Original Article

Pathways From Parental Substance Use to Child Internalizing and Externalizing Behaviors in a Child Protective Services Sample

Child Maltreatment
1-11

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Abstract

This study examines the role of mediation in the pathway from parental substance use to children developing child internalizing and externalizing behaviors. Using the National Survey of Child and Adolescent Well-Being II, a random half sample (i.e., split-half approach) of children aged 18 months to 17 years who remained in the home following a child welfare investigation ($N = 1{,}633$) was used to examine direct and mediated pathways from parental self-reported alcohol and drug use to, separately, parent report of child internalizing and externalizing behaviors. Four parallel mediators were examined: child-reported exposure to violence, child-reported parental monitoring, parent-reported harsh physical discipline, and parent-reported emotional maltreatment. The strongest models for both parental alcohol and drug use to internalizing and externalizing behaviors were single-mediator models through emotional maltreatment. Results suggest emotional maltreatment is a crucial intervention target for families with substance use disorders. Parenting interventions must also strengthen parent–child relationships in order to be effective at improving child outcomes.

Keywords

child maltreatment, child welfare services/child protection, emotional/psychological maltreatment, substance abuse

At some point before they turn 18 years, approximately 25.6% of all American children live with a parent with a substance use disorder (SUD; Felitti et al., 2019). Among child welfare–involved families, parental problematic substance use is a pressing problem associated with negative consequences. Although not the cause of child maltreatment in every family where it is present, problematic substance use contributes to maltreatment in one to two thirds of all child welfare cases (Semidei et al., 2001). Compared to all families reported to child protective services (CPS; 3.9%–11.4% prevalence), SUDs are more common in families receiving services (26%–68%) and in families where the children are removed from the home (5.2%–79%; Seay, 2015). Within the child welfare system, the presence of parental substance use increases the likelihood of removal into foster care and negative foster care outcomes including prolonged stays in care (Semidei et al., 2001; Vanderploeg et al., 2007).

Both parental substance use and child welfare involvement increase the likelihood of children developing child emotional and behavioral problems. Specifically, parental substance use has been associated with a higher risk for developing internalizing and externalizing disorders (Staton-Tindall et al., 2013) including an increased likelihood of higher levels of aggression (Osborne & Berger, 2009). In a sample of child welfare–involved children 2 years and older from the National Survey of Child and Adolescent Well-Being I (NSCAW I) who remained in the home following the child's family being reported to CPS, 20.23% of children scored above the clinical cutoff for internalizing behavior at baseline and another 11.44% were in the borderline range (Seay & Kohl, 2015). In the same sample, 29.44% of children scored above the clinical cutoff and another 10.82% were in the borderline range for externalizing behavior at baseline (Seay & Kohl, 2015). In a sample of children who had been exposed to violence, maternal problematic alcohol use was associated with higher total scores on the Child Behavior Checklist (Risser et al., 2013).

Although research supports that parental problematic substance use negatively impacts children and is associated with the development of internalizing and externalizing behaviors, the pathways through which alcohol and drug use create these negative outcomes can be further explored by drawing from the literature on SUDs. Substance use reduces the number of cues one can notice and respond, which sometimes results in incorrect perception of others' behavior as more provocative than intended (Pernanen, 1991). This hypothesis developed into the

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alcohol myopia model in which the concept of inhibition conflict proposes that alcohol results in a narrowing of attentional capacity (Giancola et al., 2010). Individuals under the influence of alcohol can only focus on salient and provocative stimuli rather than less prominent stimuli (Giancola et al., 2010). The alcohol myopia model has been widely applied in the literature on substance use including alcohol-related aggression, suicide, and intimate partner violence (Foran & O'Leary, 2008; Giancola et al., 2010).

Applying the alcohol myopia model to the physical and sexual abuse of children, Miller et al. (1997) proposed that problematic alcohol use results in the caregiver noticing only the most prominent social cues and missing all others. This impaired detection increases the perceived severity of threats encountered, decreases concern for the consequences of behavior thus increasing the likelihood of exhibiting violent behavior toward the child. Since individuals under the influence of a substance can only focus on the most salient and provocative stimuli, they respond to these stimuli rather than less salient stimuli. If the most pressing stimuli that are present provoke anger, a parent could lash out at someone in the home. If the most pressing stimuli are something else (e.g., TV show), then the parent may be unaware of less salient stimuli (e.g., a child's needs) and provide poor supervision to the child. As with all theories of behavior, individual characteristics and comorbid conditions may impact when and how behavior is exhibited. For example, excessive substance use can be a coping mechanism to address other comorbid mental health conditions, which could impact a parent's behavior both while under the influence of substances and sober.

Exposure to Violence

Research supports an association between parental problematic substance use and children's exposure to violence within and outside the family (Foran & O'Leary, 2008; Staton-Tindall et al., 2013). Exposure to violence describes two types of experiences, which place children at higher risk for negative mental health outcomes: direct victimization and witnessing violence. Direct victimization is associated with trauma symptoms for children and adolescents (Fowler et al., 2009) and the development of internalizing and externalizing disorders (Yoon et al., 2016). Witnessing intimate partner violence has also been associated with negative developmental outcomes for children (Hillis et al., 2017) and an increased likelihood of internalizing and externalizing behaviors in adolescence for children who have been maltreated (Moylan et al., 2010). After controlling for experiencing violence, some studies have found a significant association between witnessing violence and child behavior problems (Hazen et al., 2006), while other studies have not (Park et al., 2012).

Parental Monitoring

Problematic substance use by parents has been associated with decreased levels of parental monitoring and involvement (Fals-Stewart et al., 2004; Suchman & Luthar, 2000). While under the influence of substances, the reduced ability to take in less salient stimuli may result in decreased parental monitoring. Poor parental monitoring may serve as one pathway from parental problematic substance use to negative child outcomes through poor supervision of the child's location and actions. Poor parental monitoring may allow for the future victimization of the child by another individual or neglect of the child by the parent (Leifer et al., 2004; Widom & Hiller-Sturmhofel, 2001). Decreased parental monitoring has been linked to adolescent depression (Yap et al., 2014) and child behavior problems in the general population (Li & Cheng, 2017) and among mothers with an SUD (Brakenhoff et al., 2018).

Harsh Physical Discipline

Research indicates that parents who engaged in problematic substance use are more likely to self-report the use of harsh or ineffective discipline (Ammerman et al., 1999; Cohen et al., 2008; Hien & Honeyman, 2000; Kepple, 2018; Miller et al., 1999). In the literature, harsh physical discipline has primarily been assessed with three self-reported measures: the Child Abuse Potential Inventory (Milner, 1994), Parent–Child Conflict Tactics Scales (Straus et al., 1998), and Parental Punitiveness Scale. A history of parental SUDs has been associated with higher scores on the Child Abuse Potential Inventory (Ammerman et al., 1999; Cohen et al., 2008; Miller et al., 1999), the Parent–Child Conflict Tactics Scales (Kepple, 2018; Miller et al., 1999), and the Parental Punitiveness Scale (Hien & Honeyman, 2000; Miller et al., 1999). In Cohen et al. (2008), only the relationship of SUDs with the Child Abuse Potential Inventory was significant, and the relationship of SUDs with the Parent–Child Conflict Tactics Scales and the Parental Punitiveness Scale was nonsignificant. These studies are supportive of an association between a parental history of SUDs and punitive or harsh physical discipline, but many have been limited by small sample sizes limiting statistical power. Extensive research has demonstrated an association between experiencing harsh discipline and the development of internalizing and externalizing problems (Bayer et al., 2019; Laskey & Cartwright-Hatton, 2009; McKee et al., 2007).

Emotional Maltreatment

The American Academy of Pediatrics defines emotional maltreatment as the "repeated pattern of damaging interactions between parent(s) and child" that "occurs when a person conveys to a child that he or she is worthless, flawed, unloved, unwanted, endangered, or only of value in meeting another's needs" (Kairys et al., 2002, p. e68). Using a nationally representative sample of families from the National Family Violence Resurvey (Tajima, 2000), problematic alcohol use by a parent increased the odds of being verbally abused by 34%. Definitions and criteria for emotional maltreatment vary greatly based on state policies and legal definitions. Even when emotional maltreatment is identified, it is difficult to substantiate

due to state by state CPS mandates on necessary levels of evidence. However, experiencing emotional maltreatment has been associated with long-term negative outcomes including internalizing and externalizing problems (McKee et al., 2007).

The literature supports associations between parental substance use, negative parenting behaviors, and child behavior problems. However, prior work has been limited by smaller sample sizes, samples that are not representative of the child welfare system due to focused sampling methods (e.g., mothers recruited from maternity care clinics) and a lack of nationally representative samples. Further, research is needed which tests the parenting mechanisms through which substance use leads to child behavior problems.

Current Study

Substance use alone does not produce all the child harm that is associated with parental substance use. Problematic substance use impacts parenting and through omission or commission, maltreatment, and child harm occur. Further examination is needed to understand these pathways that lead to child harm so that interventions and prevention can target these pathways. In a sample of families where the child remained in the home following a report of child maltreatment, the following hypotheses were tested:

Hypothesis 1: Exposure to violence will mediate the relationship from parental problematic alcohol use and problematic drug use at baseline to child internalizing and externalizing behaviors at 18-month follow-up.

Hypothesis 2: Parental monitoring will mediate the relationship from parental problematic alcohol use and problematic drug use at baseline to child internalizing and externalizing behaviors at 18-month follow-up.

Hypothesis 3: Harsh physical discipline will mediate the relationship from parental problematic alcohol use and problematic drug use at baseline to child internalizing and externalizing behaviors at 18-month follow-up.

Hypothesis 4: Emotional maltreatment will mediate the relationship from parental problematic alcohol use and problematic drug use at baseline to child internalizing and externalizing behaviors at 18-month follow-up.

Method

Participants and Data

This analysis used data from Waves 1 and 2 of the National Survey of Child and Adolescent Well-Being II (NSCAW II), a study sponsored by the Administration for Children and Families and the U.S. Department of Health and Human Services. The NSCAW II is a national probability sample of children and their families who were investigated for child maltreatment between February 2008 and April 2009. A two-stage stratified sampling process was used in the NSCAW II. There were eight sampling strata with seven of these representing U.S. states with the largest child welfare caseloads. The remaining stratum contains all other states that participated. Primary sampling units were randomly selected from within the eight strata. Primary sampling units are typically at the CPS agency level, but sometimes contain more than one CPS agency in smaller jurisdictions. Families were randomly selected for participation from all families in the primary sampling unit who were investigated by CPS during the sampling time frame. Families were contacted for recruitment, and informed consent procedures were used. Additional information about the NSCAW II methodology is accessible through the National Data Archive on Child Abuse and Neglect (NDACAN, 2010). This study received human subjects approval by the author's institutional review board.

This study includes a subsample of NSCAW II cases, those in which the child remained in the home following the baseline maltreatment report. Measures in this study collected data in-person from the child's primary caregiver (most often the biological mother if involved) and the child. In this article, the term parent refers to the child's primary caregiver identified in NSCAW II whose legal relationship may be biological/step/foster/adoptive parents, custodial grandparents, or legal guardians providing long-term care. The subsample is limited to children who remained in the home because interviews with parents were only conducted in this sample. Table 1 compares demographics for families where children remained in the home at Wave 1 and the parent did not have a SUD ($N = 3{,}486$) to families where children remained in the home at Wave 1 and the parent did have a probable SUD ($N = 471$).

Measures

Parent self-report of problematic drug use. In this article, the terms problematic drug use and problematic alcohol use indicate that a parent is using drugs or alcohol to a degree that it is creating problems in the life of the individual. Problematic drug or alcohol use is an encompassing term, which covers lower levels of use that create problems in the life of the individual and use which meets diagnostic criteria for SUDs. Although SUD is a term with clear definitions, this article focuses on the spectrum of self-reported substance use from no substance use up to high self-reported levels. An individual who does not meet criteria for an SUD may still have trouble with parenting that is associated with their moderate substance use.

Collected during the baseline interview, using Audio Computer–Assisted Self-Interview (ACASI) technology, parent self-report of problematic drug use was assessed with the 20-question Drug Abuse Screening Test–20 (DAST-20; Skinner, 1982). Items on the DAST-20 assess for life problems due to drug use including problems with relationships (e.g., Has drug abuse created problems between you and your spouse or your parents?), employment (e.g., Have you lost your job because of drug abuse?), and legal concerns (e.g., Have you engaged in illegal activities to obtain drugs?) as well as a questions about adverse reactions (e.g., Have you ever

Table 1. Demographics of Parents With and Without a Probable SUD.[a]

Families With Child In-Home at Wave 1		
Variables	Without SUD[b] *n* (%)[c]	With SUD[b] *n* (%)[c]
N	3,486	471
Age in years[d]	33.27 (32.00)	33.82 (32.00)
Gender		
Male	323 (9.38)	29 (8.20)
Female	3,163 (90.62)	494 (91.80)
Race		
White/non-Hispanic	1,477 (48.61)	266 (50.05)
Black/non-Hispanic	961 (20.81)	109 (13.54)
Hispanic	819 (24.74)	120 (25.15)
Other	221 (5.84)	28 (11.26)
Highest level of education		
Beyond high school degree	928 (27.19)	122 (27.89)
High school degree	1,547 (45.83)	229 (36.06)
Less than high school degree	1,006 (26.98)	171 (36.05)
Poverty		
Above poverty line	1,290 (41.09)	167 (35.33)
At or below poverty line	1,933 (58.91)	302 (64.67)
Marital status		
Married	961 (32.63)	95 (20.48)
Separated	410 (13.83)	66 (14.25)
Divorced	526 (17.92)	94 (25.76)
Widowed	67 (2.37)	12 (3.14)
Never married	1,515 (33.25)	255 (36.37)

Note. AUDIT = Alcohol Use Disorders Identification Test; DAST-20 = Drug Abuse Screening Test–20; SUD = substance use disorder.
[a]Scoring an 8 or higher for men and 5 or higher for women on the AUDIT or scoring 6 or higher on the DAST-20 for men and women. [b] SUD indicated by score of ≥6 on the DAST-20 or score of ≥5 on AUDIT for women or ≥8 on AUDIT for men. [c] Values reflect weighted row percentages. [d] Values reflect weighted mean (and median).

experienced withdrawal symptoms [felt sick] when you stopped taking drugs?) and help-seeking behavior (e.g., Have you gone to anyone for help for drug problems?). Response options for each item are yes or no. To provide the strongest power to detect effects (MacCallum et al., 2002), level of problematic drug use served as a continuous independent variable. Total scores on the DAST-20 can range from 0 to 20 with higher scores indicating higher levels of drug-related problems in the past 12 months (Skinner, 1982). Internal consistency for the DAST-20 has been found to be high ranging from .74 to .95 across studies (Yudko et al., 2007) with acceptable test–retest reliability (Cocco & Carey, 1998). In this sample, Cronbach's coefficient α was .88.

Parent self-report of problematic alcohol use. Collected from the parent, using ACASI technology, during the baseline interview, level of problematic alcohol use in the past year was assessed with the 10-question Alcohol Use Disorders Identification Test (AUDIT; Saunders et al., 1993). The first 3 items on the measure assess for alcohol consumption (e.g., How often do you have six or more drinks on one occasion?), Items 4–6 assess for drinking behavior that indicates dependence (e.g., During the past year, how often have you found that you were not able to stop drinking once you had started?), and Items 7–10 assess for alcohol-related problems and adverse reactions (e.g., Have you or someone else been injured as a result of your drinking?). Items 1 through 8 can receive 0–4 points, and Items 9 and 10 can receive either 0, 2, or 4 points each for a total possible score of 40 points. Response sets for the items vary by question, but most questions use a 5-point Likert-type scale of *never* (0), *less than monthly* (1), *monthly* (2), *weekly* (3), and *daily or almost daily* (4). Used as a continuous independent variable to provide the strongest power to detect effects, total scores on the AUDIT can range from 0 to 40 with higher scores indicating higher levels of problematic alcohol use (Saunders et al., 1993). The AUDIT consistently demonstrates a high level of internal consistency and high test–retest reliability (Reinert & Allen, 2007). In this sample, Cronbach's coefficient α was .85.

Child internalizing and externalizing behaviors. Collected at the 18-month follow-up, child internalizing and externalizing behaviors were continuous dependent variables measured with the Internalizing and Externalizing subscales of the Child Behavior Checklist in children 18 months and older. Child behaviors were measured with the parent's report of internalizing and externalizing behaviors on two age-appropriate versions of the Child Behavior Checklist (Achenbach, 1991, 1992). Questions assessing for internalizing behaviors on the Child Behavior Checklist assess for symptoms of anxiety or depression including crying a lot, being too dependent, nervous gestures or behavior, and unnecessary panic. Questions assessing for externalizing behaviors on the Child Behavior Checklist assess for symptoms of acting out or problems with anger including defiance, destroying property, and injuring self or others. Responses use a 3-point Likert-type scale ranging from *not true* (0), *somewhat or sometimes true* (1), and *very or often true* (2). The continuous *T*-scores (range 0–100) were utilized, with higher scores indicating a stronger likelihood of having an internalizing or externalizing disorder. In this sample, internal consistency of the Internalizing subscale of the Child Behavior Checklist was good, averaging .87 for children 18 months to 5 years old and .90 for children 6 years and older. Internal consistency of the Externalizing subscale of the Child Behavior Checklist was also good, averaging .92 for children 18 months to 5 years old and .93 for children 6 years and older.

Exposure to violence. In children aged 8 years and older, exposure to violence was measured with the Violence Exposure Scale–Revised (VEX-R)—Home Set at baseline (Fox & Leavitt, 1995). Administered using ACASI technology, the VEX-R measures children's exposure to violent and criminal acts by an adult in the home using questions with cartoon illustrations. Children are asked about their experiences of both witnessing violence (e.g., How many times have you seen an adult throw something at another person in a home you've lived in?) and experiencing violence (e.g., How many times has an adult

thrown something at you in a home you've lived in?) in their home. Response options are (0) *never*, (1) *1 time*, (2) *a few times*, or (3) *lots of times*. Questions assess for yelling at a person, throwing items at a person, hard pushing or shoving, spanking, slapping, beating, stealing, pointing a knife or gun at someone, stabbing, shooting someone, and observing arrest or drug dealing. In the NSCAW II study, the cartoon illustrations and example questions (e.g., How many times have you watched TV?) were only used with children aged 8–10 years (NDACAN, 2010). Children aged 11–18 years were asked the questions which assess for violence exposure, but they were not shown cartoon illustrations to make the measure developmentally appropriate for older children. Scores on the VEX-R are a continuous count of the number of times that a child reports witnessing or experiencing violence. In this sample, Cronbach's coefficient α was .91.

Parental monitoring. In children aged 10 years and older, the level of parental monitoring was measured at baseline with the child's responses on the Parental Monitoring subscale of the Supervision-Child Scale from the Fast Track Project (Ammerman et al., 1999; Conduct Problems Prevention Research Group, 1995). Children were asked five questions about the extent to which their caregiver monitors their activities and arranges supervision for them (e.g., If you did not come home by the time you were supposed to be in, how often would your caregiver know?). Other questions assessed for awareness of who the child is with, what time they should be home, what they are doing, and the ability of the child to contact the parent. Response options were (1) *almost never*, (2) *once in a while*, (3) *sometimes*, (4) *often*, and (5) *almost always*. Scores were the mean of the 5 items, with higher scores indicating a higher level of parental monitoring. In this sample, Cronbach's coefficient α was .69.

Harsh physical discipline. Using ACASI technology, harsh physical discipline was measured with parent self-report on the Physical Assault subscale of the Parent–Child Conflict Tactics Scale (Straus et al., 1998). Questions in this subscale assess for lesser acts of harsh physical discipline like spanking, slapping, or pinching (e.g., In the past 12 months, how many times have you slapped this child on the face or head or ears?) up through severe physical abuse including beating, burning, or threatening with a knife or gun (e.g., In the past 12 months, how many times have you burned or scalded this child on purpose?). Response options are never/not in past 12 months, 1 time, 2 times, 3–5 times, 6–10 times, 11–20 times, or more than 20 times. Scores are continuous with higher scores indicating a higher degree of harsh physical discipline in the last 12 months. Although widely used in the field, the Parent–Child Conflict Tactics Scales have low internal consistency reliability ($\alpha = .55$ for the Physical Assault subscale; Straus et al., 1998). This limitation is acknowledged by the developers of the measure. In this sample, Cronbach's coefficient α was .78 for physical assault.

Emotional maltreatment. Based on parent self-report at baseline using ACASI technology, emotional maltreatment was measured with the Psychological Aggression subscale of the Parent–Child Conflict Tactics Scale (Straus et al., 1998). Questions in this subscale assess for verbal aggression (e.g., In the past 12 months, how many times have you shouted, yelled, or screamed at this child?) and verbal threats (e.g., In the past 12 months, how many times have you threatened to spank or hit this child but did not actually do it?). Response options are never/not in past 12 months, 1 time, 2 times, 3–5 times, 6–10 times, 11–20 times, or more than 20 times. Scores are continuous with higher scores indicating a higher degree of emotional maltreatment in the last 12 months. In this sample, Cronbach's coefficient α was .62 for psychological aggression. Previous research reports internal consistency reliability as $\alpha = .60$ for this subscale (Straus et al., 1998).

Control variables. Control variables used in the analysis were child gender, child age, poverty, and prior CPS report. Child age is the age of the child at the baseline interview ranging from 0 to 17.5 years. Child gender is a dichotomous (male or female) control variable. Poverty is a dichotomous variable with families either being at or beneath the poverty line or above the poverty line based on family income and the number of adults and children in the household. Prior CPS report is defined as whether or not the family had a prior CPS report at baseline. Child's race/ethnicity and number of children in the home were also considered as conceptually important control variables.

Statistical Analyses

Path analysis mediation models were used in this analysis. Using the split-half approach (Kline, 2011), a random 50% sample ($n = 1{,}633$) was utilized for the analyses. All models were run on the randomly sampled half data set that was created. This method allows the utilization of a systematic model building approach in which prior models are used to inform the development of nested models that include the previously significant path. In the first set of models, the first step was to test the direct relationship from each parental problematic substance use variable (alcohol use and drug use, separately) to each dependent variable (internalizing and externalizing disorders, separately). Next, four single-mediator models were run for each set. In each single-mediator model, the direct relationship from the single independent to the single dependent variable and the indirect relationship through one of the hypothesized mediators (emotional maltreatment, harsh physical discipline, parental monitoring, and exposure to violence) were tested. See Figure 1 for an example of a single-mediator model with emotional maltreatment as the mediator. Parallel mediator models are models in which all the mediators are mediating separate paths between the independent and dependent variables rather than two or more mediators sequentially separating the independent and dependent variables. If more than one of the single-mediator models was significant, then

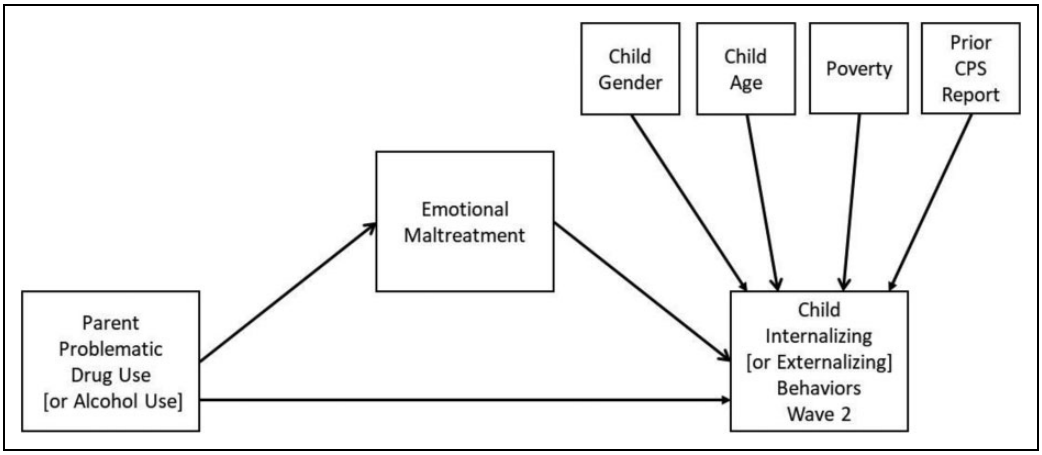

Figure 1. Single-mediator model of problematic drug or alcohol use to internalizing or externalizing behaviors through emotional maltreatment.

double parallel mediator models were run for each combination of two significant mediators. If three or more mediators were significant in the single-mediator models, triple parallel mediator models were run for each combination of three significant mediators. The fit indices of the mediator models were compared to determine which model(s) provided the strongest fit with the data. Confirmation models were run on the remaining half of the data set.

Data management was conducted with SAS Version 9.2, descriptive analyses with STATA, and path models with Mplus Version 7.0. Descriptive analyses and path models account for stratification, clustering, and weighting. Path models utilized the maximum likelihood with robust standard errors estimator, which is the estimator recommended by Mplus for models with all continuous dependent variables when stratification, clustering, and weighting must be taken into account. Full information maximum likelihood was used in the path models. In the path analysis models, the type of analysis utilized was the complex analysis (i.e., type = complex) to account for the complex survey data.

Global model fit was assessed with the χ^2 test of model fit, comparative fit index (CFI), Tucker–Lewis Index (TLI), and root mean square error of approximation (RMSEA; Hu & Bentler, 1999). To indicate a strong model fit on the χ^2 test of model fit, the χ^2 should be nonsignificant. The χ^2 test of model fit is biased in larger samples and more likely to be significant despite a strong model fit to the data (Kline, 2011). However, χ^2 values that are nonsignificant with large samples indicate a very strong fit for the data. For this reason, the χ^2 test of model fit was examined in these models. Other fit indices have been created to compensate for the bias of the χ^2 test of model fit in large samples and have been reported. Respectively, indicators of strong model fit on the CFI, TLI, RMSEA, and standardized root mean square residual (SRMR) are $\geq$0.90, $\geq$0.90, <0.05 and nonsignificant, and <0.05 (Hu & Bentler, 1999; Kline, 2011).

Results

Prevalence of Substance Use

Using a cut point of 8 or higher for men and 5 or higher for women (Reinert & Allen, 2007), the prevalence of a probable alcohol use disorder was 8.28% in the unweighted sample and 8.27% weighted. Using a cut point of 6 for the DAST-20 (Skinner, 1982), the prevalence of a probable drug use disorder was 5.32% in the unweighted sample and 2.66% weighted. The prevalence of a probable SUD (drug use disorder or alcohol use disorder) was 11.90% in the unweighted sample and 9.71% weighted. Just over half of the sample (50.16%) reported some alcohol use (score of 1 or greater) and 35.11% reported a score of 1 or higher on the DAST-20.

Bivariate Analyses

In bivariate analyses, the number of children in the home was highly associated with poverty (Wald $\chi^2 = 39.28$, $p < .0001$) and prior reports on the family (Wald $\chi^2 = 8.94$, $p = .0038$). Child's race/ethnicity was significantly associated with poverty (Wald $\chi^2 = 8.23$, $p = .0001$) and the number of children in the household (Wald $\chi^2 = 3.00$, $p = .0364$). To prevent multicollinearity, child's race/ethnicity and number of children in the home were dropped from the models due to their significant relationship and conceptual overlap with poverty. Poverty was the variable retained due to its theoretical- and empirically based relationship with child well-being.

Child Internalizing Behaviors

When including the control variables in the model, a significant direct pathway from parental self-reported problematic alcohol use to child internalizing behaviors at 18-month follow-up was present ($\mu = .12$, $p < .05$). However, a direct pathway from parent self-reported problematic drug use to child internalizing behaviors at 18-month follow-up was no longer present after

the inclusion of the control variables. As current methods support the testing of mediating effects even when there is not a significant direct pathway (Hayes, 2009), mediation was still tested for both models.

In the single-mediator models, which all included the control variables, emotional maltreatment and harsh physical discipline were significant single mediators that fully mediated the relationship from parent self-reported problematic alcohol and drug use to child internalizing behaviors at 18-month follow-up. Parental monitoring and exposure to violence were not significant single mediators. A double parallel mediator model (harsh physical discipline and emotional maltreatment) was run for both alcohol and drug use. For both models, when harsh physical discipline and emotional maltreatment were both mediators in the model, only emotional maltreatment was a significant pathway.

The model with the strongest fit for problematic alcohol use to child internalizing behaviors was the single mediation model in which emotional maltreatment fully mediates the relationship from problematic alcohol use to child internalizing behaviors at 18-month follow-up when including the control variables in the model. The model indicates that increased problematic alcohol use is associated with increased emotional maltreatment, which is associated with increased child internalizing behaviors ($R^2 = .089$). Model fit was excellent across the fit indices with a nonsignificant χ^2, $\chi^2(4, N = 1{,}082) = 2.88$, $p = .58$, and good model fit on RMSEA (0.000, $p = .987$), CFI (1.00), TLI (1.00), and SRMR (0.013). The standardized specific indirect effect of alcohol to internalizing through emotional maltreatment was significant ($\mu = .047$, $\sigma = .013$, $p < .001$).

The model with the strongest fit for problematic drug use to child internalizing behaviors was the single mediation model in which emotional maltreatment fully mediates the relationship from problematic drug use to child internalizing behaviors at 18-month follow-up when including the control variables in the model. The model indicates that increased problematic drug use is associated with increased emotional maltreatment, which is associated with increased child internalizing behaviors ($R^2 = .104$). Model fit was strong for the χ^2 test of model fit, $\chi^2(4, N = 1{,}015) = 5.90$, $p = 0.207$; RMSEA (0.022, $p = .904$), CFI (0.96), SRMR (0.021), and borderline for the TLI (0.89). The standardized specific indirect effect of drug use to internalizing through emotional maltreatment was significant ($\mu = .037$, $\sigma = .017$, $p = .026$).

Child Externalizing Behaviors

When including the control variables in the model, there was a significant direct pathway from parent self-reported problematic alcohol use to child externalizing behaviors at 18-month follow-up ($\mu = .08$, $p < .05$). However, there was not a significant direct pathway from parent self-reported problematic drug use to child externalizing behaviors at 18-month follow-up when including the control variables in the model.

In the single-mediator models, which all included the control variables, both emotional maltreatment and harsh physical discipline were significant mediators from parent self-reported problematic alcohol and drug use to child externalizing behaviors at 18-month follow-up. Exposure to violence was a significant mediator in only the problematic alcohol use model and not the problematic drug use model. Parental monitoring was not a significant single mediator in problematic drug use or problematic alcohol use models.

For problematic alcohol use to externalizing behavior at 18-month follow-up, when emotional maltreatment and harsh physical discipline were both mediators in the model and the control variables were included, only emotional maltreatment was a significant pathway. For problematic alcohol use to externalizing behavior at 18-month follow-up, two additional double parallel mediator models (emotional maltreatment with exposure to violence, harsh physical discipline with exposure to violence) and one triple parallel mediator model were conducted to examine all the combinations of the significant mediators.

For both problematic alcohol and drug use to child externalizing behavior at 18-month follow-up, the model with the strongest fit statistics was the single-mediator model through emotional maltreatment when including the control variables. Emotional maltreatment fully mediated the relationships in both models. These models indicate that increased problematic alcohol or drug use is associated with increased emotional maltreatment, which is associated with increased child externalizing behaviors. Model fit was strong across all fit indices in both models. Model fit for problematic alcohol use to externalizing behaviors through emotional maltreatment ($R^2 = .178$) was strong with a nonsignificant χ^2, $\chi^2(4, N = 1{,}082) = 2.88$, $p = .58$, and good model fit on RMSEA (0.000, $p = .987$), CFI (1.00), TLI (1.00), and SRMR (0.014). The standardized specific indirect effect of alcohol to externalizing through emotional maltreatment was significant ($\mu = .071$, $\sigma = .018$, $p < .001$). Model fit for problematic drug use to externalizing behaviors through emotional maltreatment ($R^2 = .206$) was also strong with a nonsignificant χ^2, $\chi^2(4, N = 1{,}015) = 5.90$, $p = .207$, and good model fit on RMSEA (0.022, $p = .904$), CFI (0.98), TLI (0.94), and SRMR (0.022). The standardized specific indirect effect of drug to externalizing through emotional maltreatment was significant ($\mu = .053$, $\sigma = .023$, $p = .023$).

Using the second half of the split sample, the finalized path models were run again to test for confirmation. Two of the four models were confirmed in the second half of the sample: (1) single-mediator model from self-reported problematic alcohol use to internalizing behaviors through emotional maltreatment and (2) single-mediator model from self-reported problematic alcohol use to externalizing behaviors through emotional maltreatment.

Discussion

In the confirmed models, emotional maltreatment was a consistent pathway from self-reported problematic alcohol use to

internalizing and externalizing behaviors that were supported in both halves of the data. Only the alcohol use models with emotional maltreatment as a mediator were confirmed in the second half of the data set. This may indicate that the proposed relationships are stronger within the context of probable alcohol use disorders. However, it could also be that the inability to separate out the acute effects of different types of drugs may be impacting the relationships seen in the drug use models. The lower rates of drug use within the sample may also have impacted the lack of confirmation. There was some support for the role of harsh physical discipline as a mediator, but it was no longer a significant mediator when both emotional maltreatment and harsh physical discipline were included in the same model.

Exposure to violence was a significant mediator in only the problematic alcohol use model, and this was not confirmed in the second half of the sample. Despite evidence that exposure to violence is associated with the development of internalizing and externalizing disorders, the experiences of direct victimization and witnessing violence impact children differently (Moylan et al., 2010; Yoon et al., 2016). Prior studies have found mixed results when examining the added impact of witnessing violence in samples of children who have already experienced violence (Hazen et al., 2006; Park et al., 2012; Yoon et al., 2016). Future research examining mediation in a high-risk child welfare sample should unpack exposure to violence into the separate experiences of witnessing violence versus experiencing violence. It is possible that in this sample at high risk for the development of child behavior problems, witnessing violence was not as strongly linked to the development of internalizing and externalizing disorders as in a lower risk sample.

This analysis did not support parental monitoring as a mediator in the pathway from problematic substance use to child internalizing and externalizing behaviors. Despite the established importance of parental supervision, some research suggests that the measurement of parental monitoring is actually collecting data on the children's levels of self-disclosure to a parent (Rodríguez-Meirinhos et al., 2020). By asking children to self-report a parent's knowledge of their child's activities or friends, the child is also describing whether or not the child has disclosed that information to the parent. The child cannot be aware of everything the parent knows but only that information which they have discussed together. This open communication reflects the larger dynamic present between the parent and the child that goes beyond parental monitoring. In a sample of children at high risk for child maltreatment, the lack of significance in the parental monitoring pathway may be reflective of the parent–child relationship rather than the true ability of the parent to supervise the child's activities.

Large longitudinal data sets, including the NSCAW II, contain limitations inherent in the collection of large amounts of data at multiple waves. Data were not collected on drug type. Thus, this analysis cannot specifically reflect on the opioid crisis. However, as a nationally representative child welfare sample of families investigated between 2008 and 2009, opioid use disorders are likely to present within the sample. Further research is needed to examine the relationship of opioid use disorders with emotional maltreatment. Although parents were informed of the confidential procedures taken in the study and allowed to provide their responses using ACASI, some may have chosen to not report sensitive information including problematic substance use. Parents had a previous history of involvement with CPS and could have felt that disclosure of this information could negatively impact their relationship with CPS.

In addition, parents in the study reported their own substance use, their own behaviors related to emotional maltreatment and harsh physical discipline, and their child's externalizing and internalizing behaviors. Although research supports the accuracy of self-reported substance use (Hilario et al., 2015; Schuler et al., 2009), less is known about reporting parenting behavior or children's behaviors. Some research indicates that correlations between self-report and observation of parenting behavior are highest for young children, but results are inconsistent and sample sizes were small (Zahidi, 2018). Prolonged and severe substance use may impact information processing and recall, and this could be relevant for a small portion of subjects. If high levels of substance use impacted the ability of some parents to recall their own behaviors or those of their child, this likely resulted in an underreporting of negative parenting behaviors or child internalizing and externalizing behaviors.

It is a limitation that self-report of parental problematic substance use cannot be examined in the foster care sample. The NSCAW II data set only contains parent self-report measures (e.g., AUDIT, DAST-20) for families in which the child remained in the home following the baseline investigation. While the majority of CPS-involved children (87%) do remain in the home following an investigation (Dolan et al., 2011), research indicates a higher prevalence of parental problematic substance use in the foster care system compared to lower levels of CPS involvement (Seay, 2015; Semidei et al., 2001). If self-report measures were available in the entire sample, it is expected that a larger percentage of SUDs and possibly higher rates of harsh physical discipline and emotional maltreatment may be present. It is hypothesized that the specified relationships and the direction of the pathways would be the same in this sample but that the power to detect effects would be increased. Additional research is needed to test these pathways in a sample of families where children are removed from the home. Like the NSCAW I, the NSCAW II has numerous strengths which outweigh the existing limitations (Kohl et al., 2009), and the self-report of parental substance use was a strength of this data set given the limitations of caseworker reported SUDs (Seay, 2019).

Results suggest emotional maltreatment is a critical target of interventions for parents with probable SUDs. Although data from the Adverse Childhood Experiences Study indicate that 11.1% of children experience emotional maltreatment in childhood (Felitti et al., 2019), it is rarely reported to or substantiated by CPS. The strength of the relationship and the

confirmation of these models contribute to the evidence that emotional maltreatment is among the most salient factors leading to child harm in this population. Leading evidence-based parenting interventions often focus on decreasing corporal punishment. Equal attention must be made to strengthening the parent–child relationship through enhanced communication skills, improved bonding, and providing treatment services to address substance use. For parents engaged in substance use, skills training to mitigate risk toward the child should focus on finding appropriate care for one's child while using substances and deferring responses when upset (e.g., not engaging with a child on heated topics while drinking). Future research should also examine the role of parental comorbid mental health conditions on the pathway from substance use to child internalizing and externalizing behaviors and the potential differences that could be present in the models as children pass through developmental stages.

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References

Achenbach, T. M. (1991). *Manual for the Child Behavior Checklist/4-18 and 1991 profiles*. Department of Psychiatry, University of Vermont.

Achenbach, T. M. (1992). *Manual for the Child Behavior Checklist/2-3 and 1992 profile*. Department of Psychiatry, University of Vermont.

Ammerman, R. T., Kolko, D. J., Kirisci, L., Blackson, T. C., & Dawes, M. A. (1999). Child abuse potential in parents with histories of substance use disorder. *Child Abuse & Neglect*, *23*(12), 1225–1238.

Bayer, J. K., Morgan, A., Prendergast, L. A., Beatson, R., Gilbertson, T., Bretherton, L., Hiscock, H., & Rapee, R. M. (2019). Predicting temperamentally inhibited young children's clinical-level anxiety and internalizing problems from parenting and parent wellbeing: A population study. *Journal of Abnormal Child Psychology*, *47*(7), 1165–1181.

Brakenhoff, B., Wu, Q., & Slesnick, N. (2018). Substance using mothers experiencing suicidal thoughts: Impact of parenting behaviors on child behavior problems. *Journal of Child and Family Studies*, *27*(2), 629–638. https://doi.org/10.1007/s10826-017-0897-z

Cocco, K. M., & Carey, K. B. (1998). Psychometric properties of the drug abuse screening test in psychiatric outpatients. *Psychological Assessment*, *10*(4), 408.

Cohen, L. R., Hien, D. A., & Batchelder, S. (2008). The impact of cumulative maternal trauma and diagnosis on parenting behavior. *Child Maltreatment*, *13*(1), 27–38.

Conduct Problems Prevention Research Group. (1995). *Supervision questionnaire—Child (grade 4/year 5)*. https://fasttrackproject.org/techrept/s/sch/supervision_child.pdf

Dolan, M., Smith, K., Casanueva, C., & Ringeisen, H. (2011). *NSCAW II baseline report: Introduction to NSCAW II* (OPRE Report #2011-27a). Office of Planning, Research and Evaluation, Administration for Children and Families, U.S. Department of Health and Human Services.

Fals-Stewart, W., Kelley, M. L., Fincham, F. D., Golden, J., & Logsdon, T. (2004). Emotional and behavioral problems of children living with drug-abusing fathers: Comparisons with children living with alcohol-abusing and non-substance-abusing fathers. *Journal of Family Psychology*, *18*(2), 319.

Felitti, V. J., Anda, R. F., Nordenberg, D., Williamson, D. F., Spitz, A. M., Edwards, V., Koss, M. P., & Marks, J. S. (2019). Relationship of childhood abuse and household dysfunction to many of the leading causes of death in adults: The adverse childhood experiences (ACE) study. *American Journal of Preventive Medicine*, *56*(6), 774–786.

Foran, H. M., & O'Leary, K. D. (2008). Alcohol and intimate partner violence: A meta-analytic review. *Clinical Psychology Review*, *28*(7), 1222–1234.

Fowler, P. J., Tompsett, C. J., Braciszewski, J. M., Jacques-Tiura, A. J., & Baltes, B. B. (2009). Community violence: A meta-analysis on the effect of exposure and mental health outcomes of children and adolescents. *Development and Psychopathology*, *21*(01), 227–259.

Fox, N. A., & Leavitt, L. A. (1995). *The Violence Exposure Scale for children (VEX-R)*. University of Maryland.

Giancola, P. R., Josephs, R. A., Parrott, D. J., & Duke, A. A. (2010). Alcohol myopia revisited: Clarifying aggression and other acts of disinhibition through a distorted lens. *Perspectives on Psychological Science*, *5*(3), 265–278. https://doi.org/10.1177/1745691610369467

Hayes, A. F. (2009). Beyond Baron and Kenny: Statistical mediation analysis in the new millennium. *Communication Monographs*, *76*(4), 408–420.

Hazen, A. L., Connelly, C. D., Kelleher, K. J., Barth, R. P., & Landsverk, J. A. (2006). Female caregivers' experiences with intimate partner violence and behavior problems in children investigated as victims of maltreatment. *Pediatrics*, *117*(1), 99–109.

Hien, D., & Honeyman, T. (2000). A closer look at the drug abuse—Maternal aggression link. *Journal of Interpersonal Violence*, *15*(5), 503–522.

Hilario, E. Y., Griffin, M. L., McHugh, R. K., McDermott, K. A., Connery, H. S., Fitzmaurice, G. M., & Weiss, R. D. (2015). Denial of urinalysis-confirmed opioid use in prescription opioid dependence. *Journal of Substance Abuse Treatment*, *48*(1), 85–90.

Hillis, S. D., Mercy, J. A., & Saul, J. R. (2017). The enduring impact of violence against children. *Psychology, Health & Medicine*, *22*(4), 393–405. https://doi.org/10.1080/13548506.2016.1153679

Hu, L., & Bentler, P. M. (1999). Cutoff criteria for fit indexes in covariance structure analysis: Conventional criteria versus new alternatives. *Structural Equation Modeling*, *6*(1), 1–55. https://doi.org/10.1080/10705519909540118

Kairys, S. W., & Johnson, C. F., & Committee on Child Abuse and Neglect. (2002). The psychological maltreatment of children—Technical report. *Pediatrics*, *109*(4), e68–e68.

Kepple, N. J. (2018). Does parental substance use always engender risk for children? Comparing incidence rate ratios of abusive and neglectful behaviors across substance use behavior patterns. *Child Abuse & Neglect*, *76*, 44–55. https://doi.org/10.1016/j.chiabu.2017.09.015

Kline, R. B. (2011). *Principles and practice of structural equation modeling* (3rd ed.). Guilford Press.

Kohl, P. L., Jonson-Reid, M., & Drake, B. (2009). Time to leave substantiation behind: Findings from a national probability study. *Child Maltreatment*, *14*(1), 17–26.

Laskey, B., & Cartwright-Hatton, S. (2009). Parental discipline behaviours and beliefs about their child: Associations with child internalizing and mediation relationships. *Child: Care, Health and Development*, *35*(5), 717–727.

Leifer, M., Kilbane, T., & Kalick, S. (2004). Vulnerability or resilience to intergenerational sexual abuse: The role of maternal factors. *Child Maltreatment*, *9*(1), 78–91.

Li, Q., & Cheng, T. C. (2017). New evidence in physical violent behaviors among school-aged children: A multiple disadvantages model. *Children and Youth Services Review*, *81*, 301–308. https://doi.org/10.1016/j.childyouth.2017.08.021

MacCallum, R. C., Zhang, S., Preacher, K. J., & Rucker, D. D. (2002). On the practice of dichotomization of quantitative variables. *Psychological Methods*, *7*(1), 19.

McKee, L., Roland, E., Coffelt, N., Olson, A. L., Forehand, R., Massari, C., Jones, D., Gaffney, C. A., & Zens, M. S. (2007). Harsh discipline and child problem behaviors: The roles of positive parenting and gender. *Journal of Family Violence*, *22*(4), 187–196.

Miller, B. A., Maguin, E., & Downs, W. R. (1997). Alcohol, drugs, and violence in children's lives. In M. Galanter (Ed.), *Recent developments in alcoholism* (Vol. *13*, pp. 357–385). Springer.

Miller, B. A., Smyth, N. J., & Mudar, P. J. (1999). Mothers' alcohol and other drug problems and their punitiveness toward their children. *Journal of Studies on Alcohol*, *60*(5), 632–642.

Milner, J. S. (1994). Assessing physical child abuse risk: The child abuse potential inventory. *Clinical Psychology Review*, *14*(6), 547–583.

Moylan, C. A., Herrenkohl, T. I., Sousa, C., Tajima, E. A., Herrenkohl, R. C., & Russo, M. J. (2010). The effects of child abuse and exposure to domestic violence on adolescent internalizing and externalizing behavior problems. *Journal of Family Violence*, *25*(1), 53–63.

National Data Archive on Child Abuse and Neglect. (2010). *National Survey of Child and Adolescent Well-Being: NSCAW II, Wave 1 data files user's manual restricted release version*. Author.

Osborne, C., & Berger, L. M. (2009). Parental substance abuse and child well-being: A consideration of parents' gender and coresidence. *Journal of Family Issues*, *30*(3), 341–370.

Park, A., Smith, C., & Ireland, T. (2012). Equivalent harm? The relative roles of maltreatment and exposure to intimate partner violence in antisocial outcomes for young adults. *Children and Youth Services Review*, *34*(5), 962–972.

Pernanen, K. (1991). *Alcohol in human violence*. Guilford Press.

Reinert, D. F., & Allen, J. P. (2007). The alcohol use disorders identification test: An update of research findings. *Alcoholism: Clinical and Experimental Research*, *31*(2), 185–199.

Risser, H. J., Messinger, A. M., Fry, D. A., Davidson, L. L., & Schewe, P. A. (2013). Do maternal and paternal mental illness and substance abuse predict treatment outcomes for children exposed to violence? *Child Care in Practice*, *19*(3), 221–236.

Rodríguez-Meirinhos, A., Vansteenkiste, M., Soenens, B., Oliva, A., Brenning, K., & Antolín-Suárez, L. (2020). When is parental monitoring effective? A person-centered analysis of the role of autonomy-supportive and psychologically controlling parenting in referred and non-referred adolescents. *Journal of Youth and Adolescence*, *49*(1), 352–368.

Saunders, J. B., Aasland, O. G., Babor, T. F., De La Fuente, J. R., & Grant, M. (1993). Development of the Alcohol Use Disorders Identification Test (AUDIT): WHO collaborative project on early detection of persons with harmful alcohol consumption-II. *Addiction*, *88*(6), 791–804. https://doi.org/10.1111/j.1360-0443.1993.tb02093.x

Schuler, M. S., Lechner, W. V., Carter, R. E., & Malcolm, R. (2009). Temporal and gender trends in concordance of urine drug screens and self-reported use in cocaine treatment studies. *Journal of Addiction Medicine*, *3*(4), 211.

Seay, K. D. (2015). How many families in child welfare services are affected by parental substance use disorders? A common question that remains unanswered. *Child Welfare*, *94*(3), 19–51.

Seay, K. D. (2019). Detection of problematic substance use in the child welfare system: A comparison of self-report and caseworker report. *Child Maltreatment*, *24*(2), 152–160.

Seay, K. D., & Kohl, P. L. (2015). The comorbid and individual impacts of maternal depression and substance dependence on parenting and child behavior problems. *Journal of Family Violence*, *30*(7), 899–910. https://doi.org/10.1007/s10896-015-9721-y

Semidei, J., Radel, L. F., & Nolan, C. (2001). Substance abuse and child welfare: Clear linkages and promising responses. *Child Welfare*, *80*(2), 109.

Skinner, H. A. (1982). The drug abuse screening test. *Addictive Behaviors*, *7*(4), 363–371.

Staton-Tindall, M., Sprang, G., Clark, J., Walker, R., & Craig, C. D. (2013). Caregiver substance use and child outcomes: A systematic review. *Journal of Social Work Practice in the Addictions*, *13*(1), 6–31.

Straus, M. A., Hamby, S. L., Finkelhor, D., Moore, D. W., & Runyan, D. (1998). Identification of child maltreatment with the Parent–Child Conflict Tactics Scales: Development and psychometric data for a national sample of American parents. *Child Abuse & Neglect*, *22*(4), 249–270.

Suchman, N. E., & Luthar, S. S. (2000). Maternal addiction, child maladjustment and socio-demographic risks: Implications for parenting behaviors. *Addiction*, *95*(9), 1417–1428.

Tajima, E. A. (2000). The relative importance of wife abuse as a risk factor for violence against children. *Child Abuse & Neglect*, *24*(11), 1383–1398.

Vanderploeg, J. J., Connell, C. M., Caron, C., Saunders, L., Katz, K. H., & Tebes, J. K. (2007). The impact of parental alcohol or drug removals on foster care placement experiences: A matched comparison group study. *Child Maltreatment*, *12*(2), 125–136.

Widom, C. S., & Hiller-Sturmhofel, S. (2001). Alcohol abuse as a risk factor for and consequence of child abuse. *Alcohol Research & Health*, *25*(1), 52–52.

Yap, M. B. H., Pilkington, P. D., Ryan, S. M., & Jorm, A. F. (2014). Parental factors associated with depression and anxiety in young people: A systematic review and meta-analysis. *Journal of Affective Disorders*, *156*, 8–23.

Yoon, S., Steigerwald, S., Holmes, M. R., & Perzynski, A. T. (2016). Children's exposure to violence: The underlying effect of posttraumatic stress symptoms on behavior problems. *Journal of Traumatic Stress*, *29*(1), 72–79.

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.

Zahidi, R. (2018). *Relationship between self-report and observed parenting among parents in coerced and non coerced population*. Georgia State University. https://scholarworks.gsu.edu/iph_theses/556