Measuring Drug Abuse Among Parents:

Disparities between Child Welfare Worker Risk Assessments and

DAST Self-Report Measures in NSCAW II

Qualifying Paper

Social Welfare Problem

(Substance Abuse)

Wendy Wiegmann

Submitted in Partial Fulfillment of the Requirements

of the Doctor of Philosophy Degree in the School of Social Welfare

University of California, Berkeley

Prepared under the Supervision of Bridget Freisthler, Ph.D.,

UCLA Luskin School of Public Affairs – Department of Social Welfare

Fall 2013

Abstract

Parental substance abuse has been connected to child maltreatment and long-term difficulties for children. Some researchers have concluded that child welfare workers under-identify parental substance abuse. Still others report that child welfare workers automatically perceive increased risk in cases where substance abuse is present, even controlling for other risk factors. Using data from the National Survey of Child and Adolescent Well-Being II, this study examines concordance between child welfare worker risk assessment of parental drug abuse and the Drug Assessment Screening Test (DAST), a validated drug assessment instrument. This study's findings indicate that child welfare workers identify problematic drug use in 57% of cases that meet DAST self-report criteria. On the other hand, among parents identified by child welfare workers as demonstrating drug abuse, DAST assessments identified only 18% of cases. An examination of mean DAST scores shows that workers identify drug abuse among parents after approximately 2.3 problematic criteria, as opposed to the 6 criteria recommended by DAST user instructions. With findings suggesting that child welfare workers simultaneously over- and under-assess drug abuse among parents compared to the DAST, this study stresses the value of continued child welfare worker training on parental substance abuse. Workers who underreport drug abuse may need additional coaching on questions and interview techniques that will help them gather pertinent information about parental drug use despite parents' resistance or complicated family circumstances. Workers who over-report drug abuse may need help understanding their personal biases, the complex nature of substance abuse, and ways that drug use may or may not be connected to child maltreatment. Future research should explore the types of drug-related problems associated with child welfare worker assessments of drug abuse and correlations between these problems and child maltreatment.

Literature Review

Prevalence of Substance Abuse Among Parents

According to combined 2002 – 2007 data from the Substance Abuse and Mental Health Service Administration (SAMHSA), over 8.3 million children (11.9%) lived with at least one parent who was dependent on or abused alcohol or drugs during the previous year. Of these, almost 7.3 million (10.3%) lived with a parent who was dependent on or abused alcohol, and 2.1 million (3.0%) lived with a parent who was dependent on or abused drugs (SAMHSA, Office of Applied Studies, 2009). Although figures are mixed (ranging from 18% to 80%), due to differing study populations and definitions of substance abuse and dependence, among cases which are reported to and substantiated by the child welfare system, most studies report that 40–80% include some degree of parental substance abuse. Among children who eventually enter foster care, most studies report that 50-79% involve parental substance abuse (Testa & Smith, 2009; Young, Boles, & Otero, 2007).

Effects of Parental Substance Abuse on Children

A number of studies have documented the profound effects of substance abuse on the lives of children. Often leading to traumatic and unpredictable home environments, parental substance abuse has been linked to impaired parenting skills, lower levels of supervision and responsiveness to children, poorer quality of parent-child interactions, parent-child conflict, and inconsistent discipline (for review, see Arria, Mericle, Meyers, & Winters, 2012). These home environments can have long-lasting impacts on children's psychosocial wellbeing, inducing problems with anxiety and depression, as well as contributing to externalizing behaviors such as delinquency, low academic performance, and substance abuse (for review, see Johnson & Leff, 1999). While a number of studies have documented the ability of resilient individuals to

overcome the chaotic environment created by substance abuse and to develop into socialized, competent and self-confident individuals, other studies have linked parental substance abuse to long-term effects such as low socio-economic status, substance abuse, and criminality during adulthood (Johnson & Leff, 1999).

A number of children also become involved in the foster care system due to parental substance abuse. In these situations, the chronic, relapsing nature of addiction (Bevan, 2009; Leukefeld & Tims, 1989), as well as the difficulties of overcoming a substance abuse problem hamper child welfare efforts to resolve family problems and risk factors within mandated child welfare timelines (Azzi-Lessing & Olsen, 1996). Children of parents with substance abuse problems are less likely to reunify with their parents (Ryan, Marsh, Testa, & Louderman, 2006), will spend a longer time in care before they reunify (Brook, McDonald, Gregoire, Press, & Hindman, 2010), and are more likely to experience subsequent allegations of maltreatment when compared to children of non-substance-abusing parents (Barth, Gibbons, & Guo, 2006; Fuller &Wells, 2003; Jonson-Reid, Emery, Drake, & Stahlschmidt, 2010; Smith & Testa, 2002). Research has also indicated that children of parents with substance abuse problems are more likely to experience long or repeated stays in foster care (Brook, et al., 2010; Drake, Jonson-Reid, & Sapokaite, 2006). For these children, instability is a fact of life, often leading to pervasive feelings of loss, isolation, and loneliness, and beliefs that relationships are unpredictable and unreliable (Samuels, 2008; Unrau, Seita, & Putney, 2008). Furthermore, children placed in foster care are more likely to commit crimes, drop out of school, need financial assistance, experience substance abuse problems, or enter the homeless population by adulthood than children who do not enter care (Courtney, Dworsky, Lee, & Raap, 2009; Doyle, 2007).

Assessing Substance Abuse Among Parents

Child welfare worker assessments.

Early studies on child welfare worker assessments have focused on the ways in which worker decisions are based on limited evidence, rely on worker intuition, and are considerably influenced by information that is most easily available, memorable, or likely to trigger an emotional response (Munro, 1999). Additionally, research has demonstrated that child welfare workers' decisions are often influenced by stereotypes (Azzi-Lessing & Olsen, 1996; Howell, 2008), and vary markedly depending on the individual (Lindsey, 1992; Regehr, Bogo, Shlonsky, & LeBlanc, 2010). In terms of substance abuse, research has demonstrated that workers carry a number of stereotypes about parental substance abuse, and are likely to perceive higher levels of risk when substance abuse is present, even after controlling for other factors such as maltreatment allegation, parental mental health, history of arrest, or the severity of harm to the child (Berger, Slack, Waldfogel, & Bruch, 2010; Howell, 2008).

To improve the reliability and validity of child welfare worker decisions, many child welfare jurisdictions have moved toward the use of standardized risk assessments (Cross & Casanueva, 2009: Gambrill & Shlonsky, 2000; Regehr, et al., 2010; Shlonsky & Wagner, 2005). These systems, derived from expert opinion (consensus-based) or actuarial-based, use indices of family characteristics and environmental factors to determine the likelihood of child maltreatment and predict the risk of maltreatment recurrence (D'Andrade, Austin, & Benton, 2008). Overall, research suggests that risk assessment tools have substantially improved the decision making of child welfare workers over clinical judgment alone (D'Andrade et al., 2008; Gambrill & Shlonsky, 2000; Grove & Meehl, 1996; Shlonsky & Wagner, 2005).

A number of authors argue, however, that substance abuse is not adequately assessed by

risk assessment tools but is instead often treated as a single, uni-dimensional item (Marsh, Smith, & Bruni, 2011; Olsen, Allen, & Azzi-Lessing, 1996). Furthermore, because risk-assessment tools remain reliant on social worker perceptions (Regehr et al, 2010; Shlonsky & Wagner, 2005; Schwalbe, 2008), some authors argue that implementation of the tools is also inadequate in detecting parental substance abuse because workers are not properly trained on interviewing families about substance abuse (Dore, Doris, & Wright, 1995; Hohman, Finnegan, & Clapp, 2008) or detecting signs of abuse within the larger context of family functioning (Marsh et al., 2011; Olsen, et al., 1996; Schroeder, Lemieux, & Pogue, 2008).

Within this context, a number of researchers have argued that substance abuse among parents is under-identified within the child welfare system (Chuang, Wells, Bellettier, & Cross, 2013; Young, et al., 2006). In a recent analysis of data from the National Survey of Child and Adolescent Well-being (NSCAW II), Chuang, et al. (2013), found that among a cohort of primary caregivers whose diagnostic test data indicated harmful use or dependence on alcohol and/or drugs, investigative caseworkers identified substance abuse treatment needs in only 41% of cases (p. 122). To alleviate problems of under-identification, these authors and others (Dore et al., 1995; Olsen et al., 1996) argue that child welfare workers should be more thoroughly trained in detecting substance abuse among parents and should also incorporate standardized assessments of drug and alcohol abuse in their interviews with parents.

Evident from these conclusions is the authors' presumption that diagnostic tools can produce a more accurate reading of parental substance abuse than child welfare worker assessments. What is missing from these recommendations, however, is whether the authors see any difference between substance use that may be present in families but is not connected to child maltreatment, and substance use that is directly related – an issue at the heart of child

welfare assessments of parental substance abuse. Within this conceptualization, there is no evidence currently available that indicates that diagnostic substance abuse screens are more valid or reliable than child welfare worker assessments. While it may be true that diagnostic drug screens can detect substance abuse where workers do not, it is not clear whether these tools are able to determine whether such abuse is contributing to child maltreatment (and therefore a "treatment need"), something that may be more feasible for child welfare workers. Conversely, child welfare workers may also be able to identify lower-levels of problematic substance use that is directly related to child maltreatment, where diagnostic drug screens would not identify abuse.

The Drug Assessment Screening Test (DAST).

This study will examine concordance between assessments of parental drug dependence (as measured by the DAST) and child welfare worker assessments of drug abuse within the NSCAW II. The DAST is a semi-structured interview designed to identify individuals with hazardous or harmful patterns of drug use using a twenty-question yes/no survey. The DAST is a face-valid measure with all twenty questions relating specifically to problematic drug use. Questions range from whether respondents "used drugs other than those required for medical use" or "felt bad or guilty about drug use," to "lost a job because of drug abuse" or "engaged in illegal activities to obtain drugs." According to literature evaluating the psychometric properties of the DAST (Skinner, 1982; Gavin, Ross, & Skinner, 1989), a threshold score of 6 or more drug-related problems will achieve an accurate estimation of DSM-III drug abuse/dependence.

However, as a face-valid measure, the DAST has been cautioned against in contexts where subjects may have stronger motivation to under-report drug involvement (Grekin, et al., 2010; Wooley, Rogers, Fiduccia, & Kelsey, 2012; Yudko, Lozhkina, & Fouts, 2007). This warning is particularly appropriate in the context of parental involvement with child welfare. In

a recent and related study, Grekin et al. (2010) interviewed 300 low-income, post-partum women in their hospital rooms after giving birth. Using a version of the DAST (DAST-10), administered confidentiality with computer-response technology, the researchers compared mothers' DAST responses to urine and hair samples. The study found that even while using the lowest possible cutoff (score of 1), the DAST identified less than half of women who produced positive toxicology screens. These results confirm the findings of other studies that have questioned the validity of the DAST in contexts where respondents want to present themselves as socially desirable (Skinner, 1982) or may be defensive about admitting to their drug use (Skinner, 1982; Wooley, et al., 2012).

Objective & Research Questions

As indicated earlier, a number of authors concerned about the inadequacy of current child welfare risk assessments in detecting substance abuse have recommended expanding workers' tools to include diagnostic substance abuse screens (Chuang et al., 2013; Dore, et al., 1995). Noting that substance abuse is difficult to detect, particularly since parents have a strong incentive to hide the problem, and child welfare workers may be reticent to broach the subject, these authors argue that incorporation of diagnostic screens into risk assessments will prompt workers to ask questions about drug and alcohol use and aid them in detecting substance abuse within families.

However, as noted by some (Chuang et al., 2013; Marsh et al., 2011; Olsen et al., 1996), current child welfare risk assessments generally include some assessment of substance abuse, although usually as a single uni-dimensional question. Presuming that child welfare workers are sufficiently prompted by this question to, at the very least, ask about drug and alcohol use in families, it is not clear what benefit (if any) can be gained by including diagnostic screens,

particularly in a child welfare context. As indicated by McAlpine, Marshall, & Doran (2001),

substance use may not lead to child maltreatment in all families. In these cases, the inclusion of

a diagnostic drug screen may lead child welfare workers to become overly focused on drug use,

ignoring other family needs and risk factors. Alternately, diagnostic drug screens are designed to

detect harmful drug use or dependence, limiting their ability to identify cases where lower-level

drug use is present and associated with child maltreatment. Apart from a study conducted by

Chuang et al. (2013), there are currently no evaluations that examine concordance between child

welfare worker assessments of drug abuse and diagnostic drug screens. Furthermore, although

qualitative studies have shown that workers are likely to perceive increased risk when substance

abuse is present (Berger, et al., 2010; Howell, 2008), no study has explored the specific threshold

that social workers are likely to use when defining abuse. This study seeks to explore these

issues through a comparison of child welfare worker assessments and DAST self-report results.

A recent analysis of survey data from the NSCAW II (Chuang et al., 2013) has asserted

that child welfare workers under-identify substance abuse among parents who are reported for

child maltreatment. A further purpose of this study is to replicate the strengths of the Chuang et

al. (2013) article (large weighted national sample, confidential interview of respondents using

computer-response technology, a number of literature-supported control variables), while

correcting some of its errors. The first weakness that this study will address is the fact that

researchers for the Chuang et al. (2013) study combined parents who demonstrated harmful use

or dependence on alcohol (as measured by the Alcohol Use Disorders Identification Test -

AUDIT) with those who demonstrated harmful use or dependence on drugs (as measured by the

DAST). While both alcohol and drug abuse have been connected to child maltreatment, the two

types of problems are fundamentally different in terms of their social acceptability and

prevalence in the adult population (SAMHSA, Office of Applied Studies, 2012). Due to the

legality and social acceptability of alcohol, it is possible that respondents in the NSCAW II were

more likely to admit to alcohol behaviors *and* that social workers were less likely to perceive

alcohol behaviors as problematic when compared to drug use, which is neither legal nor socially

acceptable. As such, by combining AUDIT and DAST assessments in their analysis, Chuang et

al. (2013) may have overgeneralized their findings about social worker identification of

substance abuse problems among parents. The degree of this potential overgeneralization is

unknown because the authors did not report how many of their subjects demonstrated harmful

use or dependence on alcohol as opposed to drugs. Nor did they stratify their analysis to look at

alcohol and drugs separately. By focusing singly on the presence of drug problems among

NSCAW II respondents, this study hopes to eliminate this difficulty.

Another limitation of the Chuang et al. (2013) study is the fact that the authors measured

social worker identification of substance abuse problems by whether or not the social worker

indicated that a parent needed services for a drug or alcohol problem (p. 121). While child

welfare worker identification of a substance abuse problem and referral to treatment services are

certainly related, service referral is a step removed from the worker's detection of a problem.

The current study will examine parental drug abuse using a tighter measure of the dependent

variable: whether, at the time of the investigation, the child welfare worker perceived active drug

abuse by the primary caregiver.

Using data from the NSCAW II, this paper will examine concordance between DAST

assessments of drug abuse based on parental self-reports of drug-related behavior and child

welfare worker assessments of drug abuse. Specifically, the current study will answer the

following questions: (1) For parents with children who have been investigated by child welfare

agencies, are DAST scores of drug-related behaviors predictive of child welfare worker risk assessments of drug abuse? (2) For those parents assessed by child welfare workers as having active drug abuse, what is the mean number of problems self-reported by parents on the DAST?

Methods

Data

The current study is a secondary data analysis of an existing dataset: the National Survey of Adolescent and Child Well-Being (NSCAW) II. NSCAW II data were collected using a longitudinal cohort survey design. The purpose of NSCAW II is to explore aspects of child and family involvement in the child welfare system, and the effect of those factors on outcomes for abused and neglected children (Dolan, Smith, Casanueva, & Ringeisen, 2011). The NSCAW II is the second version of the National Survey of Adolescent and Child Well-Being, with the first (NSCAW I) having been completed in 5 waves from 1999 to 2007. In 2008, NSCAW investigators launched a second study using the same methodology as NSCAW I with a new cohort of children (Dowd et al., 2012).

Currently, the NSCAW II has two waves of data available for analysis. Given the current study's focus on factors affecting caseworker identification of parental drug abuse during an investigation of child maltreatment, the current study will explore only baseline (Wave I) data. Wave 1 data for the NSCAW II was completed between April 2008 and December 2009.

Sample

The NSCAW II includes case data on a nationally representative sample of 5,872 children, ages 0 to 17.5 years old at the time of sampling. In order for their cases to be eligible for the study, children must have been referred to and investigated for child maltreatment between February 2008 and April 2009 (Dolan, et al., 2011). Because interviewers for the NSCAW II talked to children, parents, caseworkers, child welfare agencies and teachers about

the sample children in each cohort, it is best to think of the sample in terms of cases (typically representing a family), and not people, as the unit of analysis. Data from Wave I include substantiated and unsubstantiated investigations of abuse or neglect, as well as children and families who did and did not receive child welfare services. As mentioned above, the current study will focus on information from Wave I of data collection. For this wave, child welfare workers were interviewed about parental drug abuse in 4,818 cases and parents completed DAST assessments in 3,687 cases. However, for a number of analyses, the current study is restricted to cases where investigative caseworker interviews were completed AND parents completed the DAST, limiting the sample to 3,119 cases.

According to the NSCAW II Data File User's Manual (Dowd et al., 2012), children in NSCAW II sample were selected using a two-stage stratified sample design. Within this design, cases were selected based on two probabilities: the primary sampling unit and selection of a child, given the child's county of residence. Consequently, the sample was weighted to account for different selection probabilities, for deviations from the original plan, and for nonresponse. To ensure that findings are not skewed, survey weights are applied in the current analysis.

Sample demographics.

As illustrated in Table 1, the sample of parents for this study were primarily White (43%), with the largest minority being comprised of black parents (28%), followed by Hispanic parents (23%). Incomes for families in this sample were evenly distributed, ranging between 22% and 27% across the four income levels. Incomes most commonly fell between 50% and 200% of the federal poverty line with 54% of the total sample. Finally, 28% of parents in the total sample were assessed by child welfare workers as demonstrating mental health disorders.

The focus children of parents in the sample were predominantly infants (50%), with 14%

focused on children 3-5 years old, 18% on children 6-10 years old, and 18% focused on children over the age of 11. Children of parents in the sample were primarily referred to child welfare agencies for "Other" abuse types, which include emotional abuse, abandonment, moral/legal maltreatment, educational maltreatment, exploitation, prematurity/low birth weight, and domestic violence (49%). The second most common maltreatment allegation was lack of supervision (19%). Other maltreatment allegations include physical abuse (17%), sexual abuse (6%), and failure to provide (9%). Parents in the full sample were not more likely to be referred to the child welfare system for a substance-related abuse (22%), nor were they more likely to be referred for more than one type of abuse (41%).

Drug use and abuse.

Among the entire sample of 5,872 cases, 4,818 (82%) primary caregivers were assessed by child welfare workers for an active drug problem. As reflected in Table 1, of those assessed, 28% were perceived as demonstrating active drug abuse while 72% were not.

Among the entire sample, 3,687 (63%) parents completed full DAST assessments. According to the binary threshold model suggested by Skinner (1982) and Gavin et al. (1989), 5% of parents who completed the DAST assessment met criteria for drug abuse (6 or more problems). Notably, 7% of those who completed the DAST admitted to 3 to 5 drug-related problems, more than twice the number who admitted to 6 to 8 problems (2%), sufficient problematic use to meet the DAST cutoff for drug abuse.

Among parents who met DAST criteria for abuse (N = 196), the majority (N = 85, 43%) demonstrated between 6 to 8 drug-related problems, although a sizeable portion (26%) admitted 9 to 11 problems. Of those meeting DAST drug abuse criteria, 16% admitted 12 to 14 problems, 12% admitted to 15 to 17 problems, and only 2% admitted to 18 to 20 drug-related problems.

Table 1: Sample Demographic
(Unweighted n = 5,872)

Variable Name	N(%)
Dependent Variable	
CWW Active Drug Abuse	4,818
Yes	1,352 (28%)
No	3,466 (72%)
Key Independent Variable	
Binary DAST Criteria for Drug Abuse	3,687
Yes	196 (5%)
No	3,491 (95%)
Categorical DAST Criteria for Drug Abuse	3,687
0-2 "Yes" DAST Responses	3,237 (88%)
3-5 "Yes" DAST Responses	254 (7%)
6-8 "Yes" DAST Responses	85 (2%)
9-11 "Yes" DAST Responses	51 (1%)
12-14 "Yes" DAST Responses	32 (1%)
15-17 "Yes" DAST Responses	24 (1%)
18-20 "Yes" DAST Responses	4 (<1%)
Covariates	
Maltreatment Allegation	5,054
Physical Abuse	846 (17%)
Sexual Abuse	300 (6%)
Failure to Provide	446 (9%)
Lack of Supervision	980 (19%)
Other	2,482 (49%)
Substance Related Abuse Type	5,054
Yes	1,100 (22%)
No	3,954 (78%)
More than one type of maltreatment	5,054
Yes	2,086 (41%)
No	2,968 (58%)
Child Age	5,872
0-2 years	2,937 (50%)
3-5 years	828 (14%)
6-10 years	1,053 (18%)
11+ years	1,054 (18%)
Parent Race/Ethnicity	5,766
Black/Non-Hispanic	1,629 (28%)
White/Non-Hispanic	2,501 (43%)
Hispanic	1,300 (23%)
Other	336 (6%)
Parent Income	5,323
Less than 50% poverty line	1,190 (22%)
50 –<100% poverty line	1,449 (27%)
100% - 200% poverty line	1,419 (27%)
>200% poverty line	1,265 (24%)
Mental health problem	4,728
Yes	1,334 (28%)
No	3,394 (72%)

Measures

Dependent Variable: Caseworker-perceived caregiver substance abuse. The key

dependent variable for this analysis is derived from the Child Welfare Worker Risk Assessment

module of the NSCAW II, in which the caseworker was asked whether, at the time of initial investigation, was there active drug abuse by the primary caregiver (yes/no).

Independent Variable: DAST assessment of drug behaviors.

The DAST is a semi-structured interview designed to identify individuals with hazardous and harmful patterns of drug use. Using a twenty-question yes/no survey, interviewers can assess whether a survey respondent demonstrates drug abuse. This assessment was conducted by NSCAW II interview staff and not among child welfare workers. According to studies evaluating the tool's reliability (Gavin, et al., 1989; Skinner, 1982), a cutoff point of 6 or more points for both men and women qualifies the individual for a DSM-III diagnosis of drug dependence. According to a review by Yudko, et al. (2007), using the 6 point cutoff, the psychometric properties of the DAST have been established, with internal consistency ranging from 0.74 to 0.92, sensitivity of 74%, specificity of 83%, and a hit rate of 81% among the following populations: people seeking treatment for alcohol and drug problems, psychiatric patients and outpatients, union members (including identified drug users and nonusers), adolescents, and substance-abusing minority women in abusive relationships. The current study will evaluate the DAST as a binary (yes/no) factor, as measured by the suggested 6 or more point cutoff, but will also examine DAST responses as a continuous variable for this study.

Covariates.

This study also controlled for several other factors that might affect the likelihood that child welfare workers would assess caregiver drug abuse. These variables include the primary reason the child was referred to the child welfare system (physical abuse, sexual abuse, failure to provide, failure to supervise, other); whether there was an allegation of substance-related abuse (yes/no); whether there was more than one type of alleged maltreatment (yes/no); child age (0 to

2 years, 3 to 5 years, 6 to 10 years, 11 and older); caregiver's ethnicity (Black/non-Hispanic, White/non-Hispanic, Hispanic, Other); caregiver's income (less than 50% of Federal Poverty Line, 50% to less than 100%, 100% to 200%, more than 200%); and whether the child welfare worker perceived the primary caregiver to have a mental health problem (yes/no).

Analysis

The final results for this study present three different analyses of child welfare worker assessment and DAST data among parents in the NSCAW II sample. To address the issue posed by Chuang et al. (2013) about whether child welfare workers under-identify drug abuse among parents, a logistic regression was run to determine whether parental DAST scores of 6 or more points (yes/no) was predictive of a child welfare worker assessment of an active parental drug problem, controlling for other factors that may influence a child welfare worker assessment. The second analysis builds upon the first by exploring DAST scores among parents in the NSCAW sample as a continuous variable. This analysis seeks to examine whether workers' detection of drug abuse among parents increases as the number of problems associated with drugs also increases. As with the first model, DAST scores were examined against child welfare worker assessments, controlling for covariates. The final analysis for this study examines mean DAST scores for those cases where child welfare workers assessed parents as demonstrating active drug abuse to determine whether child welfare workers have a higher or lower threshold for the problematic behaviors assessed by the DAST than has been used among other populations.

Missing Data

Worker assessed drug abuse.

There were a number of differences between missing worker assessment data and

collected worker assessment data. Although DAST assessments of drug abuse were similar between those with missing (5%) and those with collected (5%) data (Table 2), differences were detected between missing and collected data based on allegation type, parent race/ethnicity, and parent mental health. The most notable difference between missing and collected worker assessment data was in terms of diagnosis of parental mental health problem. Among parents with missing worker assessment data, 46% were identified as demonstrating mental health problems, compared to 28% of parents with collected worker assessment data ($p < 0.001$).

DAST assessed drug abuse.

Missing DAST assessment data differed significantly from collected data on every variable. Most importantly, as reflected in Table 2, parents with missing DAST data were far more likely than those with collected data to be assessed by child welfare workers as demonstrating active drug abuse (45% vs. 19%, $p < 0.001$). In addition, parents with missing DAST data were more likely ($p < 0.001$) to be referred to child welfare for substance-related abuse (23% vs. 18%) or more than one type of maltreatment (51% vs. 36%), and to be diagnosed with a mental health problem (44% vs. 20%) than those with collected data. Combined, these findings indicate that cases with the highest risks for the current study were missing data on the primary independent variable. Notably however, parents with missing DAST data were also more likely to have higher incomes than parents with collected DAST data. In fact, the highest percentage of individuals with missing DAST data was from the highest income level (40% were more than 200% of federal poverty line).

Table 2: Missing Data

Variable Name	Missing Worker Assessed Drug Abuse Data			Missing DAST Assessed Drug Abuse Data		
	Yes	No	p-value	Yes	No	p-value
CWW Active Drug Abuse	--	--	--	1,699	3,119	<0.001
Yes	--	--		761 (45%)	591 (19%)	
No	--	--		938 (55%)	2,528 (81%)	
DAST Criteria for Drug Abuse	568	3,119	0.808	--	--	--
Yes	29 (5%)	167 (5%)		--	--	
No	539 (95%)	2,952 (95%)		--	--	
Maltreatment Allegation	254	4,800	0.024	1,825	3,229	<0.001
Physical Abuse	45(18%)	801 (17%)		269 (15%)	577 (18%)	
Sexual Abuse	23 (9%)	277 (6%)		89 (5%)	211 (7%)	
Failure to Provide	21 (8%)	425 (9%)		188 (10%)	258 (8%)	
Lack of Supervision	61 (24%)	919 (19%)		323 (18%)	657 (20%)	
Other	104 (41%)	2,378 (50%)		956 (52%)	1,526 (47%)	
Substance Related Abuse Type	254	4,800	<0.001	1,825	3,229	<0.001
Yes	27 (11%)	1,073 (22%)		512 (23%)	588 (18%)	
No	227 (89%)	3,727 (78%)		1,313 (60%)	2,641 (82%)	
More than one type of abuse	254	4,800	0.004	1,825	3,229	<0.001
Yes	83 (33%)	2,003 (42%)		933 (51%)	1,153 (36%)	
No	171 (67%)	2,797 (58%)		892 (49%)	2,.076 (64%)	
Child Age	1,054	4,818	0.067	2,185	3,687	<0.001
0-2 years	523 (50%)	2,414 (50%)		1,289 (59%)	1,648 (45%)	
3-5 years	129 (12%)	699 (15%)		233 (11%)	595 (16%)	
6-10 years	188 (18%)	865 (18%)		330 (15%)	723 (20%)	
11+ years	214 (20%)	840 (17%)		333 (15%)	721 (20%)	
Parent Race/Ethnicity	1,018	4,748	<0.001	2,086	3,680	0.005
Black/Non-Hispanic	325 (32%)	1,304 (27%)		646 (31%)	983 (27%)	
White/Non-Hispanic	362 (36%)	2,139 (45%)		880 (42%)	1,621 (44%)	
Hispanic	270 (27%)	1,030 (22%)		451 (22%)	849 (23%)	
Other	61 (6%)	275 (6%)		109 (5%)	227 (6%)	
Parent Income	931	4,392	0.332	1,909	3,414	<0.001
Less than 50% poverty line	216 (23%)	974 (22%)		200 (10%)	990 (29%)	
50 –<100% poverty line	231 (25%)	1,218 (28%)		379 (20%)	1,070 (31%)	
100% - 200% poverty line	259 (28%)	1,160 (26%)		575 (30%)	844 (25%)	
>200% poverty line	225 (24%)	1,040 (24%)		755 (40%)	510 (15%)	
Mental health problem	134	4,594	<0.001	1,631	3,097	<0.001
Yes	61 (46%)	1,273 (28%)		718 (44%)	616 (20%)	
No	73 (54%)	3,321 (72%)		913 (56%)	2,481 (80%)	

Results

Bivariate Analysis

Demographics.

As reflected in Table 3, parents assessed by child welfare workers as demonstrating drug dependence were primarily White (47%), more likely to have higher incomes (58% 100% - >200% of federal poverty line), and a substantial portion (47%) were also identified by child welfare workers as demonstrating mental health disorders. Children of parents assessed as demonstrating drug abuse were overwhelmingly infants (73%). While the majority of children

were referred to child welfare agencies for "Other" abuse types, which include emotional abuse, abandonment, moral/legal maltreatment, educational maltreatment, exploitation, prematurity/low birth weight, and domestic violence (69%), a sizeable number were referred to agencies for lack of supervision (17%). A majority of parents assessed by child welfare workers as demonstrating drug abuse were also likely to be referred to child welfare agencies for "substance-related abuse" (57%) solely or in addition to other types of abuse, and to be referred for more than one type of maltreatment (58%).

Worker assessed drug problem.

As indicated in Table 3, of the total number of cases identified by child welfare workers as demonstrating drug abuse, where there was also data from the DAST (n = 591), 109 (18%) were identified by the DAST as demonstrating an active drug abuse problem. In fact while there were cases in which the DAST identified drug abuse, but the child welfare worker did not (35%), it was more common that the child welfare worker assessed an active drug problem but the DAST did not (82%). Of cases with both child welfare worker and DAST data, 482 (82%) reported fewer than 5 drug-related problems, and 378 (64%) reported 0 to 2 problems.

Table 3: Bivariate Analyses

Variable Name	Worker Assessed Drug Abuse	p-value
Key Independent Variable		
Meets DAST Criteria for Drug Abuse	591	<0.001
Yes	109 (18%)	
No	482 (82%)	
DAST Responses	591	<0.001
0-2 "Yes" DAST Responses	378 (64%)	
3-5 "Yes" DAST Responses	104 (18%)	
6-8 "Yes" DAST Responses	44 (7%)	
9-11 "Yes" DAST Responses	23 (4%)	
12-14 "Yes" DAST Responses	25 (4%)	
15-17 "Yes" DAST Responses	16 (3%)	
18-20 "Yes" DAST Responses	1(<1%)	
Covariates		
Maltreatment Allegation	1,349	<0.001
Physical Abuse	75 (6%)	
Sexual Abuse	11 (1%)	
Failure to Provide	100 (7%)	
Lack of Supervision	231 (17%)	
Other	932 (69%)	
Substance Related Abuse Type	1,349	<0.001
Yes	766 (57%)	
No	583(43%)	
More than one type of maltreatment	1,349	<0.001
Yes	782 (58%)	
No	567 (42%)	
Child Age	1,352	<0.001
0-2 years	985(73%)	
3-5 years	135 (10%)	
6-10 years	131(10%)	
11+ years	101 (7%)	
Parent Race/Ethnicity	1,339	0.002
Black/Non-Hispanic	393(29%)	
White/Non-Hispanic	632 (47%)	
Hispanic	249 (19%)	
Other	65 (5%)	
Parent Income	1,234	<0.001
Less than 50% poverty line	257 (21%)	
50 –<100% poverty line	260 (21%)	
100% - 200% poverty line	332 (27%)	
>200% poverty line	385 (31%)	
Mental health problem	1,210	<0.001
Yes	564 (47%)	
No	646 (53%)	

Multivariate Analyses

Weighted logistic regression reveals that problematic drug use among parents (as measured by the DAST) is predictive of child welfare worker identification of drug abuse (Table 4). Controlling for variables such as maltreatment allegation, child age, parent race/ethnicity, parent income, and parental mental health problem, individuals meeting a dichotomous DAST

criteria (6 or more points) were 6.37 (CI: 2.74, 14.78) times more likely to be identified by child welfare workers as demonstrating substance abuse as parents not meeting such criteria. Furthermore, when DAST scores are measured as a continuous variable, considering the same covariates, child welfare worker detection of drug abuse increases by 1.22 (CI: 1.08, 1.37) for each additional symptom of drug abuse self-reported by parents.   For parents assessed by child welfare workers as demonstrating active drug abuse, average DAST scores were approximately 2.3 drug-related problems, a threshold lower than that suggested by DAST documentation.

Child and family factors which are associated with a higher likelihood of child welfare worker detection of drug abuse include maltreatment allegations of lack of supervision and substance-related abuse types, and worker identification of parent mental health problems. Workers were also more likely to detect drug abuse if families were referred to child welfare for more than one type of abuse. Variables associated with a lower likelihood of worker assessment of parental substance abuse include sexual abuse allegations (compared to physical abuse) and if the case revolved around children 6 years and older (compared to infants). As demonstrated by Table 4, these findings were consistent between both models; the DAST measured as a dichotomous and a continuous variable. Interestingly, parent race/ethnicity and poverty level did not emerge as significant in either model.

Table 4: Child welfare worker assessment of drug abuse: Logistic regression results (weighted n = 1,624,729)

Variable Name	DAST as Dichotomous Variable			DAST as Continuous Variable		
	OR	S.E.	95% CI	OR	S.E.	95% CI
DAST Assessment (Binary)	6.37***	2.69	(2.74, 14.78)	--	--	--
DAST Assessment (Continuous)	--	--	--	1.22**	.07	(1.08, 1.37)
Maltreatment Allegation						
Physical Abuse		(Reference)			(Reference)	
Sexual Abuse	.02**	.02	(.002, .18)	.02**	.02	(.003, .19)
Failure to Provide	1.43	.79	(.48, 4.28)	1.23	.62	(.45, 3.38)
Lack of Supervision	2.88*	1.25	(1.21, 6.83)	2.78*	1.20	(1.18, 6.57)
Other	.48	.21	(.20, 1.14)	.46	.20	(.19, 1.10)
Substance Related Abuse Type	10.30***	3.66	(5.07, 20.93)	9.65***	3.49	(4.69, 19.85)
More than one type of maltreatment	1.76*	.48	(1.02, 3.03)	1.79*	.50	(1.02, 3.12)
Child Age						
0 – 2 years		(Reference)			(Reference)	
3-5 years	.63	.23	(.31, 1.29)	.56	.20	(.27, 1.16)
6-10 years	.32**	.11	(.16, .61)	.32**	.12	(.15, .66)
11+ years	.17***	.07	(.07, .38)	.17***	.07	(.08, .68)
Parent Race/Ethnicity						
White/Non-Hispanic		(Reference)			(Reference)	
Black/Non-Hispanic	1.39	.57	(.62, 3.14)	1.29	.56	(.54, 3.08)
Hispanic	.65	.23	(.32, 1.34)	.59	.19	(.31, 1.13)
Other	.40	.30	(.09, 1.75)	.40	.29	(.10, 1.67)
Parent Income						
Less than 50% poverty line		(Reference)			(Reference)	
50 –<100% poverty line	.62	.15	(.39, 1.01)	.63	.15	(.39, 1.01)
100% - 200% poverty line	1.11	.41	(.54, 2.30)	1.14	.40	(.57, 2.30)
>200% poverty line	.56	.25	(.23, 1.36)	.56	.24	(.24, 1.34)
Parent Mental Health						
Mental health problem	10.53***	2.97	(6.00, 18.47)	10.11***	3.02	(5.57, 18.33)

*p<0.05, ** p<0.01, ***p<.0.001

Discussion

Findings and Directions for Future Research

The results of this study provide mild support for the contention made by Chuang et al. (2013) that drug abuse is under-identified by child welfare workers. Of the 196 parents identified by the DAST assessment as exhibiting symptoms of drug abuse, 109 (57%) were identified by child welfare workers as demonstrating the same. However, a deeper examination of the data reveals a more complicated picture. As indicated by results from the logistic

regression, parent admissions of problems associated with drug abuse (as measured by the DAST) are highly correlated with child welfare worker detection of drug abuse among parents. This is true if drug-related behaviors are measured using a threshold (6 or more problems) model or examined as a continuous variable. Furthermore, logistic regression reveals that there are a number of factors that make child welfare workers more or less likely to detect drug abuse. As described earlier, child welfare workers are more likely to detect abuse if parents are referred to the child welfare system for lack of supervision or substance-related abuse, are referred to the child welfare system for more than one type of maltreatment, and if parents exhibit mental health problems. As illustrated above, workers are less likely to determine that parents have a drug abuse problem if children are referred to the child welfare system for sexual abuse (compared to physical abuse), or if the children are 6 years or older (compared to infants).

For those parents whom child welfare workers identify as demonstrating abuse, the picture is even more complicated. Of the 591 parents identified by child welfare workers as demonstrating active drug abuse, 109 (18%) were identified by the DAST as demonstrating the same. An examination of mean DAST scores for these parents indicate that child welfare workers have a lower threshold for identifying drug-related problems among parents than the DAST assessment tool recommends for adults. In fact, according to the results of this study, parents considered by workers to be drug abusing self-reported an average of 2.3 drug-related problems (as opposed to 6).

These results point to a degree of vigilance among child welfare workers that is not captured by a simple comparison of worker and DAST assessment rates. It appears that workers find even low levels of drug-related problems to be abuse when considered in a child welfare context. This finding is consistent with literature which shows that workers perceive higher

levels of risk when drug use is present in families (Berger et al., 2010; Howell, 2008). However, these results do not necessarily mean that child welfare workers are inaccurately diagnosing problematic and risky drug use among parents. With DAST questions ranging from moderate ("used drugs other than those required for medical use," "felt bad or guilty about drug use") to severe ("lost a job because of drug abuse," "engaged in illegal activities to obtain drugs," or "neglected family because of use of drugs"), child welfare workers may in fact be correctly identifying cases where a small number of problems make a large impact on child safety and wellbeing. Such an assessment depends directly on the specific drug-related problems which parents report. Clearly, more study is needed to determine which particular aspects of drug use are more likely to lead to a worker assessment of drug abuse in a child welfare context. Furthermore, to determine the veracity of worker-assessed risk, future research should examine whether certain drug-related problems are associated with particular types of child maltreatment.

A number of authors concerned about the inadequacy of current child welfare risk assessments in detecting substance abuse have argued for expanding assessments to include diagnostic substance abuse screens. Believing that such screens will prompt child welfare workers to ask relevant questions about substance abuse, these authors contend that validated substance abuse assessments will improve the ability of workers to detect and respond to substance abuse in families (Chuang et al., 2013; Dore, et al., 1995). For this study, NSCAW II survey staff conducted DAST assessments instead of child welfare workers. As such, this study cannot directly address the contention that inclusion of diagnostic drug screens in child welfare assessments will provide an effective tool for prompting child welfare workers to ask about substance abuse. However, as indicated by the significant numbers of missing DAST assessments in this study, it is difficult to get parents to answer questions about drug abuse, even

in a survey setting where answers were recorded using audio-enhanced computer-assisted self-interview (ACASI) techniques designed to facilitate anonymity and disclosure of stigmatized behaviors (Newman et al., 2002). In contrast, while there were a number of missing responses to child welfare assessments of parental drug abuse, there were not nearly as many as missing DAST assessments, an indicator that workers are comfortable making assessments of parental drug abuse without the use of drug screens (although the accuracy of these assessments is unknown).

As the literature review for this study shows, face-valid drug abuse measures are problematic with populations that wish to minimize or deny their drug use. Thus, if the object of inclusion of diagnostic drug screens in child welfare risk assessments is to detect drug abuse when parents are not ready to disclose, face-valid measures such as the DAST are not likely to help. Results from this study indicate that in addition to the large numbers of missing DAST assessments, there were a significant number of parents who admitted to $0 - 2$ drug-related behaviors but were assessed by child welfare workers as having an active drug abuse problem. While these results may have more to do with worker bias against parental drug use, it could also be the case that parent respondents to the NSCAW II were able to detect that they were being screened for drug abuse, and decided to hide or minimize their use as much as possible. Future studies seeking to explore the usefulness of diagnostic drug screens in prompting workers to ask about and accurately diagnose drug abuse should use indirect measures to minimize the amount of missing or inaccurate data.

Limitations

Several limitations are present in the current study. The first and most significant limitation is the large amount of missing data. As indicated above, there were 568 cases with

DAST assessments that were missing child welfare worker assessment data, and 1,699 cases with child welfare worker assessments but no DAST analysis. Given that the current study attempted to measure the level of concordance between child welfare worker and DAST assessments of drug abuse, the significance of the loss of these overlapping cases cannot be overstated.

Furthermore, analysis of missing data indicates that completion of the DAST assessment was particularly difficult among parents with the highest risk factors: those more likely to be assessed by child welfare workers as having a drug problem, parents more likely to be referred for substance-related child abuse or for more than one type of maltreatment, as well as parents more likely to be diagnosed with a mental health problem. As such, the generalizability of this study is limited to cases like those with complete data: families with white parents, infant children, referred to the child welfare system for "other" abuse types, those not referred for substance-related child abuse or more than one type of abuse, and not demonstrating mental health disorders. Results from this study indicate that these cases are significantly different from cases where substance abuse is typically present, a notable shortcoming.

A second limitation is related to the validity of the two key variables. In regards to the dependent variable, worker assessment of parental drug abuse, the current study is limited to the cross-sectional[1] assessment of the investigating child welfare worker, early in the case, when the worker may not have gathered enough information to conduct an accurate assessment. Furthermore, without additional information on the means by which workers made a determination of parental drug abuse, the validity of such assessments cannot be fully ascertained. In regards to the independent variable, the DAST assessment of drug abuse, the

---

[1] NSCAW II data is available for longitudinal analysis if multiple waves of data are utilized. For the current study, the researcher used only Wave 1 of data collection, resulting in a cross-sectional analysis.

validity of the tool among child welfare-involved clients has not been determined. However, assessments using the tool among new mothers in maternity wards (Grekin et al., 2010), and among populations where respondents hope to underreport their true drug use (Skinner, 1982; Wooley, et al., 2012) are not promising.

Implications for Practice

Notwithstanding the limitations above, results from this study present several possible implications for child welfare practice. First, a significant number (57%) of parents were identified by the DAST as drug abusing, but child welfare workers did not make the same determination. These results suggest that child welfare workers under-identify drug abuse among families, which presents possible risks to the children they are investigating. As argued by Chuang et al. (2013), many parents who need substance abuse treatment would normally not seek out such treatment. For these families, identification of substance abuse by child welfare workers is essential to engaging them in services and improving the safety and wellbeing of their children. As such, child welfare workers must be equipped to conduct thorough assessments of parental substance abuse among the cases they investigate. Whether workers need more resources, time, or additional diagnostic tools cannot be concluded from this study. However, practitioners and policymakers should explore these issues, making sure that workers are able to adequately assess the needs of families on their caseloads.

Another conclusion can also be drawn from these results. While it is possible that child welfare workers are under-identifying drug abuse among families, it may also be the case that some parents experience a number of drug-related problems (and may even be drug abusing), but these problems do not affect the safety of their children. It is important to note that the DAST is

designed to focus solely on drug-related problems and their correlations with DSM-II diagnoses of drug abuse or dependence. Child welfare assessments, on the other hand, are primarily focused on the safety and wellbeing of children. Within these assessments, parental drug abuse is but a single factor. Furthermore, the DAST assesses whether respondents have experienced the problems measured by the tool in the last 12-months, whereas child welfare risk assessments focus on the time of investigation. Without more information about the types of problems parents reported, correlations with particular types of maltreatment, or whether parents were still experiencing the problems they reported on the DAST at the time of investigation, conclusions about the effectiveness of child welfare workers in assessing parental drug abuse (particularly as it relates to child maltreatment) should be made with caution and not exaggerated.

Results from this study also indicate that there was a significant number (64%) of parents who admitted to very small numbers of drug-related problems but were assessed by child welfare workers as drug abusing. The reasons behind these findings are unknown. It is possible that workers are able to detect drug abuse in cases where the face-validity of the DAST allows parents to deny or minimize drug use (Wooley, et al., 2012). It may also mean that the questions assessed by the DAST are irrelevant or peripheral to parents. Indeed, the types of problems that a parent may experience because of drug use could be very different from those experienced by the adults on which the DAST was normed. While the DAST asks about some aspects of drug use that could affect family-life such as "neglecting family" "getting in trouble at work" or "having problems with spouse," there may also be questions that relate more to parenting that are not assessed by this tool (getting up in the morning, having enough money for food and other necessities, maintaining patience with children are just some – non-validated – examples). To adequately detect drug abuse among parents, then, it may be necessary to adapt current

diagnostic assessments to focus on issues relevant to child welfare. Child welfare practitioners, who have direct experience assessing family risk factors and child safety, should be included as much as possible in this process.

In terms of practice implications, the results of this study most forcefully support the value of child welfare worker training. Findings from this study indicate that the assessments of child welfare workers often do not match diagnostic drug screen assessments. Putting aside the difficulties associated with face-valid drug screens such as the DAST, worker assessments were sometimes more vigilant and sometimes less vigilant than drug screens. Workers who were erroneously less vigilant than drug screens may need additional training on questions and interview techniques that will help them gather pertinent information about parental drug use despite parent resistance or complicated family circumstances. Workers who were erroneously more vigilant may need training to help them understand their personal biases, the complex nature of substance abuse, and ways that drug use may or may not be connected to child maltreatment (Berger et al., 2010).

References

Arria, A. M., Mericle, A. A., Meyers, K., & Winters, K. C. (2012). Parental substance use impairment, parenting and substance use disorder risk. *Journal of Substance Abuse Treatment*, *43*(1), 114-122.

Azzi-Lessing, L., & Olsen, L. J. (1996). Substance abuse-affected families in the child welfare system: New challenges, new alliances. *Social Work*, *41*(1), 15-23.

Barth, R. P., Gibbons, C., & Guo, S. (2006). Substance abuse treatment and the recurrence of maltreatment among caregivers with children living at home: A propensity score analysis. *Journal of Substance Abuse Treatment*, *30*(2), 93-104.

Berger, L. M., Slack, K. S., Waldfogel, J., & Bruch, S. K. (2010). Caseworker-perceived caregiver substance abuse and child protective services outcomes. *Child Maltreatment, 15*(3), 199-210.

Bevan, G. (2009). Problem drug use the public health imperative: What some of the literature says. *Substance Abuse Treatment, Prevention, and Policy*, *4*(1), 21-29.

Brook, J., McDonald, T. P., Gregoire, T., Press, A., & Hindman, B. (2010). Parental substance abuse and family reunification. *Journal of Social Work Practice in the Addictions*, *10*(4), 393-412.

Chuang, E., Wells, R., Bellettiere, J., & Cross, T. P. (2013). Identifying the substance abuse treatment needs of caregivers involved with child welfare. *Journal of Substance Abuse Treatment, 45*(1), 118-125.

Courtney, M., Dworsky, A., Lee, J., & Raap, M. (2009). Midwest evaluation of the adult

  functioning of former foster youth: Outcomes at age 23 and 24. Chicago, IL: Chapin Hall

  at the University of Chicago.

Cross, T. P., & Casanueva, C. (2009). Caseworker judgments and substantiation. *Child*

  Maltreatment, *14*(1), 38-52.

D'Andrade, A., Austin, M. J., & Benton, A. (2008). Risk and safety assessment in child welfare:

  Instrument comparisons. *Journal of Evidence-Based Social Work*, *5*(1-2), 31-56.

Dolan, M., Smith, K., Casanueva, C., & Ringeisen, H. (2011). NSCAW II Baseline Report:

  Caseworker Characteristics, Child Welfare Services, and Experiences of Children Placed

  in Out-of-Home Care. OPRE Report #2011-27e, Washington, DC: Office of Planning,

  Research and Evaluation, Administration for Children and Families, U.S. Department of

  Health and Human Services.

Dore, M. M., Doris, J. M., & Wright, P. (1995). Identifying substance abuse in maltreating

  families: A child welfare challenge. *Child Abuse & Neglect*, *19*(5), 531-543.

Dowd, K., Dolan, M. Wallin, J., Miller, K., Biemer, P., Aragon-Logan, E., Wheeless, S., Day,

  O., Suresh, R., & Smith, K. (2012). National Survey of Child and Adolescent Well-

  Being II. Combined Waves 1-2. Data File User's Manual. Restricted Release Version.

Doyle Jr, J. J. (2007). Child protection and child outcomes: Measuring the effects of foster care.

  The American Economic Review, *97*(5), 1583-1610.

Drake, B., Jonson-Reid, M., & Sapokaite, L. (2006). Rereporting of child maltreatment: Does

    participation in other public sector services moderate the likelihood of a second

    maltreatment report? *Child Abuse & Neglect*, *30*(11), 1201-1226.

Fuller, T. L., & Wells, S. J. (2003). Predicting maltreatment recurrence among CPS cases with

    alcohol and other drug involvement. *Children and Youth Services Review*, *25*(7), 553-

    569.

Gambrill, E., & Shlonsky, A. (2000). Risk assessment in context. Children and Youth Services

    Review, 22(11/12), 813-837.

Gavin, D. R., Ross, H. E., & Skinner, H. A. (1989). Diagnostic validity of the Drug Abuse

    Screening Test in the assessment of DSM-III drug disorders. *British Journal of*

    Addiction, *84*(3), 301-307.

Grekin, E. R., Svikis, D. S., Lam, P., Connors, V., LeBreton, J. M., Streiner, D. L., ... &

    Ondersma, S. J. (2010). Drug use during pregnancy: Validating the Drug Abuse

    Screening Test against physiological measures. *Psychology of Addictive Behaviors*,

    24(4), 719-723.

Grove, W. M., & Meehl, P. E. (1996). Comparative efficiency of informal (subjective,

    impressionistic) and formal (mechanical, algorithmic) prediction procedures: The

    clinical–statistical controversy. *Psychology, Public Policy, and Law*, *2*(2), 293-323.

Hohman, M., Finnegan, D., & Clapp, J. D. (2008). A concurrent validation study of the Alcohol

    and Other Drug Identification (AODI) scale. *Journal of Social Work Practice in the*

    Addictions, *8*(3), 367-379.

Howell, M. L. (2008). Decisions with good intentions: Substance use allegations and child

protective services screening decisions. *Journal of Public Child Welfare*, *2*(3), 293-316.

Johnson, J. L., & Leff, M. (1999). Children of substance abusers- Overview of research findings.

Pediatrics, *103*(Supplement 2), 1085-1099.

Jonson-Reid, M., Emery, C. R., Drake, B., & Stahlschmidt, M. J. (2010). Understanding

chronically reported families. *Child Maltreatment*, *15*(4), 271-281.

Leukefeld, C. G., & Tims, F. M. (1989). Relapse and recovery in drug abuse: Research and

practice. *Substance Use & Misuse*, *24*(3), 189-201.

Lindsey, D. (1992). Reliability of the foster care placement decision: A review. *Research on

Social Work Practice*, *2*(1), 65-80.

Marsh, J. C., Smith, B. D., & Bruni, M. (2011). Integrated substance abuse and child welfare

services for women: A progress review. *Children and Youth Services Review*, *33*(3), 466-

472.

McAlpine, C., Marshall, C. C., & Doran, N. H. (2001). Combining child welfare and substance

abuse services: A blended model of intervention. *Child Welfare*, *80*(2), 129–149.

Munro, E. (1999). Common errors of reasoning in child protection work. *Child Abuse & Neglect*,

23(8), 745-758.

Newman, J. C., Des Jarlais, D. C., Turner, C. F., Gribble, J., Cooley, P., & Paone, D. (2002). The

differential effects of face-to-face and computer interview modes. *American Journal of

Public Health*, *92*(2), 294–297.

Olsen, L. J., Allen, D., & Azzi-Lessing, L. (1996). Assessing risk in families affected by

    substance abuse. *Child Abuse & Neglect*, *20*(9), 833–842.

Regehr, C., Bogo, M., Shlonsky, A., & LeBlanc, V. (2010). Confidence and professional

    judgement in assessing children's risk of abuse. *Research on Social Work Practice*,

    20(6), 621-628.

Ryan, J. P., Marsh, J. C., Testa, M. F., & Louderman, R. (2006). Integrating substance abuse

    treatment and child welfare services: Findings from the Illinois alcohol and other drug

    abuse waiver demonstration. *Social Work Research*, *30*(2), 95-107.

Samuels, G. M. (2008). *A Reason, A Season, or a Lifetime: Relational Permanence Among*

    Young Adults with Foster Care Backgrounds. Retrieved from:

    http://www.chapinhall.org/sites/default/files/old_reports/415.pdf

Schroeder, J., Lemieux, C., & Pogue, R. (2008). The collision of the Adoption and Safe Families

    Act and substance abuse: Research-based education and training priorities for child

    welfare professionals. *Journal of Teaching in Social Work*, *28*(1-2), 227-246.

Schwalbe, C. S. (2008). Strengthening the integration of actuarial risk assessment with clinical

    judgment in an evidence based practice framework. *Children and Youth Services Review*,

    30(12), 1458-1464.

Shlonsky, A., & Wagner, D. (2005). The next step: Integrating actuarial risk assessment and

    clinical judgment into an evidence-based practice framework in CPS case management.

    Children and Youth Services Review, *27*(4), 409-427.

Skinner, A. (1982). The drug abuse screening test. *Addictive Behaviors*, *7*, 363–371.

Smith, B. D., & Testa, M. F. (2002). The risk of subsequent maltreatment allegations in families with substance-exposed infants. *Child Abuse & Neglect*, *26*(1), 97-114.

Substance Abuse and Mental Health Services Administration, Office of Applied Studies. (April 16, 2009). *The NSDUH Report: Children Living with Substance-Dependent or Substance-Abusing Parents: 2002 to 2007*. Rockville, MD: Substance Abuse and Mental Health Services Administration.

Substance Abuse and Mental Health Services Administration, Office of Applied Studies (2012). *Results from the 2011 National Survey on Drug Use and Health: Summary of National Findings* (NSDUH Series H-44, HHS Publication No. (SMA) 12-4713). Rockville, MD: Substance Abuse and Mental Health Services Administration.

Testa, M. F., & Smith, B. (2009). Prevention and drug treatment. *The Future of Children*, *19*(2), 147-168.

Unrau, Y. A., Seita, J. R., & Putney, K. S. (2008). Former foster youth remember multiple placement moves: A journey of loss and hope. *Children and Youth Services Review*, *30*(11), 1256-1266.

Wooley, C. N., Rogers, R., Fiduccia, C. E., & Kelsey, K. (2012). The Effectiveness of Substance Use Measures in the Detection of Full and Partial Denial of Drug Use. *Assessment*, *20*(5), 1-11.

Young, N. K., Boles, S. M., & Otero, C. (2007). Parental substance use disorders and child maltreatment: Overlap, gaps, and opportunities. *Child Maltreatment*, *12*(2), 137-149.

Yudko, E., Lozhkina, O., & Fouts, A. (2007). A comprehensive review of the psychometric

    properties of the Drug Abuse Screening Test. *Journal of Substance Abuse*

    Treatment, *32*(2), 189-198.