. Respondents' parental drug use bias scores were higher than their racial bias scores. Social workers' racial bias scores were higher than other respondents' scores. A set of nine primary decision-factors used frequently in decision-making was identified. Finally, respondents reported using their discretion in adhering to CPS policy depending upon their concern for children's safety.

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The research contributes to understanding the intake decision-making process. Findings related to worker characteristics, relevant decision-factors, and decision-making behaviors may influence practice and future research. Findings also suggest that naturalistic decision theory concepts warrant further attention and study.

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Chapter One

Introduction

Child Maltreatment and Child Protective Services

Children depend upon their caregivers for their protection and wellbeing. Throughout history, some children have received poorer care than others and many have experienced harm. Though its definition and social meaning have changed through time, child maltreatment has always existed.

When caregivers harm children or fail to provide a level of care that meets their minimum needs, society intervenes to protect children and assure their safety and wellbeing. With good intentions, child protective services agencies, the duly empowered agents of society, respond to allegations of child maltreatment by invoking State authority and engaging families in a process intended to result in improved safety. Certainly the child welfare system has protected thousands of children and remains necessary in contemporary society to keep children safe. Many children may be alive due to the efforts of child protective service workers.

However, considered from a social justice perspective, while exercising its duty to protect vulnerable children, the child welfare system, paradoxically, may inadvertently risk harming vulnerable families. Decisions made throughout the protective services process, at

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both worker and administrative levels, may protect or fail to protect families or even lead to harm.

Defining Maltreatment

The meaning of maltreatment has changed considerably over time in keeping with prevailing social values, reflecting different attitudes and beliefs towards children. In contemporary society it remains difficult to adequately define child maltreatment as definitions tend to be contextually situated, varying greatly across jurisdictions. Essentially, child maltreatment is a broadly defined spectrum of abusive or neglectful caregiver behaviors or environmental conditions that place children at risk of harm or that prevent their basic needs from being adequately met (National Association of Counsel for Children [NACC], n.d.). The general terms *abuse* and *neglect* are often employed interchangeably with *maltreatment*, and with each other, in the literature and public discourse. These terms tend to be applied incorrectly across contexts (particularly geographical contexts), often used without a clear understanding of their technical meanings.

Acts or behaviors that might be considered indicative of maltreatment in Virginia, for example, might not be considered maltreatment in another state. Or an act might qualify as one type of maltreatment in one state but be considered a different type of maltreatment in another state. Consider that in North Carolina, by policy, spanking resulting in minor injury may be accepted for response as an allegation of neglect (North Carolina Department of Health and Human Services [NCDHHS], 2007), yet in Virginia the same reported behavior would be considered an allegation of physical abuse (Virginia

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Department of Social Services [VDSS], 2005). Differences in defining maltreatment make research in the area particularly challenging, especially gathering data across jurisdictions as the meaning of maltreatment may vary considerably (Child Welfare League of America [CWLA], n.d.; Child Welfare League of America & National Data Analysis System [CWLA & NDAS], 2005; Gryzlak, Wells, & Johnson, 2005; Howing, Wodarski, Kurtz, & Gaudin, 1989; Landsman & Hartley, 2007).

Generally, maltreatment definitions are found within states' child welfare policies driving child protective services. The categories of maltreatment recognized in Virginia are regulated by policy developed by the Virginia Department of Social Service, derived from law codified in *The Code of Virginia*:

- *Physical abuse* is defined as physical injury to a child that is inflicted by a caregiver or that a caregiver allows to be inflicted by some other person. Physical abuse may also be defined as circumstances that create a substantial risk of death, disfigurement or impairment of a child's bodily functions (Joint Legislative Audit and Review Committee [JLARC], 2005, p. 11).
- *Physical neglect* occurs when there is a failure by a caretaker to provide food, clothing, shelter, or supervision of a child to the extent that the child's health or safety is endangered. Physical neglect is also defined to include cases of abandonment and situations in which the parent is incapacitated or absent and thus is severely limited in his or her ability to perform childcare tasks. The regulations provide that when neglect is the result of poverty and there are no outside resources available to the family, the parent or caretaker will not be deemed to have neglected

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the child. The regulations also define neglect to include medical neglect. This occurs when a caretaker fails to obtain or follow through with medical, mental, or dental care, and this failure could result in illness or developmental delays. Medical neglect also includes situations in which medically indicated treatment is withheld (JLARC, 2005, p. 11-12).

- *Mental abuse or neglect* "occurs when a caretaker intentionally inflicts mental injury on a child or intentionally allows mental injury to be inflicted. Mental abuse also occurs when a caretaker creates a substantial risk of impairment of mental functions" (JLARC, 2005, p. 13).
- *Sexual abuse* occurs when a caretaker commits, or allows to be committed, "any act of sexual exploitation or sexual act upon a child" (JLARC, 2005, p. 13).

Note that the maltreatment categories have fairly vague definitions. Vague wording is commonly found in maltreatment definitions across jurisdictions (Benbenishty, Segev, Surkis & Elias, 2002; Gryzlak et al., 2005). Definitions tend to be established to allow maximum discretion to child protective services in interpreting policy and identifying behaviors and conditions as maltreatment and deciding how to respond to maltreatment allegations (JLARC, 2005).

By most standards, Virginia has developed fairly narrow maltreatment standards (JLARC, 2005), although they are less clearly defined than in other states. Some critics believe that maltreatment definitions should be much more clearly and consistently defined, arguing that vague definitions are applied inconsistently, generally to the detriment of poor, minority families (Besharov & Laumann, 1996; Huxtable, 1994).

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Child Welfare and Maltreatment Statistics

Although it is clear that the child maltreatment problem in America is significant, it has been difficult to accurately quantify at both the national and local levels. Disparities in measurement procedures, differences in legal criteria for defining maltreatment across states and localities, changing policy interpretations, and incomplete data collection contribute to complexities in documenting and researching the problem (Landsman & Hartley, 2007; Stehno, 1982).

Despite their variation, the statistics that are available document a serious problem. Prevent Child Abuse America estimates that a child is maltreated every 30 seconds in this country (Prevent Child Abuse America, n.d.). All too frequently, the maltreatment is severe or chronic enough to be lethal. It is estimated that three children in the United States die from maltreatment every day (Fromm, 2001).

National Statistics

National statistics provided by the United States Department of Health and Human Services, Administration on Children, Youth, and Families (USDHHS, 2009), indicate the scope of the problem. In 2007 (the most recent fiscal year with complete data available) Child Protective Services (CPS) agencies across the nation received 3.2 million maltreatment referrals pertaining to 5.8 million children. For various reasons CPS agencies chose not to respond to one-third of those reports (38.3%), but 62% were accepted (screened in) for an official response by a local CPS agency. Children were officially found to be maltreated in some manner in approximately 25% of those cases. More than 75% of the cases CPS responded to ended with the determination that the children

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involved had not been maltreated. Twenty-four percent of the maltreatment complaints resulted in an official judgment that children had been maltreated. Specifically, 794,000 children were determined to have been maltreated in 2007. Children experienced different types of maltreatment: neglect (59%), physical abuse (10.8%), sexual abuse (7.6%) or emotional or psychological maltreatment (4.2%). In 2007 an estimated 1,760 children died from child maltreatment. Some 20.7% of victim children and 3.8% of non-victim children (siblings and others) were placed in foster care. Almost one-half of the maltreated children were Caucasian (46.1%) and 21.7% were African American.

Virginia Statistics

According to the Virginia Department of Social Services (2009) 58,060 child maltreatment concerns were reported to Virginia's central child maltreatment hotline or to local social service departments during fiscal year 2007. Not every report was accepted for investigation. A reported 27,864 (48%) concerns were screened out, but 30,196 (52%) reports were screened in for a response. Maltreatment investigations conducted during fiscal year 2007 involved 61,342 children, or roughly 3.4% of Virginia's 1,826,179 children.

Of the reports actually investigated, 4,377 were *founded*, meaning adequate evidence was available to determine that maltreatment had occurred or the investigator's assessment revealed sufficient risk to the child to warrant further State intervention. These cases involved 6,487 children (Virginia Department of Social Services [VDSS], n.d.). Consequently, 8,475 children were involved in *unfounded* investigations. In these situations either evidence was not sufficient to indicate that the alleged victim child was

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maltreated or the risk to the child was assessed as minimal or non-existent, requiring no further intervention or mandated service. Family assessments were conducted with 30,289 children (VDSS). According to VDSS, children experienced different types of maltreatment including neglect (61%), physical abuse (28%), sexual abuse (14%), medical neglect (3%) and emotional maltreatment (1%). Sixty children died from maltreatment. In fiscal year 2007, 59% of maltreatment victims were Caucasian and 35% were African American.

The Costs of Maltreatment

Although child maltreatment most directly impacts individual children and families, its effects radiate beyond private homes to be felt by communities and the nation. Aside from the high cost in human capital, child maltreatment is an expensive problem requiring an expensive solution. The Urban Institute has estimated that the national cost for funding child welfare services in 2004 was $23.3 billion dollars (Scarcella, Bess, Zielewski, & Geen, 2006).

Child maltreatment is equally expensive at the local level. According to the Joint Legislature Audit and Review Committee [JLARC] (2005), Virginia allocated 21.5 million dollars to child protective services, roughly 20% of the State's $105 million general service allocation. Clearly, child maltreatment is a serious national and local problem, taking its toll on both children and taxpayers.

Child Protective Services Intake: Responding to Maltreatment

All states generally respond to child maltreatment complaints through a similar process. The process has multiple phases, but generally involves receiving maltreatment

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reports, determining whether maltreatment allegations fall within the purview of the child protective services agency, responding to the report in a way intended to assess risk of harm, and, when necessary, providing or coordinating services that will ensure the alleged victim child's safety and wellbeing (USDHHS, 2009).

Child Protective Services in Virginia are delivered following a protocol outlined in State policy. The protocol dictates particular actions that should be taken at different decision points throughout the life of a case. However, localities are allowed a great degree of discretion in determining how to respond to a maltreatment complaint (JLARC, 2005).

Decisions essentially act as transition points for cases entering different phases of the CPS process. Intake is the first phase and includes: 1) establishing validity, 2) determining appropriate response (investigation or family assessment); 3) and resolution by screening a referral in (responding) or screening it out (no response) (JLARC, 2005; VDSS 2005). Particular actions occur during each of these phases and at least one major decision is made in each phase:

Intake. In Virginia concerned citizens who file a complaint alleging maltreatment are called *reporters* and their concerns are documented in child protective services *reports*. Reports are received directly by local agencies but the majority of reports are called in to the central Child Protective Services Hotline.

Whether a report is made to the Hotline or the locality, the same initial process occurs. The reporter's concerns are documented in an automated reporting system, and the victim(s) and alleged maltreating caregiver(s) are screened for child protective services history in Virginia. Once information has been entered into this central data system (in

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reports that do not clearly dictate an emergency response), the report is reviewed for *validity*, generally by an agency administrator and not by the receiving worker.

Two main decisions are made during this phase by the receiving, or *intake*, worker: the decision to officially document a reported concern and the determination of urgency based on the nature of the allegations. Although the majority of concerns received by either the Hotline or localities are documented as reports, not all concerns are managed in the same way.

Policy around documenting concerns as reports is discretionary. While it appears the intent of State policy is to record all concerns (VDSS, 2005), regardless of their substance, in practice workers receiving reporters' concerns exercise considerable discretion in how they handle allegations. Based on the information provided by reporters, some concerns are not entered as reports. Localities, like individual workers, also exercise discretion in documenting reports. In some localities all concerns are documented as reports, yet in others intake workers decide which concerns they will accept as maltreatment reports.

Once this informal determination is made by the receiving worker that concerns will be documented as a report, the perceived urgency is assessed based on the information the reporter provided. Reports assessed as emergencies are processed more rapidly than reports deemed less urgent. Clear standards do not exist for discriminating between emergency and routine concerns (VDSS, 2005). Except in the case of localities employing Structured Decision-Making, individual workers use their discretion in assessing the circumstances.

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Establishing validity. A determination must be made as to whether the reported concerns meet the legal definitions of maltreatment, and, thus, whether the agency can intervene. If concerns appear to meet the criteria, *based on the assessor's interpretation both of the reported allegations and the legal and policy criteria*, then the report is considered valid and is accepted, or *screened-in*, by the agency for a response. When concerns are received that do not meet the maltreatment definitions, those reports are *screened-out* meaning no further action is taken. In many states this decision is made by the hotline, but in Virginia, only localities can determine the validity of a report (VDSS, 2005).

Generally senior line workers, supervisors, or administrators determine validity. Great discretion surrounds establishing validity as the decision-maker must determine whether allegations fit the criteria provided in Virginia's maltreatment definitions, which are considerably vague. Similar allegations may be perceived differently by different decision-makers; in one situation a report might be validated and screened-in for a response, yet when received by a different person in the same agency, or in a different locality, might be screened-out and closed. Decision-making at this stage has been shown to be influenced by a variety of individual and contextual factors (CWLA, n.d.; Gryzlak et al., 2005; Howell, 2008).

Determining appropriate response (investigation or family assessment). When agencies validate child protective service reports a response to the report is required. Virginia employs a Multiple Response System, meaning that not all referrals are managed in the same way. The multiple response system allows for reports to be assigned different

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responses based on the severity of the alleged concerns. Serious concerns that place a child at significant harm require an investigation. Concerns that meet the definition of maltreatment but do not represent serious or immediate risk receive an assessment response (The Center for Child and Family Policy, 2004). All reports that are screened-in (validated) during the intake process must be assigned by the locality to a *response track*: *investigation* or *family assessment*. Prior to 1998 (JLARC, 2005) in Virginia all validated reports were investigated, meaning that a child protective services investigative social worker initiated a formal investigation of the maltreatment concerns.

Intake is a vital child protective services task (Wells, Lyons, Doueck, Brown, & Thomas, 2004). It is arguably one of the most important tasks with serious potential outcomes that include positive or negative consequences for children and families. Each of the maltreatment reports mentioned earlier in the chapter involved an intake decision being made. As those numbers suggest, intake decision-makers' decisions are crucial in protecting vulnerable children—and in protecting families by keeping them out of the system when its protections are not needed.

Despite its significance to the child protection process, intake decision-making remains poorly understood. Compared to other phases of the child protection process intake has received scant attention. Few empirical studies have been conducted to learn about intake decision-making or determine best practices in intake screening, suggesting this crucial phase of the child welfare continuum remains significantly devalued. Fleeting interest in child protective services intake practices has been observed in the literature with studies appearing one or two times per decade in the 1980s, 1990s and early 2000s.

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Hutchison's (1989) study of intake screening practices is acknowledged as the first study to address child protective services intake decision-making. Hutchison examined the factors that were used in making decisions and that appeared to have predictive influence on the decision to accept a report. The study also examined the interaction between case characteristics, practitioner characteristics, reporter characteristics and type of allegation. Hutchison also examined whether other variables actually contributed to the decision-making process. Intake staff in two child protective service agencies completed a screening form developed for the study. The forms were used during the one-month study period in summer, 1987. Two hundred twenty-eight reports were captured on the screening forms. Regression analysis identified six screening decision predictors. If the reporter was the non-offending parent, the report was less likely to be screened in. If the case was already an open case in CPS and a new allegation was received, the new allegation was less likely to be screened in. On days when a high number of reports were received, a report was less likely to be screened in. However, reports indicating clear evidence of physical abuse, neglect, or sexual abuse were likely to be screened in by intake staff. Two additional particularly important findings emerged. First, where the allegation was received had a statistically significant relationship with the screening decision. Significant differences in screening decisions were found to exist between the two sites. Second, alleged victim race was found to have an influence on the screening decision. At one site, reports concerning nonwhite families were more likely to be screened in for a response.

Wells, Stein, Fluke, and Downing (1989) surveyed state child welfare agencies across the United States in 1987 to gather information on screening practices and policies.

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At that time, they found that only 44 states' child welfare policies included particular regulations regarding intake screening. Their initial survey was followed shortly thereafter with a survey of 100 counties in eight states. Purposive sampling was used to develop a stratified sample that represented supervisors from urban and rural counties. The study achieved an 82% response rate. Wells et al. compared respondent' comments about the criteria that drove intake decision-making against state policies governing the respondents' geographic areas. They found considerable discrepancy between the criteria intake supervisors claimed they relied upon in decision-making and the criteria established by policy. The researchers concluded that intake decision-making was "idiosyncratic" (p. 46) with staff relying upon their own judgment, ungoverned by official state protective services policy.

In a follow-up study, Wells, Fluke, and Brown (1995) further examined screening practices reporting on data gathered in 1986. Wells et al. gathered screening data from 12 child protective service agencies in five states. Each site met the criterion of receiving a minimum 100 maltreatment reports monthly. Intake workers were required to collect data from CPS reports on screening forms. During the study period, staff recorded 2,504 unduplicated reports. Neglect was alleged in 36% of the reports and physical abuse in 21%. The researchers noted that ambiguity in many reports meant it was necessary for intake workers to rely on their own judgment in many cases in determining whether a report met legal and policy criteria to be screened in, although in some cases details in the allegations left no room for indecision. Significant variation was found in the screening practices between sites, with the decision to screen in reports ranging from a low 35% of

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reports to 100% in one agency. Across the sites, 70% of all reports alleging a physical injury were screened in. Reports concerning African American children ($N = 232$) were screened in 90% of the time compared to 68% of reports involving Caucasian children. Unless accompanied by allegations of other forms of maltreatment, drug use concerns were screened in 59% of the time compared to 64% when other concerns were alleged. Reports involving children younger than two years-old were screened in at a 74% rate. Referrals concerning girls were less likely to be screened in than those concerning maltreatment of boys or girls and boys in the same home. Reports alleging serious injury or sexual abuse were more likely to be screened in compared to other types of maltreatment.

Wells et al. (1995) observed that the variable with the strongest influence was the site where the decision was made. Decision-making clearly varied significantly between sites, even those governed by the same child protective service policy. Finding that 25% of allegations that met policy criteria were screened out, Wells et al. stated (p. 542), "Regarding screening activity itself, one of the most startling findings of this study was the degree to which some agencies were not investigating what appeared to be bona fide allegations of child maltreatment…children with the same maltreatment allegations and injury status would have dramatically different chances of being investigated by CPS depending on the jurisdiction in which they lived." The researchers advocated for the development of a structured decision-making process that could be employed during intake.

Wells et al. (2004) returned to the data collected in the Wells et al. (1995) study to explore "decision ecology" (p. 982). This study reported findings that were not reported in

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Wells et al. (1995). In the 1995 study CPS staff completed a 44-item questionnaire providing information about duties, work experience, attitudes about CPS roles and responsibilities, service availability, job satisfaction, training, education, worker demographics, policy and procedures, and factors believed to influence decision-making. Twenty-two collateral agencies from 11 data collection sites who provided services to the same clients were also surveyed for information about relationships with CPS and opinion on their local CPS agency's effectiveness. In the analysis related to this study, the relationship between collateral agencies and CPS had a significant effect in that more referrals were accepted in sites where there were positive relationships between CPS and collateral agencies. Intake workers who reported believing that CPS has a broad role that includes protecting children at any level of risk were more likely to accept referrals than those who felt CPS has a more limited role. Supervisors were found to screen more referrals than workers in five sites.

Gryzlak et al. (2005) used the data collected in the Wells et al. (1995) study to determine whether alleged victim children's race had an effect on the screening decision. That study has been described earlier in this section. In their secondary analysis of the data, Gryzlak et al. sampled 960 cases from across the five sites to use in logistic regression analysis. The regression revealed that neither the child's race nor the screening worker's race had an impact on the screening decision. Several variables did contribute significantly to the model, including the site where a report was received (reports were 6 to 8.5 times more likely to be screened in at some sites), specific injury alleged (8 times more likely to be screened in), sexual abuse allegation (4.8 times as likely to be screened in), female

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victims (60% more likely to be screened in than reports on males or males and females together). In additional analyses, the researchers found that 76% of reports alleging sexual abuse of Caucasian children were screened in compared to only 57% of similar reports involving African American children. Other maltreatment concerns were more likely to be accepted when the alleged victim children were African American. Sixty-two percent of the reports involving African American children were screened in compared to 42% of the reports involving Caucasian children. African American intake workers screened in 65% of reports they received compared to Caucasian workers who screened in slightly less than 50% of theirs. Together, African American and Caucasian workers screened in 52% of cases involving Caucasian children and 44% of cases involving African American children. When the child and worker were the same race, African American workers screened in 46% of the reports and Caucasian workers screened in 49%. When the worker was African American and the alleged victim children were Caucasian, workers screened in 77% of the reports. In contrast, when the worker was Caucasian and the children African American, they screened in only 40% of the reports. The researchers acknowledged that their findings were contradictory, but noted that other research findings have been similarly contradictory.

In the previous section the limited number of empirical studies related to intake practices and decision-making were reviewed to present the state of the knowledge about the intake process. In the next portion of the chapter, consideration will be given to the question of whether intake decision-making is a flawed practice, particularly vulnerable to bias.

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Child Protective Services Intake Decision-Making:
A Potentially Flawed Process in a Flawed System?

Is child protective services intake decision-making potentially a flawed process or one that is vulnerable to decision-makers' individual biases? That question concerned the researcher based on experience working in intake for a child protective services agency. Interest in that question was heightened after being exposed to the findings of the research investigating disproportionality in the American child protection system. Across the child protection continuum evidence suggests that African American children and Caucasian children are treated differently, with outcomes tending to be decidedly negative for African American children. Some of the evidence was presented in the discussion of the intake studies that have been conducted. Other evidence is found in the growing body of literature exploring disproportionality. Concerns raised about the differential treatment of Caucasian and African American children in the child welfare literature will be summarized, acknowledging but not being able to comprehensively review the great body of literature that has evolved in this area, and concerns relating to intake decision-making will be highlighted. This information is discussed because of its importance to this dissertation's central question that particular variables may influence intake decision-making and that bias may explain that influence at least partially.

Child Welfare and African American Children[1]

[1] For a thorough historical review of service provision to African American children from the time prior to the settlement house movement to the current child welfare system, see Smith and Devore (2004) and Brown and Bailey-Etta (1997). The term "African American" is used for consistency (and is used interchangeably with "Black" in the literature), acknowledging it is a contemporary term. At times in the past, children who would have been described as "Black" were not considered American.

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African American children have historically been treated differently by the child welfare system. There is great agreement that African American children and families were essentially ignored by charitable organizations, mutual aid societies, and the settlement houses (Hogan & Siu, 1988; Smith & Devore, 2004). African Americans were considered inferior to European Americans and ethnic immigrants and were rarely served by these groups (Smith & Devore). Segregated child welfare agencies were created in the late 1920s and the needs of African American children living in urban areas were met by these agencies. However, despite the existence of service organizations, the majority of these children's needs were served by their local communities and extended family networks until the 1950s and 1960s (Hogan & Siu; Jimenez, 2006).

Jimenez (2006) describes a "shadow system" (p. 889) of loosely coordinated formal and informal efforts that developed as a means of protecting children within the African American community. This system was necessary because the established child welfare system could not be relied upon for protection and service. McRoy (2005) argued that the child welfare system was not developed with African American children's cultural and racial needs in mind. She observes that the foster care system originated to serve only Caucasian children needing substitute care. African American children were rarely placed in foster care before the 1960s when there was a dramatic swell in their presence. According to Smith and Devore (2004), it became clear in the 1970s that they had grown into the largest group of children involved in the child welfare system. Billingsley and Giavonnoni's seminal book *Children of the Storm: Black Children and American Child Welfare* brought African American children's negative experiences in the system to the

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profession's attention in 1972. Attention drifted away from the topic and it was largely ignored during the 1980s and 1990s.

In 1999, Morton's highly critical article "The Increasing Colorization of America's Child Welfare System: The Overrepresentation of African-American Children" ignited attention on African American children in the system. Morton was responding to the consistent findings of the National Incidence Studies that no evidence existed to explain why such a large number of African American children were in foster care given that comparable rates of maltreatment between races had been found consistently in that series of studies. Morton demanded an explanation for the disproportionate presence of African American children in the child welfare system, particularly in foster care. He argued that if the National Incidence Studies had repeatedly found no evidence to support theories that African American children were maltreated more than Caucasian children then systemic bias in the child welfare process must be considered as the most plausible explanation. He also argued that decision-making practices in child protective services likely, then, perpetuated institutionalized racism.

Morton's article propelled the *crisis* of African American children's treatment in the child welfare system into the child welfare discourse and launched disproportionality research in child welfare. Indeed, it can be argued that the majority of research carried out after 1999 related to African American children's child welfare experience has been motivated by Morton's challenge. Morton described the phenomenon as *disproportionality* and researchers have pursued the issue vigorously. Smith and Devore (2004) highlight an apparent paradox: African American children, once ignored and excluded from the child

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welfare system, have come to be overrepresented in that same system with their needs continuing to be ignored.

National Incidence Studies

In addition to Morton, many of the sources presented in this chapter consider the findings of the National Incidence Studies to be conclusive evidence that race is not connected inherently to maltreatment. Findings from the studies are used to argue that disproportionality is less a function of natural distribution of maltreatment across racial groups and more a function of racial bias at systemic and personal levels (Cross, 2008). The findings are now almost unanimously considered credible and possessing an impressive degree of generalizability (Derezotes & Poertner, 2005; Hill, 2006) and are essentially accepted as fact in the literature. Heading the study team, Sedlak and Broadhurst (1996, ¶1) describe the national incidence studies as "…the single most comprehensive source of information about the current incidence of child abuse and neglect in the United States." These studies were congressionally-mandated to "estimate the current national incidence, severity and demographic distribution of child maltreatment" (Westat, Inc., n.d., p. 1) during specified periods. Three NIS studies have been carried out and a fourth was recently completed. NIS-1 was conducted in 1979, NIS-2 in 1986, and NIS-3 in 1993 (Sedlak et al., 2008). Findings from the data collected for NIS-4 between 2005 and 2006 were expected to be available in December, 2008, but have not yet been released.

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NIS Design and Methodology[2]

All four studies have employed a design that allows for national estimates of child maltreatment to be generated based on a nationally representative sample of cases (Sedlak & Broadhurst, 1996; Sedlak et al., 2008). NIS-4 improves upon previous study methodology and appears to be the most rigorous design employed to date. Data from 122 nationally representative counties is collected in NIS-4, an increase from 42 counties sampled in NIS-3 (Sedlak et al.). For the fourth study, NIS collected data from 11,321 professionals (compared to 5,600 in NIS-3) at 1,697 community sentinel agencies (compared to 842 in NIS-3) and from 126 local CPS programs (compared to 42 in NIS-3) (Sedlak et al.).

Data are collected from two sources: CPS agencies that serve the sample counties and county "sentinels." Sentinels are community professionals who frequently interact with children and would be likely to encounter maltreated children. Sentinels include law enforcement, private medical providers (including family physicians and pediatricians), hospitals, mental health centers, public health departments, juvenile justice services, public housing programs, homeless and runaway shelters, daycare centers and public schools (Sedlak et al., 2008).

Sentinels provide data on children they suspect have been maltreated and CPS agencies provide data on children they have actually investigated. Each provides data during a specified three-month study period. Sentinels provide information on suspected maltreated children as they encounter them. CPS provides retrospective case data from a

[2] For a complete description of NIS-4 methodology, see Sedlak et al., 2008 and the NIS website.

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past time frame that corresponds to a sentinel reporting period. Prior to participating, sentinels and CPS agencies are trained to collect data that applies the NIS maltreatment standards to ensure, to the degree possible, data consistency (Sedlak et al., 2008).

In order to manage widely varying state maltreatment definitions, NIS operationalizes maltreatment using two standards: Harm Standard and Endangerment Standard. To meet the Harm Standard criteria, a child must present with moderate to severe maltreatment (physical, emotional, and/or sexual abuse OR physical or emotional neglect) that is demonstrable. Physical evidence is available to the sentinel or CPS agency that allows for objective identification of the maltreatment. All children who are identified under the Harm Standard (who were actually investigated by CPS) are also considered endangered. The criteria for meeting the Endangerment Standard is broader to also capture children who are considered "at risk" for being maltreated but who do not present with demonstrable indicators. Children who were not investigated by CPS are counted under the Endangered Standard if a non-CPS sentinel reported believing the child to have been, or be at risk of being, maltreated.

Each case reported is reviewed and coded by a number of NIS staff reviewers to ensure consistent application of the standards. NIS staff eliminate duplication in reports so than any reported child is only counted once. They also remove children whose alleged maltreatment fails to meet the operationalized maltreatment definitions established for the study. Information was provided for 11,930 unduplicated maltreatment concerns, sampled from the entire 140,206 reports received by participating agencies. Records are weighted so that incidence estimates may be generated from the data collected (Sedlak et al., 2008).

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Prior to conducting NIS-4, Westat (the contractor) conducted three additional studies to improve upon the NIS-3 study design and to ensure the interpretability and quality of the findings.[3] One study examined policies and procedures CPS agencies follow in addressing child maltreatment reports. A second examined CPS intake and screening processes at the sample sites to determine how standards are applied in practice and to determine how reports made that do not meet criteria for investigation are disposed of or handled. A similar study was conducted to determine how sentinels define and recognize maltreatment and determine when to report concerns to CPS.

Key findings. There are a number of key findings from the three previous National Incidence Studies that would likely be of interest to both child welfare practitioners and scholars. The findings are summarized in Figure 1.[4]

Incidence	• The number of children whose maltreatment met the Harm Standard Definition rose from 931,000 children in 1986 to 1,553,800 in 1993 (67%+). • The number of children whose maltreatment met the Endangerment	• The number of children at risk of being physically abused rose from 311,500 in 1986 to 614,100 (97%+). • The number of children at risk of being sexually abused rose from 133,600 in 1986 to 300,200 in 1993 (125%+).

[3] For detailed methodology descriptions of the supplemental studies, see Sedlak et al., 2008.

[4] For a full account of NIS findings for the three NIS studies, as well as descriptions of the methodologies employed in those studies, see http://childwelfare.gov/systemwide/statistics/nis.cfm

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	Standard Definition rose from 1,424,400 in 1986 to 2,815,600 in 1993 (98%+). • The number of seriously injured children rose 299% between 1986 and 1993, from 141,700 to 565,000. • The number of potentially abused (but not demonstrably harmed) children rose from 590,800 in 1986 to 1,221,800 in 1993 (107%+). • The number of potentially maltreated (but not demonstrably harmed) children rose from 917,200 in 1986 to 1,961,300 in 1993 (114%+). • The number of sexually abused children rose from 119,200 in 1986 to 217,700 in 1993 (83%+). • The number of physically neglected children rose from 167,800 in 1986 to 338,900 in 1993 (102%+). • The number of emotionally abused children rose from 49,200 in 1986 to 212,800 in 1993 (333%+). • The number of physically abused	• The number of children at risk of being emotionally abused rose from 188,100 in 1986 to 532,200 in 1993 (183%+). • The number of children at risk of being physically neglected rose from 507,700 in 1986 to 1,335,100 (163% +). • The number of children at risk of being emotionally neglected rose from 203,000 in 1986 to 585,100 in 1993 (188%+). • The number of children actually harmed or endangered quadrupled between 1986 and 1993. • The number of physically neglected children was 2½ times greater in 1993 than in 1986. • The number of emotionally neglected children was 2½ times greater in 1993 than in 1986. • The number of emotionally abused children 2½ times greater in 1993 than in 1986. • The number of children physically abused nearly doubled between 1986 and 1993. • The number of children sexually abused doubled between 1986 and 1993. • The number of maltreated children who were actually harmed was 2/3 higher in

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	children rose from 269,700 in 1986 to 381,700 in 1993 (42%+).	NIS-3 than in NIS-2. • A child's risk of experiencing harm through maltreatment was 1½ times greater in 1993 than in 1986.
Child Characteristics	• In 1996, girls were sexually abused three times as often as boys. • Boys were more likely to be emotionally neglected than girls. • Boys were more likely to be seriously injured than girls. • Beginning at age 3, children became increasingly vulnerable to sexual abuse as they aged. • There were no racial differences in rate of maltreatment (or sustained injuries caused by maltreatment)in 1986 or 1993. • White children were more likely to be sexually abused by a birth parent than other children.	• White children were more likely to be physically abused by a non-parent perpetrator than other children. • White children were more likely to sustain a serious injury than other children. • White children were more likely to sustain a moderate injury than other children. • White children were more likely to sustain an injury documented due to maltreatment than other children. • Non-white children were more likely to be sexually abused by a non-parent perpetrator than other children.
Family Characteristics	• Children with a single parent were 77% more likely to be physically abused than children living with both parents. • Children living with a single parent were 63% more likely to be at risk	• Children whose annual family income was less than $15,000 were 56 times more likely to be educationally neglected than children whose annual family income exceeded $30,000. • Children whose annual

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	of being physically abused than children living with both parents. • Children living with a single parent were 87% more likely to be physically neglected than children living with both parents. • Children living with a single parent were 165% more likely to be at risk of being physically neglected than children living with both parents. • Children living with a single parent were 74% more likely to be emotionally neglected than children living with both parents. • Children living with a single parent were 64% more likely to be at risk of being emotionally neglected than children living with both parents. • Children living with a single parent were 220% more likely to be at risk of educationally neglected than children living with both parents. • Children living with a single parent were 80% more likely to be at risk of being seriously harmed than children living with both parents. • Children living with a single parent were 90% more likely to be at risk	family income was less than $15,000 were 44 times more likely to be maltreatment in some way than children whose annual family income exceeded $30,000. • Children whose annual family income was less than $15,000 were 40 times more likely to have been harmed by physical neglect than children whose annual family income exceeded $30,000. • Children whose annual family income was less than $15,000 were 48 times more likely to be at risk of physical neglect than children whose annual family income exceeded $30,000. • Children whose annual family income was less than $15,000 were 14 times more likely to have actually have been harmed by maltreatment than children whose annual family income exceeded $30,000. • Children whose annual family income was less than $15,000 were 12 times more likely to be at risk of being harmed by maltreatment than children whose annual family income exceeded $30,000. • Children whose annual family income was less than $15,000 were 60 times more likely to die from maltreatment than children whose annual family income exceeded $30,000. • Children whose annual family income was less than

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	of being moderately harmed than children living with both parents. • Children living with a single parent were 120% more likely to be at risk of being maltreated than children living with both parents. • Children living in single father-headed households were $1^{2/3}$ more likely to be physically abused than children living in single mother-headed households. • Children with 4 or more siblings were 3 times as likely to be physically neglected as only children. • Children whose annual family income was less than $15,000 were 22 times more likely to be harmed by maltreatment than children whose annual family income exceeded $30,000. • Children whose annual family income was less than $15,000 were 25 times more likely to be endangered by maltreatment than children whose annual family income exceeded $30,000. • Children whose annual family income was less than $15,000 were 18 times more likely to be sexually abused than	$15,000 were 22 times more likely to be at risk of dying from maltreatment than children whose annual family income exceeded $30,000. • Children whose annual family income was less than $15,000 were 22 times more likely to have experiences serious harm than children whose annual family income exceeded $30,000. • Children whose annual family income was less than $15,000 were 22 times more likely to be at risk of experiencing serious harm than children whose annual family income exceeded $30,000. • Children whose annual family income was less than $15,000 were 18 times more likely to have experienced moderate harm than children whose annual family income exceeded $30,000. • Children whose annual family income was less than $15,000 were 20 times more likely to be at risk of experiencing moderate harm than children whose annual family income exceeded $30,000. • Children whose annual family income was less than $15,000 were 57 times more likely to have a documented injury due to maltreatment than children whose annual family income exceeded $30,000. • Children whose annual

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	children whose annual family income exceeded $30,000.	family income was less than $15,000 were 39 times more likely to be at risk of sustaining an injury that could be documented as due to maltreatment than children whose annual family income exceeded $30,000. • The strongest correlate for maltreatment is family income. The poorest families experience the highest rate of maltreatment.
Perpetrator Characteristics	• Birth parent(s) maltreated 78% of the maltreated children in the sample. • Birth parent(s) physically abused 62% of the physically abused children in the sample. • Birth parent(s) physically neglected 91% of the physically neglected children in the sample. • Birth parent(s) emotionally abused 81% of the emotionally abused children in the sample. • Birth parent(s) sexually abused 25% of the sexually abused children in the sample. • Female perpetrators maltreated 65% of the maltreated children in the sample. • Male perpetrators maltreated 54% of the maltreated children in the sample.	• Fathers neglected 43% of the neglected children in the sample. • Fathers maltreated 46% of the maltreated children in the sample. • Male (non-parent) perpetrators maltreated 85% of the non-parent maltreated children in the sample. • Female (non-parent) perpetrators maltreated 41% of the non-parent maltreated children in the sample. • Males physically abused 67% of the physically abused children in the sample. • Females physically abused 40% of the physically abused children in the sample. • Males sexually abused 89% of the sexually abused children in the sample. • Females sexually abused 12% of the sexually abused children in the sample. • A caregiver younger than 26

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	• Mothers maltreated 75% of the maltreated children in the sample. • Mothers physically abused 60% of the physically abused children in the sample. • Fathers physically abused 48% of the physically abused children in the sample. • Mothers neglected 87% of the neglected children in the sample.	years old sexually abused 22% of the sexually abused children in the sample. • A non-parent caregiver younger than 26 years old maltreated 40% of the children maltreated by a non-parent. • One-half of all perpetrators were employed.
Child Protective Services Investigation	• Only 28% of children who were actually harmed through maltreatment were investigated by CPS in 1993 (44%-). • CPS investigated less than half of harmed children's reports and less than half of the reports for children believed to be at risk for maltreatment—except referrals made by law enforcement.	• CPS investigated only 16% of harmed children reported by schools. • CPS investigated only 26% of children reported to have serious injuries. • CPS investigated only 26% of children reported to have moderate injuries.

Figure 1

Summary of NIS-3 Findings[5]

[5] Adapted from Sedlak and Broadhurst, 1996, from website sections: Distribution of Child Abuse and Neglect by the Child's Characteristics, Distribution of Child Abuse and Neglect by the Family Characteristics, Distribution of Child Abuse by the Perpetrator's Characteristics, Child Protective Services Investigations (Information is considered public domain and used courtesy of the Child Welfare Information Gateway).

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As the findings suggest, family structure and family income emerged in the NIS-3 analyses as factors highly correlated with maltreatment. Perhaps the most pertinent finding to this dissertation, given the argument that disproportionality exists in the child welfare system, is that incidence rates were not independently influenced by race in NIS-3, nor were any significant overall race differences identified in NIS-1 or NIS-2 (Sedlak & Broadhurst, 1996; Sedlak & Schultz, 2005). Sedlak and Schultz (2005) have acknowledged this to be a consistently puzzling finding across the incidence studies. They explain,

> …in light of the differential distribution of people of color at lower income levels in the general population…if low income is a risk marker for abuse and neglect, and families of color are more likely to have low incomes, then one would expect children of color to be at a higher risk of abuse and neglect…The NIS findings are also perplexing in view of the fact that children of color are overrepresented within the child welfare system, well beyond their relative representation in the general child population. (p. 48)

In secondary analyses, Sedlak and Schultz (2005) found an interaction between race and injury severity and maltreatment type. African American children were more likely to be investigated when injuries were described as serious (or fatal), when reports were received from professionals, when parents were described as substance abusers, and when emotional or physical neglect was alleged. However, in no case was race an independent predictor of maltreatment.

In contrast, when race and family income are considered, but other factors are controlled in statistical models, Caucasian children are at a higher risk of physical neglect

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and abuse as well as sexual abuse. Under this model, Caucasian children have a 10% likelihood of being maltreated while African American children only have only a 6% likelihood. Caucasian children were also found to be more likely to be maltreated in sibling groups comprised of more than four children (Sedlak & Schultz). Based on their findings, Sedlak and Schultz concluded that African American children's risk of maltreatment is, in fact, less than Caucasian children's.

In considering the apparent conflict between the NIS findings and the reality of disproportionality (in service discrepancy and minority overrepresentation in substitute care), Morton (1999) suggests that if the methodology is sound, as he contends it is, then other explanations must be considered to understand the discrepancy. Morton hypothesizes alternatives to flawed methodology: minorities are disproportionately reported, minorities are disproportionately investigated, or decision bias influences case outcomes at the substantiation stage. Sedlak and Broadhurst (1996) concurred, stating,

> The NIS findings suggest that the different races receive differential attention somewhere during the process of referral, investigation, and service allocation, and that the differential representation of minorities in the child welfare population does not derive from inherent differences in the rates at which they are abused or neglected. (Distribution of Child Abuse and Neglect by Child's Characteristics Section, no page number)

Influence of NIS study data on disproportionality research. NIS data provide compelling evidence that historic assumptions about maltreatment being a function of race and socioeconomic class are, perhaps, baseless myths (Cross, 2008) with little or no

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empirical support. If child maltreatment were, in reality, more prevalent in African American families and communities than in Caucasian families and communities, as has been assumed, then that prevalence pattern should be present for African Americans in estimates generated from NIS data (Barth, 2005; Sedlak & Schultz, 2005). This has not been the case. A greater rate of maltreatment incidence has not been found for African Americans. NIS studies consistently have found no statistical relationship between maltreatment incidence and race. In fact, when risk factors are controlled in the analysis, African American children actually demonstrate a lower risk for maltreatment than Caucasian children (Sedlak & Schultz).

The Government Accountability Office (2008b) has accepted the NIS evidence and reported in testimony to the Subcommittee on Income Security and Family Support, Committee on Ways and Means, House of Representatives on July 31, 2008 that "disproportionality occurs despite the fact that national studies have shown that children suffer from abuse and neglect at the same rates regardless of race or ethnicity" (p. 1). It is now commonly agreed in the literature that the NIS findings are acceptable evidence that there is no difference in the rate of maltreatment between Caucasian and African American children and that minority children are not at greater risk of maltreatment than Caucasian children (McRoy, 2005). The disproportionality research will be briefly reviewed in the next section.

Disparity in the Child Welfare System and Human Service Systems

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Child Welfare[6]

The disproportionality literature contends that race causes children and their families to be treated differently in the child welfare system (Hill, 2006; Hines, Lemon, Merdinger, & Wyatt, 2004; McRoy, 2005; The Race Matters Consortium, n.d.). African Americans are vulnerable to bias and racism in this system just as they are in others because of privilege, social inequity, and institutionalized racism (The Race Matters Consortium). In child welfare, African American children are unquestionably overrepresented in foster care and receive inadequate/incomparable services compared to Caucasian children (Derezotes & Poertner, 2005; Derezotes, Poertner, & Testa, 2005; Dougherty, 2003). Disproportionality[7] has been identified as a serious problem plaguing the child welfare system and has become the topic of intensive study (Derezotes et al.; Hill, 2006) and dialogue across practice and policy arenas (Annie E. Casey Foundation & Center for the Study of Social Policy, n.d.; Center for the Study of Social Policy [CSSP], 2004 a, b). Minority children are disproportionately involved in the child welfare system across its continuum (Berger, McDaniel, & Paxson, 2005; Child Welfare League of America [CWLA], n.d.; Derezotes et al., 2005; Government Accountability Office [GAO], 2007, 2008; Vandergrift, 2006). Overrepresentation and service disparities have been found in every area of child welfare services.

[6] The list of sources documenting disproportionality and service disparities is extensive. Sources providing comprehensive overviews include CWLA & NDAS, 2005; Derezotes & Poertner, 2005; Hill, 2006; Hines, Lemon, Merdinger, & Wyatt., 2004; and McRoy, 2005.

[7] Disproportionality is defined as the degree to which African American children and other minorities are overrepresented in foster care and receive disparate services.

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Referral. Disproportionality may first manifest at the point where a maltreatment referral is made to child protective services (Hill, 2006; Lemon, D'Andrade, & Austin, 2003). Hines et al. (2004) suggest that reporting may be influenced by race and class biases held by reporters. Professionals who work in fields where they interact regularly with poor African Americans have been accused of operating on this bias (Chasnoff, Landress, & Barrett, 1990; Crane & Ellis, 2004; Hampton & Newberger, 1985). Magruder and Shaw (2008) compared the rates at which children in a birth cohort in California were referred to CPS by their seventh birthday to determine if race would have an effect on referral. By their seventh birthday, 18% of the Caucasian children had been referred at least once to CPS and 38.5% of African American children had been referred (in the same cohort, 1 Caucasian child in 30 had been placed in foster care by age seven while 1 African American child in every 10 had been placed in care). However, not all studies have found reporting to be influenced by race. Egu and Weiss (2003) investigated whether public school teachers' decisions to report maltreatment would be influenced by race. They found neither a race effect nor interaction between race and any other factor but did find apparent severity of abuse to be significant. Despite Egu and Weiss' findings, race is believed to be an important factor in the reporting decision (Hill, 2006).

Intake. The screening process that occurs at intake has been explained earlier in this chapter (pp. 8-10). In many jurisdictions, agencies have been found to respond to minority (particularly African Americans) and Caucasian families differently (Barth, 2005; Church, Gross, & Baldwin, 2005). Derezotes and Poertner (2005) reported a pattern found in screening decisions in Illinois. For each maltreatment report accepted involving a

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Caucasian child, three were accepted involving African American children. Similar patterns have been reported in other states (Barth; Hill, 2006). Reports concerning minorities are disproportionately screened in by CPS agencies compared to reports involving Caucasians (Derezotes & Poertner). Personal biases held by workers and institutional racism have been suggested as factors potentially related to differences in screening rates (Derezotes & Poertner; Hines et al., 2004).

Investigation or assessment. Minority families more frequently receive an official child protective services response to maltreatment complaints than Caucasian families (Barth, 2005; Church et al., 2005; CWLA, n.d.; Hines et al., 2004). In contrast to their proportion in the population, minority families are involved in child protective services assessments and investigations at higher rates (Hines et al.). The CPS response may disproportionately lean towards investigation for minorities, the more intrusive response in localities employing a dual response system (Besharov & Laumann, 1996; Courtney et al., 1996; Needell, Brookhart, & Lee, 2003). Compared to an assessment, an investigation is more likely to lead to a removal from the home (Derezotes & Poertner, 2005). When they examined data for a sample of 700,000 children from five states whose case information is included in the National Child Abuse and Neglect Data System (NCANDS) Fluke, Yuan, Hedderson, and Curtis (2003) found African American children were twice as likely to be investigated as Caucasian children. Individual and institutional racism have long been identified as influencing the decision to investigate minority families (Hogan & Siu, 1988; Inkelas & Halfon, 1997). Comparing foster care representation to general population estimates, African American children were disproportionately investigated while

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Caucasian children were under-investigated. Crampton and Coulton (2008) found African American children in and around Cleveland, Ohio, were investigated more often than Caucasian children between 1990 and 2000. Using Life Table Analysis to estimate referral incidents for children in this cohort, they estimated that 4.8% of Caucasian infants would be referred to CPS by their first birthday compared to 14.4% of African American infants. An estimated 21% of Caucasian children would be investigated by their tenth birthday. The estimate was higher for African American children (49%). In Cleveland, 47% of Caucasian children were likely to be investigated and 51% of African American children. In contrast, in Cuyahoga County, only 13% of Caucasian children were likely to be investigated while an estimated 44% of African American children would be investigated. The relationship between race and investigation remains unclear. Evidence certainly suggests that race is a strong variable in predicting that minority families will be investigated when reported to CPS.

Substantiation. Maltreatment reports that are investigated require a substantiation decision: maltreatment is either substantiated or unsubstantiated (alternately described in some states as founded or unfounded).[8] Reports regarding African American children have been found to be disproportionately substantiated (Derezotes & Poertner, 2005; Hill, 2006). Needell et al. (2003) reported the substantiation rate for African American children in California was 2.5 times that of Caucasian children. Ards, Chung, and Myers (2003), found the substantiation rate for African American children in Minnesota to be six times

[8] Substantiation is the outcome allowed in the majority of states, but some do allow other outcomes. In localities employing the dual response system, family assessments will have no substantiation decision.

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the rate of Caucasian children. Sabol, Coulton, and Polousky (2004) found that African American children living in one Ohio county between 1999 and 2001 were three times more likely to have a maltreatment report substantiated by their tenth birthday than Caucasian children. Baird (2005), Drake (1996), and Yegidis and Morton (1999) provide additional evidence of higher substantiation rates for reports involving African American children.

Because African American children in Illinois were known to be reported to CPS at three times the rate of Caucasian children, Rolock and Testa (2005) investigated whether race would predict substantiation. Using state administrative data collected between 1989 and 1999, they built logit models to predict a CPS investigator's decision to substantiate a complaint. In their final model, African American children were 1.19 times more likely to be substantiated than Caucasian children, no matter the investigator's race. They also found that Caucasian investigators were more likely to substantiate cases at a higher rate no matter the child's race. African American children represent 19% of the Illinois child population but 46% of the substantiated cases and 76% of the open CPS cases. The influence race has on substantiation does not appear to be completely consistent. Ards, Chung, and Myers (1998) reviewed National Child Abuse and Neglect Data System data, examining the proportion of African American children in Minnesota's general population to the proportion of substantiations, assuming there would be a higher proportion of substantiations in areas of Minnesota with a higher concentration of African American

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families. They found an inverse relationship instead. In areas with higher concentrations of African American children there were fewer substantiations.

Foster care. Based on the 2000 census data, African American children are overrepresented in foster care, on average for all states, at twice their proportion of the general population (Hill, 2006). In some states this rate is even higher.[9] Shaw, Putnam-Hornstein, Magruder, and Needell (2008) provide an example from California, where African American children accounted for 7.2% of the general child population yet 28.2% of the foster care population in 2006. In another example, Roberts (2008) reports that in Illinois in 2003, African American children comprised 18% of the population but 68% of the foster care population. Virginia is considered one of 15 states with moderate disproportionality (CSSP, n.d.). In 2000, in Virginia Caucasian children accounted for 64% of the general child population and 44% of the foster care population. In contrast, while African American children were 23.4% of the child population, they accounted for 51.9% of the children and youth in foster care. According to Dougherty's (2003) estimates, African American children were represented in Virginia at a greater rate than in the general population while Caucasian children were underrepresented.

Since the 1980s, African American children have had the highest rate of disproportional representation in out-of-home care of any racial or ethnic group (GAO, 2008; McRoy, 2005; Roberts, 2005). According to Hill (2005a), for every 10 children in

[9] The Center for Social Policy's "Race + Child Welfare Project" (CSSP, n.d.) provides estimates for over-/underrepresentation for African American and Caucasian children in all 50 states in Fiscal Year 2000. See Fact Sheet 2, Table 1. Dougherty (2003) also provides a similar chart created using the same Minority Overrepresentation Index used in Juvenile Justice to determine disproportional representation across states.

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foster care in the nation, six are African American. Needell et al. (2003) estimate that African American children are taken into care at three times the rate of Caucasian children (9 per 1000 African American children compared to 3 per 1000 Caucasian children). The Government Accountability Office (2008a, b) reported that at the end of the 2006 Fiscal Year 510,000 children were in foster care and African American children were overrepresented in that population. African American children have been found to linger in foster care (Courtney, 2000; Courtney et al., 1996; Glisson, Bailey, & Post, 2000). They are less likely to be reunited with family (Berrick, Barth, & Needell 1994; Goerge & Bilaver, 2005) since they are less likely to receive reunification services (Close,1983; Crane & Ellis, 2004).

Levine, Doueck, Freeman, and Compaan (1996) studied a random sample of 270 children referred to CPS in one New York county to determine if race influenced outcomes. The racial distribution of the children in the sample was nearly evenly distributed with 47% African American and 55% Caucasian. They found that a disproportionate number of African American children were taken into foster care. Given that African American children represented 11.3% of the county's child population at the time, they were overrepresented in foster care at 47%. Lu et al. (2004) studied a representative sample of 3,963 maltreatment cases referred to CPS in San Diego County, California, between May 1990 and October 1991. African American children in the sample were 23.8% more likely to be placed in foster care than children from other groups. Given their representation in the general child population, African American children were 1.25

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times overrepresented in the foster care population while children from all other groups were underrepresented.

Kinship care.[10] Though many children are placed in foster homes and group homes and remain in those placements throughout their tenure in the foster care system, federal law requires that relatives be identified and relative placements be considered whenever possible in order to maintain children's connections to family. The Government Accountability Office (2008) estimates that at least one-fourth of all children placed in substitute care reside with relatives. The use of kinship care, or relative placements, varies considerably across states and local jurisdictions. Kinship care is more often chosen as a placement option for African American children than Caucasian children (Barth, 2005). The likelihood for African American children to be placed with relatives is twice that of Caucasian children (U.S. Children's Bureau, cited in Hill, 2006). African American children are overrepresented in kinship care to an even greater degree than they are overrepresented in foster care (Dougherty, 2003).

Kinship care clearly offers particular benefits to any child (maintaining family connection, cultural sensitivity, fewer placement disruptions, frequently able to remain in the home past age 18). Yet, in the case of African American children, the practice actually supports disproportionality and inequity. Dougherty (2003) reports that children placed in kinship care remain in foster care, on average, longer than children placed in traditional

[10] In most, but not all states, kinship care requires a biological relationship. In some states "fictive" kin (close non-relatives such as godparents or symbolic relatives) are allowed to provide care. In some areas both relatives and non-relatives who desire to provide care must complete the same process to become foster parents as any other person. This discussion of kinship care does not take into account foster children placed in relatives' homes through the Interstate Compact on the Placement of Children.

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non-relative foster care. Hill (2005b) found that children placed in relative care were less likely to be reunited with parents than children placed in foster homes. Using kinship care extensively may be problematic if the practice leads to workers reducing or discontinuing efforts to work towards reunification when it is, or may be, possible—a primary philosophical tenant of child welfare practice.

The Government Accountability Office (2008) has suggested that kinship care may actually prohibit adoption and permanence. Adoption requires parental rights to be terminated so that the child may be free to adopt. Family members, however, are often unwilling to pursue terminating relatives' rights to their children. Family members also may believe that once they are given custody, financial support will not be available to provide for their adopted children's needs.

Berrick et al. (1994) surveyed foster parents and kinship caregivers in California to learn more about services received to support children's placements in their homes and their positions on adopting the children in their care. These were substitute caregivers providing care to 4,234 children between 1988 and 1994. Half of the sample provided foster care and half kinship care. The final sample (n = 600) included 354 foster parents and 246 relative caregivers.

Differences were evident in the range of services provided to the two groups even though the children placed in both groups' homes were very similar in terms of medical, emotional, and behavioral needs. The researchers noted that kinship caregivers received fewer supportive services (such as counseling and respite). If the relative caregivers received any financial assistance, it was considerably less than the foster parents received.

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They also found that many kinship caregivers were providing care to children who were medically-fragile or had special medical needs. However, these relatives were generally not receiving the funding for specialized care that would have been available to foster parents caring for such children.

Over half of the foster parents and kinship care providers indicated that they did not desire to adopt the child(ren) placed in their homes. Foster parents' explanations for not desiring to adopt were related to their own age, concerns about ongoing financial support once adoption was finalized, and recognition that there was no biological link to the children. Relative caregivers reported seeing no need to adopt since they were already related to the children and believing they could not afford to raise the children permanently. An unanticipated concern emerged in the data. African American foster parents reported receiving fewer supportive services than their Caucasian counterparts, particularly they reported fewer contacts with foster care social workers than Caucasian foster parents reported.

Evidence suggests that African American children in kin placements receive fewer services than Caucasian children in such placements and fewer than Caucasian children in foster care (Berrick et al., 1994; Brown & Bailey-Etta, 1997). Kinship caregivers receive less preparation for care giving (if any) and less financial support (if any) for providing care (Brown & Bailey-Etta; Chipungu, Everett, Verdick, & Jones, 1998). Brown and Bailey-Etta and Smith and Devore (2004) point out that poor children tend to have poor relatives. If kinship care is going to be a viable option for children, then relative caregivers

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should be provided funds to help them meet the needs of the children they take into their families without stressing those families further economically.

Reunification. Once children are placed into substitute care, federal law requires that a *permanency plan* must be developed that identifies their permanence goals (GAO, 2008). In accordance with law and child welfare philosophy, reuniting children with their biological parents is the optimal goal when children are removed from their homes and placed in foster care[11]. Reunification is the primary goal for nearly half of all children in foster care and is the mechanism through which most children ultimately exit the system (Dougherty, 2003; Kemp & Bodonyi, 2002). Yet evidence suggests that African American children are the least likely to exit the system through reunification (Dougherty; Wulczyn, 2003).

Harris and Courtney (2003, p. 410) report "…nearly all research has shown a relationship between race and the likelihood of family reunification, the most common route of exit from out-of-home care." The relationship is a negative one for African American children. These children experience a slower reunification rate than Caucasian children (Harris & Courtney; Rodenborg, 2004; Wulczyn, 2003) and are less likely to be reunited with family (McRoy, 2005).

Using survival analysis, McMurtry and Lie (1992) examined children's permanency outcomes to determine reunification predictors. Using stratified random

[11] If circumstances warrant a change in that permanency goal, then the state or jurisdiction can proceed to a different plan that might include reunification with relatives or adoption. In fact, the *Adoption and Safe Families Act of 1997* mandates that when a child has remained in foster care consecutively for 15 of the previous 22 months, the jurisdiction having legal custody must file to terminate parental rights and free that child for adoption (Dougherty, 2003).

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sampling, they developed a sample that included 775 children in foster care in one Arizona county between 1979 and 1984. The sample comprised 74.1% Caucasian children and 10.1% African American children (oversampled to represent the ethnic distribution of African American children in the county at the time). In addition to discovering that for every Caucasian child in foster care there were three African American children, they observed that African American children remained in foster care longer than their Caucasian counterparts. African American children remained in substitute care an average of three years while Caucasian children tended to exit care after two years or even earlier.

The researchers found race to be a predictor for case outcome. In their model, African American children were half as likely to exit foster care through reunification as Caucasian children. Those African American children who were reunited still stayed in foster care twice as long, on average, as Caucasian children who were reunited with family. They noted, "On any given day during his or her stay in foster care, a black child in this study was half as likely to be returned home on the following day as a white child" (p. 47).

Harris and Courtney (2003) extracted administrative data from the Foster Care Information System in California. They randomly sampled 10% of children (n = 9,162) placed in foster care between 1992 and 1996 in 58 counties. Roughly half the children were Caucasian and 22.8% were African American. They examined the relationship between race and other family characteristics and the length of time children remained in foster care before exiting the system via reunification. Controlling for all potentially

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influencing factors, they found that African American children exited foster care through reunification at a slower rate, approximately three-quarters that of Caucasian children.

Lu et al.'s (2004) study of 3,936 case records for children involved in the child welfare system has been described above. In their study, they found that African American children's permanency outcomes differed from Caucasian children's considerably. After 17 months, African American children remained in care at a rate disproportionately larger than the remaining Caucasian children. More than 70% of the African American children in their sample had not been reunited with their families.

To examine the influence of race upon reunification, Hill (2005b) sampled data from the National Study of Protective, Preventive, and Reunification Services Delivered to Children and their Families, conducted in 1994. His sample included 1,034 children in foster care during the study period. In the sample, 34% of Caucasian children were reunited with parents but only 9% of African American children were. Hill used logistic regression to examine the influence of independent variables (child characteristics, family characteristics, case history characteristics) on the dependent variable parental reunification. In his analysis, he found that children whose parents were working, receiving supportive services, and were not identified as having substance abuse issues were the most likely to be reunited. In this scenario, Caucasian children had a 56% chance of being reunited yet African American children had only a 23% chance. This suggests that even when African American children and Caucasian children are receiving comparable services in comparable situations, their likelihood of reunification is vastly different. Hill estimated that even in similar circumstances, Caucasian children were actually four times as likely to

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be reunited with family than African American children. He concluded (p. 225), "…this study found that controlling for the other essential predictors does not reduce the independent effects of race. In sum, race plays a major role in the reunification of children in addition to other child, family, and case history characteristics."

Other researchers have found corroborating evidence. In California, Barth, Webster, and Lee (2000, cited in Hill, 2006) found significantly lower reunification (and adoption) rates for African American children than Caucasian children. There is little doubt, given the numerous findings in the empirical literature, that race is a contributing factor to disproportionate experience with exiting foster care. In the case of African American children, race is considered to exert considerable influence over reunification (Hill, 2006).

Adoption. When children cannot be reunited with birth parents or other family members, federal law requires that they be freed for adoption and that all efforts be made to locate and secure adoptive homes for them (GAO, 2008). However, like the other outcomes described, African American children fare poorly in their experience with adoption (Child Welfare League of America and National Data Analysis System, 2005; GAO, 2008a; McRoy, Oglesby, & Grape, 1997). Children who are legally freed for adoption (meaning all biological and legal parental rights have been terminated or voluntarily relinquished) are known to remain in the foster care system for long periods. Many of the children freed for adoption actually age-out of foster care, meaning they are automatically discharged from the system when they reach majority. African-American children are known to be part of both groups (Kemp & Bodonyi, 2002).

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Barth (1997, 2005) has studied African American children's adoption outcomes closely. Barth's investigations have revealed that African American children are overrepresented in the pool of children freed for adoption but awaiting adoptive placement. They are also overrepresented in the pool of children placed in adoptive homes but awaiting legal finalization. Barth (2005, p. 34) states, "Indeed, minority status itself is considered as a special need, along with learning disabilities, developmental delays, sibling-group membership, and a history of abuse, all of which make a child more difficult to place for adoption."

Kemp and Bodonyi (2002) reported findings from their study of children's length of stay in foster care prior to adoption and the impact of race and other factors upon adoption finalization in Washington State. Their sample included 1,366 children in custody who were free for adoption in June, 1995 and had no change in status by November, 1996. The sample included 871 Caucasian children and 284 African American children. They noted that while Caucasian children represented 78% of the state's child population and 66.8% of the foster care population and 63.3% of the legally-free children in the sample, African American children, though only 4% of the state population, accounted for 16.3% of the foster care population and 20.7% of the freed children awaiting adoption. The researchers relied upon Cox proportional-hazards modeling for their analyses so that both children adopted and those not adopted during the time period could be included. This method calculates the odd that, on any given day, a child in the sample will be adopted. They reported the median length of stay as 50.7 months for all children. African American children's average stay of 56.6 months was longer than Caucasian children's average 49.1

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months stay. Also, 62.2% of the Caucasian children in the sample were successfully adopted during the study period while only 15.6% of the African American children were adopted. African American children were found to be 40% less likely to be adopted than Caucasian children in the sample. Race was found to be a predictor in the models developed. According to Kemp and Bodonyi (2002), African American children were 46% less likely to be adopted the next day compared to Caucasian children. They concluded that race is a characteristic that has a significant impact on the odds of permanency being achieved through adoption for African American children.

Before continuing with the focus in child welfare, it should be acknowledged that race impacts African American adults and children's treatment differentially in other systems as well. Service disparities, or the differences in quality of services and intervention options, have been documented in the following human service fields. The studies presented are not exhaustive but exemplify the impact of race on other services.

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Health and Medicine

Evidence suggests that minorities, particularly African Americans, are treated differently in the healthcare system and they experience different healthcare outcomes (Agency for Healthcare Research and Quality, 2000). Systemic, organizational, and clinical practices contribute to disparities in health care for minorities (Betancourt, Green, & Carillo, 2002). Several key factors have been identified as contributing to health disparities, including an insensitivity to patient diversity, limited numbers of minority health providers, culturally incongruous and inadequate medical services (Betancourt et al.), and biased decision-making (AHRQ; Kerker, Horowitz, & Leventhal, 2004; van Ryn & Burke, 2000; van Ryn & Fu, 2003). Patient race has been identified in some studies as influencing physicians' assessments and treatment recommendations (Jenny, Hymel, Ritzen, Reinert, & Hay, 1999; Kerker et al.; Lane, Rubin, Montheith, & Christian, 2002). For example, African Americans may not be encouraged to undergo cardiac treatments that are commonly recommended for Caucasians; minority women have been found to wait twice as long for additional diagnostic assessments following an irregular mammogram; HIV-infected African Americans are less likely to be prescribed antiretroviral therapy, a course of protease inhibitors, or receive preventative care for pneumonia; and when African American preschool children are discharged after being hospitalized for asthma only 7% are prescribed preventative medications compared to 21% of Caucasian children hospitalized for the same reason (AHRQ). Physician decision-making has been identified as a predominant factor contributing to health care disparities. Studies have found physicians' decisions to be influenced negatively by race (Jenny et al.; Kerker et al.; Lane

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et al.; van Ryn & Burke), socioeconomic status (Kerker et al.; Lane et al.), and suspicion of drug use (Kerker et al.).

Mental Health and Counseling

Racial and ethnic service disparities have been identified in the mental health and counseling system. Chow, Jaffee, and Snowden (2003) suggest that a complex relationship exists between race and mental health services. The United States Surgeon General reported in 2001 that the American mental health system is "plagued by disparities" (¶ 7). Racial minorities, whose incidence of need for mental health services is comparable to Caucasians' need receive a poorer standard of mental health care. The Surgeon General suggested that racism and discrimination create and maintain barriers that prevent minorities from accessing needed mental health services. He suggested that the lack of preventative and therapeutic mental health services contribute to the overrepresentation of minorities experiencing social problems like homelessness and unemployment.

Studies have documented differential diagnosis of minority and Caucasian clients. Segal, Bola, and Watson (1996) found that clinicians spend less time assessing minority clients prior to forming diagnoses. Strakowski, Lonczak, and Sax (1995) documented that African Americans were more often diagnosed as psychotic than Caucasians exhibiting similar symptoms. Minorities are also more likely to be involuntarily hospitalized according to van Ryn and Fu (2003).

Disparity has been found in addressing the mental health needs of African American children in foster care also. Garland and Bessinger (1997) found that courts ordered mental health services for Caucasian children placed in foster care more routinely

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than for African American children. African American children were less likely to be involved with any mental health or counseling service at all. In another study of foster children's mental health needs and services, Garland, Landsverk, and Lau (2003) found that Caucasian children were 14 times more likely to have received mental health services in care than African American children. They concluded that the disparity in mental health usage between minority and Caucasian children was likely explained by biased assessments by caseworkers and mental health professionals, systemic bias, and workers' and caregivers' lack of knowledge of minority children's mental health needs.

Education

Disproportionality and service disparity has been identified in primary and secondary education (Salend, Duhaney, & Montgomery, 2002). African American students receive harsher discipline in schools and are placed in restrictive classrooms more frequently than Caucasian children. They are also suspended or expelled from school with greater frequency than Caucasians or any other minority (Salend et al.). Minorities have been recognized as overrepresented in special education since the 1960s (Warner & Burnette, 2000). According to Warner and Burnette, African American children account for 32% of the special education children labeled mildly mentally retarded, 29% of the children labeled moderately retarded, and 24% of those labeled seriously emotionally disturbed, yet they account for only 16% of the United States school-age population.

Juvenile Justice

Some of the most compelling disproportionality and disparity evidence can be found in the juvenile justice literature. Despite the reality that Caucasian and minority

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youth commit crimes at similar rates, minority youth are more likely to become involved in the juvenile justice system (Crane & Ellis, 2004; Poe-Yamagata & Jones, 2000). African American youth are overrepresented as perpetrators (Office of Juvenile Justice and Delinquency Prevention [OJJDP], 1999; Wright & Thomas, 2003). Minorities are disproportionately arrested, charged, and sentenced. They receive harsher sentences, are more likely to be held in adult confinement facilities, and are more likely to have their cases transferred to adult courts for resolution (Crane & Ellis; Hoytt, Schiraldi, Smith, & Ziedenberg, 2002; Males & Macallair, 2000; OJJDP; Wright & Thomas). According to Crane and Ellis, Caucasian juveniles' crimes are often resolved after arrest without court intervention but African American youth's cases tend to be reviewed in court. Minority youth are more frequently tried as adults than Caucasian youth who are generally tried in juvenile courts, if their case is sent to trial at all (Wright & Thomas). Minorities account for 34% of the general youth population but represent 63% of incarcerated youth. In contrast, Caucasian youth account for 66% of the general youth population and only 37% of detained youth. In Virginia 70% of the youth population is Caucasian and represent only 40% of incarcerated juveniles. In contrast, African Americans are overrepresented at 52% of the states incarcerated youth population, but only 25% of the general youth population (W. Haywood Burns Institute, 2003). Racism and discriminatory practices at individual and system levels have been suggested as explanations for minorities' differential treatment in the juvenile justice system (Hoytt et al.; OJJDP; Wright & Thomas). Biased decision-making by agents in the system has been identified as a contributing factor as well (Hoytt et al.).

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As these examples demonstrate, minorities are treated differently than Caucasians in other service systems beyond child welfare. Racial disproportionality and service disparities have been observed in service systems where professional decision-makers act as gatekeepers to services and resources or hold power and authority over others in education, health, and the criminal system.

Explaining Disproportionality

Racism, Institutional Biases and Structural Characteristics

Institutional racism has been proposed as contributing to the problem. Krieger (2003, p. 195) defines racism as "institutional and individual practices that create and reinforce oppressive systems of race relations whereby people and institutions engaging in discrimination adversely restrict, by judgment and action, the lives of those against whom they discriminate." Racism at this level may manifest in dominant organizational practice norms and organizations that are culturally insensitive and offer culturally inadequate services (Derezotes & Poertner, 2005), institutional biases towards particular populations and geographic areas (Hutchison, 1988, 1989; Wells et al., 1995), child welfare policies that value Eurocentric middle-class parenting norms and family structures (Harris & Courtney, 2003; Miller & Gatson, 2003), and policies and service structures that serve to marginalize and oppress minority families instead of assist them (Hines et al., 2004; Hill, 2006).

Several potential explanations for the disproportionate number of African American children involved in the child welfare system have been proposed that relate to the organizations and social service systems that exist to protect children and support

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families. Organizational characteristics and practice realities have been identified as concerns (Dettlaff & Rycraft, 2008). Organizations often lack the resources and staff to adequately serve the overwhelmingly large number of maltreated children they are expected to protect and serve. Both Yoo (2002) and Smith and Donovan (2003) call attention to the challenges caused by high caseloads, high rates of burnout and worker turnover in a system overburdened and underfunded. Several factors were identified by the United States Department of Health and Human Services (2003) as contributing to disproportionality, including inadequate number of child welfare workers to provide quality services, poor supervision, high caseloads, and a lack of commitment on the part of organizations to improve outcomes for minorities. McRoy (2005) has argued there is a fiscal bias for states to place children instead of working with them at home. The federal government offers more money for placement than prevention.

Some suggest that child welfare policies, though well-intentioned, may actually contribute significantly to this problem (Crane & Ellis, 2004). According to Hines et al. (2004, p. 509), "…child welfare policy initiatives may be instrumental in creating programs and interventions that involve more children of color in the system and perpetuate their involvement." Derezotes and Poertner (2005) suggest that although child welfare policies are not intended to be discriminatory, they may have an unintended paradoxical negative outcome for African American families. Lipsky's (1980) *street-level bureaucracy* might explain how policies that are intended to benefit all may actually harm some. Lipsky proposes that workers constantly reinterpret policy at the direct practice level in ways that were not necessarily intended at the policy-maker level. It stands to reason

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that workers holding particular racial biases might interpret and apply policies in accordance with those biases.

Biased Decision-Making and Discriminatory Worker Practices

As Derezotes and Poertner (2005) point out, outcomes for children involved in the child welfare system are dependent upon decisions made at every point across the service continuum. One potential explanation is that disproportionality is an outcome of social workers and other professionals making erroneous or biased decisions influenced by their personal feelings, beliefs, and stereotypes concerning minorities.

Another potential explanation is that child welfare decision-makers may make flawed decisions. All decisions in child welfare are made by people. People are vulnerable to inconsistent, contrary, illogical, misinformed, and sometimes biased thinking. Decision-making is a cognitive process that is, at best, generally inconsistent and often unpredictable. People perceive and process the same information differently and perception can be influenced by many internal and external factors. The decision-making process is vulnerable to many potentially biasing conditions and may change as circumstances change. Presented with the same information, decision-makers' decisions may change based on some minor or significant difference in the decision-environment. Factors influential in one decision may be interpreted to have a different degree of significance or be disregarded entirely in a different situation (Gambrill, 2006; Munro, 1999).

A common concern in the literature is that disproportionality demonstrates that child welfare decision-makers (and others) make decisions that are influenced by their

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personal racial biases. This concern has been expressed repeatedly in the studies reviewed above. The Government Accounting Office (2008b) has, in fact, identified "caseworker bias" due to "cultural misunderstanding" (p. 8) as a factor contributing to disproportionality.

Intake Decision-Making and Social Justice

As this chapter has suggested, race and child welfare have a complicated and poorly understood relationship. Child protective services are provided in an organizational and social context that may replicate and perpetuate social structures in the greater society such as status, power, and oppression. Child protective service agencies and their agents wield significant power and authority. Both child welfare workers and administrators exercise a great deal of individual autonomy within the decision-making process. Worker and agency decisions are influenced by explicit and implicit assumptions of social policies as well as the personal belief systems of decision-makers related to maltreatment and to different types of people (Brissett-Chapman, 1997; Britner & Mossler, 2002). Many of the families they encounter are marginalized for racial and socioeconomic reasons. Intake decisions-makers are potentially vulnerable to the same racial and status biases as other people. If their decisions are influenced by personal biases rather than justified criteria, such as child protective services policy, then they have the potential to further oppress minorities and disrupt families. In this regard, intake decision-making is a social justice issue that deserves attention to ensure that powerless and marginalized families are being treated fairly in the child welfare system.

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Conclusion

This dissertation addresses decision-making that occurs at the initial phase of the child protection continuum, focusing on intake decision-makers' decision-making patterns, discretion in interpreting policy and applying it to reports consistently, and the factors that influence the decision process.

It is important to understand how intake decisions may contribute to disproportionality. When a maltreatment referral is received at intake, a key decision is made whether or not to introduce a family into the child welfare system. Given the well-documented negative outcomes that many minority families experience after becoming involved with child welfare services, it is crucial that this initial decision is the proper one. It must be based on risk and not attributes that may unknowingly sway the decision-maker's judgment. The goals of this study are three-fold: 1) to better understand intake decision making by investigating the decision factors Intake decision-makers employ routinely; 2) to determine if individual decision-makers apply the factors in a discernable pattern; and 3) to consider the potential influence of race and substance use as these variables have been identified in the child welfare literature as being influential in other studies.

The study's foundation, illustrated through the literature review, will be presented in Chapter Two. The chapter will explore the decision-making literature that exists in social work and child welfare. Relevant factors that have been identified as influencing decision-making will be reviewed. Decision-making theories and Attribution Theory will

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be introduced. The research questions guiding the dissertation will be articulated at the end of this chapter.

In Chapter Three, the methodology used to conduct the study will be introduced. The choice of study participants, instrumentation, and data analysis choices will be explained and justified.

Findings will be presented in Chapter Four.

Finally, implications emerging from the study will be discussed in Chapter Five.

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Chapter Two

Literature Review

Decision-Making

Decision-making is a core social work skill (O'Sullivan, 1999; Proctor, 2002). To a greater or lesser degree, all social work activities are dependent upon and carried out in relation to decisions (O'Sullivan, 1999; Tripodi & Miller, 1966). The social work literature has tended to consider decision-making as a component of assessment and intervention selection (Taylor, 2006). In problem assessment, social workers make a range of decisions including deciding which theoretical perspective to use to recognize and define client problems, deciding what information is relevant to assessment, deciding what transactional relationship exists between the client and the client's environment and, in clinical practice, determining the diagnosis that best fits the available data (symptoms) (Gambrill, 2002).

Ross (1993) described decision-making in social work as "searching for alternatives, assessing consequences, eliminating risk or uncertainty, determining the value of consequences, and selecting the action that maximizes attainment of the desired objective" (¶ 9) within an agency setting representing a "social system that structures, regulates, and influences the options exercised by individuals in specific instances" (¶ 5). According to Taylor (2006), social workers are required to make decisions by considering

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a "multiplicity of factors in complex practice decisions" (p.1188). Decision-making in social work is challenging. O'Sullivan (1999) expresses the challenges social work decision-makers face routinely:

> There are a number of sources of complexity in social work decision making that require knowledge, analysis and high levels of skill. Social workers need to take into account interacting factors operating at different levels, ranging from the personal to the societal. Each client and his or her situation is unique and when a decision is actually being made it is not possible to predict the outcome with certainty. (p. xi)

Proctor (2002) emphasized the serious nature of social work decision-making claiming, "Social workers' decisions determine efficiencies, effectiveness, and even fates" (p. 3). Most discussion of decision-making in social work, particularly outside of the professional literature, focuses on social workers' seemingly "capricious" decision-making (p. 3)—decisions that were poorly made resulting in negative client outcomes—either failing to intervene in a problem (particularly in child and adult protective services), or choosing an intervention that caused harm (particularly in clinical practice)--or on the public's perception of social workers as poor judges (Taylor & White, 2001). This discourse is often localized to social work's child and adult protective services branches. But, according to Taylor and White, social workers across practice specialties are frequently criticized for making decisions "based on ill-formed judgments in a rather arbitrary, ad hoc way, without a framework of understanding to underpin their assessments

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and interventions" (p. 38). The need to account for decision-making in social work has influenced the development of the evidence-based practice movement.

Yet this fundamental concept, integral to social work practice, has received scant attention in the social work literature (Cuzzi, Holden, Grob, & Bazer, 1993; O'Sullivan; Proctor, 2002; Taylor, 2006). Few attempts have been made to explore decision-making empirically, mainly small studies of contextually-situated decision-making (for example Cambridge & Parkes, 2004). Instead, most discussion of the topic is conceptual (Gambrill, 2005; Ross, 1993), inferring from the findings of studies in other fields, most frequently psychology (Arangio, 1964; Cuzzi et al.; Gambrill, 2005; Orcutt, 1964; Proctor). A review of the extant sources suggests that compared to other aspects of child welfare practice, while empirical studies exist, the child welfare decision-making literature remains largely conceptual as well. The social work literature tends to discuss decision-making peripherally as more of a tangential topic (O'Sullivan, 1999) in broader, often heated, discussions of social work knowledge domains (i.e., theoretically-driven, empirically validated knowledge versus practice wisdom gleaned from experience) and professional practice approaches (i.e., rational, empirically-validated practice versus quasi-rational, intuitive, empathic practice) (Fargion, 2006; Munro, 1999). Debate continues over whether social work decision-making is, and should be, more intuitive or more analytic (O'Sullivan, 1999).

Child welfare decisions are serious. Safety is paramount and intended to drive decision-making. Decisions about children's safety require that child welfare workers routinely make weighty decisions that may have dire consequences if the wrong decision is

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made (DePanfilis, 1997; English, 1997). These decisions are also complicated (English; USDHHS, 2003). DePanfilis points out that there is no magic formula available to guide child welfare decisions. Despite their best intentions, and their mandate to make decisions which promote the safety and best interest of the child, child welfare workers have no way to guarantee that all their decisions will be correct (DePanfilis). Benbenishty et al. (2002) acknowledge that child welfare decisions must be made without the security of clear standards or rules or accepted empirical findings. Some have suggested that child welfare practice is so complicated, that even when a problem and its resolution might appear obvious to one child welfare worker, it would evade others (Jones & Gupta, 1998). Indeed, asking two or more social workers to make a decision on the same facts would likely result in receiving two or more different decisions given child welfare decision-making's low reliability (Shlonsky & Gambrill, 2005).

Urgency and uncertainty are the norm in child welfare practice. Both challenge decision-makers' ability to make sound judgments (Munro, 1999). Like all humans, child welfare workers have only a limited capacity for prediction (Payne & Bettman, 1992). Child welfare decisions may protect or fail to protect children. If the correct decision is made, a child may avoid further harm. If the choice is wrong, then dire consequences are possible (Baumann, 1997; Munro).

Child welfare workers are often scrutinized by the court, the media and the public, particularly in the wake of a tragic outcome such as a child death. In court reviews workers' decisions are constantly challenged. In child fatality reviews, their decisions are virtually autopsied by reviewers who must determine, outside the context within which the

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decision was actually made, whether decisions were appropriate or avoidable (Jones & Gupta, 1998; Kelly & Milner, 1996). While the public understandably seeks culpability when children are seriously harmed, Munro (1996) argues that when child welfare workers' decisions appear to have been poor decisions, they must be reframed as either *avoidable* or *unavoidable* based on the evidence that was available to the decision-maker in the specific decision-making event. Munro argues that there really is no *right* decision in any absolute sense in child welfare practice. Any decision made may be right *within the context within which it was made* (constraints on the decision-maker such as time and legal statutes; clear, distorted or ambiguous information available; range of foreseeable outcomes; decision-makers' experience and preparation)—or not.

Child welfare practice is decision-driven. Along the continuum from the point a maltreatment report is received and a response initiated to the point where service ends, child welfare workers make decisions that have the potential for protecting children and strengthening families and also the potential to cause distress, further maltreatment, and other harmful consequences if the wrong decision is made (Baumann, 1997). Given the serious nature of decision-making in child welfare, it is crucial that the processes decision-makers employ in making decisions is understood. It is important to understand what decision-making behaviors lead to optimal decisions. It is equally important to understand not only what the process is, but where it might be vulnerable and how those vulnerabilities might lead to suboptimal decisions. To this end, it important to consider the contributions of decision theories and to understand what has been discovered in the field of decision science.

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Decision Theory

From the time humans develop basic cognitive capacities for thought and reason in early childhood until the time those capacities diminish or extinguish in their senior years or due to other causes, people are engaged actively and passively in making decisions, large and small, simple and complex. The ability to make decisions with intention appears fundamental to humans. Several definitions from the *Encarta World English Dictionary* (Soukhanov et al., 1999) are relevant to discussing this topic generally:

- ***Decide***: choose what to do; to make a choice or come to a conclusion about something; to come to a verdict or judgment (p. 467)
- ***Decision:*** something that somebody chooses or makes up his or her mind about, after considering it and other possible choices; the process of coming to a conclusion or termination about something (p. 468)
- ***Decision-making:*** the process of making choices or reaching conclusions (p. 468)

How people make decisions and the degree to which they make good or bad decisions has interested society for millennia. Decisions and decision-makers have figured prominently in history, culture, religion, literature, and science. Certainly, societies across the world continue to be interested in decisions, decision-makers, and the freedom to make decisions.

History

The academic study of decision making can be traced back to the eighteenth century (Baumann, 1997; Goldstein & Hogarth, 1997). Decision research remained

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essentially the pursuit of economists and statisticians seeking mathematical explanations for choices, often referred to as *gambles*, until the mid-1900s.

Beginning in the late 1940s, behavioral and cognitive psychologists found an interest in studying decision-making.[12] Two schools emerged among psychologists studying decision-making, one explored the nature of choices (how people decide on a course of action and choose what to do) and the other the nature of judgment (how people use cues to arrive at a judgment; how judgment differs from actuarial prediction) (Goldstein & Hogarth, 1997; Hastie, 2001).

Due to the influence of both schools, the predominant theme in decision-making research emerged as the study of risky decision-making, or "preferential choice in the face of uncertainty" (Goldstein & Hogarth, 1997, p. 6). For thirty or more years, researchers investigated choices made between options with disadvantages, seemingly illogical decisions, degree of comfort with risk in choosing among gambles, and effects of environmental factors (such as time limits and resource limits) on task performance in decision-making. Psychologists during this period (and many today) focused on translating decision behavior into mathematical models (Goldstein & Hogarth).

Theory

Decision theory has three theoretical branches, each with a unique focus on decision behavior: prescriptive theory, behavioral theory, and naturalistic theory (Beach, 1997). Although they hold significantly different conceptual orientations and sometimes

[12] Goldstein and Hogarth (1997) provide a comprehensive review of the history of decision-making across the branches of psychology.

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conflicting assumptions, both behavioral and naturalistic theory emerged, over time, from prescriptive theory (Beach).

Prescriptive theory. Prescriptive, or utility, theory represents the most classical approach to studying and understanding decision behavior. Utility theory predicts that decision-makers will logically compare decision alternatives, predict and assess potential gains and consequences for each alternative, and select the one with the greatest decision *utility* (i.e., the choice most in the decision-maker's favor) (Baumann, 1997; Beach, 1997; Cuzzi et al., 1993; Munro, 2002). Utility theory is the cornerstone of all prescriptive theories and frameworks. These theories seek to prescribe the decisions decision-makers *should* make, if the decision maker is *rational*, in order to maximize the utility inherent in a decision or gamble (Beach).

Behavioral theory. Utility theory dominated decision-making study across disciplines until researchers argued the theory could not adequately explain or predict clinical judgment or decisions based predominantly on intuition, as opposed to logic (See Goldstein & Hogarth, 1997, citing Brunswick, 1956; Hammond, 1955; Meehl, 1954; Simmons, 1955). Behavior theory emerged as a means of explaining the influence of cognitive processes on decision making and judgment (Beach, 1997). Behavioral theories account for the ways that decision-makers recognize and interpret *cues*, past and present information or other stimuli, available to them in the particular decision event (Beach). The goal of behavioral theories is to examine *noncorrespondence*, when decision-makers' choices do not correspond to the optimal choice, to determine what *cognitive shortcomings* encouraged the poor choice (Beach).

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Behavioral theory, like prescriptive theory, assumes there is a correct, or *optimal*, decision option that should be selected from the array of choices. Theoretically, in any decision situation, the available cues relate in such a way that they lead to the optimal choice. Whether the decision-maker selects the optimal choice depends upon both (1) correctly perceiving and interpreting cues and (2) logically relating them in such a way that the optimal choice emerges as the only alternative that maximizes utility (Beach).

Both prescriptive and behavioral theories are considered normative theories because they rest on the assumption that there is a *norm*—a clearly correct decision choice—available in all decisions (Beach, 1997). Yet humans are not inherently rational all the time (Carroll & Johnson, 1990; Gambrill, 1997, 2005; Munro, 1996, 1999). When the choice is *suboptimal*, or violates the norm, then these theories posit the fault lies in the decision-maker in some way. When decision-makers make the optimal choice, according to these theories they are acting (1) rationally (an assumption of prescriptive theory) and (2) are processing relevant information logically and correctly (an assumption of behavioral theory) (Beach).

Naturalistic theory. This set of decision theories emerged in social and behavioral psychology in the early 1990s based on research suggesting additional alternative explanations for decision-making needed consideration (Zsambok, 1997). Researchers in decision-making in the 1980s started studying decisions being made by people in their natural decision environments (in the work setting, for example) or in simulated environments created by researchers that mimicked natural settings (Zsambok). According to Klein and colleagues (Beach, Chi, Klein, Smith, & Vicente, 1997, p. 30), this

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perspective "…focuses on how people use their knowledge and experience to assess complex and uncertain conditions and take action." The theory argues against traditional assumptions held in prescriptive and behavioral decision theory. Naturalistic theory presumes that 1) *situation awareness* is crucial as decisions are dependent upon contextual influences in challenging, dynamic decision environments, 2) decisions are not made by determining options' utility, 3) decisions and decision-makers are adaptive and dynamic, with decision goals changing in response to changes in the decision environment, 4) experts and novices understand and approach decision-making differently and 5) decisions are *rational* only in the sense that the decision, and the choices and options available, are sensible given the decision environment and the decision-maker's abilities (Beach et al., 1997; Klein, 1997a,b,d; Zsambok). Ultimately, according to Beach et al., the goal for research conducted from a naturalistic theoretical orientation is to describe, not prescribe, decision-makers' strategies and processes. Clearly, the basic assumptions of this theoretical perspective depart from its predecessors' (Klein, 1997a, b, d).

Key Concepts from Decision Theories

Understanding of decision-making has improved as research on the topic has continued. A number of important concepts have emerged that cross theoretical perspectives. These concepts tend to be repeatedly considered in the literature and integrated into decision-making models across disciplines. Key concepts include decision process, decision environment, decision cues, expertise, heuristics, and stereotypes.

Decision process. Carroll and Johnson (1990) suggest that decision-making studies, across fields and regardless of theoretical perspective, focus on some aspect of the

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generally-accepted components (sometimes called *stages*) of decision-making. The commonly agreed-upon components of the decision process they identify are: (1) recognition, (2) formulation, (3) alternative generation, (4) information search, (5) judgment or choice, (6) action, and (7) feedback (p. 15). Figure 2 identifies the primary cognitive tasks related to each of the decision stages. Most theorists and researchers accept the notion that decision-making proceeds serially through these stages, though not necessarily in a completely linear fashion (Carroll & Johnson).

Recognition	• Recognizing that a problem exists requiring resolution or • Recognizing there exists a need to make a choice or judgment
Formulation	• Perceiving information in such a way that a decision situation becomes apparent
Alternative Generation	• Assessing the situation to determine and classify the type of decision to be made
Information Search	• Considering goals, outcomes, costs, benefits, information needed, concerns, circumstances
Judgment or Choice	• Identifying a set of potential choices each with particular outcomes • Eliminating some potential choices from the set due to habit, preference, understanding, or other constraint
Action	• Considering attributes or properties associated with potential choices
Feedback	• Considering what information potentially increases the value (maximizes the utility) of one choice while decreasing the value (minimizing the utility) of another • (in judgment) Establishing a preferred criterion against which to compare an alternative based on its attributes to determine if the alternative is optimal (or acceptable)

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	• (in choice) Considering the multiple attributes of comparable alternatives to determine which are acceptable and one or more which are optimal • Moving the selected alternative from "consideration" to "acceptance" • Enacting the choice or judgment • Considering information received in relation to, reaction to, or as the result of the decision enacted to justify and/or learn from it

Figure 2

Decision-Making Stages[13]

Decision environment. The decision environment, or the circumstances within which a decision is made, can affect the decision-making process (Orasanu & Connolly, 1993). Naturalistic decision theory has emphasized that decision-makers are faced with making decisions in the real world, a messy place that is often uncontrolled where dramatic change occurs frequently and unexpectedly. Naturalistic decision theorists have illuminated the importance of contextual factors that are external to the decision-maker and are known to influence decision-making practices (Cannon-Bowers, Salas, & Pruitt, 1996). The environment influences whether or not a decision-maker will recognize the need to make a decision. Decision situations are framed by the environments in which they exist—circumstances might point towards the need for a decision in one environment or context but not in another (Beach et al.; Klein, 1997a, e). Environmental factors also influence the

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quality of decisions made. Context and circumstances constrain some alternatives and promote others (Beach et al., 1997; Klein, 1997a, c, e). Some decisions are made in the context of a specific organization (for example, a human service agency or a for-profit business). Organizational norms and values, implicit or explicit expectations, as well as precedents set in past decisions, may influence decisions (Beach, 1997; Gambrill, 1997, 2006; Orasanu & Connolly).

Uncertainty is a trait common to many decision environments (Cannon-Bowers et al., 1996; Orasanu & Connolly, 1993). Uncertainty refers to the ambiguity that decision-makers must reconcile with in making decisions based on incomplete, vague, conflicting, or missing information (Orasanu & Connolly). Information available for consideration may be plentiful or scarce (Cannon-Bowers et al.; Gambrill, 2006). Having too little information or too much information can be problematic for decision-makers. In the first case, the decision-maker may make uninformed decisions, while in the second case, the decision-maker may be overwhelmed by information (Cannon-Bowers et al.). Uncertainty may also describe the tendency of goals to be unclear, ill-defined, and prone to changing in some environments (Orasanu & Connolly). Gambrill suggests that many decision environments are filled with distractions. Decision-makers are constantly interrupted and may be faced with making multiple decisions simultaneously. Finally, many decisions are made in environments that are stressful where the outcomes are significant—perhaps even life-threatening. In many situations serious, even critical, decisions must be made in a matter of moments and the decision-maker is pressured to perform under particular time

[13] Adapted from Carroll and Johnson, 1990, pp. 21-24.

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limitations with only the knowledge available to guide them. Oransu and Connolly point out that decision-makers performing in these uncertain time-pressured environments where decisions will have serious repercussions for themselves or others often experience high levels of personal stress.

Decision-maker characteristics. Decision-makers' characteristics and attributes have some bearing on decision-making. Haines and Moore (2003), studying decision-making as a function of development, acknowledge that children and adults make decisions differently. They also suggest that adults' decision-making processes change as they age, partly the response to changes in perceptual acuity, but likely also by beliefs being modified by experience. Schneider and Barnes (2003) report decision-makers demonstrate different levels of personal and professional motivation. They suggest that highly-motivated individuals approach decision-making differently than those less-motivated. Culture also has an influence on decision-making according to Peterson, Miranda, Smith, and Haskell (2003). Decision-makers' decision styles and abilities are influenced by the cultures they were raised in, lived in, or have been exposed to for significant periods. Cultures demonstrate different decision-styles, place different values on rationality, emotion and intuition and have different cultural prescriptions around judgment and choices. The affective state a decision-maker is experiencing can have a significant impact on cue perception (Isen, 1997; Isen & Labroo, 2003). Feeling even mildly positive has been shown to increase perceptual acuity and the ability to process and organize information. Mildly positive people perceived information as having positive meanings. Positive affect has been shown to increase decision-making ability by allowing

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decision-makers greater flexibility in generating decision options. It seems that mildly positive people recall more relevant information, relate pieces of information more readily, and generate more creative potential solutions to problems than those feeling less positive.

Decision cues. Decision-makers rely upon cues in the decision-environment (Klein, 1998). Cues are the pieces of information decision-makers need to make decisions (Shanteau, Grier, Johnson, & Berner, 1991). They are the salient features or aspects of a decision situation that are available to the decision-maker during the decision event. Cues are embedded in the context, the environment, the circumstances, and the problem. Some cues are easily identified but others may be obscure or ambiguous. Cues may be perceived by the decision-maker or go unperceived. It is important that decision-makers be able to perceive all of the relevant cues available in a given situation (Gambrill, 2005). The decision maker interprets cues that are perceived in terms of their meaning, predictive value, relationship to other cues, and salience to the decision to be made. Cue interpretation is not necessarily consistent between decision-makers or even between decisions made by the same person. Misinterpreted or irrelevant cues adversely affect decision-making (Shanteau et al.). Decision-makers are not always aware of the cues they perceive or how cues have been interpreted (Nisbett & Wilson, 1977). Research has suggested that people are often unaware that they are perceiving, processing, and interpreting cues in the environment (or under particular circumstances) or that certain cues influence the interpretation of other cues significantly (Nisbett & Wilson).

Expertise. Successful decision-making is related to the degree to which decision-makers are prepared to make decisions. Much has been written about the value of expertise

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in decision-making. While Carroll and Johnson (1990) and Beach (1997) point out that some studies have found expert decision-makers are as vulnerable to poor decision-making as others, and Klein and Crandall (1996) note that experts are not invulnerable to bias, expertise is generally considered to have a profoundly positive effect upon decision-making. Shanteau (1988) observes that even the best decision-makers are rarely able to fully articulate how they make decisions because the decision-making process is, to some degree, simply automatic.

Shanteau (1988; Shanteau, Weiss, Thomas, & Pounds, 2003), who has studied expertise extensively, suggests decision-makers can be classified on a continuum of knowledge and expertise anchored on the low end with "naïve" decision-makers (those who possess little or no knowledge), "novice" decision-makers (who possess "intermediate" knowledge—they do have knowledge but it is not as extensive as experts' knowledge), and "experts" who possess an extensive amount of knowledge and expertise (Shanteau, 1988, p. 206). By Shanteau's definition of an expert (one who has reached the "pinnacle" in a particular field), most literature on expert decision-making is really discussing "advanced novice" (p. 206) decision-makers, who well may possess years of decision-making experience yet not really be experts in their fields. The literature suggests that experts and novices differ in a number of important ways, particularly in their approaches to decision making. According to the literature, novice decision makers:

- Lack the experience to interpret obscure or vague information in situations correctly (Beach, 1997);
- Rely on the most concrete information available (Gambrill, 2005);

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- Formulate incomplete problem definitions (Gambrill, 2005);
- Fail to perceive all available decision cues in a decision event (Gambrill, 2005);
- Frequently become overloaded by information and confused by uncertain information (Klein, 1998);
- Rely upon unreliable heuristics (Shanteau, 1988);
- Overlook important information (Shanteau, 1988);
- Are less able to tolerate challenges to decision-making and are impaired by difficult decision circumstances (Shanteau, 1988);
- Rely upon rules for making decisions in lieu of experience (Zsambok, 1997).

In contrast, experts:

- Approach problem-solving in a flexible, adaptive manner (Beach, 1997);
- Recognize patterns in decision cues and information available (Beach, 1997);
- Have a more comprehensive understanding of their area of expertise (Benbenishty et al., 2002);
- Process information more rapidly and efficiently (Benbenishty et al., 2002);
- Reason differently (Gambrill, 2005);
- Organize information in a more sophisticated way (Gambrill, 2005; Ganzach, 1994);
- Think about problems abstractly (Gambrill, 2005);
- Identify anomalies when they encounter them (Gambrill, 2005);

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- See things that novices do not see (Gambrill, 2005) because their perceptual abilities are highly sophisticated (Shanteau, 1988);
- Consider whether a problem is defined correctly (Gambrill, 2005);
- Recognize and understand the decisions to be made more quickly (Gambrill, 2005);
- Perceive most, if not all, of the decision cues available in a decision event (Gambrill, 2005);
- Recognize missing information relevant to the decision (Gambrill, 2005; Ganzach, 1994);
- Better understand tasks related to their area of expertise (Ganzach, 1994);
- Require less information before making a decision (Ganzach, 1994);
- Employ *configural* rules in processing and interpreting cues (for instance, "x" means "x" generally, but when associated with "y" means "z") (Ganzach, 1994);
- Perform well under time pressures and challenging environmental demands (Klein, 1998);
- Initially generate a singular decision option (or limited set of options) that is the course of action most likely to be successful (Klein, 1998);
- Rely upon *informed* intuitive reasoning instead of decision-making rules or calculations (Klein, 1998);
- Act without second-guessing their decisions but re-evaluate and act differently when additional information indicates a shift in circumstances or problem frame (Klein, 1998; Shanteau, 1988);

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- Avoid wasting time by comparing alternatives (Klein, 1998);
- Learn from earlier decisions, particularly from mistakes made (Shanteau, 1988);
- Partialize problems (Shanteau,1988);
- Consider creative decision strategies (Shanteau, 1988);
- Increase their successful decision rate over time (Shanteau, 1988);
- Assess the relative value of information , not giving equal importance to all data (Shanteau et al., 1991);
- Maintain confidence in their decision-making (Shanteau, 1988).

Klein has also studied expertise in decision-making extensively. He suggests that expertise is a key factor in successful decision-making, particularly in real-world decision-making. According to Klein (1998), experienced decision-makers approach decision tasks differently than novices. As a result of their experience, they are able to use cues to analogize, or recognize a variety of *prototype* situations, presented in decision events. The prototypes are associated with particular, expectable, options or outcomes (positive and negative). Knowing these, it is unnecessary for the decision-maker to generate an exhaustive set of potential outcomes for assessment. The expert moves more quickly to action than the novice with a greater sense of confidence in the decision made. According to Klein and Weick (2000, p. 21), "Experience buys you the ability to:

- Size up situations quickly;
- Recognize typical ways of reacting to problems;
- Mentally game out an option to see if it will work;

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- Focus on the most relevant data elements;
- Form expectancies;
- Detect anomalies and problems; and
- Figure out plausible explanations for unusual events."

Mental simulation. Another important concept in decision theory is mental simulation. Klein and Crandall (1996) define mental simulation as "the process of mentally enacting a sequence of events" (p. 6). They (and Klein, 1998) suggest that people engage in mental simulation routinely in the course of daily living, giving the process little thought. However, in relation to decision-making, naturalistic decision theorists believe mental simulation plays a pivotal role.

Klein and Crandall propose that mental simulation has four primary functions (pp. 7-10): 1) explain a phenomenon, 2) explore problem models, 3) generate action plans, and 4) evaluate potential actions. To explain a phenomenon, mental simulation is used to consider explanations for an event based on simulating a sequence of possible events that might have preceded and resulted in the event in question. Decision-makers use mental simulation to explore problems by imagining "models" that explain the relationships between potential causal factors and predictable outcomes. Decision-makers are believed to "run" the simulations, integrating new information gained from unsuccessful models, introducing new factors that might have additional explanatory power. To generate an action plan, decision-makers employ mental simulation by projecting into the future and

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forecasting outcomes. Within the simulated action plan, the decision-maker hypothesizes a sequence of potential activities and considers how each activity might further the desired action and which ones might be problematic. Finally, mental simulation is employed to evaluate potential actions based on expectable flaws and risks. Essentially, the decision-maker identifies the most sound action plan by considering the most predictable ways that a plan could go wrong. Klein and Crandall note that considerable experience is necessary to be able to successfully engage in extensive, productive mental simulation.

Heuristics. Heuristic processing is also believed to influence decision-making. Tversky and Kahneman (1982) asserted that people engage mental short-cuts called heuristics when making decisions to avoid cognitive overload. Essentially, decision-makers conserve mental energy by reaching a decision based on the minimum number of factors possible (a process referred to as *satisficing* [Simon, 1957, cited in Shanteau et al., 1991] in decision-making). In their seminal work *Judgment Under Uncertainty* (1982), they proposed that three heuristics may influence decision-making: the *representativeness* heuristic, the *availability* heuristic, and the *adjustment and anchoring* heuristic. When people make a conclusion based on judging one event's similarity to another (or one person's similarities to another), they risk an error in judgment based on employing the representativeness heuristic (Thomas, 2001). People risk erring in judgment by employing the availability heuristic when they rely on aspects of a phenomenon that are vivid, or the most easily recalled information (Thomas). The decision-maker draws upon the most vivid, recent information stored in memory. Thus other potentially useful but less recent or less vivid information may be ignored. When the decision-maker incorrectly estimates a

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range of probabilities (or a degree of variation of some quality), the adjustment and anchoring heuristic may lead to an incorrect conclusion (Thomas). Decision-makers tend to underestimate and their estimates tend to cluster near the anchor figure (Gammon, 2000).

Kahneman, Slovic, and Tversky (1982) have argued that decision-makers often make suboptimal decisions because they misinterpret cues based on stereotypes, past experiences and a flawed ability to estimate probabilities. Their message, that decision-making is generally flawed due to the erroneous short-cut decision strategies people employ, has had a lasting impact in the decision-making literature.

Stereotypes. Decision-makers are known to rely upon stereotypes, mental representations of people (or objects) based on seemingly representative characteristics and/or behaviors (Hilton & von Hippel, 1996). In some cases stereotypes may act similarly to heuristics, a way of reducing perceptual demand. Stereotypes may also reduce decision-makers' cognitive load by screening out stimuli and new information using stored information for processing instead. Hilton and von Hippel suggest that not all stereotyping behavior is negative, but acknowledge that stereotypes have the potential to trigger and reinforce positive or negative cognitions. Stereotypes may activate particular behaviors depending upon the associations the individual holds regarding the stereotype. For example, a stereotype held about a person of a different race might activate hesitation or fear in an interaction with such a person. Or, a stereotype of a snake being dangerous may cause an individual to flee upon encountering a snake in the yard—regardless of the type of snake it is.

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The concepts that have been discussed above have been integrated into various decision-making models. Two models with relevance given their treatment of decision cues and contextual factors will be discussed. The first is the Cognitive Continuum Model and the second is the Recognition-Primed Decision-Making Model.

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Decision-making Models

Two decision-making models are particularly relevant and warrant brief mention given the way they incorporate the core decision concepts that have been reviewed. The first is oriented in behavioral decision theory. The Cognitive Continuum Model is a behavioral theory model that emphasizes the importance of cues (Daniel, 2003). This model assumes that decision-makers employ two approaches when interpreting cues, analysis and intuition (Hammond, 2000). According to Hammond (2000), the model's creator, these two approaches are not mutually exclusive as some might argue, but are, instead, two anchors on a continuum of cognitive activity. Hammond suggests that contextual factors in the decision environment (e.g., need for speed, need for accuracy) influence the choice of interpretive approach. The types of cues available (or, at least, those perceived), their number, the nature of the task, and decision-makers' objectives influence the decision.

Klein's Recognition-Primed Decision Making (RPD) Model suggests that perceptual cues available in the decision environment are used to recognize similar decision events stored in memory (Kaempf, Klein, Thorsden, & Wolf, 1996; Klein, 1993, 1997e, 1998; Klein & Crandall, 1996). Depending upon experience, decision-makers match between 40% and 80% of decision situations they encounter to previous experiences (Beach, 1997). The decision maker recalls whether or not the recognized event was managed successfully. If a decision strategy in a past event was successful, then the decision-maker pursues the available option most similar to the one previously employed. If a decision was unsuccessful, the decision-maker revises the decision-strategy and

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chooses an alternative thought to be most likely to be successful given current circumstances (Klein).

An essential concept of the RPD Model is mental simulation. Klein (1993, 1997e, 1998; Klein & Crandall, 1996) asserts that when decision makers face any decision, particularly an unrecognized situation or when a situation is similar to a past event where the decision made was wrong, they engage in rapidly constructing mental simulations, comparing all the possible outcomes that they can predict based on past experience, knowledge, and training. The decision-maker ultimately chooses the alternative most likely to make the most positive simulation (or, in theoretical terms, the one with the greatest utility) materialize. As the cue pattern recognition and mental simulation concepts would suggest, the Recognition-Primed Decision-Making Model emphasizes the importance of expertise and demonstrates that experts have the advantage over novices in complex real-world decision-making.

Theories and discoveries that have emerged from decision science clearly have relevance to social work practice. As noted earlier, social work practice, particularly child welfare practice, is driven by decisions. The chapter will next review the conceptual and empirical literature related to several social work decision-making and then specifically child welfare decision-making.

Social Work and Decision Making

History

Scholars in other fields have studied decision-making for hundreds of years (Goldstein & Hogarth, 1997). Economics, statistics, psychology, medicine, nursing, law

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enforcement, accounting and finance, and marketing have all made important contributions to the greater understanding of decision-making across varied contexts (Baumann, 1997; Carrol & Johnson, 1990; Cuzzi et al., 1993; Payne & Bettman, 1992). Decision-making scholarship has emerged in the social work literature only relatively recently (Cuzzi et al.; Taylor, 2006; Taylor & White, 2001), with a foray into the field in the 1960s (Briar, 1961, Orcutt, 1964), 1970s (Fischer & Miller, 1973; Miller, 1974) and 1980s (Franklin, 1986) through occasional studies of problem-solving and clinical judgment. Decision-making again surfaced as a topic of interest as the profession adopted a focus on evidence-based practice in the 1990s in clinical practice and child welfare (Gambrill, 1997; Rosen, 1993; Shapira & Benbenishty, 1993).

Social Work Decision-Making and Decision Theory

Conceptual Exploration

Decision theory is relevant to social work practice and may provide a useful lens for considering the way social workers make both routine and anomalous practice decisions. Yet these theories appear to be underutilized in the profession. While researchers have relied upon decision theory for direction in examining decision-making in many fields and its value has been discussed as a potential guiding framework for research (Cuzzi et al., 1993; Gambrill, 1997; Proctor, 2002) there are few examples of decision theory being successfully integrated into social work research (see Munro, 1996, 1999).

Indeed, while Munro (1996, 1999) has engaged in research conceptually oriented in utility theory, other social work researchers have relied upon alternative, more humanistic or structural theories from social work and other disciplines to inform and guide their

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work. A review of dissertations on the topic of child welfare decision-making between 1988 and 2004 finds that only three directly incorporate or articulate a specific decision theory (Daniel, 2003, *Cognitive Continuum Model*; Murphy, 1994, *Judgment Modeling* along with Attribution and Labeling theories; Stevens, 1998, the *Adaptive Decision Model*). The rest either hint at relevant theories through inclusion of terms that have emerged from specific decision theories or adopt a social work theory (such as systems theory) as a theoretical basis (Galante, 1999, Aversive and Modern racial discrimination theories; Fitch, 2001, General Systems Theory; Gammon, 2000, Heuristic processing and Attribution Theory; Hutchison, 1988, Attribution and Labeling theories; Karanda, 2004, Attribution Theory; Thomas, 2001, no explicit theoretical orientation).

Decision Theory Concepts

A number of the key concepts discussed earlier have immigrated from decision theory into the social work and child welfare decision-making literature. The concepts that have been explored in social work and child welfare decision-making include decision process, decision environment, decision-maker characteristics, decision cues, expertise, heuristics, and stereotypes.

Decision process. O'Sullivan (1999) has proposed a model that he believes describes general social work decision-making. Figure 3 presents a graphic depiction of this model. In contrast to Carrol and Johnson's (1990) model that was described earlier, O'Sullivan's model is circular emphasizing that decision-making in social work practice is ongoing and not necessarily linear. O'Sullivan stresses that the elements of decision-making are interrelated and must all be addressed to arrive at optimal decisions.

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Figure 3

Professional Social Work Decision-Making Framework[14]

Decision environment. O'Sullivan (1999) and others (Drury-Hudson, 1999; Gambrill & Shlonsky, 2005; USDHHS, 2003; Wells et al., 2004) have observed that factors in the decision environment, for example in the child protective services agency, impact decision-making. Some factors like policy (Drury-Hudson; Gambrill & Shlonsky, 2000; Shlonsky & Gambrill, 2005; O'Sullivan), law (USDHHS, 2003), agency mission (O'Sullivan), and task priority (O'Sullivan) provide direction in decision-making, in some cases constraining decision options to those that are congruent with the agency's goals or

[14] Adapted from O'Sullivan (1999), p. 20.

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function (O'Sullivan). Resources and workloads also constrain decision-making options (O'Sullivan; USDHHS).

Some factors, like an agency culture valuing efficiency, profit, or bureaucratic procedure discourage decisions that are congruent with best practice, social work principles and values in favor of other options that may serve the agency more than the client (O'Sullivan, 1999). O'Sullivan observes that management in social work agencies is often less governed by social work principles and ideals. Management shares social work's values, demonstrates ambivalence towards them, or disregards them as impractical or irrelevant (O'Sullivan).

A number of environmental factors have been identified in the literature as adversely affecting social work and, particularly, child welfare decision-making. The uncertain nature of child protective service work is a primary factor (Rzepnicki & Johnson, 2005; Shlonsky & Gambrill, 2005). Stress (O'Sullivan) is another factor common in child protection agencies. In fact, Rzepnicki and Johnson refer to the child protective services practice environment as a "culture of stress" (p. 396). Curry, McCarragher, and Dellmann-Jenkins (2005) point out that the high turnover characteristic of child welfare agencies tends to increase the stress remaining workers experience. They report annual turnover rates for child protective service agencies consistently range from 20-50%. The time pressures that decision-makers face and the multiple demands placed on them in child protective service practice have also been identified as having detrimental effects on decision-making (Gambrill & Shlonsky, 2005; Shlonsky & Gambrill, 2000). A lack of quality, or consistent, supervision has also been identified as a problem (Curry et al.). It is

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reportedly even more difficult for inexperienced workers whose supervisors are busy working vacant caseloads and cannot make time to meet with workers struggling to make decisions in the field (Curry et al.).

Decision-maker characteristics. Just as characteristics of the decision environment can influence decision-making, so can the decision-maker's own personal characteristics. Lazar (2006), for example, found evidence that gender influenced decision-making in his decision-making study. The literature frequently suggests that social work decision-makers rely upon personal attitudes (USDHHS, 2003) and values (Benbenishty, Osmo, & Gold, 2003; O'Sullivan, 1999) in making decisions. This may especially be true when decision-makers' personal values conflict with professional values or client values (O'Sullivan). Shlonsky and Gambrill (2005) suggest that decision-making is also influenced by competing social values.

Mood and affective state have been discussed as influences on social work decision-making in the literature (Ryan, Garnier, Zyphur, & Zhai, 2006; Shlonsky & Gambrill, 2005). Fear for personal safety, anxiety, stress, dissatisfaction, anger, and blame have all been highlighted as emotions that social workers might experience in reaction to clients and client circumstances (O'Sullivan, 1999). O'Sullivan suggests that emotion can be an asset or a liability for social workers. He argues that emotional arousal can, in some instances, promote clearer, focused thinking. However, at other times, it can impair cognitive functioning, particularly perception and analytical processing (O'Sullivan). O'Sullivan cautions that social workers must be careful to monitor their emotions and be certain that their decisions and actions are not being guided by their emotions alone.

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Some writers have suggested that what social workers and child welfare workers know, and how they know it, can influence decision-making and may lead to erroneous decisions. Child welfare workers must draw from their knowledge to make decisions (Drury-Hudson, 1999; Ryan et al., 2006) but often that knowledge is incomplete or is not sound for various reasons (Shlonsky & Gambrill, 2005) . Drury-Hudson (1999) and Shlonsky and Gambrill (2005) have argued that child welfare workers are prone to relying upon practice wisdom instead of empirically-based knowledge. Benbenishty and Chen (2003) conclude that in some instances child welfare workers rely upon their own implicit policies, personal "rules" for associating and interpreting information, usually from their own experience, that may or may not have any real basis in fact or evidence. Personal and professional experience have been highlighted in the literature as factors decision-makers rely upon in decision-making (Gambrill & Gibbs, 2002; USDHHS, 2003). O'Sullivan cautions that relying upon personal experience (for instance, the worker's experiences in his or her family, or the worker's experience as a parent) can have a positive or negative influence.

The degree to which decision-makers' personal belief systems affects their decision-making has also been discussed in the literature (USDHHS, 2003). Lazar (2006) has suggested that the degree to which a decision-maker holds authoritarian beliefs may influence decisions. Jayaratne, Faller, Ortega, and Vandevort (2008) note that different decision approaches are favored by those holding conservative beliefs as opposed to those with more liberal beliefs. They also suggest that child welfare workers may have difficulty keeping their decisions from being influenced by their religious beliefs.

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Shlonsky and Gambrill (2005) have questioned child welfare workers' critical thinking abilities and how poor critical thinking might negatively impact decision-making. They acknowledge that child welfare workers are constrained in their decision-making by the limited human capacity to process information. They have proposed that child welfare workers, and many social workers in general, rely upon ineffective problem-solving strategies. Lack of adequate training may explain why social workers do not have a repertoire of useful problem-solving strategies (USDHHS, 2003). While some scholars suggest that child welfare workers make competent decisions (Benbenishty et al., 2002) many others are more skeptical and critical (MacDonald, 2001; Munro, 1999). Child deaths, and lesser negative outcomes, have prompted researchers to question child welfare workers' competence and judgment (Munro, 1996, 1998, 1999, 2002, 2007).

Child welfare workers' feelings about their work may also have an impact. Experiencing a sense of worker and supervisor support appears to positively impact decision-making (USDHHS, 2003). However, experiencing workload stress seems to have a negative effect (USDHHS).

Decision cues. Social work decisions and child protective services decisions, particularly, rely on a number of factors. The factors external to the decision-maker are regarded as decision cues (O'Sullivan, 1999). In the child welfare literature these cues are often referred to as decision factors or risk/resiliency factors and tend to be the basis for risk assessment instruments (usually as a checklist of potentially relevant factors). Child welfare researchers have spent years trying to identify the salient cues associated with

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child maltreatment. They have also tried to determine if child protective services workers rely upon these cues in making their decisions.

Rycus, Hughes, and Garrison (1989) summarized key maltreatment cues. Their list includes the risk factors that have been supported repeatedly in the child protective services and risk assessment literature. Their summary is presented in Figure 4. The US Department of Health and Human Services (2003) affirms that those key factors continue to be considered highly correlated with maltreatment and continue to be incorporated into contemporary risk assessment instruments. In addition to Rycus et al.'s list, they add severity of maltreatment, caregiver/child relationship, social and economic factors, perpetrator access, multiple risk factors, and referral source.

O'Sullivan (1999) points out that it is not enough that cues may exist in the decision environment (for instance the maltreatment report or the actual home environment). If the decision-maker cannot perceive them, cannot recognize them, or does not understand their meaning and significance, then the cues have little value in that decision situation. He observes that there will likely always be more cues available in the environment than the decision-maker is ever able to perceive. Of those that are identified, the decision maker must choose which to consider important and which to ignore. The perception and interpretation of cues is dependent upon the characteristics of the decision-maker and decision environment that have been discussed.

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Figure 4
Factors Identified with Maltreatment Types[15]

Physical Neglect

- Child's age
- Abandoned (left with others for short or extended periods; no contact from parent; caregiver has no legal authority over child)
- Dangerous physical environment (unsanitary to the degree that child may be harmed by exposure to rotting food, excrement, exposed wires, broken glass, flaking lead-based paint)
- Inadequate supervision (child not old enough to supervise self; young or immature child supervising other children; child's behavior makes self-supervision risky; supervised by an incapable or incompetent adult)
- Physical care (ulcerative diaper rash, chronic lack of physical care and hygiene; inadequate clothing for weather conditions
- General neglect (lack of adequate food, dehydration, basic needs unmet)
- Developmental delays
- Caregiver history of neglect
- Unrealistic expectations for child
- Excessive family stress/poor coping and problem-solving skills
- Lacks support from other adults/family members
- Substance abuse
- Lack of parenting skills
- Previous maltreatment reports

Physical Abuse

- Child's age
- Observable injuries (type, location on body, number of injuries)
- Behavioral indicators
- Lack of a protective adult caregiver in the home
- Developmental delays
- Caregiver history of physical abuse
- Severe discipline
- Unrealistic expectations for child
- Excessive family stress/poor coping and problem-solving skills/chronic crisis
- Previous reports of maltreatment

(Figure 4 continues)

[15] See Rycus, Hughes, and Garrison (1989) for source information.

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(Figure 4 continued)

Sexual Abuse

- Physical indicators
- Behavioral indicators
- Advanced sexual knowledge/sexual behavior beyond age/developmental stage
- Emotional distress/aggression

Emotional Abuse/Neglect

- Deprivation/parental indifference (chronic emotional deprivation, persistent lack of assessment, isolated from others)
- Lack of empathy
- Unpredictable parent response
- Belittling and critical language

Medical Neglect

- Medical care for injury or illness withheld or not provided when average person would realize it was needed

Expertise. Expertise as a decision-making concept has interested social work researchers, though it has not been studied to the same degree as in psychology. O'Sullivan (1999) has suggested that novice decision-makers rely on analytical approaches to problem-solving because they have not developed the requisite expertise to employ a more intuitive approach. He suggests, in contrast, that decision-makers who have developed skills and knowledge over time and through experience rely more on intuitive practice in their regular decision-making behavior and only employ stricter analysis when faced with an unfamiliar or exceedingly complicated or difficult task. He observes that inexperienced decision-makers in social work have less comprehension of what decision

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cues should be considered relevant and significant. They also tend to overestimate risk and do not understand what factors mediate risk.

Drury-Hudson (1999) has studied social work and child welfare expertise. She suggests that expertise develops over time and with practice in making the same decisions. Her research has led her to conclude that experts demonstrate a greater familiarity with social work literature and theory and integrate information from the literature more consistently into their decisions. Further, in contrast to less experienced decision-makers, experts demonstrate a greater knowledge of policies and procedures. A more flexible understanding of policy (at multiple levels) guides their decision-making. They can articulate theories that are relevant to their work and apply them to practice. Novices, in contrast, tend to find policy difficult to understand and apply, have an unclear understanding of how policy applies to practice, and rely heavily upon supervisors for direction and policy interpretation. They also find it difficult to explain theories and apply them to their work.

Finally, in terms of their decisions, Gold, Benbenishty, and Osmo (2001) indicate that experts employ different intervention strategies than novices and are able to generate a greater range of intervention possibilities. Schuerman, Rossi, and Budde (1999) report that experts have different thresholds for taking action than novices. And, in some cases, they have been found to act preemptively (for instance filing custody petitions) perhaps because they lack confidence or are only able to see a narrow range of potential responses (Sullivan, Whitehead, Leschied, Chiodo, & Hurley, 2007).

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Simulation. Only O'Sullivan has addressed simulation in the social work literature. O'Sullivan has suggested that social workers engage simulation behavior in making decisions. He refers to this activity as "framing." Decision-makers construct a mental image of the situation that is a synthesis of the information they have determined to be useful and the way they have combined that information to have meaning for them. The simulation that they are able to construct depends upon the cues in the environment they were able to perceive and the meanings they ascribed to the cues they identified. He suggests that being educated as a social worker may positively affect simulation as social workers are trained to look at situations on multiple levels from multiple perspectives, thus sensitizing them to a wider array of cues.

Heuristics. O'Sullivan (1999) has suggested that social workers employ heuristics in their practice, likely as a means of finding the shortcuts needed to manage heavy caseloads and multiple responsibilities that compete for time and energy. He argues that in simple decisions, heuristics can be used effectively and do allow social workers to focus more energy and attention on more complicated tasks. However, he warns that social workers should be aware that using heuristics allows for the possibility of decisions being made poorly under circumstances where the task is complex or uncertain. It is critically important to understand heuristics as child welfare workers, often called upon to make important decisions in uncertain circumstances under an immediate time constraint, may unknowingly employ these short-cuts routinely in their practice without understanding how they may negatively impact decision-making (Schwalbe, 2004).

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Stereotyping. Social workers, like other decision-makers, are raised in particular social and cultural contexts. As a result, they internalize the cultural and social values that are shared among members of their cultural and social groups (O'Sullivan, 1999). Some beliefs that they internalize may not be accurate and are based on stereotypes. O'Sullivan writes that interactions between clients and social workers are always vulnerable to the presence of stereotypes. Social workers' stereotypes may influence their assessments, their intervention choices, and their expectations for clients' success or potential for change. Ryan (2000), approaching worker beliefs from a social constructionist perspective, suggested that stereotypic attitudes, while typically very durable, are most amenable to modification when they are consciously challenged and accurate information is provided through professional education and training. He contends that through a secondary socialization process, including training and professional education, stereotypical attitudes can be replaced with ideas that are less negative.

Stereotypical biases. Latting (1990) refers to bias as "an inherent feature in American culture" (p. 38). She claims that everyone raised in America develops some bias against some group of people. Common biases include racism, sexism, ageism, homophobia, and negative beliefs about the physically or developmentally disabled, mentally ill, or those with other challenges. Diversity and respect for all cultures and people are highly valued in social work and are incongruous with biased attitudes and oppressive beliefs. In social work education, one approach is to normalize biased thinking so that students will not feel singled out as prejudiced, but will recognize that their uninformed and negative attitudes and beliefs about others can be replaced with more

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positive, accurate ones (Latting). Two biases, commonly perpetuated through stereotypes, have been identified in the literature and are of particular interest in this study. The first is racial bias.

Racial bias is, of course, associated with racism. Bullock (2002) defines racism as "a negative bias or disliking of people because they belong to a particular group one dislikes" (p. 15). O'Sullivan (1999) offers an additional description in relation to decision-making. He states, "Racism is a lens that distorts the features of the decision situation by interpreting them in terms of racial superiority and racial stereotypes" (p. 119). Racism is a social construct that is engendered early in children in American society. Davis and Proctor (1989) note that children become aware of racial differences and social meanings attributed to particular characteristics, such as skin color, as early as four years-old. By age six, some children are able to verbalize racial stereotypes about themselves and others (Davis & Proctor). Davis and Proctor suggest that interactions between people, including social workers and clients, are "dominated foremost by observable differences in skin color" (p. 2). According to Davis and Proctor, for many people skin color triggers preconceived notions about people's other characteristics, including social status, behaviors, attitudes, and beliefs. While racism generally is recognized in terms of negative beliefs held by Caucasians against African Americans, that is not its only manifestation. African Americans and other minorities also demonstrate racially biased attitudes and beliefs.

Social workers, unfortunately, are not invulnerable to racism and social work education cannot entirely reprogram people, although it can help people critically examine their own racial consciousness. Proctor and Davis (1994) suggest that even the most well-

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intentioned social workers are likely to maintain and perpetuate racism through interactions with clients. They suggest that cross-racial interactions are challenging to navigate successfully as "the racially dissimilar social worker and client approach each other with little understanding of each other's social realities and with unfounded assumptions and unrealistic expectations" (p. 321). O'Sullivan (1999) suggests that racism is an underlying dimension in all social work interactions. He suggests that racism can have a profound and unintended influence on decision making, particularly when Caucasian social workers are working with African American clients. He states,

> Overt racism may not be prevalent within social work, but often white decision makers are unaware, with racism operating unintentionally within decision framing processes leading to discrimination and oppression in a picture of the situation, decision goals and a set of options. (p. 120)

Berger et al. (2005) report that racism in child welfare practice may be illustrated through judgments made by social workers about parenting practices between races. Social workers may hold unfounded, biased notions about the ways different races value and treat their children. One notion they use to illustrate their point is that people believe that African American families are more likely to use physical discipline and harshly correct their children's behavior. This may be true in some families but not true in many others. A second bias prevalent in child welfare is related to drug use.

Substance use, including alcohol misuse, is a serious concern in child welfare. Its significance has grown steadily over the past two decades with a surge in importance following the introduction of crack cocaine into the drug scene in the 1980s, followed by

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other hard, easily accessible street drugs like crystal meth. Parental substance use has become the concern most reported to child welfare agencies, usually in combination with other forms of maltreatment (Besinger, Garland, Litrownik, & Landsverk, 1999). Alcohol and/or drug-related endangerment issues comprise 30-80% of child protective services caseloads (Shillington, Hohman, & Jones, 2001; Sun, 2000) and are believed to affect nearly 6 million children (SAMHSA, 2003). While substance use is certainly a problem and children need protecting from its ill effects, some have argued that substance use is surrounded by stereotypes that have a biasing effect on child welfare practice. Stereotypes about drug use may unnecessarily lead to CPS intruding into families' lives (Azzi-Lessing & Olsen, 1996). Some researchers caution that limited empirical evidence of a strong relationship between substance use and child maltreatment exists in the literature (Hines et al., 2004; Karanda, 2004).The reality appears to be that there are parents whose drug use does not place their children at any risk or only at minimal risk (McAlpine, Marshall, & Doran, 2001; Klee, 1998). Klee reports that while some parents who use drugs place their children in jeopardy, others actually go to great lengths to protect their children from negative consequences and to maintain positive, healthy relationships with them.

However, most people likely do not think of parents who use drugs or abuse alcohol as responsible, caring parents. A prevailing stereotype is that drug-using parents are only concerned about using, not about their children. Sun (2000) reports that the mothers she interviewed in substance treatment experienced ambivalent feelings. They felt compelled to use and yet also compelled not to because they worried about their children. They expressed a strong desire to have positive relationships with their children. They also

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desired that their children not use drugs. Klee (1998) identified common stereotypes applied to drug-using parents (p. 439): selfish and uncaring, irresponsible, distracted, neglectful, intolerant, irritable, aggressive, disinterested in their children, and places drug use before children's welfare. Karanda (2004) found that CPS workers in Virginia relied upon outdated, invalidated ideas about drug use that have dominated the child welfare literature since the 1980s. In her interviews with child protection staff, workers identified clients with stereotypical labels like "crackhead" and "drunks." Evidence suggests that substance use has been stereotypically associated with race. Chasnoff et al. (1990) reported a finding that has been cited repeatedly in the child welfare literature as evidence of racial bias. They studied medical personnel's maltreatment reporting habits related to prenatal drug use. Although use rates were almost the same, African American women who tested positive for drugs were reported at ten times the rate of Caucasian women who tested positive. They concluded that reporting appeared to be more motivated by race than concern over prenatal drug exposure.

Policy. While not a psychological construct as other topics discussed up to this point, policy has an impact on social work decision-making, particularly child welfare decision-making (USDHHS, 2003). According to O'Sullivan (1999), policies define the parameters of decision-making in terms of goals and options and how these relate to particular circumstances. Some policies are highly detailed while others, like some child welfare policies, are rather ambiguous (O'Sullivan). Policies are common to most social service agencies and, as previously noted, provide the framework for child protective services practice. Policies are bureaucratic safeguards "designed to minimize error by

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limiting worker discretion" (Rzepnicki & Johnson, 2005, p. 396). However, while policy may constrain decision-making, it does not eliminate it. O'Sullivan points out that workers are required to recognize when policy applies, interpret policy to determine if and how it applies, consider what circumstances allow for an exception to the policy, and ultimately decide whether they will follow the policy. Lipsky (1980) has argued that social workers and other human service workers constantly reinterpret policy in ways that support their discretionary use of resources, including their own time. Jayaratne et al. (2008) emphasize that child welfare policy is always subject to the individual child welfare worker's interpretations. Policy has been used in some situations as a means of curbing biased decision-making. Policy enacted around substance use and child welfare's response is an example. To protect both vulnerable children and scarce resources, many states have developed very specific criteria for determining when alcohol and drug use is an allegation that can be investigated. Some states' policies limit investigation of drug allegations to situations where the reporter's statements demonstrate that the caregiver's use of drugs or alcohol has a clear impact upon a child's care (Jordan Institute for Families, 1999). In other states, statutes do not specifically identify substance abuse as maltreatment at all (McAlpine et al., 2001). Child welfare workers may interpret criteria loosely or ignore them entirely when they believe drug and alcohol use should be investigated in the majority of reported concerns.

Two additional methods have been used in practice to attempt to limit biased decision-making. The first is risk assessment, or the use of structured decision aids to assess or predict risk of harm. Few topics are as hotly contested in the child welfare

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literature as risk assessment and articles favoring or disfavoring the practice are numerous. In theory, risk assessment's benefit is intended to come from its reliance upon actuarial decision-making which minimizes the influence of bias (Schlonsky & Gambrill, 2005). But arguments have been made that even though risk assessment instruments are intended to be objective, those who use them are subjective so error is still introduced into assessment as items are scored and interpreted from the user's perspective (Schwalbe, 2004).

The second means of limiting bias in decision-making in child welfare is Structured Decision-Making (SDM). Structured decision-making was developed by the Children's Research Center in the mid-1980s. It is a system of assessment tools and principles intended to promote accurate assessment and consistent decision-making across the child welfare continuum (Kim, Kim, & Brooks, 2008). Responding to the need for "more efficient, consistent, defensible, and visible decision-making" (Children's Research Center [CRC], n.d., p. 1) that reduce the potential for tragic outcomes and high substitute care costs, SDM provides a comprehensive model for decision-making at multiple junctures. SDM principles guide decision-making at intake, assigning different levels of urgency in response in relation to risk factors and type of alleged maltreatment. According to the CRC,

> …all too often, agency policy about what should or should not be investigated is vaguely defined or not clearly understood by staff. Even when it is clear that the allegation is abuse/neglect-related, the criteria for determining the urgency of the case and the speed of the agency's response often varies by the unit, the supervisor, and/or the intake worker involved….The SDM intake tools clearly identify factors

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> that determine if and how quickly staff should respond to new child abuse abuse/neglect referrals. This results in greater consistency among workers and also permits administrators to easily convey the criteria they use to decide how the agency deals with abuse and neglect referrals. (p. 5)

SDM provides additional guidance through the use of structured risk assessment instruments and reunification readiness assessments. More than 20 states have adopted SDM as the guiding model for practice (CRC). Virginia has not adopted SDM statewide, but a number of localities have participated voluntarily. Ultimately all localities will adopt the SDM model, with local agencies coming aboard during various phases of the implementation plan.

Having addressed the conceptual decision-making literature and measures taken at systemic levels to minimize bias in decision-making, discussion will now turn to empirical contributions that relate to a number of the topics that have been presented. Examining the empirical literature reveals a limited amount of empirical research has been conducted in this area, especially given the recognition that decision-making is a core social work process and a mechanism relied upon in assessment and intervention. The research on decision-making has been completed in several countries (Australia, England, Israel, United States), suggesting international interest in the topic, at least a limited interest. As a whole, the body of work seems piecemeal, as if it lacks a cohesive theme or perspective. Several themes are present that reflect branches of interest, but there seems to be little connecting the research overall. Compared to research on some topics in social work, decision-making research, for the most part, appears to be a series of loosely connected

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studies, almost all advancing a different perspective or pursuing a different topic. Granted, some work has been used as scaffolding for other studies, but this seems mostly to be the case when a researcher (such as Benbenishty) advances a research trajectory by building on their own earlier work—even these examples are limited. In fact, Benbenishty is arguably the only researcher who has actually advanced the work or tried to pursue decision-making as a continued line of inquiry. There has been very little replication in decision-making studies, although it could be argued that Benbenishty, Rosen, and Merighi, Ryan, Renouf, and Healy have implemented studies similar to other studies. Overall, there has been little interest in generalizability beyond study samples. Finally, a great deal of the research has been conducted mostly with convenience samples, using very similar methodologies, with the use of vignettes being a frequent design element.

To facilitate the review of the existing empirical work, studies have been grouped according to unifying themes. Four distinct themes emerged in reviewing the empirical studies that seemed to connect pieces of research together in a coherent manner (although some studies do overlap). The themes are *Knowledge and Theory Use/Reasoning*, *Heuristics/Informal Rules/Decision Justification*, *Information Use/Decision Factors*, and *Expertise and Professional Decision-Making*. Tables providing additional descriptive information are provided with each group of studies.

Knowledge and Theory Use/Reasoning

Studies discussed in this section are briefly described in Table 1. Researchers interested in decision-making have acknowledged that decisions rely upon social workers' knowledge and how it is used in assessment and intervention. Drury-Hudson (1999) and

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Osmond (2006) have tried to reveal the types of knowledge that workers use in their practice. As noted earlier, Drury-Hudson has proposed a framework constructed on the types of knowledge that social work participants have identified in her research. Both Drury-Hudson and Osmond have been particularly interested in how knowledge is used conceptually to guide assessment and instrumentally to guide intervention choices. Their research has suggested that workers value types of knowledge differently with greater value attributed to knowledge that has practical applicability. Osmond's work has attempted to categorize types of knowledge based upon conceptual or instrumental use. Her research suggests that social workers draw from various types of knowledge to achieve specific aims.

Rosen, Proctor, Morrow-Howell, and Staudt (1995) also have tried to explore social workers' knowledge use. These researchers proposed that professionally educated social work practitioners should be able to articulate rationales for assessment and practice decisions. Their rationales should reflect knowledge from an array of sources, including theoretical knowledge, empirical knowledge, and policy. They also suggested that social workers' use of knowledge would be connected to particular tasks where decision-making was required. They found that for the most part social workers in their study could provide a rationale for assessment judgments and intervention choices that reflected the use of at least one type of knowledge. Their study data suggested that social workers could more easily explain how they arrived at assessment judgments, grounded in knowledge, than how they arrived at their intervention decisions. One particularly important finding was

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that 75% of the rationales workers provided derived from conceptual or theoretical knowledge. Less than 1% of the 2,347 rationales examined related to empirical knowledge.

The findings from Rosen et al.'s study are particularly interesting given findings from the study conducted by Gambrill and Gibbs (2002). These researchers examined whether a double-standard exists in knowledge quality that should be used in practice. They surveyed social workers and social work students to determine if participants felt other disciplines should be held to practice informed by more rigorous knowledge. Specifically, they asked participants the kinds of knowledge they would incorporate into their own practice (for instance, tradition, knowledge gained through personal experience, or knowledge developed through experimental trials) and the kinds of knowledge they would expect their physicians to rely upon in treating them. Both social workers and social work students reported that they would expect their doctors to rely upon the most rigorously tested types of knowledge. They would not approve of their doctors relying upon knowledge that had not been empirically tested. In their own practice, however, they would rely only occasionally on empirical knowledge, instead favoring weaker quality knowledge such as tradition and approaches suggested by colleagues. Together, the Rosen et al. and Gambrill and Gibbs studies suggest that empirical knowledge may be devalued by social workers, despite the emphasis placed on empirically-tested interventions and evidence-based practice in professional social work education.

Knowledge types and quality have little value if social workers' reasoning is flawed. Reasoning, after all, is the process of associating phenomena to other phenomena and considering how to act in given circumstances. Association and consideration both

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require knowledge. Sound reasoning would be impossible without sound knowledge. Nurius, Kemp, and Gibson (1999) examined social workers' beliefs about reasoning, particularly what sound reasoning looks like in practice. Their participants valued sound reasoning and were able to identify a number of dimensions of sound reasoning in practice. They were also able to recognize the flawed reasoning in a series of vignettes and suggest ways the hypothetical social workers' reasoning could be improved. Important strategies that the respondents suggested included 1) drawing knowledge from different sources and not relying too heavily on any one source, 2) assessing using alternative perspectives from different bodies of knowledge, and 3) critically examining how information can be framed in various ways depending on what knowledge is being applied or could be applied. Together the studies discussed in this section suggest that knowledge and its use is important in decision-making. Decisions may be enhanced or impaired depending upon the type and quality of knowledge decision-makers draw upon.

Table 1

Empirical Literature Overview: Knowledge and Theory Use/Reasoning

Author(s)	Sample/Methods	Measures	Findings
Gambrill & Gibbs (2002)	Convenience sampling:83 social workers recruited at a workshop (60 degreed social workers), 110 MSW students, 14 BSW students/ apply criteria from a list of 10 criteria to 2 hypothetical situations	Guiding questions: What level of rigorous criteria for decision-making would social workers apply in working with a client? What level of rigorous criteria would they expect their physician to rely upon in treating them for a serious medical condition?	Respondents in all groups reported they would expect their doctors to rely upon experimentally tested criteria and criteria found in the medical literature. They would not want their doctors to rely upon intuition in lieu of empirically validated criteria. For their own practice with a client, they

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			indicated they would rely primarily upon intuition, what they heard from colleagues, tradition, and what they had tried in the past. Concluded that social workers have different expectations for the professionals they turn to for assistance in terms of the validated practices they use, but are willing to use questionable criteria in their own practice with clients.
Nurius, Kemp, & Gibson (1999)	Convenience sampling: 69 case managers (43% MSWs)/24 Vignette questionnaire	Guiding questions: What do practitioners believe exemplifies sound reasoning? What factors in daily practice do practitioners believe compromise sound reasoning? What factors support sound reasoning in daily practice? What strategies would practitioners suggest for avoiding flawed reasoning?	Respondents characteristics of sound reasoning included: Practitioner Attributes (flexibility, multiple perspectives, good problem-solving, positive outlook, patience, good intuition, common sense), Consultation/Supervision/ Education (seeking out supervision, ongoing education, consulting with co-workers, knowing community resources), Mindfulness and Caution (objectivity, attentiveness, perspective, analytic skill, avoiding premature conclusions), Professional Values and Ethics (client empowerment, respecting independence and self-determination, looking at environmental and personal factors, adhering to professional values and ethics), Case Specific Focus (gathering as much information as possible, remaining open to new information, treating each situation as if it is unique, full assessment), Practitioner Self-

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			Awareness (not imposing values on others, conscious of emotional reactions, aware of how attitudes can influence perception, attempting to self-correct thinking). Environmental supports included supervision, training, collegial support, time, clarity of work roles. Factors that inhibit reasoning included time, pressure, insufficient supervision, insufficient resources, rules and regulations. Respondents' strategies to correct flawed reasoning included gather more information, ask specific questions, be skeptical of information, search for facts, explore alternative explanations and options, rely on professional values and seek education and supervision.
Osmond (2006)	Convenience sampling: 10 CPS social workers in Australia/qualitative mixed-methods	Guiding questions: What functions do types of knowledge play in practice?	10 conceptual and instrumental functions for knowledge emerged. Conceptual: awareness/ explanation/assessment, prediction, warning, comparison, generalization, behavior regulation, promoting a stance. Instrumental: education, rapport and relationship building, problem-solving and intervention
Rosen, Proctor, Morrow-Howell, & Staudt (1995)	Convenience sampling: 34 MSW health and psychiatric service social workers in two Veterans Administration Hospitals/ Case	Guiding questions: What knowledge do social workers use to provide rationales for their decisions? Does the use of knowledge	Participants were required to assess using Rosen's Systematic Planned Practice Approach which encourages critical decision-making at

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	summaries	differ depending upon the task? What type of knowledge is used? Does the type of knowledge differ depending upon the task?	different phases by requiring the practitioner to provide a rationale for all decisions. 2,347 rationales from work with 297 clients were coded and categorized: conceptual/theory, policy, value/norm, claim/assertion, client wish, empirical evidence, practice experience. Rationales were provided for 75% of the decisions. Medical social workers provided fewer rationales than psychiatric social workers. Fewer rationales were provided for intervention choices than for problem assessments.75% of rationales relied on conceptual/theoretical knowledge, then assertions (17%) and policy (6%) and practice experience (1%). Empirical knowledge was given as a rationale in less than 1% of decisions.

Heuristics/Informal Rules/Decision Justification

The theme that connects this group of studies is decision-makers' reliance upon informal rules, short-cuts, and justifications in decision-making. These studies are briefly described in Table 2. Murdach's (1995) study is the only social work study located that specifically attempts to examine the use of heuristics in social work decision-making although many researchers have discussed Kahneman, Slovic, and Tversky's influential contributions to decision science. Her article is an important contribution to the social

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work decision-making literature because she does address heuristics directly. Murdach found evidence that clinical staff in a psychiatric hospital managed their work by employing heuristics. However, the evidence must be assessed in light of the quality of the study. Murdach employed methods that she described as being congruent with naturalistic inquiry, including informal observation and unstructured conversation—both involving her co-workers who were the study participants. As the methodology is described in the article, little attention appears to have been paid to addressing qualitative dimensions of rigor (such as member-checking or analytic memos).

Rosen (1993) was interested in social workers' tendencies to define problems predominantly as interpersonal over environmental and how such a view would limit decision-making and options. Social work education has long advocated viewing problems from various perspectives, including considering environmental influences on client behaviors and problems in living. Rosen proposed the use of a micro-macro approach to problem definition and intervention selection that he created and called the Systematic Planned Practice Approach. This approach was intended to facilitate improved decision-making by requiring workers to justify their decisions at various points in the problem-solving and intervention process. His concern was that if social workers demonstrated a bias towards defining problems in terms of interpersonal, relational, aspects or personal deficiencies then they would ignore potential benefits that might derive from considering the macro perspective. These benefits would include the range of interventions for change in the client's environment that might accompany a macro conceptualization of client problems. Participants in this study were trained to use the Systemic Planned Practice

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Approach and provided justifications for assessment and intervention decisions at the required junctures. As Rosen expected, the respondents did predominantly define problems in terms of client and interpersonal deficiencies. However, they did not overlook opportunities for encouraging or creating change in clients' environments. Rosen concluded that the use of the structured protocol enhanced participants' decisions by encouraging exploration and consideration of all options, not just those that might have been associated with one perspective on problem definition.

Benbenishty et al. (2003), and Osmo and Benbenishty (2004) have investigated social workers' justifications for decisions (building upon Rosen's prior work). Both studies explored the ways that social workers (and also laypersons in Osmo & Benbenishty) explained their choices and what information they used to support their justifications. In both studies, they found that participants were able to base justifications on cues, or evidence, found in the vignettes that were presented to them. The participants processed the information available to them using theory, general knowledge, and experience. In the second study, laypersons demonstrated that they also interpreted information using the same types of knowledge. Both studies observed that social workers failed to justify their decisions with empirical knowledge, which reinforces Rosen et al.'s and Gambrill and Gibbs' findings that were discussed in the previous section.

Platt's (2006) study is one of the few specifically addressing intake decision-making in child protective services. Though not conducted in the United States, its findings are relevant to CPS intake decision-making in the US. Platt explored the informal criteria, or implicit rules, that intake decision-makers applied in determining which maltreatment

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reports to screen in for agency response. The findings suggested that the participants employed five main criteria for deciding whether or not to accept a referral: 1) specificity of harm (how clearly the actual or potential harm was described by the reporter), 2) severity of harm, 3) risk of future harm, 4) parental accountability, and 5) extent of corroboration between referral information and other available sources.

The parental accountability criterion was a particularly important finding. This indicated that one factor influencing the decision to screen a maltreatment concern in or out would be the likelihood that the caregiver could be held accountable for the abusive or neglectful behavior. In child welfare philosophy, protection ideally always assumes predominance over accountability. Whether a perpetrator could be clearly identified should have been a secondary question asked after the child's safety was assessed and assured. The research confirmed that in some cases intake decision-makers apply their own criteria to intake decisions, including some that might potentially conflict with established practice philosophy and policy criteria.

The second important contribution from this research was the finding that the intake decision-makers studied described a "threshold" for determining whether a maltreatment report would be accepted. Specific criteria were relied upon in determining which concerns met or exceeded the threshold. The participants identified that the factors most important to that decision include injuries or harm that could be used to hold parents accountable, clear signs of harm or risk of harm, and information that could be confirmed with other professionals or from previous contacts with child welfare services. These criteria suggest that the intake workers felt more confident in making the screening choice

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to accept reports when they could establish the existence of clear evidence through physical signs and symptoms or corroborating evidence through records documenting previous concerns or other professionals' observations. This emphasis on translating concerns into clear evidence was, in fact, considered a strategy for managing the inherent uncertainty that accompanies CPS intake decision-making. However, it also presents the possibility that decision-makers would be hesitant to act to screen in reports that might be equally valid simply because the desired "proof" was not readily available. Adopting this threshold could leave many children at risk. At this phase in the child protective services process, the requirement for action is that evidence (presence of risk factors) is presented in the report that is consistent with legal criteria. The obligation to determine whether actual evidence exists falls to the CPS investigator, not the intake decision-maker.

Sheppard and Ryan (2003) were also interested in rules that social workers employ in their decision-making practice. The researchers proposed that practice decisions are considered in the form of explanatory and predictive hypotheses. They believe that social workers generate hypotheses that meld their knowledge and experience with information available to them provided by the client and other sources in the practice situation. To arrive at hypotheses, they theorized that social workers employ informal rules that shape knowledge and information in particular ways. By listening to workers process case vignettes aloud they were able to find limited evidence that workers did generate hypotheses for what was occurring in the scenarios. The comments led them to conclude that four types of rules were used in generating hypotheses—descriptive, substantive,

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application, and practice rules. Each rule influenced the way workers would consider and use information and practice knowledge and served a particular function.

The studies discussed in this section provide some evidence that social workers rely upon implicit rules and other means to justify decisions. Particularly important is the finding in Platt's (2006) study that intake workers may devalue some information and, thus, keep some maltreatment concerns from meeting personally-defined thresholds for receiving service. The next section will discuss social workers' use of particular kinds of information, especially decision factors.

Table 2

Empirical Literature Overview: Heuristics, Informal Rules, Decision Justification

Author(s)	Sample/Methods	Measures	Findings
Benbenishty, Osmo, & Gold (2003)	Convenience sample from child welfare agencies—52 Israeli social workers, 67 Canadian, roughly half of each group had social work degrees/ Case vignette to assess risk and suggest intervention	Guiding question: What are social workers "covert" decision-making practices?/ Rosens's knowledge rationales	In justifying risk and suggested intervention, respondents relied upon theory, general knowledge, and experience. Almost no mention of empirical knowledge. Did consider relevant case characteristics and evidence in vignette. Try to apply rules to move from information to judgments. May not be aware of the influence of their personal values and may try to interpret information as if it is "objective."
Murdach (1995)	Psychiatric Hospital—4 nurses, 2 psychiatric aides, 2 psychiatric residents, 1 psychologist, interns/ Observation, unstruct-ured interviews, retrospective analysis	Guiding question: What informal rules do practitioners use? Do practitioners employ heuristics?	4 heuristics emerged: prioritize concerns, use the practical and feasible, use available information, be concerned about potential negative consequences

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Osmo & Benbenishty (2004)	Compared social work professionals (52) and laypersons (50) in Israel; all social workers had undergraduate or graduate social work degrees/Critical Incident Analysis approach using case vignette	Guiding question: What rationale is given for risk assessment?	In justifying risk and suggested intervention, social workers relied upon general knowledge, theory, policy and experience; laypersons replied upon general knowledge , theory, and values; neither social workers nor laypersons relied upon empirical evidence. Social workers justified claims with evidence presented in the vignette; used information more complexly applying knowledge to case characteristics; social workers' use of critical thinking may be limited; may search for information that confirms initial hypothesis and not look for information that might disconfirm it
Platt (2006)	Purposive sampling:14 child welfare social workers in Britain/ Grounded theory; participants reviewed 23 case vignettes to determine what information was important in deciding to accept or reject a maltreatment referral	Guiding question: What information do intake decision-makers use in determining whether to screen cases in or out?	Referral information assessed using five criteria: specificity of harm; severity of harm; risk of future harm; parental accountability, extent of corroboration between referral information and other available sources; criteria that appeared to lead cases to cross the "threshold" for intervening were injuries or harm for which the parent could clearly be held accountable, clear signs of harm or risk of harm, information could be confirmed with other professionals or from previous involvement with agency. Social workers try to manage uncertainty in decisions by relying upon a set of decision tasks that are believed to help reduce the uncertainty.

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Rosen (1993)	70 social workers from family service agencies in Israel, roughly 80% having BSW degree/ Quantitative analysis	Guiding questions: Do workers tend to define problems as environmental or interpersonal? Is this a bias that affects intervention and outcome decisions?	Participants were required to assess using Rosen's Systematic Planned Practice Approach which encourages critical decision-making at different phases by requiring the practitioner to justify decisions. Found that workers demonstrated a bias to assess problems as interpersonal as opposed to environmental but the bias did not persist in outcome planning, possibly because the decision-tool required considering environmental outcomes
Sheppard & Ryan (2003)	Purposive sampling: 21 British child welfare social workers/ Cognitive Process Interview assessing 3 vignettes	Guiding questions: What hypotheses do social workers generate in practice situations? How do they use content from particular situations to generate hypotheses? Do they use rules for generating hypotheses? If they want to know more about some aspects than others, why?	Participants implicitly relied upon a number of rules: *descriptive* rules are based on generalizations established through experience or practice knowledge; *substantive* rules apply to particular case aspects and are used to interpret circumstances, may be "red flags"; *application* rules refer to the way social workers believe they should apply knowledge and experience to particular circumstances; *practice* rules guide intervention and connect actions to reasons for action—often vague and ill-defined reasons for taking particular actions. In analyzing situations, social workers generate hypotheses that are based on this set of implicit rules

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Decision Factors and Use

The studies described in Table 3 and discussed in this section have particular relevance for studying child protective services decision-making. As a whole, these studies examine the ways that child welfare workers interpret and use factors found in child maltreatment situations, particularly in assessing risk and making placement decisions. Some studies also explore how social workers react to factors that might trigger bias, such as race or substance use.

All of the studies in this section researched participants' use of decision-factors identified in the child welfare literature in their decision-making. Galante (1999), Gammon (2002), Enosh and Carmelli-Geller (2008), and Howell (2008) all studied the potential impact of characteristics commonly associated with bias in decision-making. Enosh and Carmelli-Geller investigated the influence of socioeconomic status and ethnic minority group membership on risk assessment and placement decisions. Galante, Gammon, and Howell all explored the influence of race. Howell's study also examined the influence of substance use allegations assuming substance use to be a biasing factor. Findings were contradictory across the studies in terms of the influence of potentially biasing factors. Enosh and Carmelli-Geller did find risk assessment was highly influenced in their sample by socioeconomic status and by children being members of a minority group. Gammon also found socioeconomic status to have an effect. Children identified with lower socioeconomic status were referred for placement more frequently than those whose socioeconomic status was suggested to be higher.

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Galante (1999) found that in her study placement recommendations for African American and Caucasian children did differ. Workers recommended placement for African American children assessed as low to moderate risk but only recommended placement for Caucasian children assessed at high risk. In-home services were recommended for moderate risk Caucasian children and for moderate and high risk African American children. African American children were also described by workers as harder to adopt than Caucasian children. In Howell's (2008) study, maltreatment reports involving African American children were accepted more often than reports involving Caucasian children. This pattern in accepting more reports involving African American children was consistent for both Caucasian and African American intake decision-makers. In contrast, Gammon (2000) did not find race to have an influence on the decision to reunite children with their parents. Hansen et al. (1997) found race to have an effect but it was in an unexpected direction. In this study, being Caucasian increased the odds of being reported to child protective services for maltreatment concerns. Hansen et al. concluded that if respondents were not demonstrating a social desirability bias, then their responses might demonstrate that professionals see maltreatment in African American families as normal and to be expected. However, maltreatment in Caucasian families was considered to deviate from the norm, thus causing professionals to experience greater concern which increased their motivation to report. Together, these studies suggest that race has the potential to influence decision-making but its influence appears to be inconsistent and may be diffused by other factors in a decision environment. They also suggest that race is a variable that deserves additional study to determine its effect on decision-making.

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Both Lazar (2006) and Gammon (2000) found gender had an effect on decision-making. Client gender and worker gender were found to influence decisions in the first study while only worker gender was found to have an effect in the second. In Lazar's study, child protective services workers perceived cases involving female children to be more serious, requiring more intrusive responses to address risk. Also, female CPS workers responded less intrusively to a battered child than male social workers, but that was the case in only one of the four vignettes they were asked to review. Gammon found that male social workers were less likely to recommend that children be reunited with their parents after 17 months in care than female social workers. These studies offer some evidence that gender may affect decision-making with male children perceived as being less at risk of maltreatment and female decision-makers being less severe and making "softer" (i.e., more pro-family, less intrusive) decisions than male workers.

To determine whether the mere presence of a substance abuse allegation would influence the intake screening decision, Howell (2008) surveyed intake decision-makers in a state comparable to Virginia. Howell presented participants with 10 scenarios that *did not meet criteria* for CPS response at the time to see if the scenarios that included mention of drug use would be accepted. Participants also were scored on a brief scale that Howell created to assess their degree of negative bias concerning substance use. The scenarios involving substance use were accepted more frequently than the scenarios depicting other concerns. Participants with higher scores on the bias scale chose to screen in more scenarios mentioning drug use than those participants with lower scores. The findings of this research suggest that social workers with strong feelings about substance use may

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choose to screen in drug use complaints even when that decision would not be supported by prevailing child protective services policy. The findings also indicate that substance use and its potential biasing effect deserve further study.

Several studies from this group explored the factors that influence decision-making in addition to those already discussed. Primarily these researchers were interested in identifying key factors used in decision-making and determining if any pattern in factor use could be found. Benbenishty et al. (2002) examined whether case characteristics or alleged maltreatment type influenced decision-making, particularly if physical abuse influenced decisions. Both social workers and non-social workers who participated in their study reacted strongly to allegations of physical abuse. Evidence of physical abuse seemed to have a *satisficing* effect for social workers and non-social workers, meaning at the point cues suggested physical abuse, they stopped searching for other maltreatment cues. However, when physical abuse was not alleged or suggested by the cues, they searched for cues consistent with different types of maltreatment. After searching for cues indicative of physical abuse, social workers and non-social workers searched for cues that provided information about the parent-child relationship, and child development across the physical, emotional, and cognitive domains. Benbenishty et al. concluded that social workers and non-social workers both search for cues, and rely on similar cues in decision-making, but social workers attend to more cues available in the decision environment.

Four studies explored the specific factors that decision-makers indicated using in making child protection decisions (Britner & Mossler, 2002; DeRoma et al., 2006; Murphy, 1994; Shapira & Benbenishty, 1993). Britner and Mossler found agreement on

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the importance of just three decision-factors out of 18 between child welfare workers, mental health counselors, judges, and CASA advocates who work with maltreated children: severity of abuse, likelihood of reoccurrence, and pattern of abuse. Other than these three being identified consistently by all four groups, each group focused on different factors. The researchers concluded that different stakeholders assign different value to decision-factors depending on their professional perspectives and objectives.

Similarities in the importance of particular decision factors were found in several of the remaining studies. Both DeRoma, Kessler, McDaniel and Soto (2006) and Murphy (1994) found parental responsibility for abuse to be indicated as a critical factor. In both studies, decision-makers took into account whether the parents had acknowledged responsibility for maltreating their children. The importance of the parent-child relationship was emphasized as a pertinent decision factor in the studies conducted by DeRoma et al. and Shapira and Benbenishty (1993). The child's relationship with the mother was found to be particularly important to decision-makers in Shapira and Benbenishty's study. In their study, they also found that decision-makers relied upon clear indicators of abuse—a similar finding to the study conducted by Benbenishty et al., who found that signs of physical abuse were the most important to the decision-makers as the basis for decisions. Finally, three studies found an emphasis placed on the degree to which the parents were willing to accept help (or had been willing in previous incidents). DeRoma et al., Murphy, and Shapira and Benbenishty all found this factor to be important to decision-makers in their studies. Considered together, these studies all provide evidence that decision-makers do acknowledge and rely upon decision-cues in the environment as

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providing the basis for making decisions. However, they suggest that there is really very little consistency in the factors that are used in making child protection decisions. Essentially, it appears that relevant factors are context-based, meaning different factors emerge as particularly important in different contexts, instead of a general set of factors being seen as important across contexts. In some respects, this is a disturbing finding given the amount of research that has been conducted in order to identify conclusively the key factors associated with maltreatment. These studies suggest that the factors vary and are not equally important, at least not by line workers, as they have been purported to be in the risk assessment literature.

Table 3

Empirical Literature Overview: Decision-Factors and Use

Author(s)	Sample/Methods	Measures	Findings
Benbenishty, Segev, Surkis, & Elias (2002)	Convenience sampling: 100 BSW social workers working on MSW, 100 BSW students, 100 business students, all in Israel/ "Policy Capturing" and Process Tracing approaches using a vignette embedded with 14 distinct information cues, half of the vignettes included signs of physical abuse	Guiding questions: What case characteristics influence decisions? How do workers arrive at recommendations? Do professional and layperson assessments differ in terms of risk? Do professionals and laypersons search for information differently? Does physical abuse have a different impact on professionals than laypersons?	Indication of physical abuse had a significant impact resulting in higher assessment of risk, but the business students rated it higher and were more willing to recommend removing children from the home than the other respondents. When physical abuse was not mentioned, business students assigned the lowest levels of risk even when other serious indicators of maltreatment were present. Social workers and social work students attended to all maltreatment indicators. Social workers and social work students searched for more information—more cues—than business students. They looked for more cues when physical abuse was NOT indicated than

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			when it was. All groups searched for cues related to physical abuse before any others then proceeded to search for information concerning parent-child relationship, then emotional, physical and cognitive development. Concluded social work professionals search for meaningful decision cues.
Britner & Mossler (2002)	Purposive sampling—90 professionals (43 child welfare social workers, 6 judges, 8 Court-Appointed Special Advocates (CASAs), 23 mental health counselors) identified by child welfare agencies in Virginia/Questionnaire and 4 vignettes alleging physical abuse, half victim race identified as "white" and half "black"	Guiding questions: How do different child welfare professionals prioritize and use information in deciding whether a child should be removed from the home?	Importance of different kinds of information to the decision was not influenced by race, age, or chronicity of abuse. Eighteen decision-factors were scored. Severity of abuse, likelihood of reoccurrence, pattern of abuse were rated highest as important information. All groups listed those 3 factors as the most important to consider. Differences in the relevant importance of other factors was found between the professional groups. Concluded multiple professional perspectives impact the differential importance of information pertaining to child abuse situations.
DeRoma, Kessler, McDaniel, & Soto (2006)	Convenience sampling: 51 DSS social workers in 4 South Carolina counties, 70% degreed social workers/ Structured interview	Family Separation and Reunification Decision-Making Assessment assessing the role 35 parenting risk factors play in decision to remove/reunite children; What are the factors social workers believe to be most important in	Found motivational factors and behavioral appeared to be more highly valued than environmental factors. Top factors included, in order, parent's ability to set limits with perpetrator, personal responsibility for abuse acknowledged, effective supervision, ability to handle medical/emergency issues,

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		separating children from their families?	quality parent-child relationship, willingness to accept help from DSS and other agencies. Priority set by the respondents for factors differs from the priority established in child welfare literature, suggesting workers rely on their own assessment of importance for different factors
Enosh & Carmeli-Geller (2008)	105 Israeli child welfare workers/Factorial survey using 8 maltreatment vignettes (risk to child, socioeconomic status, ethnic minority status)	Guiding question: To what degree are CPS workers' decisions influenced by socioeconomic and minority status?	Risk assessment and recommendation for placement were influenced by socioeconomic status and ethnic minority group membership. Low socioeconomic status and minority group membership predicted high risk assessment and removal recommendation. Concluded that more attention should be paid to the influence of prejudice in decision-making
Galante (1999)	Stratified sampling: 903 social workers across the US drawn from NASW membership list identified as child welfare practitioners (3,036 invited to participate—252 names per 12 study conditions—each condition received at least 66 responses), 79% MSWs/Abuse vignette and neglect vignette manipulating race and evidence of harm	Guiding questions: Does race influence decision-making? Do decision-making patterns vary by maltreatment type?/Modern Racism Scale, Aversive Racism Scale	More experienced workers (15+ years) reported more positive beliefs about services, particularly in-home services and were less likely to recommend removal. Overall respondents' racism scores suggested low prejudice against African Americans. African American race was found to be significantly associated with perceptions of barriers to service, length of time in care, and lack of cultural understanding. Caucasian race was associated with lack of family support and likelihood of future harm. In-home services were recommended for Caucasian children in moderate risk while being recommended for African American children at

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			moderate or high risk. A recommendation to remove Caucasian children was likely for children at high risk but the recommendation was likely for African American children experiencing risk at low and moderate levels. Caucasian children were identified as easier to adopt than African American children. Physical abuse cases received more service intervention ideas than neglect cases. Concluded race appeared to influence decision-making but not to the degree that it could be described as prejudicial, although heightened awareness of race may have lowered scores.
Gammon (2000)	Random sampling: 534 social workers drawn from NASW membership list/4 maltreatment vignettes manipulating race and socioeconomic status	Guiding questions: Does race influence reunification decisions? Does socioeconomic status influence reunification decisions?	Race and socioeconomic status were not found to influence respondents' reunification decisions. Male social workers were less likely to recommend reunification than females. Experienced social workers were more likely to recommend reunification than less experienced social workers. The decision to reunify a child may be less vulnerable to bias than the decision to remove. Decisions may also have been influenced by the policy mandate to reunite children with families as quickly as possible.
Hansen, Bumby, Lundquist, Chandler, Le, & Futa (1997)	Random sampling from membership lists: 125 licensed psychologists, 85 Certified Master Social Workers (94% MSWs)/ 5 vignettes alleging maltreatment, manipulating age of child, race, and	Guiding questions: Do case characteristics influence the decision to report concerns to CPS? Do characteristics associated with the professional influence the decision to report?	Across all maltreatment types and socioeconomic conditions, scenarios involving Caucasian children were more likely to be reported. Concern ratings were consistently higher in scenarios involving Caucasian children than African American children. Racial bias

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	socioeconomic status		may have been present in respondents seeing maltreatment as more normative for African American families than Caucasian families. Social desirability bias was possible if respondents realized race was being studied and rated African Americans more positively
Howell (2008)	Population sampling: 86 intake supervisors (primary intake decision-makers) in CPS agencies in a state comparable to Virginia, 12 MSWs/10 maltreatment scenarios (none of which met the legal definition of maltreatment in the state) and list of relevant decision-factors	Guiding questions: Does an allegation of substance use influence the decision to screen in a maltreatment report? Do intake decision-makers' feelings about substance use influence their decisions? Does victim race influence the decision to accept a report? Does social work education influence feelings about substance use? Does social work education influence screening decisions?/Value scale (measuring substance use bias) created by researcher	Respondents scoring higher on the substance use bias scale accepted more scenarios. Respondents scoring higher on the scale were more likely to identify substance use as a factor in their decision-making. Scenarios involving African American and Latino children were accepted more frequently than those involving Caucasian children, by both African American and Caucasian respondents. Social work education was found to have no effect on screening decision or biased feelings towards substance use.
Lazar (2006)	Population sampling: 154 Israeli child protection workers (of 334 possible)/4 vignettes randomly assigned to participants	Guiding question: What influence do demographic and personality variables have on CPS decisions?/ Authoritarianism scale	Found that the alleged victim child's gender influenced decision-making. Girls were perceived as being more at risk and requiring more intrusive responses. Female social workers' response to a battered child was less intrusive than males'. Social workers who scored higher on the authoritarianism scale responded more intrusively than those with lower scores.

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			Concluded the decision-making across the scenarios appeared inconsistent and subjective.
Murphy (1994)	Purposive sampling: 15 Ohio CPS workers responsible for screening and investigation decision-making in out-of-home care situations/Focus groups at three CPS agencies using guided interview approach, followed 1 month later by 105 screening "profiles" respondents judged for severity and whether or not they would have screened the report in for investigation	Guiding questions: What factors do child protective services workers report using in their decision-making? How consistent are workers in their use of information in their decisions? Do workers use the same factors? Do child welfare workers use information in the way they think they do? Do workers use the same information to screen reports that they use in other decisions?	Factors identified in all scenarios included consequences to the child and responsibility for the injury. Child age and cooperation of perpetrator were used in many, but not all, cases. Use of information cues could be found in less than one-half of the decisions. Three or fewer cues were used in most cases. At the most, 6 cues were used. Respondents differed in the number and type of cues used in decision-making. Cue use was inconsistent with different workers willing to substantiate reports based on using different cues. Decision-makers varied in how decisive they appeared to be in making a substantiation decision. Respondents appeared to have limited to moderate insight into their decision-making. Respondents did appear to use the same cues to screen in cases. Decision-makers from different counties used different cues suggesting context is an influence.
Shapira & Benbenishty (1993)	Convenience sampling: 28 social welfare agency social workers/120 case vignettes manipulating 10 decision factors (factorial survey)	Guiding question: What factors influence child welfare workers' judgment? How do they use information to assess risk?	Four factors emerged with predictive influence on risk assessment: signs of maltreatment, child's physical and intellectual development, mother-child relationship, and child's socioemotional development. Three factors best predicted intervention choices: mother-child relationship, parents' cooperation with previous

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	interventions, and signs of maltreatment. Respondents could be differentiated by the emphasis they placed on the importance of the child-parent relationship or the emphasis placed on signs of maltreatment. Evidence suggested the decision-makers were consistent in their use of information across the scenarios.

Expertise and Professional Decision-Making

The final group of studies that will be reviewed relate to expertise and professional decision-making. These studies are described in Table 4. Several studies have attempted to identify what experts think about when they are making decisions. These studies have used identified experts to try to probe the kinds of information used by experts in a particular area and how information is used (Ayre, 1998; Drury-Hudson, 1999; Fook, Ryan, & Hawkins, 1997; Merighi et al., 2005). Fook et al. interviewed expert social work practitioners (although their operational definition of "expert" as having 5 years social work experience likely would not meet Shanteau's strict criteria). The participants reviewed two vignettes and the interviewers recorded comments made about the scenarios the vignettes described. Particular attention was paid to participants' descriptions of how they would "know" what the problem was or how to address it. The participants' comments were later categorized using content analysis. Three themes emerged in participants' discussions of applying assessment and intervention to the scenarios: use of theory, complexities in the environment, and intervention focus. The experts relied heavily upon theory in their assessments and demonstrated confidence in their initial impressions.

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Interestingly, while they appeared confident in terms of their assessments, they were much less confident in articulating reasons to intervene in particular ways.

A similar study was conducted using a cross-national sample of expert mental health practitioners in Australia and Canada. Merighi et al. used focus groups to determine expert characteristics of clinicians in community mental health settings. Their findings were similar to Fook et al.'s findings. Participants discussed the use of theory in their work and how it influences assessment and intervention decisions. The participants appeared to be able to tailor their use of theory to situational circumstances. In fact, they relied upon theory as the starting point for assessing client problems, sometimes drawing upon theories from other disciplines that seemed to relate to the problem and using them as a springboard for assessment. In contrast to Fook et al.'s experts, Merighi et al.'s experts were able to explain how they arrived at intervention decisions and could justify their intervention choices in terms of specific theories.

Ayre (1998) and Drury-Hudson (1999) were interested in better understanding expert child protective services decision-making. Both used semi-structured interviews having experts talk through assessment and intervention decision-making. Ayre asked his participants to review a recent CPS situation while Drury-Hudson asked participants to review a vignette. Drury-Hudson also had non-experts (social work students) do the same so that she could compare experts' and non-experts' thinking and decision-making. Out of 40 CPS incidents Ayre's participants discussed, 401 factors that had been influential in decision-making emerged from the participants' statements. The factors represented decision cues in four categories: observations concerning the child, observations

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concerning the parents, observations of family relationships, and observations of the CPS system. One of the particularly important findings from Ayre's study is that the experts he interviewed appeared to almost totally approach assessment from a deficit-based perspective. Roughly 90% of the factors that participants discussed represented deficiencies, generally parent or family deficiencies.

In contrast to Ayre's study that focused on identifying factors expert CPS decision-makers use, Drury-Hudson (1999) was interested in how those factors relate to social work knowledge and theory. Drury-Hudson compared expert CPS workers' (defined as having 10+ years) assessments of a hypothetical maltreatment situation to assessments made by undergraduate social work students placed in CPS field placements. The experts clearly were able to identify concerning factors in the vignette. They were able to provide theoretical and policy explanations for why particular cues were important. Social work students, in contrast, were not consistently able to recognize important cues. Experts were able to explain how theory and policy were applied to practice in a conscious, deliberate way. Non-experts struggled with the purposeful use of theory and policy in practice. The CPS experts were clear about their roles and how they were guided by legislative and agency policy. They understood how policy was interpreted contextually. Social work students were confused about their roles and did not clearly understand how policy was interpreted and applied across situations. While the students acknowledged that they rarely relied upon the social work literature to guide their practice, the experts indicated that they routinely consulted the literature to stay current in their field and to have a basis for assessment and intervention grounded in empirical findings. Overall, Drury-Hudson found

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that experts relied upon theory and empirical research as tools to be used in completing their work while students did not have these tools to work with in practice.

One study in this group defined expertise as experience working in a particular field. This study by Mandel, Lehman, and Yuille (1994) explored differences in how experts (child welfare workers with experience in the field and professionals in related fields) address assessment by asking for additional information, generating hypotheses, or proposing unwarranted assumptions. These behaviors were compared to non-experts, undergraduates in a psychology course. Participants were asked to review a maltreatment vignette and write down their reactions and thoughts. The vignette was designed to suggest minimal evidence of mild maltreatment. The child welfare experts' comments suggested that they would want additional information to consider (71%) compared to the undergraduates (47%). Thirty-nine percent of the experts' comments reflected hypotheses generated to explain their assessment of the problem while 47% of the undergradatues generated hypotheses. Undergraduates made more unwarranted assumptions (34%) about the situation compared to the experts (12%). Mandel et al. concluded that while experts found more critical value in information, non-experts approached assessment and decision-making similarly and the experts did not make better decisions as a function of experience.

Sullivan et al. (2008) compared the decision-making of highly experienced (8 or more years) child welfare workers to that of less experienced (less than 2 years) workers in the field to see if they assessed risk differently. Both groups were asked to review maltreatment concerns provided in vignettes and consider whether particular risk factors applied and, if so, how seriously they considered the factors. In their study, they found that

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both the highly experienced and less experienced child welfare workers assessed risk very similarly. The identified risk factors and the degree to which particular factors were rated in importance were consistent for both groups. In contrast to a finding in Gammon's (2000) study described earlier, there was little difference in placement recommendations made by the experienced and less experienced child welfare workers. Both groups made similar recommendations. In Gammon's study, the experienced social workers were less likely to recommend placement out of the home. If Sullivan et al.'s vignettes were adequately ambiguous (meaning they did not simply present a physical abuse situation so clear that potential responses were effectively limited) then their findings suggest that experienced and inexperienced decision-makers assessed risk and made placement recommendations similarly.

The final studies have been discussed often in the child welfare decision-making literature. Ross, Schuerman, and Budde (1999) examined expert child welfare decision-making by recruiting a panel of 27 nationally-recognized child welfare experts and comparing their decisions to those of line workers in child protective services. Both groups were presented vignettes and asked to identify important maltreatment decision-factors that had an influence on decision-making. Participants were also asked to make an intervention recommendation. No clear pattern emerged in how experts or line workers made use of decision-factors, although both groups found similar factors to be important. Both groups identified the number of founded complaints as a primary decision-factor, but the significance they attributed to other factors varied between and within groups. Experts were more likely to suggest interventions maintaining children in their homes while line

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workers were more likely to recommend removal. Overall, they concluded that there was very little difference in the way that nationally-recognized experts and line workers with considerably less experience made child welfare decisions. In a companion study, Schuerman et al. (1999), the researchers explored the degree to which experts agreed with each other, line workers agreed with each other and the two groups agreed in deciding to recommend removal from the home. The experts agreed with each other in 65% of the cases they reviewed ($N = 70$). Line workers agreed with each other in 64% of the cases ($N = 18$). The experts agreed on recommending family preservation services in 56% of the cases while line workers agreed in 48%. Given the assumption that experts should demonstrate reliable, comparable judgment regarding maltreatment, the 27 experts agreed unanimously in only 23% of the scenarios. They were able to achieve 81% consensus in 67% of the cases. The researchers concluded that the complexity involved in child welfare practice is so great that not even renowned experts can agree on a clear definition or goals for intervening.

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Table 4

Empirical Literature Overview: Expertise and Professional Decision-Making

Author(s)	Sample/Methods	Measures	Findings
Ayre (1998)	Purposive sampling: 25 expert decision-makers in Britain, nominated by child welfare agencies, having at least 7 years' experience in CPS and making at least 10 CPS decisions yearly/Semi-structured interviews using Critical Incident Approach	Guiding questions: What factors influenced a recent CPS decision? What factors suggested risk or safety?	Respondents identified 401 (utilized in 40 cases respondents recalled) factors that could be categorized as observations concerning the child, observations concerning the parents, observations of family relationships, observations of the CPS system. Factors related to the parents appeared more important to the respondents than other factors. 90% of factors related to deficits and only 10% related to strengths, suggesting respondents approach assessment decision-making from a deficit-oriented perspective.
Drury-Hudson (1999)	Convenience sampling: 10 novice decision-makers (undergraduate BSW students placed in child welfare agencies; 8 expert decision-makers had at least 10 years CPS experience and were recruited through snowball sampling—all in Australia/ "think-aloud" review of a neglect vignette followed by semi-structured interview	Guiding question: Do novice decision-makers and expert decision-makers use knowledge differently?	Novices and experts both associated case characteristics to theories. Novices exhibited difficulties with explaining how to apply theories to practice. Novices did not use theory in a deliberate or conscious way. Experts demonstrated a clearer understanding of how to apply policy to practice situations. Experts described theories as "tools" used in their work. Experts were more aware of the child welfare research and indicated using it regularly in their work. Novices reported finding limited value in research articles. Experts were able to decidedly identify factors that suggested risk and warranted concern. Novices were unclear as to the factors

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			that should be of concern, or how to interpret factors in terms of risk. Novices were unfamiliar with legislation and policy related to practice. Experts were familiar with legislation and policy and could explain how it drives practice. Concluded that social work education did not prepare students adequately to be placed in CPS agencies. Also that students are not adequately prepared for integrating theory into practice.
Fook, Ryan, & Hawkins (1997)	Purposive sampling: 30 MSW expert social workers in Australia were nominated by Field educators at schools of social work, 5 years post-graduate social work experience / Critical Incident Analysis using structured interviews using 2 vignettes	Guiding question: What are the broad features of social work expertise?	Content analysis resulted in 3 themes: Use of theory, Complexities of the environment, Intervention focus. Respondents took into account situational factors. They were aware of community resources and how those could be relevant to the situations. Demonstrated confidence in their assessments but less confidence in choosing specific interventions. Respondents found it easier to say what they would NOT do and why than what they would do. Applied theoretical concepts to their assessments. Did not approach problems from only one theoretical perspective—merged theoretical concepts across situations. Respondents assessed and made recommendations differently, depending on their practice contexts and experience.
Mandel, Lehman, & Yuille (1994)	Convenience sampling: 141 child welfare professionals enrolled in 3-day workshops (social	Guiding question: Do unwarranted assumptions, hypotheses, and requests for additional information influence	Even though the vignette contained very weak evidence and limited indicators of serious maltreatment, 40% of

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	workers, police, agency administrators, others), 131 undergraduates in a psychology course/ Vignette then asked to provide comments. Comments coded later as "requests for additional information," "hypothesis generated," and "unwarranted assumption."	decision-making?	professionals agreed that the child should be removed from the home. 71% of the professionals requested more information, 39% generated hypotheses, and 12% made unwarranted assumptions. 47% of undergraduates requested additional information, 47% generated hypotheses, 34% made unwarranted assumptions. Level of agreement between professionals and non-professionals was similar. Concluded professionals more critically appraised information but ultimately did not make better decisions than the non-professionals.
Merighi, Ryan, Renouf, & Healy (2005)	Purposive sampling: 19 expert mental health practitioners nominated by county mental health programs in Melbourne, Australia (7) and San Jose, California (12), 5+ years experience/ Focus group interviews	Guiding question: What characteristics do expert mental health practitioners exhibit?	Respondents exhibited the characteristics of expertise advanced by Fook et al. (1997). Respondents were able to articulate ideas about practice, reflect upon their interventions, apply theory to assessment and intervention, use creativity, relate the principles of ethical practice to their work, rely upon procedural and substantive knowledge, consider problems in terms of situational factors, demonstrate flexibility and creativity in approaching problem-solving. The researchers noted that the respondents were able to integrate theory and ideas from other practice fields into their work in unusual circumstances allowing them a starting point for action.
Rossi, Schuerman, & Budde (1999)	Purposive sampling: 27 nationally-recognized child	Guiding questions: What factors do expert decision-makers rely upon in making custody decisions? Does decision-making	Experts were slightly more likely to offer services to families than line workers. Experts were more likely to

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	welfare experts (theoreticians and practitioners with national reputations), 103 CPS workers from Michigan (44), New York (32), and Texas (27)/Experts reviewed 70 vignettes and CPS workers reviewed 18 (4 were the same all respondents, remaining 14 were a random combination drawn from the 70 cases the experts reviewed)	differ between experts and line workers?	suggest using family preservation services for stabilization. No clear pattern emerged in experts' use of decision-factors or line workers' use of decision-factors (70 possible factors provided). Both groups used similar decision-factors. Experts and line workers did rely more heavily on different factors. Experts found Number of Founded Complaints, Perpetrator Threatened Child, Caretaker Failed to Protect Child particularly significant. Workers identified Number of Founded Complaints, Caretaker Criminal Record, and Caretaker Failed to Protect Child the most significant factors. Concluded that overall experts and line workers with much less experience made decisions almost identically
Schuerman, Rossi, & Budde (1999)	Same as in Rossi et al. (1999)	Guiding question: To what degree to experts agree with other experts in placement decisions? To what degree do line workers agree with other line workers? To what degree do experts and line workers agree?	In deciding whether to remove a child, the experts agreed in 65% of the cases. In deciding whether to recommend family preservation services, they agreed in 56% of the cases. Line workers agreed on removing a child in 64% of the cases. They agreed on recommending family preservation services in only 48% of the cases. The 27 experts agreed unanimously in only 23% of 70 cases. They achieved 81% agreement in 67% of the cases. Expert practitioners agreed with each other more frequently than the theoreticians agreed with each other or the practitioners. While agreement between experts was better than expected by chance, it was still not as high as would be hoped. Both groups were more likely

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			to make similar decisions in extreme cases. Concluded that because both experts and line workers appear to have different thresholds for seriousness in maltreatment concerns, a family's chances of having a child removed would rely a great deal upon who their case was assigned to
Sullivan, Whitehead, Leschied, Chiodo, & Hurley (2007)	Convenience sampling: 63 child welfare social workers in Ontario, Canada grouped as inexperienced (less than 2 years) and experienced (8 or more years)/Maltreatment vignettes assigning risk ratings on 22 risk factors	Guiding question: Does experience influence risk rating and intervention recommendation?	Experienced social workers and inexperienced social workers assessed risk similarly. Experienced and inexperienced social workers made similar recommendations regarding removing children from the home

The empirical research studies that were reviewed in the previous section represent the existing knowledge base in social work decision-making. They speak to the literature's current state of development in terms of the purpose and value of theoretical and practice knowledge, the ways practitioners use knowledge to inform practice, the use of information and decision-factors in practice, and the differences and similarities that expert and non-experts demonstrate in their decision-making practices. The chapter introduced decision theory earlier and proposed that it has merit as a basis for social work research and practice. In the next section, Attribution Theory will be introduced and discussed. Given that evidence has suggested that some decisions made in child welfare appear to be biased, particularly towards African American families, and, in some cases, parents

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accused of drug use, Attribution Theory may help to illuminate how bias emerges in the decision process.

Attribution Theory

The decision theories reviewed earlier describe decision-making processes and provide important theoretical concepts that may help explain aspects of decision-making. However, they do not adequately address influences on decision-making such as motivation or decision-maker beliefs. A study of decision-making as a process that may be influenced by bias requires a theoretical orientation that accounts for bias. Attribution Theory (Heider, 1958) may offer one way to understand biased decision-making particularly if decisions appear to be influenced by race and/or substance use. Attribution theory accounts for the way people attribute cause for others' circumstances, events, and behaviors (particularly socially unacceptable behaviors) based on characteristics others are assumed to possess or do possess and demonstrate (Bridges & Steen, 1998; Karanda, 2004; McDonell, 1993; Weiner, 1992). Attributes that are perceived as cogent to assigning blame may be internal (such as disposition, behaviors, beliefs, values, or attitudes) or external (such as environmental challenges or constraints or circumstances over which a person has limited—if any—control) to the individual involved in the event or demonstrating a particular behavior (Bridges & Steen; Heider; Jaspars, Fincham, & Hewstone, 1983; Karanda; McDonell). Generally, individuals are held accountable to a greater degree—or assigned more blame—for their circumstances if they are perceived as having questionable or negative *internal* attributes. Blame tends to be diminished when circumstances appear to be predominantly related to external factors (McDonell; Wadley & Haley, 2001).

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McDonell (1993), for example, found that early in the HIV/AIDS crisis, social workers holding negative stereotypes of gay and bi-sexual men blamed those men for becoming infected with HIV—as if their sexuality should have made illness a linear, foreseeable, and anticipated outcome that they could have avoided. Bridges and Steen (1998) offer a race attribute example from a study of juvenile probation officers' court assessments. They found that participants in their sample described African American and Caucasian offenders differently in their reports and in the sanction recommendations that they made. African American offenders' internal attributes were more heavily emphasized (i.e., assigning a greater degree of personal responsibility to those juveniles for their criminal behavior) while Caucasian offenders' external attributes were emphasized (i.e., centering responsibility not on the individual but on the influences of their environments). The sample participants encouraged judges to sanction the African American offenders more severely than the Caucasian offenders. These examples demonstrate the tendency to assign negative attributions to marginalized populations.

Kerker et al. (2004) investigated the impact of patient characteristics on physician's orders for toxicology screens. They believed that race and socioeconomic status influenced physicians' decision to order drug screens since doctors have been found to hold negative views of patients who use substances. While they did not find income to be related to the decision, they found that African American women were more likely to be screened for drugs than Caucasian women. They concluded that doctors in their study relied on their personal attitudes and assumptions about race and characteristics associated with substance use in making their decisions. Wadley and Haley (2001) found that diagnostic labels could

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reduce the degree to which behaviors were assigned negative attributions. In their study undergraduate students were provided vignettes describing an older parent behaving in a socially inappropriate manner. Some vignettes included a diagnostic label (Alzheimer's disease, major depression) and some had no label. Some suggested that the behavior was typical for the person and other versions described the behavior as atypical. Gender was also manipulated. The findings indicated that respondents expressed greater sympathy and patience for the older adult when the behavior was described as atypical and a diagnostic label was present. The adults identified as having Alzheimer's disease received the most sympathy. Those identified with major depression received more sympathy than those with no diagnosis. Across all conditions, respondents reported more sympathy and a greater willingness to help the "mothers" than the "fathers." The researchers found evidence to support the idea that people consider attributes differently when circumstances appear to be beyond individuals' control, as in the case of experiencing a debilitating mental illness. Karanda (2004) offers a final example related to substance use. In a constructivist study of the meaning of substance use to child welfare workers and other stakeholders, Karanda encountered workers who maintained very rigid attributions regarding parental substance use. In effect, Karanda observed that some workers were not able to differentiate clients from their behaviors. These workers held little regard for their clients and demonstrated little faith in substance-using parents' capacity for change.

Attributes, much like stereotypes, are difficult to disregard or modify, particularly when someone believes they have causal properties in particular circumstances or with particular populations (for example, the stereotype that parental drug use always leads to

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child maltreatment or all gay men can be expected to end up infected with HIV). According to Karanda (2004, p. 41), "…once an attribute is formed, individuals are so vested in maintaining it, that they are unable to process any information that contradicts or seriously challenges their initial cognitive construction."

Attribution Theory asserts that an individual's negative or positive perception of another's attributes (real or assumed, stereotyped or valid) will influence their behavior towards that person. Diminished empathy, victim blaming, and limited help have all been suggested as outcomes of assigning blame based on attributes in social work practice (McDonell, 1993) as well as impaired engagement and unbalanced assessment of client needs (Karanda). According to McDonell (p. 407), social workers' reliance on attributions is problematic because "attributions often lead to negative judgments of another person's behavior that reflect discrimination and that run counter to generally accepted social work values and practices."

Conceptual Model

A conceptual model, represented in Figure 5, emerged from the literature review that may be useful in describing and understanding the intake decision-making process (although it might also be applicable to other child protective services decisions). The model is influenced by decision theory, particularly naturalistic decision theory and the Recognition-Primed Decision-Making Model. It is also influenced by Attribution Theory. The model combined constructs previously identified in the literature as potentially influencing decision making (environmental demands, worker characteristics, policy) with constructs suggested by the researcher (bias sensitivity to laden cues, expertise,

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simulation). These six constructs, singularly or together, may influence how intake decision-makers perceive and interpret cues presented to them in maltreatment reports. Decision-makers are believed to use cue perception and interpretation to arrive at decisions. In the case of child protective services, decisions made may be optimal (for instance, a child is protected who really needs to be protected or an investigation is opened when one should be) or suboptimal (a child who needs to be protected is not protected or an African American family is investigated on the basis of bias instead of risk). Study variables represented the constructs and allowed an exploration of the proposed conceptual model through statistical analysis.

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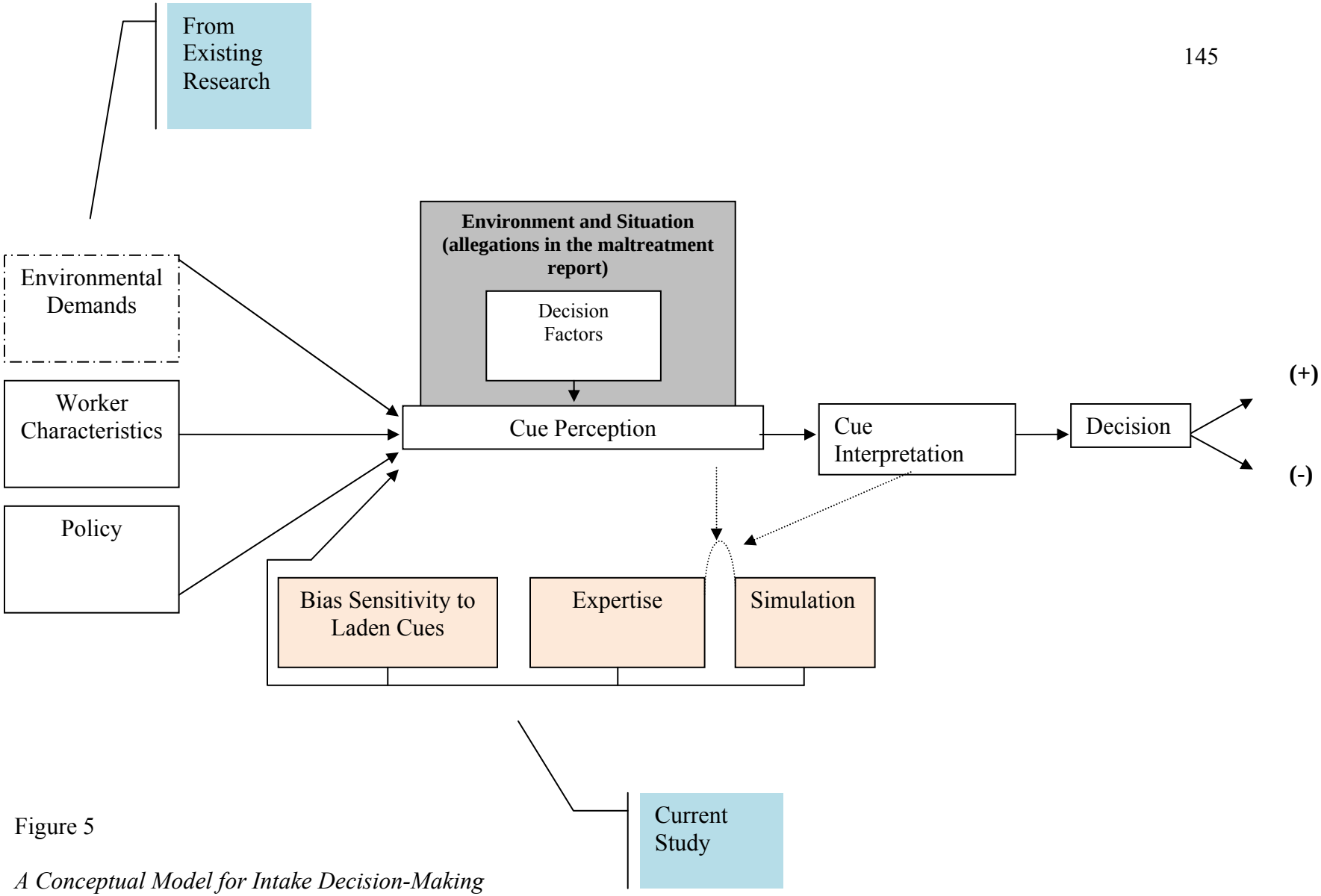

Figure 5

A Conceptual Model for Intake Decision-Making

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A brief explanation of the model may be helpful. On the left are factors previously identified in the research literature as influencing decision-making due to their impact on cue perception in the decision environment. Previous research has suggested that environmental demands (such as time pressures, number of decisions needing to be made and other factors) have an impact on cue perception. Worker characteristics (education, training, race, personal beliefs and other factors) also have been identified as having an influence on cue perception. Policy (laws, child welfare policy, structured decision-making, policy interpretation) also is believed to have influence.

The large rectangle identifies cue perception as the activity through which cues (or factors embedded in maltreatment allegations in the context of child welfare intake decision-making) are perceived in the decision-environment. Decision-makers may not perceive all available cues. They may or may not realize that other cues exist in addition to those they have perceived.

Moving to the right, cue perception leads to cue interpretation. What is perceived must be interpreted as having meaning. Decision-makers may value perceived cues differently because of the meanings those cues convey to them. Some cues simply communicate information relevant to a given situation, for instance, details suggesting risk or safety. Some suggest actions to be taken. Cues, singularly or in combination, are interpreted in order for the decision-maker to understand them, consider their meaning, relate that meaning to their purpose (protecting children if maltreatment is apparent), and use those aggregated interpretations to arrive at a judgment.

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Cue interpretation leads to a decision. A decision may be positive (optimal) or negative (suboptimal). A positive decision, for example, may be choosing to initiate a protective services investigation for a child who legitimately appears to be maltreated or at risk. A negative decision, in contrast, might be to initiate a protective services investigation for a child who appears to be at risk to the decision-maker mostly because of the decision-maker's biased interpretation of the cues provided in the report.

This study adds the three boxes at the bottom, under cue perception, to suggest additional influences on the process of cue perception and interpretation:

Bias Sensitivity to Laden Cues

Some cues may be considered *laden cues*, for some people they hold meaning that is related to strong feelings or biases. Essentially, these cues may be "bias charged," such as race and substance use, and have special (conscious or unconscious) influence when they are recognized by someone with a greater bias sensitivity to them. Consider a simple analogy: on a computer keyboard, holding down the shift key and typing a letter slightly changes that letter (t→T). It is the same letter, but its significance is different. It is used differently. In the same way, it is proposed that when someone with a bias towards substance use, for example, perceives a substance use cue in the decision environment it acts as a cognitive "shift key," slightly changing the meaning of other perceived cues. A parental behavior or an environmental factor may be interpreted differently by someone whose "shift key" is locked because it was triggered by the perceived substance use factor.

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Expertise

Klein's (1996, 1997c, 1998) and Shanteau's (1988, 1992) works suggest that experience has an influence on decision-making. They have demonstrated that "experts" perceive, interpret, and use decision-cues in very different ways than less experienced people. Expertise, then, may be as important to the intake decision-making process as it is to decision-making in other fields. In this case, experienced intake decision-makers may recognize more or different cues presented in maltreatment reports than less experienced decision-makers.

Simulation

Klein (1996; 1997a,c,e; 1998) posits that simulation is the key to the improved performance that expert decision-makers demonstrate. According to Klein, experienced decision-makers are able to quickly recognize key cues (and relationships among cues) and their significance because they draw from past experiences where those cues were significantly related to the optimal decision outcome. Experts also use simulations to hypothesize potential positive and negative outcomes of their decisions based on their past experiences. This advantage allows them to make decisions more quickly, and in many cases, more often correctly than inexperienced decision-makers.

Bias sensitivity to laden cues, expertise, and simulation are believed to contribute to cue perception that affects cue interpretation and ultimately influences the decision made. The dotted connections between elements suggest that cue perception and interpretation also influence expertise and simulation. Lessons learned from perceiving and interpreting cues in one situation help decision-makers refine their simulation skills and

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increase their expertise. There is also a feedback loop between expertise and simulation. As an expert develops expertise his or her simulations become more sophisticated and useful in generating future simulations. As simulations continue to be successful, expertise rises.

Research Questions and Hypotheses

Based on the literature, the profession's understanding of social work decision-making is clearly limited and fragmented. Some advances in understanding decision-making in social work and child welfare have been made, but much remains unknown. Even less is known about intake decision-making because there has been little work done in this area, despite its significance in the child protection process. The literature suggests that a number of concepts and ideas may be important and warrant further study. Several of those will be examined in this research, namely race and substance use as factors potentially biasing decision-making, expertise, and mental simulation behaviors. These complex and important concepts will be represented by variables that can be measured in the study. Together they will be incorporated into the conceptual model that forms the basis for this study.

A number of research questions emerged from the problem identification and literature review that relate to decision-making and the factors that might influence it. The research questions reflect potential influences on child protective services decision-making such as worker characteristics and those that are implicit and explicit in the disproportionality literature. They also include concepts drawn into the study from decision theory as well as race and substance use, factors already established as having

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influence on practice. The questions that guided this inquiry, framed in terms of the study instrument and methodology, and tentative predictions, are:

- 1) Does the race of the alleged victim influence the decision to accept a report?

  Scenarios involving Caucasian children will be accepted less frequently than those involving African American children.

- 2) Does the race of the alleged victim influence the response type in accepted scenarios?

  Accepted scenarios involving African American children will receive the more intrusive response—investigation—more frequently than Caucasian children.

- 3) What is the correlation, if any, between the number of scenarios accepted for investigation and a respondent's score on a bias scale regarding caregiver substance use or abuse?

  Respondents scoring higher on the Drug Subscale, demonstrating stronger negative feelings about substance use or abuse, will accept more scenarios for investigation.

- 4) Do participants with higher substance use or abuse bias scores choose *Substance Use* decision factors more consistently than other participants?

  Respondents with higher Drug Subscale scores will choose these decision factors more often than respondents with lower scores.

- 5) Is there any difference in decision-making demonstrated by "novice" decision-makers and "expert" decision makers?

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There will be a difference in the number of cases selected appropriately based on the respondents' years of experience. "Expert" decision-makers will classify more scenarios correctly (i.e., choose the established dominant alternative) than "novice" respondents.

- 6) Does a social work education influence respondents' acceptance rates?

  Acceptance rates between degreed social workers and those respondents with a different educational background will differ. Degreed social workers will make the nominal choice (i.e., choose as the experts who reviewed the vignettes did) in more scenarios than other participants.

- 7) Does a social work education influence respondents' Race Subscale and Drug Subscale scores on the Bias Scale?

  Respondents holding a social work degree will have lower Race and Drug Subscale scores than those with a different educational background.

- 8) Do intake decision-makers rely upon simulation in the process of making decisions?

  Respondents will report that they use each of the simulation types.

  A) Respondents will indicate using the UU*past experience* *simulation type where they compare survey scenarios to real-life scenarios faced in the past.*

  B) *They will report using the no intervention simulation type where they hypothesize outcomes if they do not intervene.*

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C) *Respondents will report using the intervention choice simulation, meaning they hypothesize what might happen depending on different intervention options they have to choose from.*

- 9) Is there consistency across the scenarios in the pattern of decision factors that decision-makers employ when making a decision?

  A constellation of routinely identified decision-factors will emerge across the scenarios.

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Chapter Three

Methodology

Introduction

Research is an orderly, systematic way of learning more about problems and phenomena (Engel & Schutt, 2005) through description and measurement (Alston & Bowles, 2003). This research was conducted to learn more, using description and measurement, about child protective services intake decision-making by examining decisions made and factors that might influence decision-makers. The research was also conducted to explore the potential contribution that theoretical constructs from the literature make to understanding the decision-making process, particularly what constructs enhance decision-making, increasing optimal decision-making, and whether decision-making is vulnerable to particular biases. Specifically, the research addresses a number of research questions and related hypotheses that will be discussed shortly. In this chapter, the research methodology, including all steps undertaken in conducting the research are laid out in order to provide a detailed account of the research process. A study's value and success rest on a rigorous, systematic methodology (Dudley, 2005).

Design

Methodological Considerations

Paradigmatic considerations. While decision-making could be considered from a number of equally valid perspectives, the questions posed in this study are grounded in the *functionalist* paradigm (Burrell and Morgan, 2000). Behaviors, in this case decisions made

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by child protective services intake decision-makers, are assumed to be guided by a set of external rules (decision rules reflecting social policies and values). The project attempts to describe, quantify, and evaluate a phenomenon—decision making—using orderly, precise positivist procedures, yielding data that empirically validate the phenomenon and that allow for at least some degree of generalizability. The highly-regulated, procedurally-driven research design attempts to maintain an objective stance and control subjective bias that could influence the inquiry. A quantitative research design, considered congruent with the functionalist paradigm's positivistic assumptions, was developed and employed to conduct this study.

Research design. The research was conducted using a quasi-experimental design called the Equivalent Materials Design (Campbell & Stanley, 1963, p. 46). Essentially, the design can be graphically described as: $M_a\ X_0\ O,\ \ M_b\ X_1\ O$, where one group receives Material A that presents one form of the experimental variable followed by observation (measurement) and a second group receives Material B, that presents the alternate form of the experimental variable and is, again, followed by observation (measurement). Quasi-experimental design is used when study participants cannot be randomly assigned to experimental and control groups for practical or ethical reasons (Vogt, 1999). However, it does not prohibit random assignment into other types of groups. In this research design, versions of the test material can be randomly assigned to members of a group (thus creating subgroups but not true experimental and control groups) or study participants may be randomly assigned to groups based on the material version (i.e., Version 1 Group, Version 2 Group). Where experimental design allows the researcher to evaluate differences

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between the experimental group and control group, this quasi-experimental design allows the researcher to examine the differences between groups when experimental variables have been manipulated across versions of the test instruments.

Online survey administration. Electronic surveying is gaining popularity as the general population becomes more advanced in technology. According to Rubin and Babbie (2001), evidence suggests that electronic surveys may be more efficient than traditional paper surveys. Similar quality data appears to be generated through online surveying. Sue and Ritter (2007) suggest that the potential for social desirability bias is decreased in electronic surveys when the survey is website based. They provide useful guidelines for conducting online surveys. This study meets the criteria they propose. Selection bias can be an issue for online surveying when members of a population may not have access to computers. All Department of Social Services employees have computers, internet access, and work e-mail accounts. Selection bias remained a concern, of course, as technology in local agencies may be limited or pose challenges for accessing the survey (i.e., firewalls that prevent accessing links and spam filters that will not deliver unrecognized e-mails). To reduce the potential selection bias, the e-mail included directions for participants who encountered problems accessing the survey instrument to contact the researcher. Respondents reported no problems accessing the survey.

Vignette methodology. Vignette methodology has become popular in the social and health sciences.[16] Vignette research has been favored in studies related to child welfare

[16] For a thorough review of vignette methodology refer to Finch, 1987; Hughes, 1998; Hughes & Huby, 2002, 2004; and Wilson & While, 1998.

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decision-making (Benbenishty et al., 2002; Howell, 2008; Landsman & Hartley, 2007; Taylor, 2006), particularly in dissertations (Daniel, 2003; Galante, 1999; Murphy, 1994). Guidelines have been suggested in the literature for constructing effective vignettes. The most important qualities that describe successful vignettes are *believable* and *realistic* (Finch, 1987). Vignettes should be worded using language that is familiar and understandable to the study population and represents participants' experience (Hughes, 1998). Ambiguity or incompleteness can actually be a positive in situations where participants would encounter incomplete or vague information in real-life practice (for instance, in maltreatment reports received by a CPS agency), making the scenarios more realistic (Barter & Renolds, 2000; Hughes & Huby, 2004; Laskey, Sheridan, & Hymel, 2007; Wilson & While, 1998).

Finch (1987) has argued that vignette designs improve on survey methodology by contextualizing issues and problems. The vignettes more closely reflect the complexity of phenomena as they appear in real life than scales and measurements that are not similarly contextualized (Finch). In studies where the vignettes have a strong degree of internal validity, it is generally assumed that the responses reflect what the participants really would do in real-life (Barter & Renolds, 2000; Hughes, 1998).

A survey including vignettes was considered a strong design choice given the purpose of this research and practical considerations. In this study, victim race and caregiver drug use are the experimental variables manipulated across two versions of a test instrument. Vignettes allowed for manipulating the experimental variables in a familiar decision task format for participants (maltreatment concerns written in a way similar to the

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way decision-makers would actually receive them in their agencies), a strength according to the literature on vignette design. Vignette research may best approximate the actual decision-making environment without having the potential influence observation might have if decision-makers were studied using naturalistic methods. The use of a survey was also appropriate as the researcher was interested in examining intake decision-makers' descriptive characteristics along with reported behaviors and attitudes (Kreuger & Neuman, 2006). According to Kreuger and Neuman, survey research is conducive for collecting data on multiple items simultaneously, addressing several research questions and testing a number of hypotheses and measuring several variables as this study did. Survey use was also a practical consideration because of time and economic limitations.

Study Population

The study population included all primary intake decision-makers in Virginia during the study period. Intake decision-makers were identified as Department of Social Services staff assigned the responsibility of screening child maltreatment reports in each of the localities in the state. The targeted personnel were those "primary" decision-makers with independent decision-making authority believed to make 75% or more of the monthly intake decisions required in an agency. Each locality (a county, an independent city, or multisite collaborative agency) is required to assign this responsibility to a primary staff member, in most cases a supervisor or senior social worker. Some localities have more than one supervisor making intake decisions. Some have subordinate staff making decisions with consultation from supervisors. An intentional decision was made to not include subordinate intake staff in local agencies or at the State Hotline. Only the primary

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decision-makers were invited to participate. The researcher applied this criterion previously in a study of intake decision-makers in a different state due to concerns that supervisors' opinions and choices would override subordinates', so the most consistent description of decision-making practice would be found by examining supervisors' decisions (Howell, 2008).

At the time the study was initiated it appeared that the population would include roughly 121 intake decision-makers, assuming one primary decision-maker per locality and that it would be feasible to study the entire population of intake decision-makers in the state. The study population was not intended to include agency personnel who are not primary decision-makers (for example, an agency director or an "on call" supervisor, both of whom might occasionally be called upon to make intake decisions). Study data later suggested that the intake decision-maker population might be larger than originally anticipated. It is important to acknowledge that there may, in fact, be population members who were not invited to participate in the study because they were unknown to the researcher at the time the study was initiated and carried out.

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Sampling

Believing the population to be comprised of 121 intake decision-makers (based on one decision-maker per locality), the researcher intended to study the entire population. A sampling frame was still needed to identify all the elements in the population, though typically such a listing is used for sampling elements *from* the population because the entire population cannot be studied for various reasons (Dudley, 2005; Engel & Schutt, 2005). Sample representativeness was not a concern given the assumption that all elements of the population would potentially be studied. Findings would simply be generalized to the group itself since it was considered the population.

The researcher contacted the five regional specialists in the state to gather information to use in constructing the sample frame. These consultants, assigned to different areas of the state, work closely with intake decision-makers in the 121 localities. Intake decision-makers rely upon the regional specialists to answer questions about Virginia child protective service policy. They often consult with the specialists in determining whether policy applies to a particular situation that has been reported. Regional specialists do receive requests for contact information on intake decision-makers and other child protective service staff in local agencies. They are empowered to release contact information, including names and e-mail addresses, to facilitate service provision and for legitimate research purposes; if they are uncertain of the legitimacy of requests, they refer the inquirer directly to the local agency (Doug Brown, Central Area Regional Specialist, personal communication, October 7, 2007).

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The researcher had participated in an intake decision audit in a local agency some months before the study and had collaborated with one of the regional specialists in accomplishing that task. That regional specialist had expressed an interest in the researcher's dissertation topic and had offered his assistance in making contact with the other specialists. The researcher contacted the specialist and asked him to advise his colleagues of the need for information and assistance in developing the list of intake decision-makers. He e-mailed his colleagues and advised them that the researcher would be contacting them.

The regional specialists were asked to provide the names of the intake decision-makers that they work with in their regions. Specifically, they were asked to identify those people who could be described as "primary" decision-makers in agencies, making 75% or more of the intake decisions. They were also asked to provide e-mail addresses and phone numbers. Four of the five specialists provided full, or at least partial, lists. In some instances, an intake decision-maker position was thought to be vacant or the specialist did not know the current intake decision-maker due to circumstances such as personnel being newly hired or promoted.

In cases where the regional specialists did not provide names (including in one entire region), the researcher searched for intake decision-makers' names and contact information on the internet (using local Department of Social Services' public homepages) and contacted local agencies by phone. All agencies contacted freely provided their intake decision-makers' names and contact information, including e-mail addresses. Such information for child welfare personnel is considered public information in Virginia (Dr.

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Suzanne Fountain, Assistant Director, Chester County Department of Social Services, personal communication, October 7, 2007). Multiple intake decision-makers from the same agency were included if the regional specialist or the agency indicated that all were authorized to make independent decisions. This was the case in three agencies. Ultimately, after removing names that were on the list more than once because some intake decision-makers served more than one agency, the sample frame included 130 intake decision-makers.

Recruitment Procedures

Once IRB approval was received and the sample frame was constructed, participants were recruited. The recruitment plan is a modification of the Tailored Design Method (Dillman, 2007). The general method involves multiple contacts, but the contacts in this case have been adjusted to facilitate online surveying and the particular circumstances related to contacting this population. According to Dillman, great empirical evidence suggests multiple contacts are the key to increasing participation. In the standard Tailored Design Method for mailed surveys five contacts are made with participants (pre-notice, questionnaire, thank you postcard, second copy of questionnaire, final reminder contact). In the standard method, Dillman suggests varying the contact type to increase responses (for instance, making the final contact a phone contact if possible). Dillman's standard method is sensitive to the need of human subjects protection committees to "reduce efforts to get recipients to respond to surveys in an attempt to keep intrusions into people's lives at a minimum" (p. 155). The modified sequence for this research included the following contacts (See Appendices A-F):

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1. Postcard Pre-notice: This contact alerted participants that an e-mail would be forthcoming. For security reasons, the VDSS network has very sensitive and effective spam filters that trap certain types of e-mail that may appear to be "junk" e-mail. A postcard was used to counter the possibility that participants might not receive the initial e-mail because of VDSS/local agency spam filters and firewalls. The post card's goal was to encourage participants to choose to open the e-mail (and first retrieve it from the filter cache if it had been trapped) if they recognize the researcher's name and remember the study. The postcard was mailed one week before the date the e-mail pre-notice was distributed.

2. E-mail Pre-notice: According to Dillman (2007), a pre-notice (modified to e-mail for this research) that alerts participants that an important survey will be forthcoming and builds anticipation is crucial to obtaining survey participation. The e-mail pre-notice preceded the survey distribution by one week.

3. E-mail with Survey Link: In Dillman's (2007) method, the paper questionnaire would be delivered in this step. In this case, a link to the online instrument is accompanied by an introductory e-mail. The survey includes information summarizing informed consent issues.

4. Postcard Reminder/Thank You: Dillman (2007) suggests that a reminder contact should follow the questionnaire distribution within one week to encourage participants who have procrastinated *but intend to respond* to complete the instrument. Dillman suggests a postcard is particularly effective at this point. The

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postcard encourages participants to respond within a specified time-frame. Both Dillman and Sue and Ritter (2007) agree that an effort should be made to thank respondents who have participated. This postcard will be sent one week after the survey is distributed.

5. Final E-mail Reminder/Thank You: Dillman's (2007) prescribed method would involve two additional contacts—delivering a second copy of the instrument and a final request for participation. In this case, a final e-mail (to vary contact method as Dillman suggests) contact is made with all participants to again thank those who have participated and to encourage *those who are still considering participating* to respond. Sue and Ritter (2007) suggest that a follow-up e-mail contact should always be sent after an online survey has been administered.

6. Incentive E-mail: Only those participants who complete the survey were contacted a sixth time. In order to guarantee that responses cannot be matched to identifying information, this information (to be used to mail the promised incentive) was gathered through a separate Inquisite survey. This mini-survey was administered by the Inquisite staff designee using the e-mail list Inquisite generates for completed surveys. After respondents provided contact information, it was provided to the researcher (thus, the researcher was aware of the names of respondents, but had no means of connecting names to response data). Respondents were sent a final letter thanking them for their participation, apologizing for the delay caused by the change in protocol, and delivering the promised incentive. This

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letter was sent to participants after the survey closed and the researcher received approval from the IRB for the change in incentive.

Human Subject Protection and Informed Consent Procedure

The study was reviewed and approved by the Virginia Commonwealth University Institutional Review Board to ensure participant protections were observed. The research was approved through an expedited review due to the minimal risk posed to participants.

Risk to Participants

Study participation presented minimal risk. No physical, psychological, or emotional risks were anticipated related to participating. At most, it was believed that the study might prompt mild discomfort if participants were concerned about their performance or that their answers would in some way identify them. The potential risks appeared to be those normally associated with maintaining privacy and confidentiality.

Risks Related to Data Collection and Storage Procedures

To administer the survey, targeted participants were e-mailed a survey link. Participants accessed the survey site, maintained on a VCU server. Survey-related e-mail and the participants' data were transmitted between VCU's server and the Virginia Department of Social Services' server. E-mail and data also travel between the VDSS server and each locality's server(s). Because VDSS and localities routinely relay confidential client data and e-mail in this manner, security protocols at VDSS are considered to provide the greatest protection possible, given current technology. To reduce the risk of unauthorized access or a breach, the participants were only be contacted through work e-mail and could only access the survey through the VDSS intranet, which serves as

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localities' portal to the greater internet. Data within the VDSS system are considered secure, but were vulnerable traveling from the VDSS server to VCU's server to the same degree that all data and e-mail traveling to and from VCU are vulnerable.

Because Inquisite, the surveying software employed to conduct the study, requires a designated data portal for administering the survey and storing returned data, with VCU staff oversight, the School of Social Work's Inquisite staff designee (Fay Wade, Assistant for Strategic Initiatives and Doctoral Studies) had the sole access to the raw data. In accordance with the School of Social Work's internal policies related to Inquisite surveying, Ms. Wade has signed a confidentiality agreement related to all research projects that are administered through Inquisite. The researcher was only able to access the data through Ms. Wade, in the form of downloaded SPSS files converted from the master Inquisite files. The researcher maintained one set of data—a working copy. Once the research closes, the original data will be transferred out of the Inquisite system to a disk. It will remain with the staff designee as part of the School's Inquisite archive for seven years. Disks are stored securely at the School of Social Work, in accordance with the School's internal Inquisite policy. At the end of the archive period, all raw data will be destroyed by the staff designee. The researcher's working copy of the data was securely stored at all times when not in use. Minimal risk, in the form of a breach of privacy and confidentiality, existed for participants in the unlikely event that internet and e-mail security protocols were breached either at VDSS or in route to VCU's server because response data does not include identifying information.

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Confidentiality. Participation in the study was voluntary and confidential. Anonymity could not be guaranteed given the manner in which data were collected through Inquisite. Surveys are administered to participants via e-mail by sending electronic links to a survey site on the internet. All e-mail contact with participants was conducted through Inquisite, except in cases where a participant contacted the researcher. To establish a survey administration list, Inquisite requires names and e-mail addresses. These are used in delivering e-mails, the survey link, and automated follow-up notices. Inquisite automatically assigned a unique identifier to each participant who completed the survey.

Personal data and response data remained separate. No effort was ever made to link identifying information to particular responses. No effort was made to identify respondents through unique identifiers. Potential participants were reassured that neither their supervisors nor any other agency administrators would have access to data, nor would be informed which employees in agencies participated.

Privacy was protected by survey data and contact information being uploaded to and stored in separate data files. Also, it was further protected since no attempt was made to link the survey data to particular participants. Minimal risk to privacy did exist due to the data being collected online and transferred between computer servers at VCU and VDSS. Electronic and physical data was stored as securely as possible. Electronic data was password-protected and physical data was maintained securely. There was no direct interaction between the researcher and the participants unless initiated by participants (for instance e-mailing with clarification questions). All interaction initiated by the researcher occurred through post-cards, mail, e-mails, and the survey site.

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Contact information included participant name and agency contact information but no sensitive personal information (for instance, social security number or financial information). This information was actually captured in a separate survey and stored in a separate data file from all other information collected. As the Inquisite Administrator, Ms. Wade also administered the second survey to gather contact information for providing the incentive to participants. Inquisite generates a list of e-mail addresses from participants who have submitted survey responses. Ms. Wade was the only person with access to that information.

In summary, measures were taken to safeguard participants' information. The data were collected in a manner that protects participants' identities to the greatest degree possible. Contact information was collected in a separate survey that was not linked to study data. Contact information was uploaded to and stored in a separate data file from the questionnaire data.

Informed consent. The study posed minimal risk (potential violation of privacy or confidentiality) and efforts were made to limit the degree of risk that did exist. No procedures were involved that would pose additional consent concerns. In the introduction, participants were advised that they were not obligated to answer all questions or to participate at all. Participants were assured in the informed consent information that their participation was voluntary and they could choose to discontinue at any time prior to submitting their survey data. Also, survey respondents were assured that they could later request that their responses be excluded. They were advised of the potential risks and researcher efforts to minimize those risks. They were also advised of the potential benefit

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to the child welfare field if decision-making is better understood as a result of this research. Participants were also advised that they could contact the Primary Investigator or the student researcher with questions or concerns. They were also advised that they could contact the Office of Research Subjects Protection for assistance or to share any concern.

Due to its electronic nature, the online study administration method makes it exceedingly difficult to obtain actual signatures from participants. However, it was possible for respondents to acknowledge their voluntary choice to participate. In this study, potential participants had the option to decline participating by simply not opening the e-mail they received, and, even if they did choose to open the e-mail, they could choose not to open the study link. If participants did choose to access the study, they could still decline participating simply by exiting the study or by acknowledging their choice by selecting the "decline" link ("***I decline****: I do not wish to participate*.") provided on the initial screen. Anyone who made this choice was automatically exited from the study site. Respondents who chose to participate gained access to the study instrument by selecting the "accept" link ("***I accept****: I do wish to participate. I understand that by clicking this option, I acknowledge my voluntary participation and that I accept the minimal risks of participating in the study*."). To encourage participants to make an informed choice, a summary of the relevant consent issues, employing similar language to that found in a typical consent document, preceded the accept/decline decision options (see study instruments in Appendices). Written and signed informed consent requirements were waived by the IRB for this study as participants were required to acknowledge their

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consent through the act of choosing the "I accept" link after being provided informed consent information.

Incentive. According to Doug Brown, Regional Specialist, the Virginia Department of Social Services' previous experience with surveying the intake decision-makers in localities suggested that low participation could be expected (personal communication, October 7, 2007). In larger localities, for example, intake decision-makers are routinely very busy. An incentive appeared to be necessary to increase the likelihood of participation, given that these busy professionals were being asked to complete an instrument that might require a significant amount of time to complete. The incentive was addressed both in the initial e-mail message to prospective participants as well as on the consent screen as part of the on-line survey. To avoid a coercive influence, the incentive was mentioned, but not prominently.

Although incentive funding was limited, a larger incentive appeared necessary than the normal token incentive. A larger amount seemed reasonable without being coercive given that the study participants are not a vulnerable population, the study is not highly emotive or invasive, and participation poses little risk. Several informal guidelines were observed in determining the amount to offer (Dr. Ann Nichols-Casebolt, Associate Vice-President for Research Development, personal communication, October 10, 2007): 1) the proportion of the incentive to the average participant's income[17]; 2) the degree of effort

[17] The incentive is estimated to be less than 1% of the average intake worker or supervisor's salary. While salary information is not available from the state, the hourly wage for a part-time hotline social worker is 19.00 per hour (19.00 x 8 hours x 20 days = $3,040.00; $100 is roughly .03%). Based on that rate, a supervisor's hourly wage is likely considerably more.

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and time required to complete the instrument (appropriate token compensation relative to salary); 3) chance of receiving the incentive versus expectation for compensation (i.e., participating just to get the money if it is guaranteed). The small amount of the guaranteed incentive was considered unlikely to have a coercive effect upon potential participants.

Each respondent was promised a $5.00 Visa gift card for participating and the chance to be entered into a drawing for one of several additional $50.00 gift cards. As it turned out, $5.00 Visa gift cards were not available for purchase except in a much larger quantity requiring special arrangements through Visa. The IRB was advised of the need to change the incentive that would be provided. The IRB approved providing $5 cash to each respondent. Respondents were also entered into a random drawing to receive one of thirty $50.00 Visa gift cards. After the survey concluded, each respondent was mailed a letter apologizing for the change in incentive that included a $5 bill and a $50 gift card, for those 30 respondents who randomly were chosen to receive the additional gift card. Features included in Inquisite were employed to ensure that participants only submitted one survey; participants could not access the link to the instrument after submitting a completed survey.

Instrumentation

Research instrument

The researcher developed the instrument that was used to collect study data. The instrument is a multi-section questionnaire constructed in two versions. Sections and items in each version were the same with two exceptions. The first exception was that the order items are presented within a section varied in each version. The second was that the study

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variables race and drug use were manipulated with reversal between the instrument versions. Each version was assigned to a different participant group, with respondents randomly assigned to Version 1 or Version 2 (Appendix G).

Careful consideration was taken in constructing the instrument given that its performance is critical to the success of the study. Development followed acknowledged survey design principles (Engel & Schutt, 2005). The instrument was designed to measure the key constructs under study by including items intended to represent those constructs and make them measurable (Engel & Schutt). The elements of the survey were intended to complement one another and produce an integrated instrument (Engel & Schutt). Items were developed and refined using feedback from multiple sources (pilot testing, feedback from experts and others with relevant experience, discussion with Committee Chair) (Engel & Schutt). The instrument's appearance was intended to be perceived as attractive (Engel & Schutt). An intentional choice was made for a colorful yet conservative web-site survey background that was not too distracting, would appear pleasing to the eye, and hopefully would not communicate any unintentional meaning (Sue & Ritter, 2007). The instrument is divided into four sections. Each section will be discussed to provide information regarding purpose and construction.

Part One: Vignette Series

Vignette series. In this section, 24 scenarios are presented that represent child maltreatment concerns. The vignettes are intended as one mechanism for measuring the degree to which respondents demonstrated bias sensitivity to laden cues, as proposed in the conceptual model. Race and drug use are two cues that decision-makers are believed to

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respond to differently based on degrees of bias. Some decision-makers may have more negative feelings about one race than another. Some may have stronger negative feelings about drug use than others. In the vignettes, the goal is to explore whether scenarios are decided differently when race and drug use are manipulated.

Although they are presented in random order, the scenarios are grouped in four series. The series include: *Baseline* ($N = 4$), *Race* (only) ($N = 8$), *Drugs* (only) ($N = 4$), and *Race and Drugs* ($N = 8$). Each scenario is preceded by limited information concerning one or more hypothetical victim children. In the *baseline* series and the *drug* series, child race is consistently referred to as "undetermined" to avoid this characteristic's potential influence. In the *race* series and *race and drug* series race is identified as either "Black" or "White." Race is reversed between the two instrument versions in order to manipulate the variable. Statements and details suggestive of drug use are found only in the *drug* series and the *race and drug* series. In the relevant scenarios information suggesting drug use is only included in the version where the manipulation is the suggestion of drug use. So, for example, if drug use is suggested by details in a drug use scenario in Version 1, those details were not included in the scenario in Version 2. Information regarding the hypothetical concerned reporter was not provided since reporter types' influence on intake decision-making has been established in the literature (USDHHS, 2003). It was important to control for the confounding influence of reporter type by eliminating its influence to the degree possible.

Vignette development. Relying upon more than five years experience as a former intake social worker in two states and a foster care and child protective services social

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worker for nearly 10 years, the researcher developed an initial pool of 68 potential vignettes, or case scenarios. Due to familiarity with the intake process and the format of maltreatment reports, having literally documented *thousands* of maltreatment allegations,[18] the researcher felt competent to construct the vignettes, instead of relying upon the limited number available in the literature.

The narrative descriptions in the vignettes were intentionally written in the same format used to document a maltreatment allegation actually received at the state's central child protective services hotline. Decision-makers would be familiar with the manner in which maltreatment allegations were conveyed in the scenarios. The only specific difference between descriptions in the vignettes and real reports was that reporter information was intentionally eliminated to avoid the known influence of reporter type.

The draft vignettes included the range of maltreatment types recognized in the state (physical abuse or neglect, sexual abuse, emotional abuse or neglect). The scenarios described similar behaviors and symptoms that intake decision-makers would face on a daily basis in their practice. Though necessarily brief, the vignettes were believed to provide adequate information to reach a screening decision—in practice, many reports would contain a similar (or sometimes lesser) amount of information. Given the researcher's interpretation of current state child protective services policies, some vignettes were constructed with the expectation that they would meet policy criteria for an official response while others were written to suggest they did not adequately meet criteria.

[18] The researcher conservatively estimates that he has documented at least six thousand maltreatment reports based on the formula: average 5 reports per shift/day x 5 days per week x 48 work weeks per year x 5 years =

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The vignette pool was distributed to the five child protective services regional specialists in the state for review and feedback. Regional specialists are considered experts in interpreting child protective services policies. The regional specialists are assumed to offer a consistent official interpretation of policy. They are the experts that intake decision-makers consult with when they are uncertain as to interpreting and applying policy to child maltreatment reports. Even with prompting and follow-up conversations, only one specialist responded and assessed the scenarios. Another specialist asked an experienced associate to score the vignettes. Lack of response may have been the result of the very large number of scenarios that the specialists were asked to review. In one case a specialist had recently experienced the death of a parent. Comments from the two reviewers (such as, "very realistic," "see cases like this every day," "reviewed this situation last week") suggested the vignettes did present as realistic and reflective of actual practice, suggesting face validity can be assumed. The two assessors are considered experts and their expert opinions are reflected in the optimal scenario decisions. It is important to acknowledge, then that the optimal decisions (or "expert decisions") reflect the opinions of the two assessors and not necessarily the entire group of regional specialists across the state. While it was unfortunate that more regional specialists did not participate in the scenario screening process, it should be noted that some published vignette studies rely on scenarios vetted by only one or two experts or practitioners with relevant experience.

The experts were asked to rate each draft vignette on a 10-point Likert-type scale anchored at one end with *definitely screen out (1)* and at the other end *definitely screen in*

6000 reports.

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(10). Prior to disseminating the vignettes for review, the researcher established a decision rule for considering specific vignettes that would actually be included in the research instrument based on experts' scoring:

Clear Accept: The scenarios the specialists had scored 9 or 10 were included in this list. These scores suggest a clear, decisive judgment for accepting the maltreatment allegations for response.

Clear Reject: The scenarios the receiving a score of 1 or 2 were included on this list. These vignettes were judged not to fit policy and clearly require screening the allegations out.

In all cases, only the scenarios the experts scored with clear consensus (either same score of 1 or 2, or 9 or 10, or within one point) were considered further. This immediately eliminated the 27 scenarios where disagreement in the response choice was inconsistent as evidenced by scores between 3 and 8. From the remaining pool, the 11 scenarios scored as 2 or 9 were eliminated, leaving the 30 scenarios with the greatest agreement between the two experts to accept or reject. From the final pool, 24 scenarios were randomly drawn from each of the two remaining categories resulting in 12 scenarios scored as "1/Definitely Reject" and 12 scenarios scored as "10/Definitely Accept" being identified for use in the study.

Three prompts followed each draft scenario: Improving realism/believability, Difficulty applying CPS policy, and Additional feedback. The first prompt was intended to solicit comments that might suggest the scenario was not credible or had dubious value for some other reason. Minor feedback was received to clarify details or to make suggestions

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of additional information that might be considered. In most cases, the experts suggested that the scenarios were realistic, offering comments such as, "I just got a call about a case like this" and "I remember a case just like this…" Comments such as these were taken as informal evidence that the scenarios presented as realistic and credible. The second prompt was intended to reveal any potential difficulty with applying current CPS policy to any of the draft scenarios. The experts did not indicate concern in any of the scenarios that policy might not be able to be applied. That the experts did not express concern that policy might be difficult to apply to the scenarios was taken as informal evidence that CPS policy could be applied in decision-making. The final prompt was expected to solicit feedback that a scenario was difficult to understand or needed improvement for some other reason. Reviewing the experts' comments left the researcher with the impression that the scenarios met the guidelines for vignette realism and believability discussed earlier. Minor changes were made in wording in the final group of scenarios in accordance with experts' feedback.

The scenarios were modified to manipulate the variables across the two instruments as required (identifying race in appropriate scenarios, eliminating details suggestive of drug use in appropriate scenarios). Once the final vignettes were identified, the vignettes' presentation order was drawn in random fashion for *instrument version one* and again for *instrument version two*. This was done to try to control for any possible ordering, or context, effect (Engel & Schutt, 2005). Engel and Schutt warn that the order in which items are presented in an instrument may influence respondents' answers. Changing the order of items between versions of an instrument is one way that researchers can attempt to lessen the impact of such an effect.

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Applying policy to decision-making. After each scenario, respondents are asked to decide whether to reject (screen-out) or accept (screen-in) the maltreatment allegations for official agency response. This screening decision is a key variable in the study and is used as an indicator of respondents' performance in the data analysis. The participants are then asked to rate the risk (to the child considered *most* at risk if multiple children) suggested by the scenario on a six-point Likert-type scale (1 = *no risk at all* while 6 = *severe risk*). The even number range of all scales is an intentional decision to avoid offering a mid-point as the literature suggests respondents may have a tendency to choose a middle value when one is offered (Thorkildsen, 2005).

For each accepted (screened-in) scenario, participants are asked to identify the appropriate agency response (*family assessment* or *investigation*) and identify the type of maltreatment demonstrated by the allegations in the scenario (identifying one or more options: *physical neglect, physical abuse, emotional abuse/neglect, sexual abuse, or medical neglect*).

Applying decision-factors. If respondents chose to accept a scenario, they were asked to identify factors they felt had influenced their decision from a standardized list that followed each scenario. Respondents could choose any of the listed factors. The decision factors were treated as dichotomous variables in the analysis.

Factor selection. An initial list of 74 potential decision-factors (characteristics related to the child or caregiver, situational characteristics, or behaviors) was drawn from the child welfare literature. These factors have been empirically evaluated and are commonly included in child protective services risk assessment instruments (Drake &

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Zuravin, 2005; English, Brummel & Marshall, 1997; Platt, 2006; Rycus et al., 1989; USDHHS, 2003). The factors were conceptually grouped (*victim characteristics, parent/caregiver characteristics, substance use, living conditions, parenting/care giving, basic needs, other*). The researcher identified a set of 25 core factors that are presented with each vignette. The core factors are relevant across the scenarios and are empirically or conceptually related to one or more types of maltreatment. Not all factors would necessarily be indicated as a relevant factor in a particular scenario. Asking the participant to consider 25 factors per scenario seems more reasonable than asking them to consider 74. The factors are presented as risk-factors, meaning they are deficit-focused and would be interpreted as potentially placing the child at risk, as opposed to resiliency factors which would suggest strengths or at least act as mediators minimizing risk factors.

Factors remained in their conceptual groupings across the scenarios. To account for ordering effect, the factors were randomly assigned an order for each instrument version. Within each conceptual group, the same factors appeared, but in two different orders depending on the instrument version (Benbenishty et al., 2002). To further counter this effect, the conceptual groupings were also randomly ordered for each version of the instrument (see Appendices).

The factors have been included as a variable in the study because research has shown that decision factors (or cues) influence decision-making. Research into heuristic decision-making has suggested that decision-makers rely on a limited number of factors in making decisions, even when greater amounts of information (including additional cues) are available (Rieskamp & Hoffrage, 1999). The recognition-primed decision-making

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literature and expert decision-making literature (Shanteau et al., 1991) have reported experts' and novices' differential use of factors (Klein, 1998). Benbenishty et al. (2002) also reported finding that decision-makers weighted available cues differently in decision-making and engaged in an *information search* process to find potentially significant cues that might be available. Mandel et al. (1994) reported similar information seeking behavior among child welfare practitioners.

Early in the research process one way considered for exploring the value and use of cues was to have the Inquisite program number each factor as a respondent chose it, thus indicating which factor among the array was chosen first, second, third and so forth. This approach might have yielded information as to the cues decision-makers (singularly and as a group) considered most significant. This approach was a computerized adaption of the strategy Benbenishty and colleagues (2002) employed to demonstrate information search in decision-making. However, the basic Inquisite program could not perform this task and it would have been difficult and costly to try to contract with Inquisite to write special software into the program. The best available and feasible option was to consider the frequency of factor selection as an indicator of its value, particularly relative to other factors identified less frequently.

Part Two: Simulation Use

This section examines whether intake decision-makers engage in simulation, a behavior in the recognition-primed decision-making literature seen as a key component of expert decision-making (Klein, 1997e, 1998). Participants are presented with three items in this section. The items test whether decision-makers engage in any of three forms of

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simulation construction and hypothesis generating as a part of the decision-making process (Beach, 1997; Klein; Schwalbe, 2004). Using an ordinal scale (*not in any of the decisions, only in some of the decisions, in all of the decisions*), participants indicate whether they relied upon simulations in any of the scenarios by generating hypotheses based on *different potential intervention options*, considered potential outcomes by generating hypotheses based on *not intervening*, or reflected upon *similar allegations encountered in the past* (past decisions/events).

Part Three: Bias Scales

In addition to measuring the potential influence of laden cue sensitivity, or essentially, bias, by examining respondents' screening decisions in scenarios where race and drugs were manipulated, a bias scale was created for the study. More specifically, it was assumed that a respondent's level of bias could be measured in terms of his or her attitudes towards race and drugs. Scales are considered useful in measuring complex constructs that are too complicated to be answered with single questions (Rubin & Babbie, 2001). According to Rubin and Babbie, another value of scale use is that composite measures allow the researcher to measure more variance than would be possible in a single question. Because both race and drugs are complex constructs, the scale, which comprises two subscales, consists of 45 items (23 Drug Subscale, 22 Race Subscale), each intended to contribute by assisting in measuring multiple dimensions (Appendix H).

Patten's (2001) guidelines for scale construction were followed: 1) addressing one idea per item (not inadvertently asking about more than one thing); 2) employing Likert-type scales, not including a mid-point; 3) including multiple items but not exceeding 25

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items; 4) including positively and negatively worded items; 5) labeling each scale point throughout the array; and 6) displaying the items and corresponding scales in a double-column format for ease in responding. In constructing the items, thought was given to writing an item in such a way that it had face validity and would encourage variance in responses (Rubin & Babbie). After the scale was drafted, items that were too similarly worded, vague, or might measure the same dimension too closely were eliminated. Although the scales are conceptually independent, to diffuse the testing effect, the items have combined into one scale. Items were randomly ordered, but the order remained the same for *instrument version one* and *instrument version two*. Some items were reverse scored in analysis due to their wording (*I can set aside my personal feelings about drug use while I am reviewing drug use allegations; Generally, there is no difference in the way Black and White parents raise their children; I take a "color-blind" approach to working with families; I never feel conflict between my beliefs about drug use and the response policy dictates in drug-use referrals; There is no difference in the rate at which maltreatment reports involving Black and White children are founded; Families of all races are treated fairly in the child welfare system; Drug-using parents can be fine parents; When it comes to race, I am "color-blind"…people are people; My beliefs about drug use and parenting are consistent with sound child welfare practice; My beliefs about race have nothing to do with my decisions; I am not biased against any race*). The items comprising the scale are presented in Appendix I. Scores are standardized following Hudson's (1999) formula resulting in scores that range from 0 to 100. Standardizing scores in this manner allows for comparison of scores from scales with different numbers of

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items. A high score on the Bias Scale indicates a high level of bias. For the Race Subscale and Drug Subscale, higher scores also indicate higher levels of each type of bias.

Subscale 1: Drug Subscale. In a previous study (Howell, 2008), a seven-item scale constructed by the researcher was used to assess individual values towards substance use and decision-making. Each item was accompanied by a four-point Likert-type scale capturing the degree to which the respondent agreed with the test item. The earlier scale demonstrated reasonable reliability (Cronbach's alpha = .76), suggesting fairly strong internal consistency among items. The scale was believed to adequately measure the respondents' values. For this study, 16 additional items were included. The items are intended to measure respondents' attitudes towards parents' drug use, policy as it relates to drug use, agreement with common stereotypes about drug use, and knowledge about the actual impact of drug use. The original four-point Likert-type scoring design was used again. The scale scores the degree to which the respondent agrees with the test item.

Subscale 2: Race Subscale. Twenty-two items are presented to assess respondents' attitudes related to race. The items describe positive and negative stereotypical behaviors and attitudes and associate these with different races. Individual items are accompanied by a four-point Likert-type scale. The scale scores the degree to which the respondent agrees with the test item.

Part Four: Participant Demographics and Measures of Expertise

For comparative purposes, respondents were asked to provide demographic data (race, gender, education) and information regarding current and past work experience in child welfare. Although the exact racial breakdown of the child welfare workforce in the

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state is unknown, it is believed to be predominantly Caucasian, with a moderately strong African American presence (Doug Brown, Regional Specialist, personal communication, October 7, 2007). The demographic characteristics of this state's child protective services workforce parallel other states (Pierce & Pierce, 1996; Zambrana & Capellow, 2003). To protect the identity of decision-makers, particularly any members of small minority groups, race will be measured in three categories: *African American*, *Caucasian*, and *other*. Demographic information (years of intake experience, years of child welfare experience prior to becoming an intake decision-maker, percent of intake decisions made independently) were used to distinguish "novice" decision-makers from "expert" decision-makers in order to compare their decisions.

Demographic information was intentionally collected at the end of the instrument. Participants are more likely to provide this data when it is requested at the end of a survey than when such questions appear earlier (Dillman, 2007). The dissertation proposal called for keeping the demographic data separated by embedding a second survey at the end of both instrument versions. Data collected in the demographic survey would be uploaded to a separate data file to ensure that response data and demographic data were not connected. It turned out that was not a possibility using the Inquisite survey software so response data also included demographic information.

Instrument Validity and Reliability

The instrument administered in the study was developed by the researcher. Caution should always be observed when employing untested instruments as their validity and reliability are unconfirmed. These properties are confirmed through rigorous testing using

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multiple administrations across varying samples (Rubin & Babbie, 2001). Preliminary exploration into these qualities is possible and is often completed prior to an initial administration of the instrument to a study group. Pilot-testing, even with a small group, is commonly used to develop initial impressions of the strength and sensitivity of a test instrument (Dillman, 2007; Rubin & Babbie).

To test the survey delivery system and to assess face and content validity, the instrument (using *instrument version one* for simplicity) was administered to a pilot-test group consisting of a former CPS regional specialist who now trains the intake assessment course for all child welfare workers, a local agency administrator who previously was employed as a CPS policy consultant in the state, a VISSTA training curriculum designer formerly employed as an intake decision-maker in a locality, and the VISSTA Family Services Unit Manager who has been both a former CPS policy consultant and longtime state hotline social worker. Test respondents were asked to complete the instrument in one sitting and note the time required for completion. They were asked to provide feedback regarding the instrument's clarity (directions and test items) and realism. Their feedback suggested completing the survey would require 20 to 60 minutes of an intake decision-maker's time. Overall their feedback on the instrument was positive. Minor wording suggestions were they made were considered in constructing the final instrument.

Some qualities (stability, reliability, and consistency) can only be warranted through extensive testing procedures. Efforts to validate an instrument and test its reliability are time-consuming and require access to multiple samples, generally with differing sample participants to determine how the instrument performs across different

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conditions (Rubin & Babbie, 2001). One statistical test that is frequently used to determine at least an initial impression of an instrument's quality is Cronbach's alpha. This score was calculated to determine how well the instrument performed in the study and is considered a measure of the instrument's reliability.

Design Strengths

The study design is arguably strong for a number of reasons. First, important constructs are measured using a variety of means including fixed response items, scales and vignettes. By providing 24 vignettes, it was possible to develop a better, more comprehensive understanding of decision-making behaviors than would be possible if fewer vignettes were used. Increasing the vignettes is considered an improvement over designs used in other studies. The development and presentation of the vignettes are design strengths. Payne and Bettman (1992) provided several cautions for vignette use in decision-making research:

- *Baseline series*. Several decision items should be included to establish respondents' baseline decision-making capacity (i.e., they demonstrate they *can* make the optimal decision when presented with an array of alternatives that includes a *dominant alternative*, or the "right" choice). These items should be unambiguous and the dominant alternative should be easily identifiable. Ludwick and Zeller (2001) also encourage the use of a baseline series of vignettes, but suggest scores from the series should be used to norm the individual decision-makers scores. Four baseline scenarios were included in the baseline series.

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- *Procedural variance*. Payne and Bettman (1992) suggest that decision-making may be influenced when procedures vary from the norm in the decision-event. The study design is sensitive to this threat. Information presented to participants follows a standard format very similar to the format in which they would be presented information in reality. The vignettes mimic the way an actual report would be written and presented, although some details have been intentionally withheld.

- *Descriptive variance*. Decision-makers' behaviors may change when decision information is presented in an unfamiliar format. The study design is sensitive to descriptive variance as a potential threat. The vignettes describe maltreatment allegations in much the same way as an actual child protective services report. Problems are described using the same language and format that would be employed in real situations.

- *Framing effects*. Payne and Bettman (1992) have suggested that research instruments sometimes frame decision scenarios in a manner that decision-makers find unfamiliar or irregular. Simple language changes that deviate from the normal language surrounding decisions can have an effect on decision-makers' responses. This study frames maltreatment allegations in the vignettes in language and format that is familiar to child protective services decision-makers.

- *Presentation effects*. Payne and Bettman warn that the repetitive use of a cue (for instance, a word such as "neglect" or "harm") within a decision scenario can

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influence decision-makers simply because the cue is prominently visible. To the degree possible, without sacrificing realism, the vignettes were written in a manner that avoided over-emphasizing any particular cue.

Design Limitations

Like all research designs, compromises must be made due to limitations and practicality.

Technology. In this case, the technology available is a potential limitation. The varying degrees of technology available across localities, plus security technologies that attempt to prevent systems unauthorized access and from being infected with computer viruses, could result in some degree of selection bias. Also, some respondents may not feel comfortable participating in an online survey because the format is different from the traditional paper survey or because they are worried that the online system would allow them to be identified in some way.

Vignette development. While the vignettes' validity is considered strong, it would likely have been helpful to have received feedback from additional regional specialists. It is assumed that the regional specialists would all agree on policy interpretations and how policies should be applied to maltreatment allegations. Such an assumption cannot be guaranteed. The experts' opinions in this study could, in reality, diverge from their peers' opinions significantly.

Screen-out cues. The study design does not investigate how decision-makers chose to screen-out vignettes. It might have been helpful to ask which cues influenced the choice to

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reject a scenario. To avoid overburdening respondents, the decision was made not to explore this area of decision-making in this study.

Cue relevancy. It might have been helpful to determine the degree to which each decision factor identified as influencing a decision had an influence (or, *cue relevancy* as described by Arslanian-Engoren, 2001) in each scenario. A decision was made not to measure cue relevancy in order to avoid overtaxing the participants.

Instrument length. Although the number of vignettes is considered a strength in terms of being able to clarify participants' decision-making behaviors, it is potentially a weakness as well. Vignette researchers have warned that participants can experience *vignette response fatigue* when too many vignettes are included on an instrument (Hughes, 1998; Hughes & Huby, 2004). A second concern is the overall number of items included on the instrument given the 24 vignettes, the 38 scale items, and the additional practice and demographic items. The study participants are busy professionals. It is conceivable that they may not be willing to invest the time required to complete the instrument, even if an incentive is offered.

Data Collection

Data were collected in this study via an internet survey. The survey was administered on July 10, 2008, and the survey continued to be accessible until July 25, 2008. As respondents completed the online survey, the results were uploaded automatically into the Inquisite database. The data for each instrument version was provided to the researcher in the form of an SPSS (v. 16) data set.

Data Analysis

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In order to analyze the data it was first cleaned and reviewed for accuracy. Additional response codes were created as necessary to clarify information. For example, the questions relating to experience could be answered in months for respondents who had not yet worked a full year, or in years for those who had worked for one or more years. An additional code made it clear that data were not actually missing, but had been provided in a different item. A codebook for each instrument version was created for reference use. Additionally, when appropriate to conduct some analyses the respondents were grouped, generally using the mean score as the cut-point. Using the mean score as the cut-point allowed the respondents to be divided into roughly equivalent groups, useful for making comparisons and examining differences.

Both parametric and nonparametric statistics were utilized to analyze the data as warranted. Univariate analysis was conducted on all variables to determine response frequency. In some cases, those results led to creating new variables to further analyze. Some of the newly created variables were dichotomized to form comparison groups for analysis. Others were summated scores that described performance across a series of test items (such as the number of scenarios accepted or the total score on the Bias Scale). Some of the univariate analysis results offer findings relevant to the research questions, such as Question 9, or can be considered partial answers that pair with other analysis results. Bivariate analysis was appropriate for answering the majority of the research questions:

- Question 1was addressed through chi-square analysis testing the association between victim race and screening decision. Analysis involving the Pearson

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product-moment correlation coefficient was also used to examine potential correlations between variables relevant to answering this question.

- Question 2 required similar analysis using the chi-square statistic to test the association between victim race and response type. Again, Pearson product-moment correlation coefficient analysis was used to examine the potential correlations between important variables.

- Answering Question 3 required the use of the Pearson product-moment correlation coefficient statistic to examine relationships between scale scores and other key variables.

- Question 4 was also addressed using the Pearson product-moment correlation coefficient statistic along with the chi-square statistic. Associations and correlations between variables were examined for significance.

- Question 5 required the use of chi-square tests, Pearson product-moment correlation coefficient analysis, and examining the results of independent samples *t*-tests to gain an understanding of the influence of expertise (measured a variety of ways) on decision-making through its relationship with different variables.

- The independent samples *t*-test was utilized to address Questions 6 and 7 as differences between social workers and non-social workers were examined in relation to other study variables.

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- Question 8 was answered through the use of independent samples *t*-tests and a one-way ANOVA to look for differences among respondents who engaged in simulation use to different degrees.

An alpha level of .05 was used in all inferential statistical tests.

Multivariate Analysis

At the beginning of the chapter, a model was presented to describe the researcher's conceptualization of the decision-process intake decision-makers may employ leading to optimal or suboptimal decisions. The model is informed by prescriptive and naturalistic decision theories and attribution theory. The elements combined in the model are drawn from previous research in child welfare decision-making and decision-theory. Model testing is an important aspect of social work research as useful models may have bearing on actual practice (Monette, Sullivan, & DeJong, 2005). Discriminant Function Analysis (DFA) offers a statistical means of testing the proposed model. DFA is an appropriate choice, as opposed to regression analysis, due to the number of cases (Dr. Patrick Dattalo, Virginia Commonwealth University, personal communication, March 10, 2009).

DFA has several purposes including statistically investigating group differences and using groups to classify cases (Ainsworth, n.d.; Garson, n.d.b; Poulson & French, n.d.; Vogt, 2005). Additionally, DFA is useful for building and testing classification (prediction) models. It allows for exploration of differences among groups, assesses the contributions of independent variables to a model, indicates which independent variables make insignificant contributions to a model, and explains variance in the dependent

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variable accounted for by the independent variables (Garson). DFA is particularly useful when dealing with smaller sample sizes. The literature suggests that DFA can be considered robust with as few as 20 cases (Ainsworth).

In DFA, predictors (continuous variables) are combined in a discriminant function that is then used to classify cases into groups comprising the criterion variable (Ainsworth, n.d). The process also estimates how well the cases were classified by the function. Cases are classified based on their discriminant function scores; cases falling below the cutoff value are classified in one group while cases above the cutoff value are classified in a second group (Ainsworth). Each group in the dependent variable also is assigned a discriminant score, which is the group mean (Garson, n.d.b).

To conduct the discriminant function analysis, study variables representing "proxies" of the elements in the conceptual model were identified for inclusion in the discriminant function. The proxy independent variables included:

- Prior child welfare experience (measure of expertise);
- Total Drug Subscale Score (measure of cue bias sensitivity);
- Total Race Subscale Score (measure of cue bias sensitivity);
- Total Confidence Score (measure of expertise);
- Simulation: Past Experience (measure of simulation behavior);
- Simulation: No Intervention (measure of simulation behavior);
- Simulation: Intervention Choice (measure of simulation behavior).

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Independent variables were entered into the model together since stepwise discriminant analysis is not recommended (Dattalo; Garson, n.d.b).

Three different models were tested using three different dependent variables to determine if the discriminant function would classify cases appropriately across the dependent variables. Several statistics are important for interpreting DFA correctly and will be reported. These statistics include Box's M (*F*) (testing homoscedasticity), Wilks' Lambda (*F*) (testing model significance using group means), canonical correlation coefficient (*R**) (measuring the correlation between the discriminant function and each group in the criterion variable), standardized discriminant coefficients (an estimate of each predictor's importance in the model), and classification results (how cases were classified and the percentage estimated to have been classified accurately).

Each participant's responses across the 24 scenarios can be considered a "package" or a unique decision-making pattern. The 24 scenarios essentially can be considered a multi-item scale that evaluates each respondent's decision-making pattern, a description of each respondent's decision-making predispositions (Dattalo, personal communication). The pattern as a whole is a better reflection of the participant's decision-making predispositions than any singular scenario decision item. Collapsing each participant's pattern (decisions made across the 24 scenarios) into a single variable weights each decision equally. Thus a decision in any of the series (baseline, race, drugs, race and drugs) is made equal to all of the other decisions (Dattalo).

To construct this variable, the 87 decision patterns (each participant's 24 accept/reject decisions) were combined and stacked in a new data set. Combining the

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patterns through stacking sets of responses resulted in an artificial sample of 2088 cases. Each participant's responses to the independent variables included in the discriminant function were also collapsed into a single variable in the artificial data set by stacking the responses 87 times. Thus, each case included responses to the dependent and independent variables and could be used for data analysis on the synthetic sample.

In summary, this chapter introduced a conceptual model informed by the literature review that may illuminate the relationships between constructs important to understanding intake decision-making. It has laid out the research methodology that was employed to undertake this study of child protective services intake decision-making. Variables have been described that were developed for gathering data. Data analysis efforts were described to explain how meaning would be discerned from the data. In Chapter Four, the findings are presented.

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Chapter Four

Results

This chapter presents the findings in this study. Data analysis results will be presented in eight sections. In the first section, data collection results are addressed. In the second section the sample's demographic characteristics are reported. Section three addresses the vignette scenarios. The fourth section discusses decision factor use. Nonparametric bivariate analyses involving chi-square tests are reported in the fifth section. Parametric analyses involving correlations are presented in the sixth section. Discussion of parametric analyses continues in section seven which reports *t*-test and one-way ANOVA results. Finally, the results of the discriminant function analysis are presented in the eighth section.

Data Collection Results

Response Rate

The population of interest for this study was child protective services intake decision-makers in Virginia's Department of Social Services agencies. Each of the 121 localities in the state has at least one intake decision-maker although smaller localities may share intake decision-makers. Localities may have more than one intake decision-maker and some even have designated units with multiple intake workers. In most cases, a primary staff member such as a child protective services supervisor, senior worker, or other administrator is assigned responsibility for decision-making. Subordinate staff and staff at the State Hotline may document child maltreatment reports, but in most situations

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the intake decision is believed to be made by a supervisor or senior worker. Occasionally other staff, such as night and weekend "on-call" supervisors may serve in this capacity.

To establish the sampling frame, the researcher contacted the five Regional Specialists who consult with intake staff and provide guidance. Each regional specialist is assigned a number of localities within his or her region and works closely with child protective service staff in those local agencies. The specialists were asked to provide the name of each locality's primary intake decision-maker, the person the specialist believed likely made 75% or more of the intake decisions. Four of the five specialists provided names for decision-makers in each of their agencies. In a few cases, the intake decision-maker position was vacant or the regional specialist was unsure who the current intake decision-maker was in an agency. Because intake decision-makers' names and contact information is public information, the researcher used information available on locality websites to identify the intake decision-maker in the region where names were not provided by the regional specialist. In cases where the information could not be located in that way, the researcher contacted the locality and asked for names and contact information. Online surveys were forwarded to the identified decision-maker in each of the 121 localities. Eighty-seven CPS intake decision-makers completed the survey, yielding a 67% response rate.

When the sampling frame was created, the researcher believed the population of intake decision-makers was 121 or fewer intake decision-makers based on the lists received from regional specialists, contacts with localities, and anecdotal information. However, respondents reported that the population may be larger than expected. As Table

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5 indicates, estimates provided by respondents suggest a much larger population of intake decision-makers exists. It is important to consider that this study targeted *primary* intake decision-makers, defined as those making 75% or more of the intake decisions in their agencies. Respondents may have included other staff that may occasionally make intake decisions but do not make them routinely (such as agency directors or on-call supervisors).

Table 5

Number of Agency Staff with Authority to Make Independent Intake Decisions (N = 87)[+]

Staff	*n*	Valid %	Cumulative *n*	Cumulative *%*
1 - 2	40	48.2	35	48.2
3 - 4	20	24.1	60	72.3
5 - 6	12	14.5	72	86.8
7 - 8	6	7.0	78	93.8
9 - 10	3	3.8	81	97.6
11+	2	2.4	83	100.0
Missing	4	4.6		

[+]May include administrators, supervisors, designated intake staff, or other personnel.

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Sample Description

The majority of respondents were both Caucasian (n = 74, 85.1%) and female (n = 73, 83.9%). This distribution of race and gender reflects the known distributions for child welfare staff in the United States (Pierce & Pierce, 1996; Zambrana & Capellow, 2003). Racial and demographic characteristics are provided in Table 2. Sixty respondents (69%) have earned undergraduate degrees (some respondents reported more than one undergraduate degree) and 26 (29.9%) have earned graduate degrees. Over half (57.4%) have earned at least one social work degree and nine reported earning both social work degrees. Educational information is included in Table 6.

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Table 6
Sample Demographics (N = 87)

Characteristic	*n*	%
Race		
African American	7	8.4
Caucasian	74	89.2
Other	2	2.4
Missing	4	4.6
Gender		
Male	14	16.1
Female	73	83.9
Education		
High School Diploma	1	1.1
Bachelors Degree	60	69.0
Masters Degree	26	29.9
Undergraduate Degree		
Social Work	31	52.0
Other	29	48.0
Graduate Degree		
Social Work[+]	19	66.0
Other	10	34.0

[+]Of the 19 participants who have earned the MSW, 9 (.10%) also earned the BSW.

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The majority of respondents (n = 64, 74.4%) reported being the primary intake decision-maker in their agencies. However, as Table 7 suggests, intake decision-making is not most respondents' (n = 53, 60.9%) primary job responsibility. Respondents reported varying lengths of time performing intake decision-making. Slightly less than half of the respondents (n = 34, 46.9%) have been making intake decisions for five or fewer years. Four respondents reported being intake decision-makers for less than one year. The remaining (53.1%) reported working as intake decision-makers significantly longer with time spent making intake decisions ranging from 6 to 32 years. Sixteen of the respondents (23.1%) reported less than one year of child welfare experience before becoming responsible for intake decision-making in an agency. Thirty-eight respondents (55.1%) reported prior child welfare experience ranging from one to 11 years. The remaining respondents (21.8%) reported working in child welfare more than 12 years before becoming intake decision-makers. Respondents' years of intake decision-making experience and child welfare experience are summarized in Table 8.

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Table 7

Decision-Making Responsibility (N = 87)

Characteristic	*n*	%
Primary Agency Decision-Maker[+]		
Yes	64	74.4
No	22	25.6
Missing	1	1.0
Screening is Primary Responsibility		
Yes	31	35.6
No	53	61.0
Missing	3	3.4

[+]Defined as screening 75% or more of reports received by agency monthly.

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Table 8

Decision-Making Experience (N = 87)

		Valid	Cumulative	
	n	%	*n*	%
Years Intake				
0 – 5 Years	34	49.7	34	50.0
6 - 10 Years	12	18.8	46	68.8
11 - 15 Years	7	11.0	53	79.8
16 - 20 Years	6	9.5	59	89.0
21 - 25 Years	3	4.7	62	94.0
26+ Years	4	6.3	66	100.0
Missing	21	26.9		
Years Child Welfare				
0 – 1 Years	16	23.1	16	23.1
2 – 6 Years	18	26.1	34	49.2
7 – 11 Years	20	29.0	54	78.2
12 – 16 Years	8	12.0	62	90.2
17 – 21 Years	4	5.7	66	95.9
22 – 26 Years	1	1.4	67	97.3
27+ Years	2	2.7	69	100.0

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Missing	18	21.0

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Decision-Making Behaviors

Independent decision-making. Intake decision-makers have the authority to make intake decisions independently. However, Table 9 suggests only a small number make them independently most of the time. The majority of respondents reported making decisions independently three-quarters of the time (n = 31, 52.5%) while 32.2% (n = 19) reported making independent decisions one-quarter of the time or less. As Table 10 shows, slightly less than half of the respondents reported being the final decision-maker in 1% to 75% of intake decisions in their agencies in June, 2008, the month prior to the survey being administered.

Table 9

Percentage of Intake Decisions Made Independently (N = 87)

			Cumulative	
Percentage	*n*	Valid %	*n*	%
0 - 25%	19	32.20	19	32.20
26 - 75%	9	15.25	28	47.50
76 - 100%	31	52.55	59	100.00
Missing	28	32.20		

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Table 10

Percentage of Intake Reports from June 2008 in which Respondents were the Final Decision-Makers (N = 87)

		Valid	Cumulative	
Reports	*n*	%	*n*	%
0%	7	11.3	7	11.3
1 – 75%	23	37.0	30	48.3
76 – 95%	20	32.3	50	80.6
96 – 100%	12	19.3	62	100.0
Missing	25	28.7		

Policy application. Respondents reported that in cases where policy clearly applies to the allegations, they can make an intake decision in approximately 10 minutes. However, when the fit between policy and concerns is less clear, their decision-making slows considerably. While nearly half the respondents (*n* = 29, 46.0%) reported they still make the decision in less than 10 minutes, the time needed for the remaining intake decision-makers ranged from 11 minutes to more than 60 minutes. Table 11 summarizes the range of time respondents reported needing to make intake decisions as they consider and apply policy to reported maltreatment concerns. In some situations, the intake decision-maker may have concerns that children are at risk in situations where policy

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indicates no action should be taken. Respondents were split on how they make intake decisions their feelings conflict with policy directives. While 45% of the respondents (*n* = 39) indicated they would strictly adhere to the policy despite personal feelings, 48% (*n* = 42) reported they would ignore the policy in order to intervene. Table 12 reflects how intake decision-makers reported they would proceed when their feelings conflicted with policies guiding their work.

Three types of simulation behavior were proposed as variables included in the study. Respondents reported using all three types of simulation as they made decisions to accept or reject scenarios in the study. While one respondent reported not engaging in simulation *previous experience/recalling past cases* while completing the survey and one did not answer, 85 respondents (*N* = 87) reported engaging in simulation recalling past cases in at least one scenario. Eighty respondents (92%) reported engaging in this type of simulation in several to all of the scenarios.

Seventy-nine (91.9%) respondents (*N* = 86) reported engaging in simulation where *intervention choices* were considered. Thirty-seven respondents (43%) reported using this type of simulation only in some scenarios while 41(47.7%) respondents reported using it in all of the scenarios.

Of the 86 participants who responded, six (7%) reported not using the simulation type *considering no intervention* in their decision-making. Thirty-two (37.2%) reported employing the simulation in some of the scenarios. The majority of the respondents (*N* = 48, 55.8%) reported using this simulation type in all of the scenarios. These frequencies are presented in Table 13.

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Table 11

Time Spent Making Intake Decisions (N = 87)

		Valid	Cumulative	
Average Minutes	*n*	%	*n*	%
When Policy Clearly Applies				
1 - 5	47	73.4	47	73.4
6 - 10	11	17.2	58	90.6
11+	6	9.4	64	100.0
Missing	23	26.4		
When Policy is Unclear				
1 - 5	14	22.2	14	22.2
6 - 10	15	23.8	29	46.0
11 – 29	18	28.6	47	74.6
30 - 60	15	23.8	62	98.4
61+	1	1.6	63	100.0
Missing	24	27.6		

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Table 12

Policy and Feeling of Risk Conflict (N = 87)

When my Feelings Conflict with Policy	*n*	Valid
I adhere strictly to policy	39	44.8
I ignore policy in order to intervene	42	48.3
Missing	6	6.9

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Table 13

Use of Simulation Types in Decision-Making (N = 87)

Type of Simulation and Number of Scenarios	*n*	Valid %
Recalling past cases		
None of the Scenarios	1	1.2
A Few of the Scenarios	5	5.8
Several of the Scenarios	25	29.0
Almost All of the Scenarios	36	41.9
All of the Scenarios	19	22.1
Missing	1	1.1
Considering Intervention Choice		
Not in any of the Scenarios	8	9.3
Only in some of the Scenarios	37	43.0
In all of the Scenarios	41	47.7
Missing	1	1.1
Considering no intervention		
Not in any of the Scenarios	6	7.0
Only in Some of the Scenarios	32	37.2
In all of the Scenarios	48	55.8
Missing	1	1.1

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Agency Characteristics

Structured decision-making. Respondents were asked to provide information about their intake decision-making environments. They were asked if they work in a locality employing the Structured Decision-Making Model. Less than half of the respondents reported working in one of the SDM localities (n = 30, 34.5%). Fifty-seven respondents (65.5%) reported that they are not employed in SDM localities.

Maltreatment report volume. The volume of child maltreatment reports received by Virginia localities varies greatly. Respondents were asked to estimate the average number of maltreatment reports received in a typical month. Table 14 reports that a few localities receive no child maltreatment reports in typical month (n = 3, 3.8%), while other localities receive almost 400 (n = 7, 8.8%) or more (n = 1, .20%) reports routinely. The majority of respondents (n = 69, 86.2%) reported that their agencies receive somewhere between 1 and 140 reports monthly.

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Table 14

Number of Monthly Intake Reports Agency Typically Receives (N = 87)

		Valid	Cumulative	
Reports	*n*	%	n	*%*
0	3	3.80	3	3.8
1 - 20	37	46.20	40	50.0
21 - 55	19	23.80	59	73.8
56 - 140	13	16.20	72	90.0
141 - 375	7	8.80	79	98.8
Over 376	1*	.21	80	100.0
Missing	7	8.00	87	

*One agency reports 600 intake reports monthly.

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Having presented descriptive information for respondents and their decision-making environments, the chapter will proceed to briefly addressing the research instrument's general performance and the bias scale. This discussion will precede reporting the respondents' decisions regarding the vignettes they were presented with in the study.

Bias Scale and Research Instrument

Construction. Two equivalent versions of the research instrument were administered through an on-line survey system to participants randomly assigned to receive one or the other version (Version 1 or 2). The instrument was developed by the researcher and was pilot-tested in the manner described in Chapter 3. The instrument performed successfully during the pilot test and only minor changes were made based on respondent feedback. The instrument appears to have been successful in the current study. Respondents assigned to each version were able to complete the instrument and appeared to be able to respond to all items. Scales to measure racial and drug bias were created and included in the instrument. These scales improved upon an earlier version the researcher developed and administered in a separate study (Howell, 2008).

Scale performance. The Bias scale demonstrated an acceptable level of internal consistency (Cronbach's alpha = .87). The Drug Subscale and Race Subscale also had acceptable internal consistency (Cronbach's alpha = .75 and .74, respectively). Scale items and response rates are provided in Appendix H due to table length.

Vignettes

Participants in this study were presented with a series of vignettes describing potential maltreatment allegations. The vignettes were created by the researcher as

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described in Chapter 3. Details presented in the vignettes were used to manipulate the variables race and drugs across both versions of the instrument. The scenarios were categorized into four series: 1) baseline series, 2) drug series, 3) race series, and 4) race and drug series. The scenarios are provided in Appendix I.

Baseline series. All participants received the same four baseline vignettes to measure basic intake decision-making proficiency and to generate scores to use in additional analyses. The baseline scenarios intentionally avoided any mention of race or drugs. Two respondents (2.3%) decided only two of the four baseline scenarios correctly (meaning they made the same acceptance decision as the experts). Nineteen respondents (21.8%) correctly decided 3 of the scenarios. More than three-quarters of the respondents (n = 66, 75.9%) correctly decided all four baseline scenarios.

Drug series. Four scenarios were presented that manipulated the drug variable by suggesting drug use in one version while not suggesting it in the other version. Four respondents (4.7%) accepted only one of the drug scenarios presented in their instrument version. Forty respondents (46.5%) accepted two and another 40 (46.5%) accepted three scenarios. Only two participants (2.3%) accepted all four scenarios presented to them.

Race series. Eight scenarios presented information in ways to manipulate race across the two instrument versions. If in Version 1 alleged victim child race was identified as "White" in a scenario then it was identified as "Black" in the complementary scenario in Version 2. The number of race only scenarios accepted ranged from two to seven scenarios. Thirty-seven respondents, or 45.7% of the sample, accepted less than four of the

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race series scenarios. The remaining 54.3% (n = 44) chose to accept 5, 6, or 7 of the scenarios presented in this series.

Race and drug series. In the final series, race and drugs were manipulated in combination across the two test versions. Victim race was identified as either black or white and drugs were either suggested or not in these eight remaining scenarios. The number of race and drug scenarios accepted ranged from five to eight scenarios. Slightly more than half (n = 47, 55%) the respondents chose to accept 5 or fewer race and drug scenarios. Thirty-nine respondents (45%) chose six, seven, or eight of the scenarios from this series.

Table 15 reviews respondents' decisions for accepting or rejecting each scenario in relation to the optimal decision for each scenario provided by experts. Respondents accepted between 9 and 20 scenarios of the 24 scenarios.

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Table 15 *Screening Decisions*

Scenario	Expert Judgment	Basic Allegation	Version 1	% Agreement with Expert	Version 2	% Agreement with Expert
1	Reject	Homelessness	Race: W Drugs: N	26.0%	Race: B Drugs: Y	24.3%
2	Accept	Supervision	Baseline	96.0%	Baseline	100.0%
3	Accept	Physical Abuse	Race: W	100.0%	Race: B	100.0%
4	Accept	Supervision	Drugs: N	90.0%	Drugs: Y	100.0%
5	Reject	Lice	Race: B Drugs: Y	67.3%	Race: W Drugs: N	75.7%
6	Accept	Supervision	Race: B Drugs: Y	98.0%	Race: W Drugs: N	100.0%
7	Reject	Absenteeism	Race: B Drugs: N	92.0%	Race: W Drugs: Y	56.8%
8	Accept	Domestic Violence	Race: B	80.0%	Race: W	83.85%
9	Accept	Physical Abuse	Baseline	100.0%	Baseline	100.0%

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(Table 15 continued)

Scenario	Expert Judgment	Basic Allegation	Version 1	% Agreement with Expert	Version 2	% Agreement with Expert
10	Reject	Immunizations	Baseline	92.0%	Baseline	97.3%
11	Reject	Prenatal Drug Use	Race: W Drugs: Y	58.0%	Race: B Drugs: N	89.2%
12	Reject	Medical Crisis	Race: B	81.2%	Race: W	78.4%
13	Reject	Domestic Violence	Race: W	78.0%	Race: B	70.3%
14	Reject	Not Using Seat Belts	Baseline	82.0%	Baseline	80.6%
15	Accept	Filthy House; Lack of Food	Race: B Drugs: N	94.0%	Race: W Drugs: Y	100.0%
16	Accept	Supervision	Race: W Drugs: Y	98.0%	Race: B Drugs: N	100.0%
17	Accept	Teen/Adult Sex	Race: W	79.6%	Race: B	78.4%

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(Table 15 continued)

Scenario	Expert Judgment	Basic Allegation	Version 1	% Agreement with Expert	Version 2	% Agreement with Expert
18	Reject	Non-Caregiver Sexual Abuse	Race: W	66.0%	Race: B	73.0%
19	Accept	Lack of food; Adult Prostitution	Race: W Drugs: N	72.0%	Race: B Drugs: Y	83.85%
20	Accept	Abandoned Infant	Drugs: Y	100.0%	Drugs: N	100.0%
21	Reject	Parental Conflict	Drugs: Y	96.05%	Drugs: N	100.0%
22	Reject	Emotional Abuse	Drugs: N	55.1%	Drugs: Y	43.2%
23	Accept	Diaper Rash	Race: B	98.0%	Race: W	94.6%
24	Reject	Parent Showers with Children	Race: B	72.0%	Race: W	83.3%

Note. Race: B = Black, W = White; Drugs: N = Not suggested in report Y = Suggested in report

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Decision Factors

Following each scenario, respondents were presented the same list of 25 decision-factors. They were asked to identify all factors that they believed influenced their decision to accept a scenario for response. Table 16 presents a summary of the total number of factors respondents indicated influenced their decision to accept that scenario. As the table reports, the lowest number of factors applied to an accepted scenario was 5 decision-factors in Scenario 21. The most decision factors were applied to Scenario 22. Respondents selected 24 decision-factors in that scenario.

The frequency with which factors were applied varied across scenarios. As Table 17 reports, one factor, *child age*, was identified as influencing decision-making in all 24 scenarios. *Family Service Need* and *Other Factor(s)* were identified as factors that were influential in 23 of the scenarios. *Impairment (child or adult)*, *Inability to Protect Self*, and *Lack of Supervision* were the next most frequently identified factors, each indicated as being influential in 22 scenarios. Four factors were considered next most influential: *Multiple Risk Factors*, *Maltreatment Likely to Continue*, *Lacks Parenting Skills/Knowledge*, and *No Protective Adult Caregiver in Home*. Each of these factors was reported to have influenced decision-making in 21 scenarios. Finally, in 20 scenarios, respondents reported the factor *1+ Basic Needs Unmet* influenced their decision to accept scenarios. The remaining 13 factors were indicated as being influential in five to nineteen scenarios.

If the set of factors with the highest selection frequency and reoccurrence across the scenarios can be considered a simple measure of their relative importance to other factors,

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then the constellation of primary decision-factors that emerges from this data includes: *Child Age*, *Family Service Need*, *Other Factor(s)*, *Impairment (child or adult)*, *Inability to Protect Self*, *Lack of Supervision*, *Multiple Risk Factors*, *Maltreatment Likely to Continue*, *Lacks Parenting Skills/Knowledge*, *No Protective Adult in Home*, and *1+ Basic Need Unmet*.

Table 16

Decision Factors Identified as Influencing Decisions in Scenarios

Scenario	Total Number of Factors Identified	Scenario	Total Number of Factors Identified
1	23	13	20
2	19	14	15
3	21	15	22
4	22	16	20
5	20	17	19
6	21	18	10
7	20	19	21
8	21	20	21
9	23	21	5
10	4	22	24
11	15	23	17
12	9	24	13

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Table 17

Reported Factor Use Across All Scenarios

Factor	Total Number of Times Identified	Factor	Total Number of Times Identified
Child Age	24	Unsafe Environment	19
Family Service Need	23	Living Situation Instability	18
Other Factor(s)	23	Unrealistic Expectations of Child	18
Impairment (child or adult)	22	Multiple Maltreatment Types	17
Inability to Protect Self	22	Caregiver Stress	15
Lack of Supervision	22	Inadequate/Unsafe Shelter	14
Multiple Risk Factors	21	Substance Abusing Caregiver	13
Maltreatment Likely to Continue	21	Substance Use/Dealing in Home	12
Lacks Parenting Skills/Knowledge	21	History of Maltreatment	11
No Protective Adult in Home	21	Hostile/Negative Caregiver	10
1+ Basic Need Unmet	20	Lack of Medical Care	8
Caregiver Lacks Support	19	Domestic Violence	7
		Inappropriate Discipline	5

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Bivariate Analyses Testing Association Between Variables

Screening Decision and Race

Race series. To determine whether race and screening decision were associated in any of the race-only series of scenarios, relationships between the two variables were tested using the chi-square test. No significant relationship was found between the variables in any of the seven scenarios examined.[19] Victim race and screening decision appear to be independent in all scenarios: ***Scenario 8*** ($x^2(1, N = 87) = .304, p = .581$), ***Scenario 12*** ($x^2(1, N = 85) = .583, p = .445$), ***Scenario 13*** ($x^2(1, N = 87) = 1.414, p = .234$), ***Scenario 17*** ($x^2(1, N = 86) = .001, p = .980$, **Scenario 18** ($x^2(1, N = 84) = .698, p = .403$, **Scenario 23** ($x^2(1, N = 87) = .667$ (.050 Continuity Correction due to 2 cells having expected counts < 5), $p = .578$, Fisher's Exact Test), and ***Scenario 24*** ($x^2(1, N = 86) = 1.803, p = .179$).

Screening Decision and Drug Use

Drug Use series. The chi-square test was also employed to examine the association between drug use (suggested in a scenario or not suggested) and decisions to accept or reject scenarios. No significant relationship was found between drug use and screening decision in any of the 3 scenarios.[20] Drug use and screening decision appear to be independent in all scenarios: ***Scenario 4*** ($x^2(1, N = 87) = 3.926$ (2.297 Continuity Correction due to 2 cells having expected counts < 5), $p = .069$, Fisher's Exact Test),

[19] The chi-square test could not be used with Race-Only Scenario 3 as all respondents accepted the scenario, meaning there was only one category for estimation.

[20] The chi-square test could not be used with Drug Use Scenario 20 as all respondents accepted the scenario, meaning there was only one category for estimation.

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Scenario 21 ($x^2(1, N = 87) = 1.515$ (.257 Continuity Correction due to 2 cells having expected counts < 5), $p = .505$, Fisher's Exact Test), ***Scenario 22*** ($x^2(1, N = 86) = 1.186$, $p = .276$).

Screening Decision and Race and Drug Use

Race and Drug Use series. Additional chi-square tests were performed to examine the association between the decision to accept or reject scenarios and the race/drug condition manipulated across the two versions of the instrument. A significant association was found in only two of the 7 scenarios tested.[21] In ***Scenario 7*** a significant association was found between victim race and suggestion of drug use ($x^2(1, N = 87) = 14.919$, $p = .000$). The phi coefficient indicates that race/drugs condition explains 17.14% of the variance in the acceptance decision, which suggests a low relationship exists between the two variables. The remaining 82.6% of the variance in the decision to accept or reject is not accounted for by the race/drug condition.

The second significant association was found in ***Scenario 11***($x^2(1, N = 87) = 10.101$, $p = .001$). The phi coefficient indicates that race/drugs condition explains 11.62% of the variance in the acceptance decision, which suggests a moderate relationship exists between the two variables. The remaining 88.38% of the variance in the decision to accept or reject is not accounted for by the race/drug condition. Results for these tests are presented in Tables 18 and 19.

[21] The chi-square test could not be used with Race-Drug Scenario 5 as all respondents accepted the scenario, meaning there was only one category for estimation.

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No significant association was found between the variables in the remaining chi-square tests: ***Scenario 1*** ($x^2(1, N = 87) = .032$, $p = .859$), ***Scenario 5*** ($x^2(1, N = 86) = .709$, $p = .400$), ***Scenario 6*** ($x^2(1, N = 87) = .749$ (.000 Continuity Correction due to 2 cells having expected counts < 5), $p = 1.00$, Fisher's Exact Test), ***Scenario 15*** ($x^2(1, N = 87) = 2.299$ (.850 Continuity Correction due to 2 cells having expected counts < 5), $p = .258$, Fisher's Exact Test), ***Scenario 16*** ($x^2(1, N = 87) = .749$ (.000 Continuity Correction due to 2 cells having expected counts < 5), $p = 1.00$, Fisher's Exact Test), ***Scenario 19*** ($x^2(1, N = 87) = 1.668$, $p = .197$).

Table 18

Screening Decision (Scenario 7) *by Race and Drug Use*

	Black/No Drugs	White/Drugs	Total
	N (%)	*N* (%)	*N* (%)
Screening Decision			
Reject	46 (92.0)	21 (56.8)	67(77.0)
Accept	4 (8.0)	16 (43.2)	20(23.0)
Total	50 (100)	37 (100)	87 (100)

Note. $\chi^2 (1, N = 87) = 14.919, p = .000$

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Table 19

Screening Decision (Scenario 11) *by Race and Drug Use*

	White/Drugs	Black/No Drugs	Total
	N (%)	*N* (%)	*N* (%)
Screening Decision			
Reject	29 (58.0)	33 (89.2)	62(71.3)
Accept	21 (42.0)	4 (10.8)	25(28.7)
Total	50 (100)	37 (100)	87 (100)

Note. χ^2 (1, N = 87) = 10.101, p = .001

Response Type and Race

Race series. The potential association between race and response type (investigation or family assessment) was explored in the race scenarios. No significant relationship was found between race and response type in any of the 8 scenarios. Victim race and response type appear to be independent in all scenarios: ***Scenario 3*** (x^2(1, N = 84) = 1.460, p = .227), ***Scenario 8*** (x^2(1, N = 70) = .332, p = .565), ***Scenario 12*** (x^2(1, N = 18) = 1.00 (.250 Continuity Correction due to 2 cells having expected counts < 5), p = .620, Fisher's Exact Test), ***Scenario 13*** (x^2(1, N = 21) = .955 (.000 Continuity Correction due to 2 cells having expected counts < 5), p = 1.0, Fisher's Exact Test), ***Scenario 17*** (x^2(1, N = 67) = 1.51, p = .220), ***Scenario 18*** (x^2(1, N = 26) = .650 (.000 Continuity Correction due to 2 cells having expected counts < 5), p = 1.0, Fisher's Exact Test, ***Scenario 23*** (x^2(1, N = 83) = .353, p = .553), and ***Scenario 24*** (x^2(1, N = 22) = 3.27

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(1.721 Continuity Correction due to 2 cells having expected counts < 5), $p = .137$, Fisher's Exact Test).

Response Type and Race and Drugs

Race and Drug Series. To explore the potential association between the race/drug condition and response type (investigation or family assessment) chi-square tests were also calculated for the scenarios in the race and drug series. No significant relationship was found between race/drug condition and response type in any of the 8 scenarios. The race/drug condition and response type appear to be independent in all scenarios: ***Scenario 1*** ($x^2(1, N = 65) = .040$ (.000 Continuity Correction due to 2 cells having expected counts < 5), $p = 1.000$, Fisher's Exact Test), ***Scenario 5*** ($x^2(1, N = 25) = 1.852$ (.089 Continuity Correction due to 2 cells having expected counts < 5), $p = .360$, Fisher's Exact Test), ***Scenario 6*** ($x^2(1, N = 86) = 3.378$, $p = .066$), ***Scenario 7*** ($x^2(1, N = 20) = .263$ (.000 Continuity Correction due to 3 cells having expected counts < 5), $p = 1.000$, Fisher's Exact Test), ***Scenario 11*** ($x^2(1, N = 25) = .296$ (.000 Continuity Correction due to 3 cells having expected counts < 5), $p = 1.000$, Fisher's Exact Test), ***Scenario 15*** ($x^2(1, N = 84) = .001$) , $p = .969$), ***Scenario 16*** ($x^2(1, N = 86) = .000$, $p = .986$), and ***Scenario 19*** ($x^2(1, N = 68) = 2.817$ (1.781 Continuity Correction due to 1 cells having expected counts < 5), $p = .167$, Fisher's Exact Test).

Number of Scenarios Accepted and Drug Subscale Score

To examine a potential association between the total number of scenarios respondents accepted and their Drug Subscale Score, a chi-square test was run. Drug Subscale scores were collapsed into two groups: Low ($< M = 70$) and High ($> M = 70$).

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The results show a significant association between the two variables ($x^2(1, N = 80) = 11.984, p = .002$). These results indicate that the number of scenarios accepted is associated with the drug subscale score. The phi coefficient (.38) indicates that race explains 14.4% of the variance in number of scenarios accepted, which suggests a moderate relationship exists between the two variables. The remaining 85.6% of the variance in the number of scenarios respondents accepted is not accounted for by their drug subscale scores. The test results are presented in Table 20.

Table 20

Total Scenarios Accepted by Drug Subscale Score Group

	Low ($M \leq 70$) *N* (%)	High ($M > 70$) *N* (%)	Total *N* (%)
Scenarios Accepted			
0	17 (51.5)	13 (27.7)	30(37.5)
12 or fewer	11 (33.3)	9 (19.1)	20(25.0)
16 or more	5 (15.2)	25 (53.2)	30(37.5)
Total	33 (100)	47 (100)	80 (100)

Note. $\chi^2 (1, N = 80) = 11.984, p = .002$

Substance Use Factors and Drug Subscale Score

Two substance use decision factors were included in the list of potential decision factors that respondents could identify as having influenced their decision-making. The chi-square test was utilized to examine the potential relationship between Total Number of

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Substance Use Factors Chosen Across Scenarios and Drug Subscale Score. The results indicate a significant association between the two variables ($x^2(1, N = 80) = 4.4178, p = .041$). These results suggest that the number of times these respondents identified these factors is associated with their Drug Subscale scores. The phi coefficient indicates that the Drug Subscale score explains 5.2% ($r^2 = .229^2 = .052\%$) of the variance, suggesting a weak relationship. The remaining 94.8% of the variance in the number of times substance use factors were identified is not accounted for by respondents' drug scale scores. The chi-square results are reported in Table 21.

Table 21

Rate Substance Use Factors Chosen Across Scenarios *by Drug Subscale Score Group*

	Low ($M \leq 70$)	High ($M > 70$)	Total
	N (%)	*N* (%)	*N* (%)
Chosen			
< 5 times	21 (63.6)	19 (40.4)	40(50.0)
5+ times	12 (36.4)	28 (59.6)	40(50.0)
Total	33 (100)	47 (100)	80 (100)

Note. $\chi^2 (1, N = 80) = 4.178, p = .041$

Policy and Feelings of Risk Conflict and Experience Group

The chi-square test was run to examine the association between respondents' years of prior child welfare experience and their choice to adhere strictly to policy or ignore policy when concerned about children's safety yet policy does not indicate, or prohibits,

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intervention. The results show a significant association between the two variables ($x^2(2, N = 87) = 7.668$, $p = .022$). The Cramer's V coefficient indicates that years of prior child welfare experience explains 9.5% of the variance in the decision to adhere to or ignore policy, which suggests a moderate relationship. Prior child welfare experience does not account for the remaining 90.5% of the variance in that decision. The results of the chi-square test can be found in Table 22.

Table 22

Policy and Feelings of Risk Conflict by Experience Group (Years)

	0-5	6-12	13-33	Total
	N (%)	*N* (%)	*N* (%)	*N* (%)
Adhere to Policy				
Strictly	4 (23.5)	15 (68.2)	20 (47.6)	39(48.1)
Ignore	13 (765)	7 (31.8)	22 (52.4)	42(51.9)
Total	17 (100.0)	22 (100)	42 (100)	81 (100)

Note. χ^2 (2, $N = 81$) = 7.668, $p = .022$

The findings of a number of bivariate analyses were reported in this section. To summarize briefly, weak to moderate significant relationships were found in tests that involved Screening Decision and the Race/Drug Combination (in Scenarios 7 and 11 only), Total Number of Scenarios Accepted and Drug Subscale Score, Total Number of

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Substance Use Factors Identified and Drug Subscale Score, and Policy and Risk Conflict and Experience Group. No significant relationships were identified in any other tests.

Bivariate Analyses Testing Correlations Between Variables

Bias Scale Scores

Tests involving the Pearson product-moment correlation coefficient were performed to explore the correlation between respondents' Total Bias Scale scores and a number of dependent variables. Bias Scale scores were found to have significant relationships with seven of the eight dependent variables tested. Please refer to Table 23 where the results are presented.

Bias Scale score. A significant positive relationship was found between Bias Scale Score and Total Scenarios Accepted ($r = .30$, $p = .002$), indicating that decision-makers whose total bias scale score is higher (suggesting stronger bias) accepted a greater number of scenarios. The independent variable explains 9% ($r^2 = .09$) of the variance in the dependent variable.

A significant positive relationship was found between Total Bias Scale Score and Total Drug Scenarios Accepted ($r = .30$, $p = .003$), indicating that decision-makers whose total Bias Scale score is higher (suggesting stronger bias) selected more scenarios in the drugs series than participants with lower Bias Scale scores. The independent variable explains 9% ($r^2 = .09$) of the variance in the number of drug scenarios respondents' accepted. More than 91% of the variance is unexplained and could be related to extraneous variables. Although the variables do have a significant relationship, it is considered a moderate relationship.

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A significant positive relationship was found between Bias Scale scores and the number of race series scenarios respondents accepted (r = .26, p = .008), indicating that higher scoring decision-makers (suggesting stronger bias) selected more scenarios from the race series than participants with lower bias scores. The independent variable explains less than 7% (r^2 = .068) of the variance in Total Race Scenarios Accepted. More than 93% of the variance is unexplained and could be related to extraneous variables. Although the variables do have a significant relationship, it is considered a moderate relationship.

The relationship between respondents' total Bias Scale scores and their total Drug Subscale scores was found to be significant and positive (r = .79, p = .000). Decision-makers whose total Bias Scale score is higher (suggesting stronger bias) also score higher on the Drug Subscale. The independent variable explains nearly 70% (r^2 = .624) of the variance in Total Drug Subscale Score. Roughly 38% of the variance is unexplained and could be related to extraneous variables. The variables do have a moderately strong relationship.

Total Bias Scale Score and Total Race Subscale Score demonstrate a significant positive relationship (r = .82, p < .002). Decision-makers whose total Bias Scale score is higher (suggesting stronger bias) also score higher on the Race Subscale. The independent variable explains 67% (r^2 = .672) of the variance in Total Race Subscale Score. Roughly 33% of the variance is unexplained and could be related to extraneous variables. The relationship between these variables is considered moderately strong.

An insignificant positive relationship exists between Total Bias Scale Score and Total Family Assessments Assigned (r = .03, p = .386). The results indicate that decision-

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makers whose total value scale score is higher do not assign family assessments in response to the scenarios significantly more often than participants with lower scores. The independent variable explains .09% (r^2 = .0009) of the variance in Total Family Assessments Assigned. More than 91% of the variance is unexplained and could be related to extraneous variables.

A significant positive relationship was found between Total Bias Scale Score and Total Investigations (r = .26, p = .008). Decision-makers with higher bias scores (suggesting stronger bias) assigned scenarios for investigation more often than participants with lower bias scores. The independent variable explains less than 7% (r^2 = .068) of the variance in Total Investigations Assigned, leaving more than 93% of the variance unexplained. The remaining variance could be explained by extraneous variables. Although the variables do have a significant relationship, it is considered a weak relationship.

Finally, the relationship between Total Bias Scale Score and Total Agreement with Experts was examined. The results indicate a significant and negative relationship (r = -.26, p = .000), indicating that higher scoring decision-makers agreed less often with the experts' decisions on whether or not to accept scenarios. The independent variable explains less than 7% (r^2 = .068) of the variance in the dependent variable. More than 93% of the variance is unexplained and could be related to extraneous variables. Although the variables have a significant relationship, it is considered a weak relationship.

Drug Subscale Score. The relationship between Drug Subscale scores and the total number of scenarios respondents accepted was examined. The results, as reported in Table

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23, show a significant positive relationship (r = .33, p = .001), indicating that decision-makers with higher Drug Subscale scores (suggesting stronger bias) accepted more scenarios than those with lower Drug Subscale scores. The independent variable, Drug Subscale Score, explains slightly more than 10% (r^2 = .109) of the variance in the number of scenarios accepted, but leaves more than 90% of the variance unexplained. Although these variables have a significant relationship, it is considered a moderate relationship.

Drug Subscale scores and the number of drug scenarios accepted was found to have a significant positive relationship (r = .30, p = .003). Respondents who scored higher on the drug subscale (suggesting stronger bias) accepted more scenarios involving drugs than lower-scoring respondents. The independent variable, Drug Subscale Score, explains 9% (r^2 = .09) of the total variance in the number of drug scenarios respondents accepted. More than 91% of the variance is left unexplained by this relationship and could be related to extraneous variables. The variables have a moderate significant relationship.

A statistically insignificant weak relationship was found to exist between Drug Subscale Score and Total Family Assessments. The results show a negative relationship (r = -.01, p = .453). In contrast, the relationship between Drug Subscale Score and Total Investigations was found to be significant and positive (r = .32, p = .001), indicating that decision-makers whose race subscale scores were higher (suggesting stronger bias) assigned slightly more of the scenarios they accepted to be investigated. The independent variable explains less than 1% (r^2 = .01) of the variance in Total Investigations Assigned. More than 99% of the variance is unexplained and could be related to extraneous variables. Although the variables do have a significant relationship, it is considered weak.

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In contrast, the relationship between Drug Subscale Score and Total Investigations was found to be significant and positive (r = .32, p = .001), indicating that decision-makers whose Drug Subscale scores were higher assigned slightly more of the scenarios they accepted to be investigated. The independent variable explains less than 1% (r^2 = .01) of the variance in Total Investigations Assigned. More than 99% of the variance is unexplained and could be related to extraneous variables. Although the variables do have a significant relationship, it is considered weak.

Race Subscale score. Race Subscale Score was used as the independent variable in tests with several dependent variables. The results of these tests are presented in Table 23. A positive but very weak and statistically insignificant relationship was found between Race Subscale Score and Total Scenarios Accepted (r = .16, p = .070).

A significant positive relationship was found between Race Subscale Score and Total Drug Scenarios Accepted (r = .19, p = .041), indicating that decision-makers whose Race Subscale score is higher (suggesting stronger bias) selected more scenarios suggesting drug use than participants with lower Race Subscale scores. The independent variable explains 3.6% (r^2 = .036) of the variance in Total Drug Scenarios Accepted. More than 96% of the variance is unexplained and could be related to extraneous variables. Although the variables do have a significant relationship, it is considered a weak relationship.

Race Subscale Score and Total Race Scenarios Accepted have a significant positive relationship (r = .26, p = .008). Decision-makers with higher Race Subscale scores (suggesting stronger bias) selected more scenarios mentioning race than participants with

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lower Race Subscale scores. The independent variable explains 6.8% (r^2 = .068) of the variance in Total Race Scenarios Accepted. More than 93% of the variance is unexplained and could be related to extraneous variables. Although the variables have a significant relationship, it is considered a weak relationship.

The results show a highly significant positive relationship between Race Subscale Score and Total Drug Subscale Score (r = .30, p =.000), indicating that decision-makers with higher Race subscale scores (suggesting stronger bias) also scored higher on the Drug Subscale. The independent variable explains 9% (r^2 = .09) of the variance in Total Drug Subscale Score. More than 91% of the variance is unexplained and could be related to extraneous variables. Although the variables do have a significant relationship, it is considered a weak relationship.

Race Subscale Score and Total Family Assessments Assigned are weakly related. The results show a positive insignificant relationship (r = .06, p = .285). A similar insignificant positive relationship was found between Race Subscale Score and Total Investigations Assigned (r = .10, p =.183).

However, a significant relationship exists between Race Subscale Score and Total Agreement with Experts. These variables are negatively related (r = -.12, p = .000). Higher scoring decision-makers agreed less often with the experts' decisions on whether or not to accept scenarios. The independent variable explains less than 2% (r^2 = .014) of the variance in Agreement with Experts. More than 98% of the variance is unexplained and could be related to extraneous variables. Although the variables do have a significant relationship, it is considered weak.

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In sum, Bias Scale Score was found to have a significant relationship with all but one of the dependent variables tested. The relationship between Bias Scale Score and Family Assessments was insignificant. The Drug Subscale Score was found to have statistically significant relationships with all dependent variables tested except Family Assessments. Two dependent variables, Family Assessments and Investigations, were found to have statistically non-significant relationships with the Race Subscale Score, out of the seven tested.

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Table 23

Bias Scale and Subscale Scores and Selected Dependent Variables Correlations (N = 87)

	VSS	DSS	RSS
Dependent Variables	*r (p)*	*r (p)*	*r (p)*
Scenarios Accepted (24)	.30 (.002^{+})	.33 (.001^{+})	.16 (.070^{+})
Drug Scenarios Accepted	.30 (.003^{+})	.30 (.003^{+})	.19 (.041^{+})
Race Scenarios Accepted	.26 (.008^{+})		.26 (.008^{+})
Drug Subscale Score	.79 (.000^{++})		.30 (.000^{+})
Race Subscale Score	.82 (.002^{++})		
Family Assessments	.03 (.386^{+})	-.01 (.453^{+})	.06 (.285^{+})
Investigations	.26 (.008^{+})	.32 (.001^{+})	.10 (.183^{+})
Agreement with Experts	-.26 (.000^{++})	-.31 (.000^{+})	-.12 (.000^{+})
Substance Use Factors Chosen		.21 (.030^{+})	

Note. VSS = Values Scale Score; DSS = Drugs Subscale Score; RSS = Race Subscale Score. $^{+}$One-tailed; $^{++}$Two-tailed.

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Total Confidence Score

The relationship between respondents' Total Confidence Score, their years of intake decision-making experience and select dependent variables were also examined using the Pearson product-moment correlation. The results of these tests are presented in Table24.

The relationship between Total Confidence Score and Prior Child Welfare Experience show a highly significant positive relationship (r = .29, p =.000), indicating that decision-makers with higher Confidence scores also had more child welfare experience. The independent variable explains 8.4% (r^2 = .084) of the variance in Prior Child Welfare Experience. More than 91% of the variance is unexplained and could be related to extraneous variables. Although the variables do have a significant relationship, it is considered a weak relationship.

Total Confidence Score and Agreement with Experts were found to have a significant positive relationship (r = .29, p = .000). This suggests that decision-makers with higher confidence scores share higher agreement with experts across decisions to accept or reject scenarios. The independent variable explains 8.4% (r^2 = .084) of the variance in Agreement with Experts. The relationship is significant, but is weak.

Total Confidence Score is also related to Correct Baseline Decisions (r = .20, p = .000). Decision-makers with higher scores correctly decided more baseline scenarios than those with lower confidence scores. The independent variable explains 4% (r^2 = .04) of the variance in the dependent variable.

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Years Intake Experience

Years of Intake Experience was found to have a negative, insignificant relationship with Agreement with Experts (r = -.03, p = .216). Years of Intake Experience also shares a negative, but significant, relationship with Correct Baseline Decisions (r = -.33, p = .000). As years of experience increases, correct decision-making in baseline scenarios decreases. The relationship between the variables is weak.

To summarize the findings from this section, Total Confidence Score was found to have a significant relationship with three dependent variables: Prior Child Welfare Experience, Agreement with Experts, and Correct Baseline Decisions. In contrast, Years Intake Experience only shares a significant relationship with Correct Baseline Decisions. Its relationship to Agreement with Experts was found to be insignificant.

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Table 24

Total Confidence Score (TCS), Years of Intake Experience and Selected Dependent Variables Correlations (N = 87)

Experience	TCS	Years Intake
	r (p^{++})	*r* (p^{++})
Prior Child Welfare Experience	.29 (.000)	
Agreement with Experts	.29 (.000)	-.03 (.216)
Correct Baseline Decisions	.20 (.000)	-.33 (.000)

Note. $^{++}$Two-tailed.

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Bivariate Analyses Testing Mean Differences Between Groups

Expert Agreement. Table 25 reports the results of a series of independent *t*-tests comparing dependent variables across two groups: low agreement and high agreement. Groups were established based on level of agreement with experts based on mean scores. Respondents assigned to the "low agreement" group agreed 0 to 79% of the time with experts in accepting or rejecting scenarios. Respondents assigned to the "high agreement" group agreed 80% or more of the time with the experts.

Respondents in the low agreement group scored higher on the Total Bias scale than respondents in the high agreement group (M = 65.94, SD = 9.8, M = 61.27, SD = 7.8, respectively) ($t_{(df=85)}$ = 2.437; p = .015).

A significant difference between the group means was found for Total Drug Subscale Score. Respondents in the low agreement group scored higher on the Drug Subscale than respondents in the high agreement group (M = 74.39, SD = 11.9, M = 67.41, SD = 9.6, respectively) ($t_{(df=85)}$ = 3.02 ; p = .003).

An statistically insignificant difference between the group means was found for Total Race Subscale Score (M = 57.89, SD = 11.1, M = 55.43, SD = 11.2, respectively) ($t_{(df=85)}$ = 1.02; p = .309).

Test results demonstrate a highly significant difference between the two groups for Total Scenarios Accepted. Respondents in the low agreement group accepted more scenarios than those in the high agreement group (M = 15.71, SD = 2.7, M = 13.53, SD = 1.8, respectively) ($t_{(df=60)}$ = 4.287; p = .000).

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A difference was found between the groups on Total Race Scenarios Accepted Respondents in the low agreement group accepted more race scenarios than respondents in the high agreement group (M = 10.55 SD = 2.2, M = 9.22, SD = 1.5) ($t_{(df=61)}$ = 3.148; p = .003).

A similar difference was found for Total Drug Scenarios Accepted. Respondents in the low agreement group accepted more scenarios suggesting drug use than respondents in the high agreement group (M = 8.50, SD = 1.9, M = 7.12, SD = 1.3, respectively). The mean difference between the groups was 1.38. ($t_{(df=85)}$ = 3.824; p = .000).

A difference was found for Years Prior Child Welfare Experience. Respondents in the low agreement group had more child welfare experience than those in the high agreement group (M = 10.09, SD = 9.4, M = 7.76, SD = 5.2, respectively) ($t_{(df=57)}$ = 1.070; p = .027).

Finally, a significant difference was found between groups for Substance Use Factors Chosen. Respondents in the low agreement group selected substance abuse factors more frequently than those in the high agreement group (M = 5.37, SD = 1.9, M = 4.02, SD = 2.3) ($t_{(df=82)}$ = 2.831; p = .006).

To summarize the findings presented in Table 25, Level of Agreement with Experts was examined in relation to a number of dependent variables. Significant group mean differences were found to exist between the low agreement group and high agreement group for all variables except Total Race Subscale Score and Years Intake Experience.

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Table 25

Level of Agreement with Experts Group Differences and Selected Dependent Variables

Dependent Variable	*N*	*M (SD)*	*df*	*t*	*p*
Total Bias Scale Score					
Low Agreement	38	65.94 (9.8)			
High Agreement	49	61.27 (7.8)	85	2.44	.015
Total Race Subscale Score					
Low Agreement	38	57.89 (11.1)			
High Agreement	49	55.43 (11.2)	85	1.02	.309
Total Drugs Subscale Score					
Low Agreement	38	74.39 (11.9)			
High Agreement	49	67.41 (9.6)	85	3.02	.003
Total Scenarios Accepted					
Low Agreement	38	15.71 (2.7)			
High Agreement	49	13.53 (1.8)	60	4.29	.000
Total Race Scenarios Accepted					
Low Agreement	38	10.55 (2.2)			
High Agreement	49	9.22 (1.5)	61	3.148	
Total Drugs Scenarios Accepted					
Low Agreement	38	8.50 (1.9)			
High Agreement	49	7.12 (1.3)	85	3.82	.000

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(Table 25 Continued)

Level of Agreement with Experts Group Differences and Selected Dependent Variables

Dependent Variable	*N*	*M (SD)*	*df*	*t*	*p*
Years Prior Child Welfare Experience					
Low Agreement	22	10.09 (9.4)			
High Agreement	37	7.76 (5.2)	57	1.07	.027
Years Intake Experience					
Low Agreement	25	9.16 (7.1)			
High Agreement	40	8.75 (9.1)	63	.192	.848
Times Substance Use Factor Chosen					
Low Agreement	35	5.37 (1.9)			
High Agreement	49	4.02 (2.3)	82	2.83	.006

Note. The "Low Agreement" group agreed 0 to 79% of the time with the experts; the "High Agreement" group agreed 80% or more of the time with the experts.

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Agreement with Experts on Decisions to Accept or Reject. There was no difference between respondents grouped by educational degree (respondents with Bachelor degrees and those with Masters degrees). Both groups demonstrated similar agreement with experts in accepting and rejecting scenarios ($t_{(df=84)}$ = -.06; p = .952).

There was also no difference between respondents grouped by whether or not their localities employ Structured Decision-Making (SDM) and the level of agreement with experts in accepting or rejecting scenarios ($t_{(df=85)}$ = -.635; p = .526).

An insignificant difference was found between respondents who reported using Intervention Choice simulation in only some cases and those using the simulation type in all cases ($t_{(df=76)}$ = .768; p = .445).

There was no difference between respondents who reported engaging in *no intervention* simulation in only some cases and those who reported engaging in it in all the cases in their level of agreement with experts ($t_{(df=78)}$ = .938; p = .263).

Finally, respondents were grouped by adherence to policy. Adherence to policy refers to the choice to strictly adhere to policy or ignore it when policy disallows intervention yet the decision-maker has strong concerns about children's safety. The first group reported adhering strictly to policy in making decisions in that circumstance. Respondents in the second group reported they would ignore policy in order to intervene. The results show no difference between the groups and level of agreement with experts ($t_{(df=79)}$ = -.586; p = .198).

In summary, group mean differences were examined for a number of dependent variables against Level of Agreement with Experts on scenarios that should have been

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accepted or rejected. In this series of t-tests, no significant differences emerged. Little difference was found between the groups.

Total Number of Scenarios Accepted by Years' Intake Experience

An independent *t*-test was used to determine if a difference existed between the number of scenarios accepted by respondents reporting four or fewer years of intake decision-making experience and those with more than five years. Respondents who have worked as intake decision makers four or fewer years accepted a similar number of scenarios as the respondents who have worked as intake decision-makers five or more years (M = 14.32, SD = 2.5, M = 14.38, SD = 2.2, respectively) ($t_{(df=63)}$ = -.092; p = .927).

Education Type Group Differences

Table 26 presents the results of the following tests. An independent *t*-test was run to examine the difference between non-social workers and social workers in the total number of scenarios accepted. Tests with insignificant results are reported in the table.

In contrast, differences were found between groups on Total Race Subscale score. The results indicated a significant difference ($t_{(df=85)}$ = -.355; p = .026). Non-social workers' (M = 56.11) differed from social workers (M = 56.95), with social workers' racial bias scores being slightly higher. The mean difference between the groups was .84.

To summarize the findings of this section, the only significant difference in means found between non-social worker and social worker groups was in relation to Total Race Subscale Score. No significant differences were found in the number of scenarios accepted, the Total Bias Scale Score, or the Total Drug Subscale Score.

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Table 26

Education Type Group Differences and Selected Dependent Variables

Dependent Variable	*N*	*M (SD)*	*df*	*t*	*p*
Total Scenarios Accepted out of 24					
Non-social Work	46	14.63 (2.2)			
BSW or MSW	41	14.32 (2.8)	85	.588	.558
Total Values Scale Score					
Non-social Work	46	63.31 (9.5)			
BSW or MSW	41	63.32 (8.5)	85	-.004	.997
Total Drug Subscale Score					
Non-social Work	46	70.87 (10.6)			
BSW or MSW	41	70.00 (11.8)	85	.361	.719
Total Race Subscale Score					
Non-social Work	46	56.11 (12.6)			
BSW or MSW	41	56.95 (9.4)	85	-.355	.026

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Total Agreement with Experts and Simulation (Past Experiences) Use

Results from tests on two other simulation types have been discussed in an earlier section. To examine the relationship between percent of total agreement with experts in accepting and rejecting scenarios and the *past experience* simulation type, a one-way ANOVA was conducted based on reported use of the simulation in decision-making. No significant difference was found ($F(2, 82) = 1.657$, $p = .197$). There were no significant differences in the percent of agreement with experts between respondents engaging in this form of simulation in a few to several scenarios ($M = 19.40$), almost all scenarios ($M = 20.30$), or all scenarios ($M = 19.79$). The results of the one-way ANOVA are presented in Table 27.

Table 27

Total Agreement with Experts by Simulation (Past Experiences)

	N	*M*	(*SD*)	*F*	P^+
A Few to Several	30	19.40	(2.19)	1.657	.197
Almost All	36	20.30	(1.82)		
All	19	19.79	(2.12)		

$^+$*One-tailed p*

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Discriminant Function Analysis

The choice for using Discriminant Function Analysis (DFA) was explained in Chapter 3. There were several reasons DFA is considered the appropriate choice in this study. First, the number of cases was an issue that prevented using other types of regression. Second, analyzing each screening decision independently would have required the construction of 24 models which would not have provided useful information about the decision-making pattern that respondents exhibited across the 24 scenarios. It was possible to use respondents' complete decision patterns combined in a dependent variable to test if the model could accurately predict screening decisions. An artificial data set was created using 2088 cases with each scenario decision counting as one variable from 24 cases, but each of 24 variables for one case (Dr. Patrick Dattalo, personal communication, March 10, 2009). The discriminant function was created using study variables that represent the elements of the conceptual model presented in Chapter Three.

Test One

Criterion variable 1: Accept/Reject Decision. In this test, the goal was to accurately classify cases into two groups: reject or accept. According to the Box's M statistic (F = 2.19, p = .000), homoscedasticity cannot be assumed. However, according to Garson (n.d.b), DFA can be used with confidence if this assumption is violated. Wilks' Lambda was significant (F = .987, p = .010). The canonical correlation coefficient (R* = .114) indicates that 1.3% of the variance in the discriminant scores is accounted for by the discriminant function. In the model, some predictor values were more important than others as reflected in the standardized discriminant coefficients:

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Prior Child Welfare Experience	.611
Total Drug Subscale Score	.577
Total Race Subscale Score	-.557
Total Confidence Score	-.203
Simulation: Intervention Choice	.918
Simulation: No Intervention	-.403
Simulation: Past Experience	-.038

The classification results indicated that the discriminant function correctly classified 54.8% of the cases.

Test Two

Criterion variable 2: Agreement Group. In the second test, the goal was for the discriminant function to accurately classify cases into two groups: Low Agreement with Experts and High Agreement with Experts. Low agreement indicated agreement 79% of the time or less with the experts across the 24 decisions while high agreement indicated 80% or more agreement. This test was also performed using the synthetic sample of 2088 cases.

As in the previous test, according to the Box's M statistic ($F = 39.57$, $p = .000$), homoscedasticity cannot be assumed. Wilk's Lambda was significant in this test ($F = .881$, $p = .000$). The canonical correlation coefficient ($R^* = .345$) indicates that 11.9% of the variance in the discriminant scores is accounted for by the discriminant function. In the model, some predictor values were more important than others as reflected in the standardized discriminant coefficients:

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Prior Child Welfare Experience	-.505
Total Drug Subscale Score	-.210
Total Race Subscale Score	.239
Total Confidence Score	.714
Simulation: Intervention Choice	-.547
Simulation: No Intervention	.160
Simulation: Past Experience	.516

The classification results indicated that the discriminant function correctly classified 71.2% of the cases.

Test Three

Criterion variable 3: Agreement with Experts. The final test was performed using the original 87 case data set. In this test, the goal was to accurately classify the cases into two groups: Low Agreement with Experts and High Agreement with Experts. The same function testing the decision-making model was used in this test as in the previous two.

Homoscedasticity cannot be assumed in this test according to Box's M ($F = 1.806$, $p = .006$). The Wilks' Lambda was not significant in this test ($F = .859$, $p = .321$). The canonical correlation coefficient ($R^* = .376$) suggests that only 14.13% of the variance in the discriminant scores is accounted for by the discriminant function. In the model, standardized discriminant coefficients reflected the relative importance of each predictor:

Prior Child Welfare Experience	.847
Total Drug Subscale Score	.779
Total Race Subscale Score	-.793

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Total Confidence Score	-.697
Simulation: Intervention Choice	-.132
Simulation: No Intervention	.385
Simulation: Past Experience	-.007

Although the discriminant function was insignificant in this test, the classification results indicated that the discriminant function still correctly classified 64.4% of the cases. Results of the Discriminant Function Analysis in all three tests are presented in Table 28.

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Table 28

Discriminant Function Classification Results

Test	Actual	Group	Cases	Predicted Group Membership 1	2
1	Low Agreement ≤ 80%	1	264	192^{+}	72^{++}
				(72.7%)	(27.3%)
	High Agreement > 80%	2	1152	336^{++}	816^{+}
				(29.2%)	(70.8%)
2	Definitely Reject	1	574	304^{+}	270^{++}
				(53.0%)	(47.0%)
	Definitely Accept	2	836	368^{++}	468^{+}
				(44.0%)	(56.0%)
3	Agreed ≤ 79%	1	22	13^{+}	9^{++}
				(59.1%)	(40.9%)
	Agreed > 79%	2	37	12^{++}	25^{+}
				(32.4%)	(67.6%)

Note. $^{+}$Cases correctly classified $^{++}$Cases incorrectly classified

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Summary of Findings

Research Questions and Hypothesis Testing

Nine research questions and hypotheses framed the study and were presented in Chapter Two. Results from the data provided limited support for accepting the hypotheses that accompanied five of the research questions.

Limited support was found for accepting the hypothesis in Research Question 3 which predicted that Drug Subscale score and number of scenarios accepted would be related. A statistically significant association was found between Drug Subscale scores and acceptance decision. A statistically significant correlation was also found between Drug Subscale scores and the total number of scenarios accepted. The data provided limited support for accepting the hypothesis in Research Question 4. That hypothesis predicted that respondents with higher Drug Subscale scores would choose substance use decision factors more frequently across the scenarios. A statistically significant association was found between Drug Subscale scores and the number of times respondents identified substance use decision factors across scenarios.

The hypothesis accompanying Research Question 5 was also accepted based on the limited support found in the results. The hypothesis predicted that "expert" and "novice" decision-makers would accept and classify cases differently. The degree to which respondents agreed with experts (in accepting or rejecting scenarios across all 24 scenarios) and years of prior child welfare experience were found to have statistically significant relationships with the number of scenarios accepted.

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The hypothesis accompanying Research Question 8, that decision-makers use simulation in decision-making, was accepted based on the data. The majority of respondents reported engaging in the three types of simulation that were identified. Finally, support was found for the Research Question 9's hypothesis that decision-makers rely upon a constellation of decision-factors. A pattern of decision-factor usage did emerge in the analysis, with 11 factors being used most consistently in decision-making.

Chapter Five will present and discuss the implications drawn from the study's findings. The study limitations will also be reviewed. Suggestions for future research will also be presented.

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Chapter Five

Discussion

Summary

This final chapter briefly reviews the dissertation's purpose and the study methodology then presents conclusions drawn from the study findings. The study's strengths and limitations are considered before discussing social work implications. Recommendations for further study follow the implications and conclude the chapter.

Study Purpose

This study was conducted in order to address the gap surrounding intake decision-making that exists because of the limited attention the topic has received since Hutchison's (1989) intake study. As less than a dozen screening studies have been published over twenty years, the paucity of research explains why so little is known about intake in comparison to other child protection decision-making processes. Much more is known about the later phases of the child protective services process when decisions are made to substantiate maltreatment reports and when decisions are made to place children into foster care. With limited exceptions, the existing literature has focused more on intake decision outcomes than on decision-maker characteristics or decision processes. It is crucial that both characteristics and processes that influence intake decision-making be identified and studied. As the discussion of disproportionality in Chapter One set out, in many cases African American children and families introduced into the child welfare system are likely to experience a range of unintended negative, long-lasting outcomes. It is important to

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understand how intake decisions are made, and what influences those decisions, to ensure that vulnerable children who *need* protection *are* protected and others are not *harmed* through *unnecessary* interventions *when protection was not really needed*. If there are factors that influence intake decisions, and thus outcomes for children and families (particularly potentially negative outcomes), then it is imperative for the field to identify them so they can be addressed accordingly and eliminated or minimized.

Study Synopsis

Eighty-seven Virginia child protective services intake decision-makers participated in the study (67% response rate). Respondents were primarily Caucasian (89%) women (84%), the sample similar in demographic nature to child protective services workers across the nation (Zambrana & Capellow, 2003). Three-quarters (75%) of the respondents had earned at least one social work degree. The respondents were experienced child welfare workers. Over half (53%) had been employed as an intake decision-maker for more than six years and 53% had also worked in child welfare between one and eleven years before becoming an intake decision-maker. The majority (86%) reported working in agencies receiving 1-140 maltreatment reports monthly on average.

Equivalent materials design, a quasi-experimental research method, and a scale assessing race and parental drug use bias developed by the researcher were employed. The variables included in the instrument corresponded to variables in a conceptual model developed by the researcher to describe intake decision-making (see Chapter Two). Respondents completed an on-line questionnaire that included 24 vignettes describing hypothetical maltreatment concerns being reported to child protective services. Race and

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drug use were manipulated in the vignettes between two instrument versions. Respondents were randomly assigned to an instrument version group. In addition, the respondents completed a 45-item scale measuring racial and parental drug use bias. Respondents also reported the degree to which they employed different kinds of mental simulation in their decision-making, a concept contributed by naturalistic decision theory. Demographic information was collected for comparison.

Conclusions from the Findings

Race and Racial Bias

Race was examined as a variable in the study because of the significant influence it has demonstrated in previous intake and child welfare research. In earlier studies, race was found to be a predictor in the screening decision (Derezotes & Poertner, 2005; Hutchison, 1989; Wells et al., 1989; Wells et al., 1995) or at least significantly related to worker judgments (Howell, 2008). A similar influence was predicted in this study, but was not found. Race appeared to have only a minor influence. Overall, the respondents' racial bias scores were low and their decision-making process was not racially-biased. Although higher scorers did accept more scenarios in the race-only series, the difference was minimal and statistically weak. While it was certainly encouraging that race was not found to have a strong influence on decision-making, the finding is surprising given findings in previous research and especially in light of the disproportionality research.

One potential explanation for the findings related to race in this study that must be acknowledged is social desirability bias. Respondents may have recognized that race was a variable being examined and responded in ways that they assumed would present them

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more favorably. Social desirability bias has been considered in previous studies when vignettes describing African Americans have been scored less severely than those involving Caucasians in situations where the outcome was expected to be the reverse (Hansen et al., 1997). Hansen et al., in fact, report that low race influence may be a typical response pattern in vignette studies involving race.

It is a positive finding that Virginia's intake decision-makers do not appear to be racially-biased against African Americans and their screening decisions do not seem to be influenced by racial bias. In practice, evidence suggesting low racial bias is certainly desirable. The evidence from this study suggests that actual intake decision-making in Virginia may be less vulnerable to racial bias than in other states. Racially fair intake practices could be one of the explanations for Virginia having a lower disproportionality rate than many other states. This might suggest that decisions that contribute to disproportionality may be made further along in the CPS process, perhaps when complaints are substantiated or decisions for out-of-home placement are made.

Race remains an important topic for consideration in practice and policy discussions. In practice, intake decision-makers need to remain sensitive to the potential influence that race may have on decision-making. Intake decision-makers may not be aware that their decision-making can be vulnerable to racial bias. Intake staff, as well as state and local agency administrators, needs to be cognizant of the potential influence and be familiar with the disproportionality problem. Race's impact should be addressed in training within agencies and as part of the training curriculum required for all child welfare staff in Virginia. Training should address racial stereotypes and encourage trainees to

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identify and critically reflect on their racial awareness and sensitivity. Race should be an issue discussed in supervision. Regular supervision within the agency and consultation with regional specialists are recommended to ensure that decision-makers are identifying relevant decision-factors and indicators of risk included in maltreatment reports instead of assuming risk based on behaviors and attributes associated with racial stereotypes. Agency administrators might also review intake decisions regularly to identify potential patterns of differential intake practices that appear related to race. Policy makers might combat racial bias's influence, or curb its actual impact, by regularly and systematically reviewing intake decisions made that involve African American children. Auditing African American children's cases across the state periodically might help the State Department of Social Services identify disparate intake practices across regions or regional specialists identify disparate practices among their assigned agencies.

Parental Drug Use Bias

While racial bias was not found to have a substantial impact on decision-making in the study, the findings suggest that decision-making was vulnerable to bias related to parental drug use. The idea that intake decision-makers might be highly sensitized to, or biased towards, parental drug use was based on the researcher's past study (Howell, 2008) which found that intake decision-makers screened in reports that alleged drug use even though the allegations did not demonstrate risk and did not legally warrant intervention. The findings in this study confirm those in the previous study. Overall, respondents demonstrated a higher degree of bias against parental drug use than racial bias. This bias

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appears to have motivated higher scoring respondents to accept cases alleging drug use even when the allegations did not warrant intervention.

The critical issue for consideration is whether strong negative feelings about drug use influence drug-related cue interpretation in maltreatment allegations and inflate risk estimation unnecessarily. Substance use continues to be a critical problem facing child protective services across the nation from large urban cities to the most remote rural localities. Substance use behavior is clearly accompanied by risks and often there are consequences for drug-using parents and their children. In situations where alleged concerns clearly establish a link between the drug use behavior and a negative effect on children, CPS should take action to reduce or eliminate the risk for the children's safety. But the evidence in the child welfare literature has not clearly established that drug use is harmful in all situations (Karanda, 2004). In fact, the literature suggests that there are families where parents demonstrate functional drug use and managed to provide adequate, or better, care for their children (Klee, 1998; McAlpine et al., 2001). Considered from a social justice perspective, if CPS feels justified intruding into families where functional drug use is not harming children then it seems likely that justifications could be made for intruding in other instances where parenting is less than optimal, at least in the decision-maker's view, but is not harming children.

The study findings suggest that intake decision-makers may be particularly sensitized to parental drug use and some may be strongly biased. One concern the findings raise is whether intake decision-makers are able to accurately differentiate between allegations of functional drug use, where risk is not apparent, and problematic drug use,

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where risk can understandably be assumed. Decision-makers' cue interpretation in reports alleging drug use may be influenced by inaccurate information or their strong feelings may influence their perception and interpretation of environmental and behavioral cues. Karanda (2004) has expressed concern that child protective services workers in Virginia may hold beliefs about drug use that are outdated and would now be considered mostly stereotypical since research has abandoned many previous ideas about the short- and long-term effects on children that emerged in the 1980s and 1990s. Intake decision-makers might also simply weight all drug use concerns equally without attempting to estimate risk based on the unique circumstances or evidence of safety and functioning that may also be present in reports.

The manner in which caregiver drug use concerns are managed in the intake decision-making process should be addressed in practice and policy. Since CPS decision-making is intended to be policy driven, it may be helpful to decision-makers for policies to be clearer regarding drug use and circumstances under which CPS intervention is allowable. It may be helpful for decision-makers to have more specific criteria that warrants or prohibits intervention specified in policy. Given the findings suggest that decision-makers share a pronounced bias against drug use, a stronger effort to curb bias through policy and procedure may be necessary to be certain appropriate drug use referrals are accepted, not just all such referrals. In practice, training again appears to be a reasonable place to address concerns about parental drug use bias and its potential influence. Child protective services workers need to be introduced to accurate information about drug use, short- and long-term effects on adults and children, and evidence-based

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treatment modalities and options. They specifically need to be trained to differentiate between functional and problematic drug use and how to estimate risk accordingly. As was the case with race, regional specialists and State and local administrators might review intake decisions regularly, searching for patterns that might emerge in drug use reports, particularly to determine whether policy is being applied appropriately and risk estimated reasonably.

Decision Factors

Across the child protective services process, decision-making involves the perception and interpretation of environmental, contextual, and behavioral cues (Benbenishty et al., 2002; Rycus et al., 1989). In this study these cues are referred to as decision-factors. The findings confirmed that decision-makers rely upon specific factors, and combinations of factors, in their decisions (Benbenishty; Howell, 2008; Lazar, 2006; Murphy, 1994; Shapira & Benbenishty, 1993). Given the literature, it was not surprising that the respondents indicated using decision-factors to reach decisions, but the number of factors used was surprising. While as many as 24 factors were used in some decisions, a constellation of nine primary decision-factors frequently used emerged. The findings are important in considering assessment and decision-making training. It is important that intake decision-makers are familiar with and, thus, can recognize and correctly interpret relevant and irrelevant decision-factors in maltreatment reports. Decision-makers need a clear understanding of how particular decision-factors interact and how those interactions increase or decrease risk in relation to different maltreatment types and situations. For instance, some decision-factors indicate risk (*lack of supervision*, for example) that might

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be serious alone but might be amplified or lessened in relation to other factors (such as *child age* or *protective caregiver in home*). A particular combination of factors (risk and resilience factors) might reduce or increase risk estimation in a given situation. Decision-makers need to be able to arrive at a reasonable, justifiable risk estimation derived from accurately identifying and interpreting decision-factors.

Policy and Decision-Making Discretion

Child protective services decision-making is driven by law and the Virginia Department of Social Services child protection policy. Policy guides decision-making by establishing and clarifying circumstances under which local agencies may respond to alleged child maltreatment concerns. Policy is intended to encourage consistency across a system of locally administered county or independent city social service agencies. Intake decision-makers must be knowledgeable about policy since they are called upon to interpret and apply policy regularly in their decision-making.

In some situations, intake decision-makers may perceive children to be maltreated, unsafe, or otherwise at-risk, yet policy clearly indicates a response is not warranted or is not legally sanctioned. Respondents were split nearly evenly in their approach to decision-making in circumstances where policy directives conflict with their concerns that children are at-risk. Nearly half of the respondents acknowledged they would disregard policy and act, even when a CPS response might not be legally justified or supported by the State, if they felt children were unsafe. To be fair, it is most likely the case that these decisions would be made with the best intentions. While protecting children is admirable, such practice causes concern. If policy is considered an attempt to curb bias and encourage

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consistency and fairness, then efforts are circumvented when workers disagree and ignore it. In cases where it turns out that children really were at risk then it easy to consider the decision appropriate, but in cases where decision-makers' perceptions of risk were influenced more by bias (or other factors) than by relevant evidence and the decision-factors in the report, then the potential consequences to families and children may be negative, or even dire. Lipsky (1980) might interpret this behavior as the workers interpreting policy in ways that further their objectives—in this case to protect children. However, besides fairness to families, bypassing policy selectively may place children, the decision-maker, and the agency in vulnerable positions should actions taken turn out to be unwarranted and unjustified. The finding supports Wells et al.'s (1989) finding that decision-makers relied upon their own criteria for decisions that often were not aligned with existing policy.

For policy makers, this finding should be particularly concerning and warrants consideration. It is possible that some decision-makers do not understand some policies or how to interpret them correctly. They may not accurately understand the circumstances under which an intervention is prohibited. Further education along with clarification and justification of policies may be called for to address this concern. If consistency in child welfare practice really is a policy goal and intention, then discretionary practice is important to address. One recommendation for a practice response would be to require intake decision-makers to provide clear rationales for disregarding policy in situations where they felt intervention was needed in spite of policy prohibitions. Providing a rationale would perhaps help the decision-maker clarify the evidence leading to the

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conclusion that intervention is necessary and might provide a justification for action. Agency administrators and regional specialists could routinely review these rationales and justifications to determine if they were warranted or whether decision-makers need additional training or closer supervision. A second recommendation would be to require intake decision-makers to obtain agreement from a second source, such as another administrator, for overriding policy in some situations. A clear consensus might be reached that a response is correct and necessary—or the discussion might help the decision-maker recognize faulty perception or interpretation of factors, bias, or some other vulnerability in the decision process.

Decision Theory Concepts

Expertise. The naturalistic decision theory literature recognizes expertise as a crucial factor in decision-making. In real-world decision-making, expertise appears to greatly improve a decision-maker's chances for making optimal decisions, particularly when decisions must be made in uncertain environments with limited and ambiguous information available (Klein, 1997c, 1998). Contrary to the literature, expertise did not appear to have a particularly strong influence on decision-making in this study. Some assumptions, in fact, were contradicted. For instance, it was hypothesized that respondents who had worked as intake decision-makers longer would demonstrate decision-making that was more congruent with identified expert decision-makers than those who had been making these decisions a shorter time, yet this was not the case. Shanteau (1991) and Klein (1998) would agree that perhaps expertise in decision-making is less a function of time spent making decisions and more the result of learning from decisions made. The mixed

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findings in this study are not cause to abandon the value of expertise in intake decision-making but should motivate those interested in the process to study it more closely. It may be that "expertise" requires a different operationalization or a more sophisticated type of measurement than that employed in this study.

Simulation. Like expertise, naturalistic decision theory purports that decision-making is improved when decision-makers employ a mental process known as "simulation" (Klein, 1998). The respondents' high reported use of simulation was somewhat unexpected. The finding is encouraging as it suggests that this element really contributes to decision-making both conceptually and in practice, which further confirms the findings in the naturalistic decision theory literature. Although the finding is important, caution should be taken not to assume too much from the respondents' reported simulation use. While the self-reports may be accurate, it is also possible that respondents reported in these behaviors simply because they perceived seeing these items on the questionnaire as an indication that they *should* engage in simulation behavior. However, the variability in their reported use at least somewhat counters the response bias explanation. Simulation also deserves further study using methods that describe its actual use in practice.

Time Required for Decision-Making

The intake decision is a significant decision that may have serious positive or negative outcomes and consequences. One might assume that such a decision would likely require a significant amount of time to make. In practice, 90% of the respondents reported that in almost all cases, no matter how serious the allegations, ambiguous the information, or unclear the fit between the allegations and policy, they make the decision in 10 or fewer

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minutes. This finding seems to echo Klein's (1997e, 1998) research that has found that decision-makers are able to make crucial decisions quickly because they have the required expertise to do so and they process information in more efficient ways than inexperienced decision-makers. However, in this study, respondents reported requiring a similar amount of time no matter how long they had worked as intake decision-makers. Expertise did not seem to influence time needed for decision-making. It is important to study this behavior further to determine how experienced and less-experienced decision-makers approach and manage the decision process allowing both arrive at a decision in a similar time frame. It would also be valuable to identify the factors that facilitate (speed it up) decision-making and those that impede (slow it down) the process.

Social Work Education

Confirming the findings of the researcher's previous study (Howell, 2008), respondents educated as social workers did not perform differently than respondents with different educational backgrounds. Both social workers and non-social workers appear to make very similar decisions. The only statistically significant difference found associated with social work education was the finding that social workers scored slightly higher on the racial bias subscale, implying that they demonstrate stronger racial bias. At first glance, this is a disconcerting finding. However, an alternative interpretation may be reasonable and should be considered before assuming that social workers in the sample hold stronger negative feelings towards African Americans. Social work education emphasizes the importance of diversity and acknowledging oppression. VCU and many other schools require BSW and MSW students to spend considerable time reflecting upon their values,

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developing racial awareness, and considering the ways their thinking and behavior has been influenced by living in a systematically oppressive society. They are encouraged to explore and acknowledge the oppressive and potentially unjust beliefs they may have adopted from their families and communities of origin. They are encouraged to remain cognizant of social injustice and the potential for perpetuating oppression through practice. It is conceivable that the social workers were not actually more biased, but were more willing to assess their own biases critically and acknowledge them honestly. In essence, because they were encouraged to acknowledge their biased beliefs in school, they may have been more willing to report them in the survey than respondents who have not had a similar education with such a focus.

Conceptual Model

A conceptual model for describing intake decision-making (see Figure 5) emerged during the literature review. The model incorporated variables from previous intake studies along with constructs from decision theory that were operationalized as variables. The model is exploratory and tentative. It was tested to determine to what degree it could accurately classify cases as fitting one of two categories. In a test with the actual data, the model was able to correctly classify 64% of cases as belonging to either the *low agreement with experts* or *high agreement with experts* category. The model was tested further using an artificial dataset with 2088 cases (see Chapter Four) and performed well. In the same *low/high agreement* test with the larger dataset, the model correctly classified 71.2% of the cases. In a test to determine whether the model could correctly classify cases as either *cases to accept* or *cases to reject*, the model correctly classified 54.8% of the artificial

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dataset cases. These findings suggest that the current seven variable model is able to accurately differentiate between cases better than would be expected by chance.

The model's performance is encouraging but it needs further testing and likely will also need to be modified over time. That it performed well in this study is not a guarantee that it would perform similarly in other studies or under different conditions. A number of potential adjustments are possible and others would likely be necessary to fit the model to particular decision-making contexts incorporating salient variables relevant to those conditions (for instance, if used to study decisions made in a different state then variables relevant to decision-making in that context would likely need to be incorporated). The seven variables (believed to represent the conceptual model) that were used to test the model were those considered most pertinent to the local decision environment (Virginia). Any number of other variables might be more important in other environments.

Several initial ideas for modifying the model and testing it further have been considered. Contextually-based changes and additions are possible in each of the model's components:

- *Environmental factors*: Additional factors, particularly those that represent contextual factors in other decision environments, will likely enhance the model. Decision-making in Virginia occurs in a particular context, even across localities. In other states, intake decision-making occurs in vastly different decision environments and particular factors can be identified that represent those environments and may have an influence that should be considered.

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- *Worker characteristics*: It may be important to add variables that account for differing worker characteristics that might influence decision-making. One characteristic that may be important to consider is the degree to which intake decision-makers might feel vulnerable to criticism in their agencies and communities, essentially whether the decision-maker feels that he or she will be blamed for a "wrong" decision. Decision-makers who feel a lesser or greater degree of "personal liability" for decisions might make decisions differently, perhaps being more or less cautious or conservative in decision-making or applying policy more or less strictly.

- *Policy*: Decision-making is driven by policy, but child protective services policies differ widely across environments. Including variables in the model that specifically represent particular contexts and decision-environments would likely influence the model's performance.

- *Bias*: Race and parental drug use were included as variables representing bias because they were considered *laden cues* relevant to the decision environment in Virginia. Also, they have been identified in the literature as biasing factors. Other forms of bias might be pertinent to consider in this decision environment and others. In some environments it might be important to include variables testing potential biases around religion, receiving welfare assistance, being a gay or lesbian parent, or other relevant issues.

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- *Expertise*: While expertise contributed to the model, it did not have the impact that was expected given the value it has been ascribed in the naturalistic decision theory literature. Overall there was little difference in performance when expertise was measured in years of child welfare experience or years of intake decision-making experience. Expertise is likely an important concept to consider further even though its role in intake decision-making is unclear. It may be necessary to operationalize expertise differently or to employ a different method for measuring the concept.

- *Simulation*: Naturalistic decision theory has identified mental simulation as a valuable strategy expert decision-makers rely upon in making accurate decisions quickly in uncertain and risky environments. Respondents were found to engage in simulation in their decision-making so it appears that this is an important construct that contributes to the model. It may be important to determine whether there are particular factors that encourage or inhibit its use in different contexts.

- *Cue perception and interpretation*: Decision-making revolves around perceiving and interpreting (correctly or incorrectly) decision-cues ("decision-factors" in this study). Including additional variables in the model that further assess the ways decision-makers identify, value and use cues would be an important step in further refining and testing the model. It would also be helpful to examine the way that particular cues are interpreted as either "risk" or "resilience" factors singularly and in combination with other cues.

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Additional analyses of the data using modified versions of the model that incorporate other variables as predictors (for instance, education, number of reports received monthly) may provide evidence for the model's effectiveness or insight into developing the model further. Additional work will be required to determine with greater confidence that the proposed conceptual model for describing intake decision-making is useful even though this study's finding suggest that it is. Such a model has been absent in the literature to this point, so this represents a contribution in providing a model that may act as a starting point for future study.

Theoretical Conclusions

Decision theories, particularly naturalistic decision theory, and Attribution Theory provided the framework for developing and conducting this study. Behavioral theory's influence is found in the experts agreeing that *optimal* decision outcomes could be established for each of the vignettes. In their assessment of the vignettes, they determined that a particular decision *should* be made that would represent the *rational* choice (i.e., the appropriate choice to accept or reject a particular case) based on the available cues and policy. The findings that decision-makers' judgments sometimes veered from the optimal choice provided examples of *noncorrespondence* in decision-making (Beach, 1997). Overall, naturalistic decision theory may have made the greatest contribution. This approach to understanding decision-making focuses on the ways decision-makers apply their experience and knowledge to making decisions in challenging environments (Beach et al., 1997). CPS decision-making, particularly at intake, is fraught with risk and uncertainty and generally involves only partial, ambiguous information. The study affirms

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naturalistic decision theory's relevance to child protective services decision-making. Decision theory concepts, particularly those from the naturalistic branch, are relevant to describing and understanding decision-making, as study findings demonstrate. In the study, respondents relied upon decision-cues and mental simulation in their decision-making. These findings confirm the value of these concepts, considered important in the decision theory literature, for explaining CPS decision-making. However, evidence was not found to support all of the concepts that decision theory contributed to the study. Expertise was not found to have the impact on decision-making in this study that has been reported in Shanteau's (1988; Shanteau et al., 2003) and Klein's (1998) work. Whether a consequence of operationalization or measurement error in this study, or for some other reason, expertise was not found to aid or influence respondents' decision-making. As noted earlier, expertise warrants more study to understand its role in intake decision-making, as do other naturalistic decision theory concepts.

Given that bias (racial and drug use) had been identified as factors that influence decision-making in the literature (Derezotes & Poertner, 2005; Howell, 2008; Karanda, 2004) a theory addressing bias that would contribute to the study's theoretical orientation was sought. Attribution Theory was selected as it addresses attributes such as race (a characteristic attribute) and drug use (a behavior attribute) and how they lead to assigning cause for others' circumstances (Heider, 1958). Attribution Theory underpinned the Bias Scale as items were constructed to represent attribution statements, or common stereotypical beliefs, about African American parents and drug-using parents. The findings garnered further support for Attribution Theory's propositions, at least in terms of drug use

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attributions. Respondents with higher Drug Subscale scores did agree with more parental drug-use attributions (suggesting a tendency to assign blame to drug-using parents for maltreatment circumstances) and also accepted more cases that alleged drug use. However, support was not found to suggest that racial attributions influenced decision-making. There were only minor differences in decision-making that could be accounted for by racial bias. Attribution Theory appears to have relevance for describing and explaining CPS decision-making and warrants further study as well.

Congruence with the Literature

Several of the study's findings were consistent with findings from studies reviewed in the literature. The influence of respondents' Bias Scale, Drug Subscale, and Race Subscale scores is consistent with Benbenishty et al.'s (2003) findings that decisions are influenced by decision-makers' personal values. The findings in this study mirror the findings in the researcher's prior study (Howell, 2008), where substance use bias influenced the screening decision. Also, the reported use of decision-factors supports Benbenishty et al.'s (2003) findings that decision-makers rely on particular decision-factors. That child age emerged as a key factor is consistent with its predominant use in Murphy's (1994) study. Benbenishty et al. (2002) found physical abuse to be a key factor that professionals and non-professionals used in assessing risk. That 100% of respondents correctly accepted both scenarios involving physical abuse in this study highlights the importance of this factor to child welfare professionals. The findings also are supportive of Sullivan et al.'s study (2007) findings that years of experience are not a prediction in decision-making. The study also is consistent with the one conducted by Schuerman et al.

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(1999) that suggested that child welfare experts and line workers make similar decisions. Study findings did not support Gammon's (2000) finding that race influenced decision-making. In comparison to Murphy's study where decision-makers reported relying on a few decision-factors, the respondents in this study reported using more factors, sometimes as many as 20.

Limitations

All research is limited due to researcher and resource practicalities and methodological choices. The study results and the conclusions drawn from them must be considered in relation to the limitations that will be identified in this section. Other researchers, particularly those with more experience, will likely critique the study and identify additional limitations that might affect the quality of the reported findings and conclusions and the ultimate value of the study to social work and child welfare decision-making research.

Study Design

Although the quasi-experimental design employed in this study is considered strong because it protects against some threats to internal validity (Engel & Schutt, 2005), collecting data from the sample only once must also be considered a limitation. As is the case with cross-sectional survey design it is not possible to determine causal relationships between variables when data is collected only once. At best, relationships between variables could be identified. The manipulation of key variables across the two instrument versions allowed examination of those variables' influence on other variables. But conclusions drawn from examining those relationships must be considered tentative.

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Sampling

The researcher believed that the population of Virginia intake decision-makers included approximately 121 people when the study was designed and conducted. The estimate was based on information provided by regional specialists, agency websites, and agency personnel. Information provided by respondents suggests that the true population may be larger, but an exact figure remains unknown. It is possible that a number of potential participants were not invited to participate in the study given their existence was unknown.

Generalizability

This study targeted one population of intake decision-makers, those working in Virginia during the study period in 2008. Although some members of the intake decision-maker population may not have been included in the study because their presence was unknown, an effort was made to recruit all intake decision-makers who were known to the researcher based on the available information. Eighty-seven intake decision-makers responded, representing 67% of the population based on the estimate of its size at the time the study was conducted. The sample is considered representative of the actual intake decision-maker population in Virginia. The majority of respondents identified themselves as primary intake decision-makers in Virginia CPS agencies—the targeted population. Generalizability to the population from which the sample was drawn is assumed in this study. The respondents are believed to represent the population and the findings are believed to be generalizable to that population. While the study is assumed to demonstrate sample generalizability it was not intended to address other populations, thus limitations in

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cross-population generalizability is not a concern (Engel & Schutt, 2005). The study findings may not be generalizable to intake decision-makers in other states. Caution should be observed in applying the findings to other intake decision-maker populations.

Instrumentation and Measurement

Instrumentation always poses challenges for research. How an instrument is constructed, what constructs are measured, and how those constructs are measured can all limit the value of a study's findings. Instruments, including surveys, vignettes, and scales only have a limited capacity for measuring complex phenomena, particularly as it is understood by different people (Rubin & Babbie, 2001). Also, surveys rely upon respondents' self-report of beliefs or actions. Respondents may believe or act differently than they report or the act of reporting can influence what they believe or say (Rubin & Babbie).

One potential influence of instrumentation may have emerged in the respondents' identification of decision-factors that influenced their decisions. Given that some factors were identified repeatedly by respondents across 20 or more scenarios, it is possible that response bias could have played a role in factor identification. Although it is hoped that respondents gave careful consideration to their answers, they might have quickly developed a "habit" for selecting the same decision factors after realizing they would be present in the response set for all scenarios. In retrospect, it likely would have been productive to ask the experts to identify the decision-factors that influenced their decision-making as they reviewed the scenarios and decided which to accept and reject. This would have provided data that could have been used for comparison with the respondents'

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choices. This might have indicated whether the intake decision-makers and experts rely on similar or different decision-factors or prioritize the importance of specific factors similarly or not. It also would have been helpful to have asked the decision-makers which factors influenced their decision to reject scenarios. What information in the vignettes communicated to them that risk to a child was minimal or absent? This additional information might have been very valuable in gaining insight into intake decision-makers' assessment process and identified cues that help differentiate between safe and unsafe situations.

Also, although the vignette ordering was randomized in both instrument versions there might have been an anchoring effect. It is conceivable that a preceding scenario (that the respondent reacted to strongly) might have had an influence on respondents' judgments of subsequent scenarios. Such an effect would be similar to the anchoring effect that Orcutt (1964) and Arangio (1964) found in their studies.

Vignettes

Although the use of vignettes is considered a design strength and has been used successfully in decision-making research across a number of fields where it has been important to manipulate study variables (Gould, 1996; Hansen et al., 1997), its use does pose challenges. The vignettes developed for this study were constructed to demonstrate internal validity (acknowledging that external validity is unlikely to be achieved given that even a series of vignettes in a study cannot assuredly describe how respondents would behave in real situations), were reviewed by two experts, and were pilot tested by a group of experienced child welfare workers—all efforts that Gould (1996) suggests improves

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vignettes. However, even with careful crafting and attention, it became apparent that distracters may have been present in some vignettes. Unintentional distracters may have influenced responses in an unanticipated manner. It is also certainly possible that some respondents experienced the "vignette fatigue" that Hughes and Huby (2002) describe. Respondents feeling fatigued may have lost focus or interest as they continued through the series of vignettes.

Bias Scale

While the Bias Scale (with its component Race Subscale and Drug Subscale) appears to have performed well in the study, respondents' scale scores must be considered with caution. The scale was constructed by the researcher and only minimal attempts to ensure its validity and reliability were made. The initial estimates were encouraging. The scale items appear to demonstrate face validity, relate to one another conceptually, and measure the concepts they are intended to measure—all essential features of a scale, even in early development (Rubin & Babbie, 2001). As reported, the scale items demonstrated acceptable levels of internal consistency (Bias Scale Cronbach's alpha = .87, Drug Subscale Cronbach's alpha = .75, Race Subscale Cronbach's alpha = .74). Although those indicators are encouraging, effort is needed to further develop and test scale items and to evaluate different performance aspects with different groups.

One idea discussed in the literature is that CPS workers may have limited knowledge of the actual harmful effects of substance use, particularly prenatal drug use, on children's health and wellbeing (Karanda, 2004). This study did not attempt to measure the respondents' familiarity with current evidence about these effects. It might be useful to

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incorporate additional items into the Drug Subscale that somehow measure the accuracy of respondents' "factual" knowledge about these effects. This might clarify whether a high Drug Subscale score is a reflection of limited factual knowledge as opposed to a reflection of moralistic or biased attitudes.

Expert Comparisons

A final limitation that should be considered relates to comparing respondents to experts. Respondents' agreement with experts in accepting and rejecting scenarios was examined numerous times in relation to different variables. One weakness of the study is that the experts' behaviors and feelings were not actually measured, so no comparisons can be drawn between what respondents and the experts might do or believe. The experts were only called upon to determine whether scenarios should be accepted or rejected. They were not tested for their own levels of bias or to identify decision-factors leading them to accept or reject scenarios. Also, although efforts were made to recruit more experts to review the vignettes, only two experts were willing to cooperate. These two experts may fairly represent the views of the others or not. However, given the nature of their duties the assumption is made that their opinions were valid and reflect the intent of existing child protective services policy intended to guide CPS practice.

Implications

Social Work Education

Very little difference was found in the decision-making demonstrated by social workers and non-social workers in this study. Given that the same finding emerged in the researcher's previous study (Howell, 2008), it is not totally unexpected, but, as a social

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work educator, finding this to be the case in a second study is a bit disheartening. For the most part, both social workers and non-social workers demonstrated reasonable decision-making in the study, arriving at the correct decision, in the majority of scenarios. Thus, it does not appear to be the case that social workers have poor decision-making skills. It is unclear whether social workers and non-social workers recognized and applied the same decision-factors. This is a question to be answered by future analysis. However, an assumption is made that social workers are trained to perform more comprehensive assessments and to be sensitive to more cues that appear to contribute to problems at both the micro and macro levels. Social work education that promotes comprehensive assessment and identifying decision cues, within the context of family functioning and the child welfare system, is desirable. It is possible that this goal is being met through specialized education programs for BSWs and MSWs that focus on, and provide specialized training in, child welfare. Examples of such programs would include the Child Welfare Collaborative program in North Carolina and the Child Welfare Scholars program in Virginia. One important contribution social work education can make for students specializing in child welfare and other practice fields is to call attention to the disproportionality problem that exists and to help students understand how practices in child welfare contribute to it so that they will avoid those practices in their own work.

One issue that may deserve consideration in social work education has been raised by O'Sullivan (1999). He observed that social workers' professional values may be worn down when practicing in an agency that does not promote or support those values. In some cases, social workers' professional and ethical values may be replaced with those that are

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promoted by the agency. Value exploration and development of professional social work values are essential dimensions of social work education. More effort (and more study) may be needed to ensure that students graduate with durable professional values that they will be able to maintain even in challenging practice environments.

Intake Decision-Making Training

Training intake workers to become better, more consistent decision-makers is recommended. But training people to become better decision-makers is challenging. According to Shanteau (1988, p. 212) "…most efforts at improving decision skills through training have been unsuccessful." Child welfare training often focuses on conveying rules and policies or providing condensed introductions to complex phenomenon that child welfare workers encounter in practice—and providing checklists of common indicators or symptoms. Only so much information can be provided in any training session. The problem is complicated by the practice reality. If child welfare workers are in training, they are not on their jobs. With the heavy demands some localities face, having workers attend training becomes a secondary priority. Training is devalued and often assumes low priority for workers and administrators. It may be helpful to change the focus of training as it relates to decision-making. Naturalistic decision theorists have suggested that for training to be effective, it must focus not only on content (such as common indicators of maltreatment) but on integrating content through practice.

Means, Salas, Crandall, and Jacobs (1993) suggest that training people to make better decisions requires training them for "real-world" decision-making using methods that mimic real decision situations (time pressure, conflicting information). They suggest

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that decision-makers need to be taught to recognize patterns of cues that are relevant to the kinds of situations the decision-makers face. Cannon-Bowers and Bell (1997) suggest that to teach people to make decisions in the real world, training must focus on situation assessment skills including cue recognition/significance and pattern recognition so that they understand what salient cues are and how to recognize important cues present (and absent) in situations. They also suggest that decision-makers need to be trained to organize knowledge in ways that construct "templates" (p. 104) to rely upon in varying decision situations (or in the case of intake decision-making would represent different types of maltreatment). Templates are frameworks that link decision goals to environmental features. In short, they represent the cues that are associated with particular decision situations (or environments) in ways that vary, but are consistent across particular types of decision situations. Having such templates allows decision-makers to move more quickly and accurately through assessment to making the necessary decision.

Expertise and simulation may be concepts that need greater consideration and integration into child welfare training to improve decision-making. Cannon-Bowers and Bell (1997) propose that effective training requires decision-makers to develop skill in forming and applying mental simulations to decision situations. They suggest training predominantly center around working through practice-related scenarios. Scenarios promote simulation use and "…can be controlled—the characteristics of decision problems, situational cues and cue patterns, and decision outcomes can be provided as a means to aid in development of situation awareness, pattern recognition, and template building" (p. 107). They also emphasize the importance of feedback from knowledgeable

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decision-makers, suggesting training is more effective when decision-makers receive immediate feedback as they engage in simulation behaviors and make mistakes. In training intake decision-making, then, it may be more effective to engage trainees in simulation activities where decision-making is practiced in combination with learning factual and policy knowledge.

Social Justice

The review of the disproportionality literature was meant to establish that social justice is a relevant concern to child protective services decision-making. The evidence strongly suggests that minority families and Caucasian families are treated differently at many points along the child welfare continuum. Some evidence, as described in earlier chapters, suggests that disparate treatment may begin in with the intake decision with some children being introduced into the child protection system more because of their race than their need for protection. If children are being screened into CPS for reasons that are not directly related to their safety and well-being, then the profession should be concerned about this and should try to identify and correct discriminatory practices through education, training, policy, and advocacy efforts.

Future Research

This research makes a valuable contribution to the social work and child protective services decision-making literature. It is one of the few studies specifically addressing intake decision-makers' decision-making practices and their characteristics. More research is needed to better describe and understand this very important decision that starts the child protection process for so many families. Five areas of future study are encouraged: 1)

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Decision practices, 2) Expertise, 3) Simulation, 4) Decision factors and 5) Testing the conceptual model.

Decision Practices

More research is needed to examine, describe, and explain the way intake workers make decisions, particularly to determine if intake workers use common practices and arrive at similar decisions. Methods described in the literature review seem to hold promise for exploring decision-making further. Studies that employ cognitive task analysis or critical incident assessment can be used to prompt intake decision-makers to articulate and clarify their decision-making practices. Qualitative and quantitative studies are needed to develop a more comprehensive understanding of just how decision-making occurs, especially across contexts. Also, research is needed to identify decision-making vulnerabilities and practices that encourage optimal decision-making.

Expertise

Further exploration of expertise is warranted. Studies that help clarify what "expertise" in intake decision-making really is are needed. More research is needed to determine if experts actually make decisions in different ways than non-experts, and, if so, what the differences in their decision-making practices are. Also, clearly there is a need to develop better measures of expertise that can be used in future study.

Simulation

Exploring simulation behavior and use may have great promise for improving the profession's understanding of intake decision-making. It will be important to clarify how intake decision-makers learn to use simulation in their decision-making. It will also be

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important to learn how to capitalize upon simulation to ensure that optimal decision-making occurs. Studies that engage participants in simulation activity may provide valuable information about this potentially important behavior.

Decision Factors

Further analysis of decision factor importance and use is necessary for this study and in others. It is critical that there is clarification of what factors intake decision-makers rely on frequently in decision-making and whether these factors are those most important to the decision being made. It is also imperative to learn if there are extraneous factors that influence intake decision-making. Searching for consistent patterns in decision factor use would likely be productive as well.

Testing the Conceptual Model

Finally, it should be helpful to further test the conceptual model that was proposed in this study. That the model had some value with this sample does not guarantee that it would for other samples or used in other contexts. Testing the model with different samples of intake decision-makers would help determine whether it has merit outside of this study. Also, it would be helpful to incorporate additional variables that were not tested to see what effect they might have on the model's strength and value. Different variables might be more or less significant depending on the decision environment and context so it would be important to study whether the model can accommodate differences and still perform as expected.

Child protective services intake decision-makers have a difficult job. They must make very important decisions under challenging conditions. They must make these

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decisions with limited, often questionable information and under great time pressure. Unfortunately they have no magical ability to predict whether their decisions will turn out to be right or wrong. Personal experience in the field suggests these decision-makers generally have the best intentions in mind when they decide whether to accept or reject maltreatment reports—they want to protect children. Yet even with the best intentions, some decisions may be influenced by their own feelings and beliefs or other factors, often without their realization. In some cases decisions may lead to positive outcomes, where vulnerable children are protected; in others they may lead to negative outcomes, such as those described in the disproportionality literature. Encouraging decision-making that results in positive outcomes will require that more attention be given to intake decision-making through further research, study, education and training.

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Appendices

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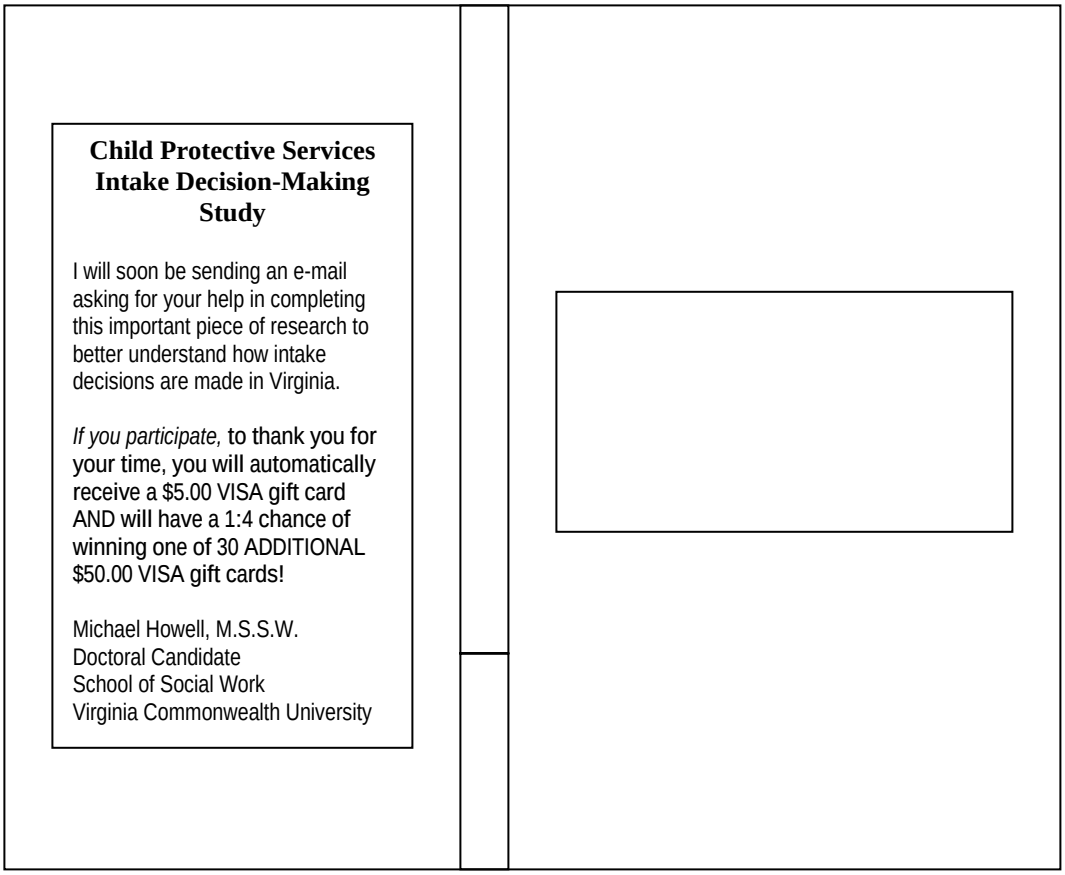
Appendix A

Postcard Pre-Notice



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Appendix B

E-Mail Pre-Notice

Subject Line: CPS Study—Attention CPS Intake Decision-Maker

Body of E-Mail:

Hello!

I am writing to invite you to participate in a survey on Intake decision-making that I am conducting to fulfill the requirements of my doctoral education. I am asking you to participate because a CPS Regional Specialist identified you as an Intake decision-maker in a local agency. You may recognize my name from reports that I forwarded to your local agency when I worked for the State Hotline. As a former Intake social worker in Virginia and another state, and also a child protective services supervisor, I am interested in the way Intake decisions are made and their impact on families.

In __Month__ I will send you an e-mail that will be linked to a confidential questionnaire that examines decision-making in screening child protective services reports. So you will recognize the study when it when it comes, the e-mail's sender address will be ***fpwade@vcu.edu*** with the subject line: ***CPS Study—Attention CPS Intake Decision-Maker***. Please consider participating. Since my study is limited to the Intake staff in our state, *your participation is* ***crucial*** to the study generating potentially useful findings.

Because I know that you are a busy professional, I would like to offer you an additional reason to participate. All participants who submit a completed questionnaire will automatically receive a $5.00 VISA gift card. Also, 30 of the approximately 130 participants who will be asked to participate will have the chance of winning an additional $50.00 VISA gift card in a random drawing.

If you have any questions regarding the study, please contact me by e-mail at howellml@vcu.edu or by calling me at (804) 475-4270.

Thank you!

Michael L. Howell, M.S.S.W.
Doctoral Candidate
School of Social Work
Virginia Commonwealth University

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Appendix C

E-Mail with Survey Link

Subject Line: CPS Study—Attention CPS Intake Decision-Maker

Body of E-mail:

Hello!

A few weeks ago, I wrote asking you to consider participating in my study of Intake decision-making in child protective services. Hopefully you received that message and the postcard that I sent to you announcing the study. I hope that examining Intake decisions will help us better serve children and families.

The survey takes about 30 minutes to complete. It is completely voluntary and confidential. Your name will not be linked to your responses in any way and your information will not be shared with anyone else. There is no consequence if you choose not to participate.

Firewalls in your e-mail system may prevent you from accessing the questionnaire directly from this link. If you have difficulty, please try copying the link and pasting it into your browser. If you find you are unable to access the survey, but would still be willing to participate, please contact me and I will immediately forward a paper copy.

If you have any questions or need help, please e-mail me at howellml@vcu.edu or call me at (804) 475-4270.

Each person who completes and submits the questionnaire will receive a $5.00 VISA gift card and will be entered into a random drawing to receive one of thirty $50.00 VISA gift cards, my way of thanking you for making time in your busy schedule to participate in my survey.

To participate in the survey, or to decline, please click on the following link:

[LINK]

Michael L. Howell, M.S.S.W.
Doctoral Candidate
School of Social Work
Virginia Commonwealth University

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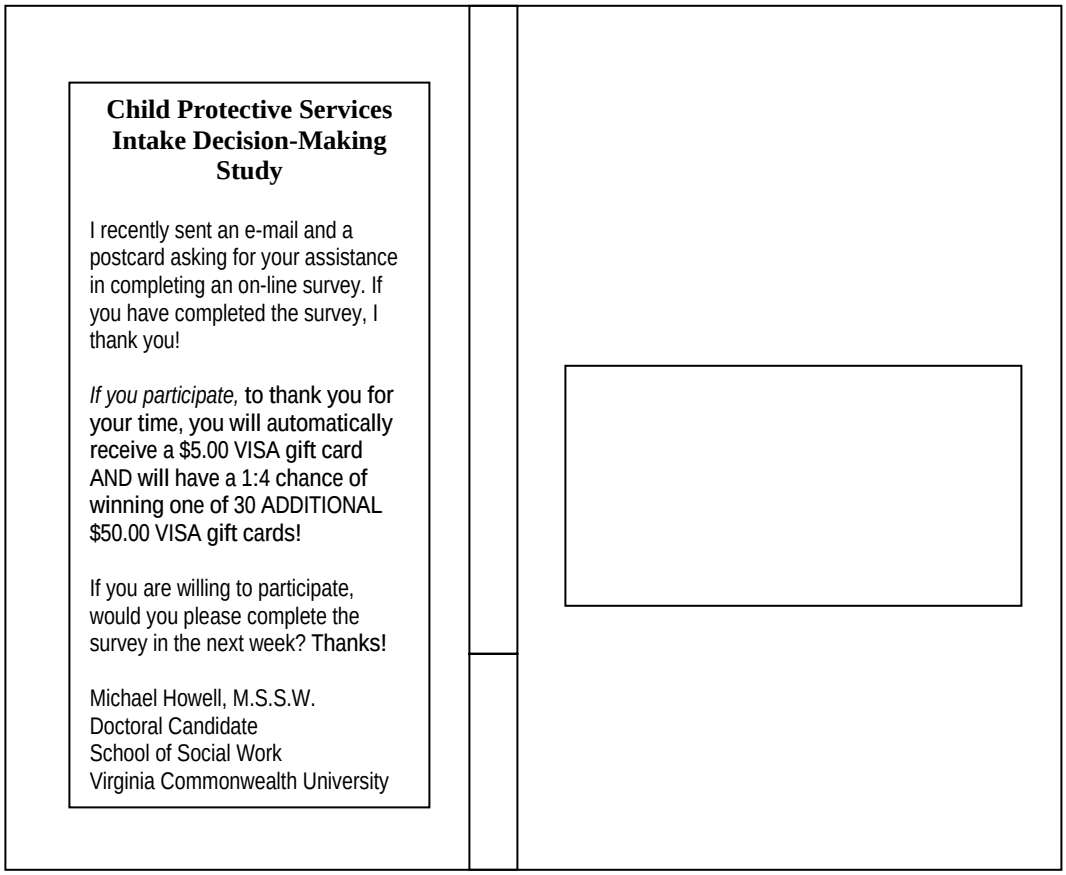
Appendix D

Postcard Reminder/Thank You



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Appendix E

Final E-Mail Reminder/Thank You

Subject Line: CPS Study—Follow Up Notice

Body of E-mail:

This is an automated e-mail message:

Hello!

I hope that you have decided to participate in my CPS Intake decision-making study. Your participation is crucial to the study's success and to our having a better understanding of intake decision-making practices in Virginia.

It is not too late to participate! If you are willing, please follow the link to the on-line survey that is provided here or contact me to request a paper survey.

To thank you for the 30 minutes or so that it will take to complete the survey, I will send you a $5.00 VISA gift card and will enter you into a random drawing for one of thirty additional $50.00 VISA gift cards.

Thank you for your consideration.

Michael L. Howell, M.S.S.W.
Doctoral Candidate
School of Social Work
Virginia Commonwealth University
(804) 475-4270
howellml@vcu.edu

[LINK]

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Appendix F

Incentive E-Mail

Subject Line: CPS Study—Contact Information to Receive Your Gift Card(s)

Body of E-mail:

This is an automated e-mail message:

Thank you for participating in my study. Your responses will be invaluable and will help us develop a clearer understanding of intake decision-making practices in Virginia.

As promised, I will send you a gift card for participating and will enter you into a drawing for an additional gift card.

Please use the link below to submit your contact information.

[LINK]

Thank you!

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Appendix G

Study Instrument

CHILD PROTECTIVE SERVICES

INTAKE DECISION-MAKING

RESEARCH STUDY[22]

As a former CPS intake decision-maker and supervisor, I think it is important that we learn all we can about Intake decision-making in order to protect children and serve families. Yet very little research has been conducted in this area.

Thank you for considering participating in my study. There will be no consequence if you choose not to participate in the study.

If you decide to participate, you will be asked to complete a brief online survey. It should take about 30 minutes or less to complete.

The survey explores decision-making in typical child protective services intake reports. It also asks you to share a little about your own decision-making practices.

There are no foreseeable physical or emotional risks to participating in the study.

You may withdraw from the study at any point while completing the survey. If you chose to withdraw, you may do so by clicking "DECLINE" below. If you click "AGREE" and proceed further, you may still withdraw. To do so, do not submit your survey responses and simply close the survey. If you submit your survey and later wish to have your responses removed, please contact me through one of the means provided below.

I know that CPS Intake decision-makers are very busy people. If you do choose to participate, as a token of my appreciation, I will send you a $5.00 VISA gift card just for taking time to help me. You will also be entered into a random drawing to receive one of 30 additional $50.00 VISA gift cards.

In order to finish the study on time, I would appreciate it if those agreeing to participate will submit their survey responses within two weeks of receiving the e-mailed survey.

Identifying information, such as your name or e-mail address, will be held confidential and will not be shared with anyone. No attempt will be made to link your name and your responses. Identifying information and survey responses are automatically separated and stored in two different files. Neither your agency administrators nor the Virginia Department of Social Services will know if you have participated in this study. Neither VDSS nor any affiliated agencies are sponsoring this research.

[22] Due to their size when printed, the actual survey instrument versions are not included. Requests for a photocopy of the actual survey instrument that includes all scenarios, formatted in Inquisite, may be directed to the author.

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Recommendations based on the findings may be made to the Regional Specialists and the Department of Social Services, but no individual data will be shared with any other party. The findings may also be published in child welfare publications to benefit other practitioners, however neither you nor your local agency will be identified in nay reports of the study findings.

The information will be kept secure and will not be viewed by anyone except me (although anonymous portions of the survey responses may be reviewed by my dissertation committee as the data are analyzed). After the analysis has been completed, and in accordance with Virginia Commonwealth University School of Social Work policy related to survey data, the original data will eventually be destroyed.

If you have questions about the survey project, you may contact me directly at howellml@vcu.edu or (804) 475-4270, or my dissertation director, Dr. Humberto Fabelo, School of Social Work, Virginia Commonwealth University at (804) 828-9033.

If you have questions about your rights as a research participant, you may contact The office of Research Subjects Protection, Virginia Commonwealth University at (804) 827-1735.

Please choose one of the following options:

( ) DECLINE: I do not wish to participate.

( ) ACCEPT: I do wish to participate. I understand that by clicking this option I acknowledge my voluntary participation and that I accept the minimal risks of participating in the study.

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Directions

On the following screens, you will be asked to review a series of brief child maltreatment allegations and determine whether the reports should be accepted or rejected. Please assume that you are the final decision-maker action on reports received by your agency.

In the reports you accept, you will be asked to apply Virginia child protective services policy by identifying the type of maltreatment that you believe is demonstrated and to identify the particular factors that influenced your decision.

You will also be asked whether you agree or disagree with some statements related to substance use and working with families.

Finally, you will be asked to share demographic information.

As you complete the survey, you may choose not to answer any particular question; simply skip the question.

After answering questions on a page, proceed to the next page by clicking the NEXT button at the bottom of the screen. Your answers will be saved automatically. NOTE: If you exit before reaching the final page, your answers may not be saved if you open the survey again to continue.

As you move forward through the survey, you will not be able to return to earlier pages.

At the end of the survey, you will be asked to click the FINISH button to submit your survey responses.

Once you submit your survey, you will automatically be contacted by e-mail within 7 business days to submit your contact information (name, mailing address). This information will only be used to send your complimentary gift card. Also, you will be entered into the drawing for one of 30 additional gift cards.

Thank you for participating. Your contribution is crucial to the study's success.

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The following scenarios are examples of child protective services reports. Please read each of the scenarios and answer the questions that follow each report based upon your experience and knowledge of current child protective services policy. [In the actual survey instrument, 24 vignettes are provided, each followed by questions 1-4.]

ALLEGED VICTIM(S)	AGE	RACE
Male	6 years	White

Caller reported that the family is homeless. The father is on disability and the mother was fired from her job because she was always getting to work late. They were evicted from their apartment a week or so ago. Caller believes they are living in their van, moving from parking lot to parking lot. Caller doesn't know how they are buying food to eat.

1. I would:

( ) Definitely Reject this Case

( ) Definitely Accept this Case

If you rejected the case, please answer question number 2, then move to the next page by clicking the NEXT button at the bottom of the page.
If you accepted the case, please continue with questions 2, 3, and 4(a-c).

2. For your decision on this report, how CONFIDENT are you that you made the right choice?

( ) 1 Not Confident at All
( ) 2
( ) 3
( ) 4
( ) 5
( ) 6 Completely Confident

3. Mark the choice for the OVERALL SEVERITY OF RISK to the child. If there are multiple children, consider the risk level for <u>the most vulnerable child</u>:

( ) 1 Not Severe
( ) 2
( ) 3
( ) 4
( ) 5
( ) 6 Extremely Severe

4. Regarding this case:

a. I would assign this case to:

( ) Investigation

( ) Family Assessment

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b. I believe the following types of maltreatment are present in this case (*mark any/all that apply*):

( ) physical neglect
( ) physical abuse
( ) sexual abuse
( ) medical neglect
( ) emotional abuse/neglect

c. Which of the following factors influenced your decision? Mark any/all that applied.

( ) Child age

( ) Physical, mental, emotional impairment (child or caregiver)
( ) Ability of child to protect self
( ) Caregiver lacks assistance

( ) Caregiver experiencing significant stress
( ) Substance-using caregiver
( ) Substance use/dealing in home
( ) Unsafe environment
( ) Inadequate/unsafe shelter
( ) Domestic violence
( ) Caregiver hostile/negative towards child(ren)
( ) Instability of living situation
( ) Other

( ) Lack of parenting knowledge/skills
( ) Inadequate supervision
( ) Inappropriate discipline
( ) Protective adult caregiver not present
( ) Unrealistic expectations for child
( ) Medical care not provided
( ) One or more basic needs unmet
( ) Family has service needs
( ) History of child maltreatment
( ) Multiple types of maltreatment
( ) Multiple risk factors present
( ) Maltreatment likely to continue

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Please indicate the choice that most closely expresses the degree to which you agree or disagree with the following statements.	1 Strongly Disagree	2 Strongly Disagree	3 Agree	4 Agree
1. Drug users are the hardest parents to work with.				
2. I believe children should always be removed from drug-using caregivers.				
3. I can set aside my personal feelings about drug use while I am reviewing drug use allegations.				
4. If I were on the fence about a drug use referral, I would screen it in for safety's sake.				
5. Allegations of drug use by caregivers should always be investigated.				
6. CPS policy treats all families the same.				
7. I am surprised by the number of maltreatment reports I review that involve Black families.				
8. Minor drug use always leads to serious drug use over time.				
9. CPS policy is soft when it comes to responding to drug use allegations.				
10. Generally, there is no difference in the way Black and White parents raise their children.				
11. I have some beliefs about Black parents that I think my co-workers might not share.				
12. I have some beliefs about White parents that I think my co-workers might not share.				
13. Most of the time, drug-using parents are bad parents.				
14. Generally, parents who use drugs do not provide good care for their children.				
15. In general, I have to be more authoritative when working with Black parents than when working with White parents.				
16. The Black parents I have worked with have mostly been harsher towards their children than the White parents I have worked with.				

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17. State statutes require all allegations of drug use by caregivers to be investigated.

18. People who use drugs are always going to use drugs.

19. I take a "color-blind" approach to working with families.

20. When their children have been removed, White parents usually work harder to get them back than Black parents.

21. I find that Black parents are injured more seriously by their parents than White children.

22. It is unlikely that drug-using parents will change enough to be able to provide adequate care for their children.

23. White parents maltreat their children less often than Black parents.

24. More children are maltreated by drug-using parents than by anyone else.

25. More Black parents use drugs than White parents.

26. I never feel conflict between my beliefs about drug use and the response policy dictates in drug use referrals.

27. There is no difference in the rate at which maltreatment reports involving Black and White children are founded.

28. I believe there are significant cultural differences in parenting related to race.

29. Race sometimes influences my Intake decisions.

30. Children should never be returned to drug-using parents.

31. Families of all races are treated fairly in the child welfare system.

32. There is no difference in smoking marijuana and smoking crack…drug use is drug use.

33. Everybody knows that Black parents believe the best way to discipline their children is to beat them.

34. Black parents, in general, are more concerned about their children's welfare than White parents.

35. Drug use almost always leads to maltreatment.

36. Most Black parents are really strict.

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37. The White families I have worked with have been more receptive to help from CPS than the Black families.

38. Drug-using parents can be fine parents.

39. Drug use referrals should be referred to Family Assessment.

40. When it comes to race, I am "color-blind"…people are people.

41. My beliefs about drug use and parenting are consistent with sound child welfare practice.

42. My beliefs about race have nothing to do with my decisions.

43. Children almost always suffer because of parents' drug use.

44. I am not biased against any race.

45. Very few parents can provide adequate care if they use drugs.

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Please answer the following questions.

1. As you considered all of the scenarios, did you imagine how the situation might play out in different ways, depending on the choice you made?

( ) Not in any of the decisions
( ) Only in some of the decisions
( ) In all of the decisions

2. As you considered the scenarios, did you ask yourself, "What might happen in this situation?"

( ) Not in any of the decisions
( ) Only in some of the decisions
( ) In all of the decisions

3. As you considered the scenarios, did the situations remind you of CPS reports you had screened in the past?

( ) None of the scenarios reminded me of past reports.
( ) A few of the scenarios reminded me of past reports.
( ) Several of the scenarios reminded me of past reports.
( ) Almost all of the scenarios reminded me of past reports.
( ) All of the scenarios reminded me of past reports.

4. If policy conflicted with my feeling that children were at risk in a situation, I would most likely…

( ) Choose to strictly adhere to policy
( ) Choose to ignore policy in order to intervene for the children's safety

5. What do you do in situations like the one mentioned in #4, where you feel a conflict between policy and intuition?

6. Are you the primary Intake decision-maker in your agency? (defined as you making the final Intake decision in 75% or more of the child protective services reports that are received within your agency in an average month)

( ) Yes
( ) No

7. Is screening child protective services reports your primary job responsibility?
( ) Yes
( ) No

8. Which of the following job responsibilities are involved in your position? (*Mark all that apply*)
( ) Supervising Intake workers
( ) Supervising other workers
( ) Deciding if maltreatment reports will be founded
( ) Documenting Intake reports
( ) Administrative responsibilities

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9. How long have you been responsible for making Intake decisions in your agency?
Months? (If less than12 months only)
Years? (Please answer with the closest whole number)

10. How many years did you work in child welfare prior to becoming responsible for screening child protective services reports? (Please answer with the closest whole number. If you worked less than one year, then please skip this question and answer # 11 instead.)

11. How many months did you work in child welfare prior to becoming responsible for screening reports? (do not exceed 11 months)

12. In an average month, my agency receives ___ maltreatment reports. (Estimate using the closest number)

13. On average, it takes me ___ minutes to make an Intake screening decision for a report where policy *clearly applies* to the allegation(s).

14. On average, it takes me ___ minutes to make an Intake screening decision for a report when the fit between policy and the allegation(s) is *less clear*.

15. What *percentage* of intake decisions do you make completely on your own?

16. Number of staff members in your agency with the authority to make independent Intake decisions?

17. Please estimate the percentage of Intake reports received by your agency LAST MONTH in which you were the FINAL decision-maker (*excluding situations where you were actually the sole decision-maker*)

18. Does your locality employ the Structured Decision-Making (SDM) Protocol?
( ) Yes, SDM is used in this locality
( ) No, SDM is not used in this locality

19. Please indicate your highest earned educational degree.
( ) High School Diploma
( ) Associates Degree
( ) Bachelors Degree
( ) Masters Degree
( ) Doctoral Degree

20. If you have a Bachelors Degree, please indicate your major. (Mark all that apply)

( ) Business	( ) Music
( ) Sociology	( ) Psychology
( ) Math	( ) English
( ) Nursing	( ) Education
( ) Social Work	( ) Other

21. If you have a Masters Degree, please indicate the field. (Mark all that apply)

( ) Business	( ) Public Health
( ) Counseling	( ) Sociology
( ) Nursing	( ) Social Work
( ) Psychology	( ) Other

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22. Please indicate your gender:
( ) Male
( ) Female

23. Please indicate your race:
( ) African American
( ) Caucasian
( ) Other

THANK YOU!
You have just completed this very important survey.

You will shortly receive an e-mail requesting that you provide contact information so that we can forward your complimentary $5 gift card to you. You will also be entered into the drawing for an additional $50 gift card.
Your results will never be linked with your contact information.

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THANK YOU FOR PARTICIPATING!

All respondents will receive a $5.00 VISA gift card, which will be mailed shortly if you provide the information below.

Thirty (30) respondents will win an additional $50.00 VISA gift card through a random drawing. All respondents who provide contact information will be entered into the drawing and will have an equal chance of winning.

To receive your gift card and be entered into the drawing, please provide the following information. This information will not be linked to your responses. It will automatically be directed to a separate data file to ensure your confidentiality.

Name

Agency

Agency Mailing Address

City/Town

Zip Code

Agency Phone Number

Agency E-Mail Address

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Appendix H

Subscale Items and Response Rates

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Appendix H

Subscale Items and Response Rates

Item	Strongly Disagree	Disagree	Agree	Strongly Agree	Missing
Drug Values Subscale					
Drug users are the hardest parents to work with.	1(1.1)	30(34.5)	41(47.1)	15(17.2)	0
I believe children should always be removed from drug-using caregivers.	26(29.9)	55(63.2)	5(5.7)	1(1.1)	0
I can set aside my personal feelings about drug use while I am reviewing drug use allegations.	35(40.2)	47(54.0)	4(4.6)	1(1.1)	0
If I were on the fence about a drug use referral, I would screen it in for safety's sake.	3(3.4)	12(13.8)	52(59.8)	20(23.0)	0
Allegations of drug use by caregivers should always be investigated.	18(20.7)	48(55.2)	19(21.8)	2(2.3)	0
Minor drug use always leads to serious drug use over time.	12(13.8)	61(70.1)	14(16.1)	0	0
CPS policy is soft when it comes to drug use allegations.	7(8.0)	30(34.5)	41(47.1)	8(9.2)	1(1.1)
Most of the time, drug using parents are bad parents.	11(12.6)	60(69.0)	13(14.9)	0	3(3.4)
Generally, parents who use drugs do not provide good care for their children.	4(4.6)	44(50.6)	34(39.1)	1(1.1)	4(4.6)

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Item	Strongly Disagree	Disagree	Agree	Strongly Agree	Missing
State statutes require all allegations of drug use by caregivers to be investigated.	32(36.8)	46(52.9)	7(8.0)	0	2(2.3)
People who use drugs are always going to use drugs.	34(39.1)	50(57.5)	2(2.3)	0	1(1.1)
It is unlikely that drug-using parents will change enough to be able to provide adequate care for their children.	16(18.4)	64(73.6)	6(6.9)	0	1(1.1)
More children are maltreated by drug-using parents than by anyone else.	15(17.2)	47(54.0)	21(24.1)	2(2.3)	2(2.3)
More Black parents use drugs than White parents.	34(39.1)	50(57.5)	1(1.1)	0	2(2.3)
I never feel conflict between my beliefs about drug-use and the response policy dictates in drug-use referrals.	8(9.2)	33(37.9)	37(42.5)	8(9.2)	1(1.1)
Children should never be returned to drug-using parents.	28(32.2)	46(52.9)	11(12.6)	1(1.1)	1(1.1)
There is no difference in smoking marijuana and smoking crack…drug use is drug use.	26(29.9)	37(42.5)	19(21.8)	5(5.7)	0
Drug use almost always leads to maltreatment.	9(10.3)	56(64.4)	20(23.0)	0	2(2.3)

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Item	Strongly Disagree	Disagree	Agree	Strongly Agree	Missing
Drug-using parents can be fine parents.	1(1.1)	45(51.7)	33(37.9)	1(1.1)	7(8.0)
Drug use referrals should be referred to Family Assessment.	4(4.6)	25(28.7)	43(49.4)	5(5.7)	10(11.5)
My thoughts about drug use and parenting are consistent with sound child welfare practice.	8(9.2)	56(64.4)	13(14.9)	4(4.6)	6(6.9)
Children almost always suffer because of parents' drug use.	3(3.4)	26(29.9)	47(54.0)	6(6.9)	5(5.7)
Very few parents can provide adequate care if they use drugs.	3(3.4)	39(44.8)	37(42.5)	2(2.3)	6(6.9)
Race Values Subscale					
CPS policy treats all families the same.	13(14.9)	52(59.8)	16(18.4)	6(6.9)	0
I am surprised by the number of maltreatment reports I review that involve Black families.	23(26.4)	58(66.7)	2(2.3)	1(1.1)	3(3.4)
Generally, there is no difference in the way Black and White parents raise their children.	4(4.6)	44(50.6)	31(35.6)	7(8.0)	1(1.1)
I have some beliefs about Black parents that I think my co-workers might not share.	20(23.0)	49(56.3)	13(14.9)	1(1.1)	4(4.6)

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Item	Strongly Disagree	Disagree	Agree	Strongly Agree	Missing
I have some beliefs about White parents that I think my co-workers might not share.	20(23.3)	48(55.2)	14(16.1)	1(1.1)	4(4.6)
In general, I have to be more authoritative when working with Black families than when working with White families.	44(50.6)	41(47.1)	0	0	2(2.3)
The Black families I have worked with have been harsher towards their children than the White parents I have worked with.	33(37.9)	51(58.6)	1(1.1)	0	2(2.3)
I take a "color-blind" approach to working with families.	28(32.2)	42(48.3)	13(14.9)	4(4.6)	0
When their children have been removed, White parents usually work harder to get them back than Black parents.	47(54.0)	39(44.8)	0	0	1(1.1)
I find that Black children are injured more seriously by their parents than White children.	45(51.7)	41(47.1)	0	0	1(1.1)
White parents maltreat their children less often than Black parents.	42(48.3)	44(50.6)	0	0	1(1.1)
There is no difference in the rate at which Maltreatment reports involving Black and White children are founded.	13(14.9)	38(43.7)	23(26.4)	5(5.7)	8(9.2)
I believe there are significant cultural	3(3.4)	33(37.9)	43(49.4)	6(6.9)	2(2.3)

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Item	Strongly Disagree	Disagree	Agree	Strongly Agree	Missing
differences in parenting related to race.					
Race sometimes influences my intake decisions.	60(69.0)	26(29.9)	1(1.1)	0	0
Families of all races are treated fairly in the child welfare system.	8(9.2)	41(47.1)	28(32.2)	6(6.9)	4(4.6)
Everyone knows that Black parents believe the best way to discipline their children is to beat them.	52(59.8)	34(39.1)	0	0	1(1.1)
Black parents, in general, are more concerned About their children's welfare than White parents.	42(48.3)	41(47.1)	1(1.1)	0	3(3.4)
Most Black parents are really strict.	19(21.8)	57(65.5)	5(5.7)	0	6(6.9)
The White families I have worked with have been more receptive to help from CPS than the Black families.	31(35.6)	52(59.8)	0	0	4(4.6)
When it comes to race, I am "color-blind" …people are people.	31(35.6)	38(43.7)	12(13.8)	3(3.4)	3(3.4)
My beliefs about race have nothing to do with my decisions.	34(39.1)	41(47.1)	3(3.4)	5(5.7)	4(4.6)
I am not biased against any race.	38(43.7)	40(46.0)	5(5.7)	2(2.3)	2(2.3)

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Appendix I

Decision-Making Scenarios

Decision-Making Scenarios

Scenario 1

Series: Race and Drugs	Optimal Decision: **Reject**
V1. Alleged Victim Race: White	Drugs: No Drugs
V2. Alleged Victim Race: Black	Drugs: Drugs

V1. Caller reported that the family is homeless. The father is on disability and the mother was fired from her job because she was always getting to work late. They were evicted from their apartment a week or so ago. Caller believes they are living in their van, moving from parking lot to parking lot. Caller doesn't know how they are buying food to eat.

V2. Caller reported that the family is homeless. The father is on disability and the mother was fired from her job because she was always getting to work late. They were evicted from their apartment a week or so ago. Caller believes they are living in their van, moving from parking lot to parking lot. Caller doesn't know how they are buying food to eat. Caller thinks the mother had a hard time getting up and to work on time because she and the father like to use drugs at night. Caller couldn't identify what drug.

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Scenario 2

Series: Baseline Optimal Decision: **Accept**

V1. Alleged Victim Race: Undetermined

V2. Alleged Victim Race: Undetermined

V1. Caller stated that the children stay in their home overnight while their mother works her midnight to 8:00am factory shift. The oldest child may be 9 or 10 years-old. The youngest is kindergarten age. Caller is concerned that the house will burn down or someone will break in. Caller believes this has been going on for months. Other than leaving the children alone, the mother takes excellent care of the children.

V.2 The scenario is the same.

Scenario 3

Series: Race Optimal Decision: **Accept**

V1. Alleged Victim Race: White

V2. Alleged Victim Race: Black

V1. Caller reported that the child disclosed that his mother struck him in the head with a wire coat hanger when he back-talked her yesterday. Caller observed a thin linear red mark running from the child's hairline to cheek on the right side of his face. Child said the mother usually hits him on his butt and legs with a belt when he misbehaves. He said she has never really hurt him when disciplining him before.

V2. The scenario is the same.

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Scenario 4

Series: Drugs	Optimal Decision: **Accept**
V1. Drugs: No Drugs	Alleged Victim Race: Undetermined
V2. Drugs: Drugs	Alleged Victim Race: Undetermined

V1. Caller said the parents do not supervise the children. The kids run around the apartment complex constantly. The parents never know where the kids really are. If the kids see an adult, they ask to go into the adult's apartment to eat or watch television. They usually don't know the adults. Caller believes the parents should be supervising the children closely. Caller believes the family is going to be evicted soon.

V2. Caller said the parents do not supervise the children because they are always drunk or high on crack. The kids run around the apartment complex constantly. The parents never know where the kids really are. If the kids see an adult, they ask to go into the adult's apartment to eat or watch television. They usually don't know the adults. Caller believes the parents should be supervising the children closely. Caller believes the family is going to be evicted soon. She believes they are spending their rent money on alcohol and drugs.

Scenario 5

Series: Race and Drugs	Optimal Decision: **Reject**
V1. Alleged Victim Race: Black	Drugs: Drugs
V2. Alleged Victim Race: White	Drugs: No Drugs

V1. Caller reported that all of the children in the home have lice. Caller said it is the worst case she has seen. They have it in their hair and even in their eyebrows. Caller said the mother doesn't seem to understand that this is a problem. She has not tried to treat the lice. Caller told her to go to CVS and get lice combs and lice shampoo. The mother said she couldn't afford those supplies. Caller thinks the mother has the money but doesn't want to spend it to treat the lice. Caller thinks she smelled marijuana in the home. The mother probably wants to use her money to buy drugs instead of lice supplies. After the caller told the mother that

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she would call CPS, the mother finally said she would go and get something to treat the lice. Caller doesn't believe she really will, though.

V2. Caller reported that all of the children in the home have lice. Caller said it is the worst case she has seen. They have it in their hair and even in their eyebrows. Caller said the mother doesn't seem to understand that this is a problem. She has not tried to treat the lice. Caller told her to go to CVS and get lice combs and lice shampoo. The mother said she couldn't afford those supplies. Caller thinks the mother has the money but doesn't want to spend it to treat the lice. After the caller told the mother that she would call CPS, the mother finally said she would go and get something to treat the lice. Caller doesn't believe she really will, though.

Scenario 6

Series: Race and Drugs	Optimal Decision: **Accept**
V1. Alleged Victim Race: Black	Drugs: Drugs
V2. Alleged Victim Race: White	Drugs: No Drugs

V1. Caller reported that a 10 year-old and 6 year-old are home alone taking care of their infant sister. They have been alone for at least 2 hours so far—maybe longer. Caller thinks the mother is up the street using drugs. CPS has been involved with her before because she was using heroin. Caller is certain there was no other adult in the home.

V2. Caller reported that a 10 year-old and 6 year-old are home alone taking care of their infant sister. They have been alone for at least 2 hours so far—maybe longer. Caller is certain there was no other adult in the home.

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Scenario 7

Series: Race and Drugs Optimal Decision: **Reject**

V1. Alleged Victim Race: Black Drugs: No Drugs

V2. Alleged Victim Race: White Drugs: Drugs

V1. Caller reported that the child has missed over 45 days of school. The mother does not make any effort to get up and get the child ready to meet the bus. Caller has tried to talk to the mother about how the child will be affected by missing so much school but the mother seems indifferent. Other than absenteeism, the child seems to be fine. Caller could not identify any other concerns of maltreatment.

V2. Caller reported that the child has missed over 45 days of school. The mother does not make any effort to get up and get the child ready to meet the bus. Caller has tried to talk to the mother about how the child will be affected by missing so much school but the mother seems indifferent. Other than absenteeism, the child seems to be fine. Recently, a teacher claimed that the child's clothing reeked of pot. The teacher also said that during a recent phone conversation with the mother, that the mother's speech was slurred. Caller thinks the mother is likely using drugs. Caller could not identify any other concerns of maltreatment.

Scenario 8

Series: Race Optimal Decision: **Accept**

V1. Alleged Victim Race: Black

V2. Alleged Victim Race: White

V1. Caller reported that the parents got into an argument over dinner being late. The father was mad that dinner wasn't on the table when he was ready to eat. He threw his plate at the mother. It hit her in the chest, covering her in food. She threw a glass back at him. It missed him but shattered against the wall, barely missing one of the children. The father grabbed the mother by the hair and slapped her. He hit her multiple times in the face and abdomen. The caller observed multiple bruises on the mother's face and stomach. She

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complained of her ears ringing and her chest being sore. The child in the kitchen witnessed the incident but was not injured. The other children were in another room when the altercation occurred. The father was arrested even though the mother did not want to press charges. He is in jail. The children are with the mother at home. The mother refused medical treatment. Caller does not know if this is an isolated incident or not.

V2. The scenario is the same.

Scenario 9

Series: Baseline Optimal Decision: **Accept**

V1. Alleged Victim Race: Undetermined

V2. Alleged Victim Race: Undetermined

V1. Caller said he has seen the mother "haul off and slap the bejeezus" out of her son "for no reason." He has seen her do this several times. The boy will be playing or minding his own business. The mother will just "knock the crap out of him." Caller said the boy is "covered" in bruises. He said they are different colors—some yellowish brown, some purple. The boy has a handprint on his left cheek. The boy is a really good boy. He is not a trouble-maker. He is respectful and soft-spoken. Caller thinks the mother may simply be crazy.

V2. The scenario is the same.

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Scenario 10

Series: Baseline Optimal Decision: **Reject**

V1. Alleged Victim Race: Undetermined

V2. Alleged Victim Race: Undetermined

V.1 Caller reported that the mother has not taken the child to the doctor for immunizations. Caller believes this is medical neglect. Caller said her doctor told her that all children should be immunized.

V2. The scenario is the same.

Scenario 11

Series: Race and Drugs Optimal Decision: **Reject**

V1. Alleged Victim Race: White Drugs: Drugs

V2. Alleged Victim Race: Black Drugs: No Drugs

V1. Caller stated that the woman he is working with is pregnant, due to deliver anytime. He is aware that the mother has been drinking heavily and has been using cocaine throughout her pregnancy. Caller is concerned that the baby will be at risk once born. There is another child in the home, living with the mother and father. Caller doesn't know if the father uses drugs or not.

V1. Caller stated that the woman he is working with is pregnant, due to deliver anytime. She reported a history of drinking and drug use prior to learning she was pregnant. Caller is concerned that the baby will be at risk once born. There is another child in the home, living with the mother and father.

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Scenario 12

Series: Race Optimal Decision: **Reject**

V1. Alleged Victim Race: Black

V2. Alleged Victim Race: White

V1. The juvenile was transported to the ER from school due to acute abdominal pain. Caller believes the child is likely going to require surgery for appendicitis. The hospital has tried repeatedly to reach the child's parents by phone but has been unsuccessful. Caller needs an adult to grant permission for the hospital to treat the juvenile.

V2. The scenario is the same.

Scenario 13

Series: Race Optimal Decision: **Reject**

V1. Alleged Victim Race: White

V2. Alleged Victim Race: Black

V1. Caller reported that the father choked and beat his girlfriend, the child's mother. They had been arguing. The father accused the mother of cheating on him. Caller indicated that the mother has significant bruising on her neck and shoulders. She has a busted lip and black eye. The son was in the home but was upstairs asleep during the incident. He was not injured and did not witness the incident. The father was arrested. The mother did not want to press charges. The father cannot return to the home until the emergency protective order expires. The caller believes the mother will likely allow the father to return home tonight.

V2. The scenario is the same.

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Scenario 14

Series: Baseline Optimal Decision: **Reject**

V1. Alleged Victim Race: Undetermined

V2. Alleged Victim Race: Undetermined

V1. Caller claimed the parents are driving the children around unsecured in their car. They do not put the children in car seats or make them wear seatbelts. Neither parent has a license—both were revoked due to DUIs in the past. Caller believes the children are going to be injured. Caller thinks CPS should be involved since this is against the law.

V2. The scenario is the same.

Scenario 15

Series: Race and Drugs Optimal Decision: **Accept**

V1. Alleged Victim Race: Black Drugs: No Drugs

V2. Alleged Victim Race: White Drugs: Drugs

V1. Caller reported being concerned about the children's home environment. Caller described the home as "filthy" and alleged that there is dog feces and urine all over the place. Caller claimed the parent never cleans the home. There are old dishes piled up in the sink and dirty clothes piled all over the place. Caller claimed there was no food in the home when she was there today. She said she has been providing food for the family. She will go to the store and bring the family a bag of food every few days and that is what they live off of until she comes back with more. Caller claimed the mother "lays up in bed with different men." Caller claimed there are always different men in the home. According to the caller, the mother would rather lay in bed than go get food for her children.

V2. Caller reported being concerned about the children's home environment. Caller described the home as "filthy" and alleged that there is dog feces and urine all over the place. Caller claimed the parent never cleans the home. There are old dishes piled up in the sink and dirty clothes piled all over the place. Caller claimed

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there was no food in the home when she was there today. She said she has been providing food for the family. She will go to the store and bring the family a bag of food every few days and that is what they live off of until she comes back with more. Caller claimed the mother "lays up in bed with different men." She uses cocaine. Caller claimed there are always different men in the home using drugs with the mother. According to the caller, the mother would rather lay in bed and be high than go get food for her children.

Scenario 16

Series: Race and Drugs	Optimal Decision: **Accept**
V1. Alleged Victim Race: White	Drugs: Drugs
V2. Alleged Victim Race: Black	Drugs: No Drugs

V1. Caller said that the mother and her three children are living in a motel. Yesterday the mother was not in the room when the children arrived home from school. They had to sit in the chairs near the pool for nearly four hours before the mother finally came back to the room. Caller heard them tell another resident that they did not know where there mother was. That resident told the caller this has happened several times over the past month. Caller had been watching the children for a while and observed the mother come out of a room further down. She was staggering and falling against the wall. Everyone in the hotel knows that drugs and prostitution is going on in that particular room. Caller was worried about the youngest child being around the pool with no adult supervision.

V.2 Caller said that the mother and her three children are living in a motel. Yesterday the mother was not in the room when the children arrived home from school. They had to sit in the chairs near the pool for nearly four hours before the mother finally came back to the room. Caller heard them tell another resident that they did not know where there mother was. That resident told the caller this has happened several times over the past month. Caller had been watching the children for a while and observed the mother come out of a room further down. Everyone in the hotel knows that prostitution is going on in that particular room. Caller was worried about the youngest child being around the pool with no adult supervision.

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Scenario 17

Series: Race Optimal Decision: **Accept**

V1. Alleged Victim Race: White

V2. Alleged Victim Race: Black

V1. Caller reported being aware of a situation in which a 24 year-old man is having a sexual relationship with a 14 year-old girl. They are dating. Caller said the girl's parents are aware that they are having sex. Caller believes the parents may provide the girl with birth control—either the pill or condoms. Caller doesn't know if the parents encourage the relationship, but they are not doing anything to stop it. Caller thinks the parents should be doing something to prevent the situation from continuing. Caller thinks the parents are committing a crime. Caller contacted local law enforcement and was told there was nothing that could be done other than calling CPS.

V2. The scenario is the same.

Scenario 18

Series: Race Optimal Decision: **Reject**

V1. Alleged Victim Race: White

V2. Alleged Victim Race: Black

V1. Caller reported that from her back terrace, she can see into her neighbor's yard. She said she went out on the terrace and was startled when she observed her neighbor's teenage son in the yard. She said he had his pants down and his penis was definitely in the mouth of a younger boy in the neighborhood. Caller did not know what to do—whether she should call the police or not. She decided she should call CPS to find out what to do.

V2. The scenario is the same.

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Scenario 19

Series: Race and Drugs — Optimal Decision: **Accept**

V1. Alleged Victim Race: White — Drugs: No Drugs

V2. Alleged Victim Race: Black — Drugs: Drugs

V1. Caller said the child told him that her mother leaves her in the living room for long periods while her male "friends" visit her in the bedroom. These different friends come over all the time—day and night. Caller said the girl reported that she hears strange noises coming from her mother's room when she is in the room with 1—or more—of her friends. She described the noises as sounding like the "wrestling on tv"—there are grunts and moans and a squeaking noise. She said that her mother has told her that if she ever comes into her mother's room while any of the friends are visiting that she can expect a beating. So, she stays in the living room and watches television. She said that when her mother and her friends come out of the bedroom they are always messing around with their clothes. Caller asked if any of the friends had ever bothered the girl. She said, "no." But then she said one of her mother's friends asked her if she had ever seen a "pecker" before. She said her mother shoved the man towards the door and said, "Leave her alone, you jerk!" Sometimes her mom will be in the bedroom all night. On those nights, she doesn't eat unless she can find something in the kitchen that doesn't have to be cooked. Her mother has told her she is not allowed to cook.

V2. Caller said the child told him that her mother leaves her in the living room for long periods while her male "friends" visit her in the bedroom. These different friends come over all the time—day and night. Caller said the girl reported that she hears strange noises coming from her mother's room when she is in the room with 1—or more—of her friends. She described the noises as sounding like the "wrestling on tv"—there are grunts and moans and a squeaking noise. She said that her mother has told her that if she ever comes into her mother's room while any of the friends are visiting that she can expect a beating. So, she stays in the living room and watches television. She said that when her mother and her friends come out of the bedroom, they are sniffling like they have runny noses and they are always messing around with their clothes. Caller asked if any of the friends had ever bothered the girl. She said, "no." But then she said one of her mother's friends

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asked her if she had ever seen a "pecker" before. She said her mother shoved the man towards the door and said, "Leave her alone, you jerk!" Sometimes her mom will be in the bedroom all night. On those nights, she doesn't eat unless she can find something in the kitchen that doesn't have to be cooked. Her mother has told her she is not allowed to cook.

Scenario 20

Series: Drugs	Optimal Decision: **Accept**
V1. Drugs: Drugs	Alleged Victim Race: Undetermined
V2. Drugs: No Drugs	Alleged Victim Race: Undetermined

V1. Caller reported that she is providing care for an infant. The baby's mother left her with the caller two days ago. She said she needed to run errands and would be back in just a few hours. Caller has not heard from the mother. She is not answering her cell phone. Caller believes the mother may be somewhere using drugs. The mother is known to use crack cocaine and marijuana. The baby is running a fever and appears to have an earache. The caller thinks the baby needs to be examined by a doctor.

V2. Caller reported that she is providing care for an infant. The baby's mother left her with the caller two days ago. She said she needed to run errands and would be back in just a few hours. Caller has not heard from the mother. She is not answering her cell phone. The baby is running a fever and appears to have an earache. The caller thinks the baby needs to be examined by a doctor.

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Scenario 21

Series: Drugs — Optimal Decision: **Reject**

V1. Drugs: Drugs — Alleged Victim Race: Undetermined

V2. Drugs: No Drugs — Alleged Victim Race: Undetermined

V1. Caller reported that when the father has the child for weekend visits, he will not allow the child to talk to her mother on the phone. The father and mother have a very bad relationship. Caller stated that the father had started using crack before he and the mother split up.

V2. Caller reported that when the father has the child for weekend visits, he will not allow the child to talk to her mother on the phone. The father and mother have a very bad relationship.

Scenario 22

Series: Drugs — Optimal Decision: **Reject**

V1. Drugs: No Drugs — Alleged Victim Race: Undetermined

V2. Drugs: Drugs — Alleged Victim Race: Undetermined

V1. Caller reported that the father mentally abuses his daughter during visits. Caller was at home and observed the child trying to get the father's attention. She was excited to be visiting. When she got in front of the television, he jumped up and screamed at her: "Sit the fuck down!" When he screamed at her, she started crying and ran out of the room. The father is very impatient with the child. He is always overreacting to her behavior. He is very young—in his late teens. His own parents were impatient and yelled and screamed constantly. Caller doesn't believe that the father has ever hurt the child, but is definitely worried that he will eventually lose his temper and do more than yell.

V2. Caller reported that the father mentally abuses his daughter during visits. Caller was at home and observed the child trying to get the father's attention. She was excited to be visiting. When she got in front of the television, he jumped up and screamed at her: "Sit the fuck down!" When he screamed at her, she started

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crying and ran out of the room. The father is very impatient with the child. He is always overreacting to her behavior. He is very young—in his late teens. His own parents were impatient and yelled and screamed constantly. Caller doesn't believe that the father has ever hurt the child, but is definitely worried that he will eventually lose his temper and do more than yell. The father deals pot—maybe crack.

Scenario 23

Series: Race Optimal Decision: **Accept**

V1. Alleged Victim Race: Black

V2. Alleged Victim Race: White

V1. Caller said the baby has "awful…horrible" diaper rash because the mother is "too lazy" to change him regularly. Caller said the infant's inner thighs and perineum are "raw and oozing" from the rash. Caller said the mother just doesn't seem to care that her child is experiencing such discomfort.

V2. The scenario is the same

Scenario 24

Series: Race Optimal Decision: **Reject**

V1. Alleged Victim Race: Black

V2. Alleged Victim Race: White

V1. Caller learned that the father showers with the two 7 year-old twins—a boy and girl. The children didn't seem concerned. The father said there was nothing wrong with it—it saves time. He said the caller should "mind her own business." Caller thinks it is inappropriate, even if it doesn't bother the kids. Caller asked the twins if their father washes them in the shower. They said he will scrub their back and the parts they can't reach, but they wash themselves everywhere else.

V2. The scenario is the same.

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Vita

Michael Lee Howell was born on September 6, 1969, in Mocksville (Davie County), North Carolina. He is a 1987 graduate of Davie County High School. Howell received a Bachelor of Science in Social Work from the University of North Carolina at Greensboro in 1991 then a Master of Science in Social Work from the University of Louisville in 1993. After earning the MSSW, he was employed as a therapist at Regional Youth Services in Jeffersonville, Indiana, from May, 1993, until October, 1994.

After returning to North Carolina, Howell was employed in a variety of child welfare positions at the Guilford County Department of Social Services (Greensboro, North Carolina) from October, 1994, until August, 2002. During his tenure with Guilford County, he held positions as a foster care social worker, Child Protective Services case planning and management social worker, Child Protective Services investigative social worker, Child Protective Services intake social worker, and Child welfare supervisor for foster care and Child Protective Services case planning and management services. He left North Carolina in 2002 to attend the Ph.D. program at the School of Social Work at Virginia Commonwealth University.

While attending school, Howell also worked in child welfare in Richmond, Virginia, and Chesterfield, Virginia. He worked as a Graduate Research Assistant for the Virginia Institute for Social Services Training Activities (VISSTA) between September, 2002, and July, 2005. He was later hired into a collateral faculty position at VISSTA as a

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Family Services Curriculum Development Specialist, writing training for Virginia Child Welfare social workers. He remained at VISSTA from July, 2005, until July, 2008. During that time, Howell also worked as an intake social worker for the Virginia Department of Social Services Child and Adult Protective Services Hotline (October, 2004, until November, 2007) and as the Interstate/Interagency Compact Placement Specialist at Chesterfield-Colonial Heights Department of Social Services (July, 2007, until July, 2008). He also taught classes in social work practice, child welfare practice, and research as an adjunct instructor in the BSW and MSW programs at the School of Social Work between 2003 and 2006.

While attending the School of Social Work, Howell was awarded a Phi Kappa Phi Scholarship and the Hans Falck Dissertation Support Scholarship. He was also recognized by the School with a University Service Award, the School of Social Work Leadership Award, and the Elaine Rothberg Social Work Award. He was also chosen by the Ph.D. program faculty to serve as the first Alumni Ambassador. In July, 2008, he joined the Social Work Department faculty at Appalachian State University as an assistant professor. At Appalachian State, he teaches social work practice and research. He can be contacted through the Social Work Department or by e-mail at howellml@appstate.edu.

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