



## Caregiver qualities, family closeness, and the well-being of adolescents engaged in the child welfare system



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### ABSTRACT

Children who come into contact with the child welfare system are at greater risk of experiencing internalizing and externalizing behaviors. This secondary analysis of the National Survey of Child and Adolescent Well-Being explored how caregiver characteristics and behaviors, and caregiver–child closeness influence these outcomes over time. The final sample was 877 caregiver and adolescent (11–17 years old) dyads. Weighted multivariate regression analyses were performed. Caregiver characteristics associated with depressive symptoms included age and education; caregiver health was not associated with internalizing and externalizing behaviors. For adolescents, being female, older, or Hispanic was associated with internalizing behaviors. Although not significant for externalizing behaviors, caregiver–adolescent closeness was protective against internalizing behaviors. Understanding factors that contribute to the mental health of child-welfare-exposed adolescents has far-reaching implications for family-based interventions with child-welfare-involved youth.

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### 1. Introduction

Children in the United States who come into contact with child welfare (CW) systems, whether or not the abuse or neglect is substantiated, are at greater risk of experiencing mental distress than those in the general population (Courtney et al., 2011). Endangering factors that often occur in tandem with child maltreatment, such as exposure to prenatal drugs or alcohol and interpersonal violence or other trauma (Raviv, Taussig, Culhane, & Garrido, 2010), predispose these youth to multifarious mental health problems (Springer, Sheridan, Kuo, & Carnes, 2007). Indeed, an estimated 80% of children with an active CW case present with internalizing or externalizing behaviors (Aarons et al., 2010). Given the elevated rates of mental health problems among adolescents in CW, it is particularly important to understand risk and protective factors that may influence outcomes for this population. As such, this work sought to elucidate the influence of caregiver characteristics, qualities, and behaviors to understand the impact of these factors on adolescent well-being.

#### 1.1. Internalizing and externalizing behaviors in adolescents

To understand the prevalence of and risks associated with internalizing (depression or anxiety) and externalizing behaviors (conduct disorders or sex and substance use behaviors) in adolescents, we reviewed data from the Youth Risk Behavior Survey (YRBS) conducted by the Centers for Disease Control and Prevention (Kahn et al., 2016). As a proxy for depressive symptoms, the YRBS uses the following question, “Have you felt sad or hopeless every day for 2 or more weeks in a row”; 29.9% of adolescents endorsed this statement (Kahn et al., 2016). Adolescent girls (39.8%) were more likely to endorse than adolescent boys (20.3%). Among girls, being younger increased the likelihood of reporting depressive symptoms (41.5% of 9th graders vs. 36.3% of 12th graders); the experience was reversed for boys, who are more likely to experience symptoms of depression as they age (16.7% of 9th graders vs. 23.9% of 12th graders; Kahn et al., 2016).

Regarding externalizing behaviors, among adolescents, 63.3% reported ever drinking alcohol, 22.6% reported ever being in a physical fight, and 41.2% reported ever having had sex (Kahn et al., 2016). Older age was associated with alcohol use (50.8% of 9th graders vs. 73.3% of 12th graders) and reports of sexual intercourse (24.1% of 9th graders vs. 58.1% of 12th graders); however, physical fighting was more common among younger adolescents (27.9% of 9th graders vs. 17.4% of 12th graders; Kahn et al., 2016). Differences also existed by gender, with male adolescents more likely than female adolescents to

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report being involved in a physical fight (28.4% vs. 16.5%, respectively) and having sexual intercourse (43.2% vs. 39.2%); however, girls were more likely to report alcohol use (65.3% vs. 61.4%; Kahn et al., 2016). Among CW-involved youth, patterns were similar, although rates of mental health problems were higher (42.7%; Heneghan et al., 2013) than a general sample of adolescents (as previously reported in YRBS statistics). CW-involved adolescents with mental health issues were more than twice as likely to report substance use, with older adolescents more likely to exhibit alcohol and drug use behaviors. As with depressive symptom reports in the YRBS sample, male adolescents were less likely than female adolescents to report depression (Heneghan et al., 2013).

### 1.2. Caregiver qualities and their influence on adolescents

The influence of family on the well-being of adolescents is intrinsically tied to availability, stability, and caregiver well-being. Parenting can be impaired by a caregiver's physical and mental health, abuse of alcohol and drugs, or both. Previous literature has suggested that caregiver mental health may be particularly impactful for youth mental health (Jacobs, Talati, Wickramaratne, & Warner, 2015). Maternal depression and symptomatology have been linked to poorer social and emotional outcomes (Goodman et al., 2011), including increased internalizing and externalizing behaviors (Campbell, Morgan-Lopez, Cox, McLoyd, & the NECR Network, 2009) among youth. Specifically, children with parents in poor physical or psychological health exhibit more depression and anxiety (Weissman et al., 2016). Further, parental physical illness has been associated with both internalizing and externalizing mental health symptoms among adolescents (Pakenham & Cox, 2014). Physical symptoms are also relevant predictors of a caregiver's ability to create stable family routines (Murphy, Armistead, Marelich, & Herbeck, 2015). Last, caregiver substance use may also be related to adolescent mental health (Seay & Kohl, 2015).

### 1.3. Caregiver–child closeness

In addition to intrinsic characteristics of caregivers, the relationship between caregiver and child has been linked to child outcomes (Raby et al., 2015) including depressive symptoms (Branje, Hale, Frijns, & Meeus, 2010; Smokowski, Bacallao, Cotter, & Evans, 2015). Supportive parenting has been shown to be predictive of social competence with peers and romantic partners and carryover of positive parenting practices to future offspring (Raby et al., 2015). Perceptions of positive parent–child closeness are associated with adolescent self-esteem (Bulanda & Majumdar, 2009) and decreased depressive symptoms (Boutelle, Eisenberg, Gregory, & Neumark-Sztainer, 2009). In fact, attachment and bonding between parent and child in adolescence is predictive of better psychosocial functioning in early adulthood (Raudino, Fergusson, & Horwood, 2013). Among CW-involved families, parental closeness is associated with reduced internalizing and externalizing behaviors (although there is limited identified research on the association between caregiver–child closeness and internalizing behaviors). For example, quality of the caregiver–child relationship has been linked to suicidal ideation among CW-involved adolescents (He, Fulginiti, & Finno-Velasquez, 2015). Further, greater caregiver–child closeness in CW-involved families has been found to reduce externalizing behaviors (DeLisle, 2010), including deviant behaviors (Snyder & Smith, 2015) and substance use (Cheng & Lo, 2010; Snyder, Gwaltney, & Landeck, 2015; Traube, James, Zhang, & Landsverk, 2012). Maternal relationships may be most influential (Branje et al., 2010) and have a more pronounced impact on outcomes for girls (Asselmann, Wittchen, Lieb, & Beesdo-Baum, 2015). This is important because of the predominance of female caregivers associated with CW-involved adolescents.

### 1.4. Theoretical framework

The current study is grounded in family systems theory (Minuchin, 1974), an extension of general systems theory (von Bertalanffy, 1973). General systems theory (von Bertalanffy, 1973) assumes that the system is greater and different than the sum of its parts. Family systems theory (Minuchin, 1974) therefore approaches an individual in his or her social context and conceptualizes the family as a unit influencing the functioning of each person. It argues that the causes of behavior are not based in the individual alone but in interactions with other family members. Understanding a child's behavior requires exploring the interactional patterns between the child and caregiver. Dissolution or distortion of boundaries between child and parental subsystems may be viewed as problematic because the child is not functioning within generational boundaries. Blos (1979) emphasized that one of the most important developmental tasks for adolescents is the process of separation and individuation; the child disengages from dependent ties with parents and gains autonomy. If the separation and individuation process is interrupted by family strain (e.g., CW involvement), this can affect an adolescent's mental health outcomes.

### 1.5. Summary

Studies of families from general populations show that parents can influence adolescent outcomes through parenting characteristics and parenting behaviors. In these populations, variations in relationship stability, quality, and behaviors is assumed. However, less is known about caregiver influence on adolescent mental health among adolescents whose caregivers have been investigated for child maltreatment. Among these families, intrafamilial relationships are inherently shattered. CW system involvement fundamentally calls into question the relationship of the parent and child; investigations are related to failures in parenting, the most severe of which result in the severing of the parent–child relationship though the removal of the child from the home. However, variation in relationship stability and quality and parenting behaviors is unknown. It is also unclear whether protective factors exist that can be harnessed in the parent–child relationship, even in families accused of maltreatment. Given the substantial number of families that come into contact with the CW system, there is an opportunity for family engagement in intervention not widely available to families in the general population. Understanding family risk and resilience mechanisms among CW-involved families provides a distinct opportunity to adapt interventions to be used when families are most vulnerable and in need and can be mandated to complete services.

### 1.6. Current study

Although the relationship between caregiver qualities and adolescent outcomes has been explored in the general population, the importance of these factors to outcomes for adolescents in the CW system is less well established, particularly the association of caregiver–child closeness with internalizing and externalizing behaviors. The current study investigated whether the behavioral health of CW-involved adolescents aged 11–17 years at baseline is a function of caregiver characteristics and family processes. Specifically, we examined whether caregiver depressive symptoms and adolescent perceptions of closeness and relationship satisfaction with their caregiver are predictors of adolescent mental health functioning 18 months later. Findings have the potential to highlight risk and protective factors for mental distress among CW-involved adolescents, which can inform intervention development to mitigate negative outcomes. Based on previous empirical findings with non-CW-involved adolescents, we hypothesized that increased caregiver depressive symptoms and poorer perceptions of caregiver–child relationship quality will predict increased internalizing and externalizing behaviors among CW-involved adolescents.

## 2. Methods

### 2.1. Procedure

The National Survey of Child and Adolescent Well-Being (NSCAW) consists of two nationally representative, longitudinal studies authorized by the U.S. Department of Health and Human Services, Administration for Children and Families in 1999–2002 (NSCAW I) and 2008–2011 (NSCAW II; Dolan, Smith, Casanueva, & Ringeisen, 2011; Dowd et al., 2004). The goal of the study—the first national probability study collecting data from CW-involved children and families—was to provide a better understanding of outcomes for children involved in the CW system due to investigation for abuse and neglect. All participant families had a recent referral to CW for alleged maltreatment. Contact with families for inclusion in the study occurred within 1 month of the referral, regardless of substantiation of the allegation.

Drawing from multidisciplinary perspectives such as CW, child development, and other relevant fields, this study collected comprehensive data on the impact of individual, caregiver–child relationship, community, and service factors on child development and well-being. Additional strengths of the data include: (a) data on child and caregiver characteristics; (b) wide-ranging standardized measures (e.g., behavioral and mental health) for both children and their caregivers; (c) follow-up waves of data at 18 and 36 months; and (d) a multistage national probability sample that allows for the generation of population-based estimates. For these analyses, we used data from the baseline and 18-month follow-up interviews of NSCAW II for these analyses.

The NSCAW II's sample was selected using a two-stage stratified sample design in which the United States was divided into nine sampling strata (Dolan et al., 2011). Eight of the strata corresponded to the eight states with the largest CW caseloads and the ninth stratum consisted of the remaining 38 states and the District of Columbia. In each of these nine strata, primary sampling units were formed and selected. The within-unit sampling process was conducted for all children investigated for child abuse or neglect by CW agencies during a 15-month period. Analysis weights were used to account for the complex sampling design (e.g., issues of missingness, nested data). Further information about the study procedures and sampling design is available elsewhere (Dowd et al., 2012). Approval for the current study was obtained from the institutional review board of [blinded for review].

### 2.2. Study participants

This current study used baseline data from a subsample of 1054 dyads of primary caregivers and adolescents (11–17 years old). Children younger than age 11 were excluded because questions regarding parent–child dynamics were only asked of children aged 11 or older. Further, children younger than 11 did not provide self-report data on the outcomes of interest; prior literature supports the use of child report, particularly on sensitive subjects (Jaccard, Dittus, & Gordon, 1998). In the NSCAW II dataset, primary caregivers were identified as the person most involved with the child on a day-to-day basis. Preliminary analyses indicated that 78% of the primary caregivers were biological parents and almost 92% were biological relatives (e.g., biological parents, grandparents, aunts, etc.).

Table 1 presents characteristics of the primary caregivers and adolescents. Most primary caregivers were biological parents (78%); the mean age of caregivers was 40 years. Although 30% of caregivers reported not completing high school, 34% reported having an associate degree, bachelor's degree, or higher. Twenty-seven percent of caregivers met criteria for major depression; 16% met the clinical cutoff for a substance use disorder. The mean score for physical health was 45.63 ( $SE = 0.67$ , range = 11.63–65.53).

More adolescents were girls (60%) and were (on average) 14 years old. The breakdown of self-identified race or ethnicity was 43% White, 28% Hispanic, 20% Black, and 9% other (which included all adolescent

participants who did not identify as White, Hispanic, or Black). Of allegations that were substantiated, the majority involved neglect, physical, or other types of abuse (approximately 27% each). Fifteen percent of adolescents resided in an out-of-home placement.

### 2.3. Measures

#### 2.3.1. Predictive variables (baseline)

Caregiver depression was captured using the Composite International Diagnostic Interview Short Form (Kessler, Andrews, Mroczek, Ustun, & Wittchen, 1998; Ringeisen, Casanueva, Smith, & Dolan, 2011). These 49 questions asked about depressive symptoms during the previous 12 months (Walters, Kessler, Nelson, & Mroczek, 2002). This instrument has been shown to accurately reproduce the diagnostic classifications of its longer format (Kessler et al., 1998). A dichotomous variable for major depression (*yes* or *no*) was generated when criteria (clinical cutoff point) were met for positive endorsement of dysphoric (sadness) or anhedonic (loss of interest in usually pleasurable activities) depressive symptoms.

The Alcohol Use Disorders Identification Test (AUDIT; Chuang, Wells, Bellettiere, & Cross, 2013) and the Drug Abuse Screening Test (DAST-20) were used to assess primary caregiver substance use disorders. The AUDIT (10 items) was developed by the World Health Organization and assesses the amount and frequency of alcohol consumption and adverse consequences associated with drinking. Psychometric properties of the AUDIT have been well established when using a cutoff score of 5 to detect dependence (Chuang et al., 2013). The DAST-20 consists of 20 dichotomous items designed to capture drug dependence. Internal consistency reliability of the DAST-20 has been good when using a cutoff score of 6 (Yudko, Lozhkina, & Fouts, 2007). A dichotomous variable (*yes* or *no*) indicated whether or not the caregiver met criteria for either alcohol or drug dependence (substance use disorder).

Caregiver physical health was measured using the physical health component of the Short Form Health Survey (Ware, Kosinski, & Keller, 1996), which has shown strong test–retest reliability ( $\alpha = 0.89$ ; Ware, Keller, & Kosinski, 1998). This study used the standardized physical score (ranging from 0 to 100) for all analyses, with 50 representing the national norm (Ware et al., 1998).

Additionally, adolescents' perceived closeness with their primary caregiver was measured using the relatedness scale of the Rochester Assessment Package for Schools (Lynch & Cicchetti, 1991). Youth responded to 24 items (4-point scale) that focused on their relationship with their primary caregiver. Mean scores were created by summing the scores of all items and dividing it by the number of items. Mean scores ranged from 1 to 5, with a higher score indicating a more positive caregiver–youth relationship. Internal consistency of this measure was good ( $\alpha = 0.85$ ). The weighted mean score for adolescents' perceived closeness with their caregiver was 3.25 ( $SE = 0.04$ ).

#### 2.3.2. Dependent variables (18 months)

The Children's Depression Inventory was used to measure adolescents' experiences with depression. This instrument contains 27 items, each rated on a 3-point Likert-type scale (0 = *absence of symptom*, 1 = *mild symptom*, 2 = *definite symptom*), that examine depressive symptoms organized in five domains: negative mood, interpersonal problems, ineffectiveness, anhedonia, and negative self-esteem (Kovacs, 1992). These items were summed to create a raw score (ranging from 0 to 45) used for all analyses. In the NSCAW II sample, internal consistency was good in samples that ranged in age from 7 to 15 years old, averaging 0.81 for 7- to 12-year-olds and 0.87 for 13- to 15-year-olds. The weighted mean score for depression was 9.80 ( $SE = 0.42$ ).

The Youth Self Report (YSR; Achenbach, 1991a), a companion to the Child Behavior Checklist, was designed to “obtain self-report of feelings and behavior in a standardized fashion for comparison with reports by normative groups of 11- to 18-year-olds” (p. iii). The YSR measures emotional and behavioral problems among adolescents, including

**Table 1**  
Characteristics of caregivers and adolescent youth and associates of adolescent mental health.

	Total (N = 1054)		Depression (M = 8.26, SE = 0.42)	Internalizing behavior (M = 11.07, SE = 0.51)	Externalizing behavior (M = 13.41, SE = 0.58)
	n	%	p	p	p
<i>Caregiver characteristics</i>					
Age <sup>a</sup>	39.88	0.46	0.11	0.40	0.51
20–34	265	29			
35–44	390	46			
45 +	317	25			
Biological parent	642	78	0.57	0.41	0.11
Education			0.58	0.37	0.68
No high school	225	30			
High school	380	36			
Beyond high school	364	34			
Depression	256	27	0.62	0.57	0.78
Substance use disorder	98	16	0.22	0.28	0.51
Physical health <sup>a</sup>	45.63	0.67	0.63	0.22	0.39
<i>Child characteristics</i>					
Female	583	59	<b>0.009</b>	<b>0.001</b>	0.20
Age <sup>a</sup>	13.62	0.11	0.73	0.99	0.38
11–13	491	50			
14 or 15	333	30			
16 or 17	230	20			
Race and ethnicity			<b>0.03</b>	0.15	0.87
White	400	43			
Black	286	20			
Hispanic	254	28			
Other	110	9			
Allegation type			0.46	0.75	0.87
Neglect	238	27			
Sexual abuse	117	11			
Emotional abuse	53	7			
Physical abuse	221	27			
Other	267	28			
Out-of-home placement	343	15	0.96	0.90	0.42
Closeness with caregiver <sup>a</sup>	3.25	0.04	<b>&lt;0.001</b>	<b>0.001</b>	<b>0.004</b>

Note. Bold indicates statistical significance at  $p < 0.05$ . Percentages are weighted.

<sup>a</sup> Figures represent mean and standard deviation.

internalizing (withdrawn, somatic complaints, and anxiety or depression) and externalizing (delinquent behavior and aggression) behaviors. In lieu of a measure of psychiatric diagnosis, the YSR is good proxy for capturing adolescent mental health problems, with a sensitivity of 0.60 and specificity of 0.73 relative to the Diagnostic Interview for Children (Jensen et al., 1995). This measure has well-established reliability and validity (Achenbach, 1991b) and has been used with CW-involved populations (Horwitz et al., 2012). Because the YSR is a continuous variable capable of producing more precise results, this study used the raw internalizing (ranging from 0 to 54) and externalizing (ranging from 0 to 49) behavior scores, as reported by youth, for all analyses. The weighted mean score for adolescent behavioral health scales was 12.01 ( $SE = 0.49$ ) for internalizing behavioral problems and 14.27 ( $SE = 0.50$ ) for externalizing behavioral problems. A previous study of 2522 adolescent junior high and high school students found mean scores for internalizing behavior of 13.66 ( $SD = 8.45$ ) for girls and 9.49 ( $SD = 7.18$ ) for boys and for externalizing behavior of 13.24 ( $SD = 6.92$ ) for girls and 13.77 ( $SD = 7.92$ ) for boys (Broberg et al., 2001).

### 2.3.3. Control variables

For caregivers, we controlled for gender (*male* or *female*), age (20 to 34, 35 to 44, and 45 or older), education level (*less than high school*, *high school graduate*, and *greater than high school*). With respect to adolescents, we controlled for gender (*male* or *female*), age (11–13, 14 or 15, and 16 or 17), race (*White*, *Black*, *Hispanic*, or *other*), maltreatment allegation type (*neglect*, *physical abuse*, *emotional abuse*, *sexual abuse*, or *other*), and out-of-home placement (*yes* or *no*). All control variables were derived from baseline data.

### 2.4. Data analyses

Weights were used throughout the analyses to produce national estimates of CW-investigated children in the United States (Biemer, Christ, & Wiesen, 2009). Bivariate analyses were conducted to examine associations between primary caregiver behavioral health and several control variables (e.g., caregiver education, youth demographics, and CW-related variables) on adolescent mental health (depression and internalizing and externalizing behavior problems). Any variables associated with outcome variables of interest at  $p < 0.10$  in the bivariate analyses were included in multivariate regression analyses. However, sociodemographic variables for both primary caregivers and youth were included in the final analysis regardless of the strength of their association with outcome variables at the bivariate level. Three weighted multivariate regression models were fitted to evaluate the relationships of caregiver behavioral health attributes, caregiver–child closeness, and child mental health outcomes, after adjusting for covariates (Model 1 = depression; Model 2 = internalizing behavior; Model 3 = externalizing behavior). In the final models, a value of  $p < 0.05$  was considered to be statistically significant. All analyses were performed using Stata 13.

## 3. Results

Table 1 presents sample descriptive and bivariate relationships between caregiver and adolescent characteristics and adolescent behavioral health. Neither caregiver age nor caregiver–child biological relationship was associated with adolescent behavioral health. No individual caregiver characteristics were significantly associated with

adolescent behavioral health. Individual characteristics of adolescents were associated with adolescent behavioral health. Being female was associated with depression ( $p = 0.009$ ) and internalizing behaviors ( $p = 0.001$ ). Race and ethnicity was also associated with depression ( $p = 0.03$ ) but not with internalizing or externalizing behaviors. Neither maltreatment type nor out-of-home placement was associated with adolescent behavioral health. However, closeness to caregiver was associated with all three adolescent behavioral health outcomes (depression,  $p < 0.001$ ; internalizing behaviors,  $p = 0.001$ ; externalizing behaviors,  $p = 0.004$ ).

### 3.1. Multivariate relationships

The results of the weighted multivariate regression analyses are displayed in Table 2. Depression, internalizing behaviors, and externalizing behaviors were each modeled separately. Although not significant in the bivariate models, caregiver age and educational level were significantly associated with depression in adolescents. Further, individual adolescent characteristics, including age, gender, and race and ethnicity, were also significantly associated with behavioral health in some models.

Model 1 revealed that adolescents with older caregivers, on average, scored 2.17 (35–44 years;  $p = 0.02$ ) and 2.69 (45+ years;  $p = 0.04$ ) points higher with regard to depression severity than adolescents with caregivers younger than 35 years old. Caregiver education also influenced adolescent behavior problems. Compared to adolescents whose caregiver had less than a high school education, those whose caregiver had a high school education scored 2.79 points higher on the depression severity scale ( $p = 0.004$ ). A one-unit increase in perceived closeness with caregiver was associated with a 3.62-point decrease in adolescent depression severity ( $p < 0.001$ ). Some demographic characteristics were also significantly associated with adolescent depression scores. Adolescents aged 14 or 15 years, on average, scored 1.87 points higher on depression severity ( $p = 0.01$ ) than those between the ages of 11 and 13 years. Adolescents who self-identified as Hispanic, on

average, scored 3.68 points higher on depression severity than those who self-identified as White ( $p = 0.002$ ).

Although variation existed among some of the demographic characteristics associated with internalizing behaviors (Model 2), no caregiver characteristics were associated with internalizing behaviors. On the other hand, caregiver–child relationships remained significant; a one-unit increase in perceived closeness with caregiver was associated with a 3.63-point decrease in internalizing behavior problems ( $p = 0.001$ ). Female adolescents scored 2.44 ( $p = 0.02$ ) points higher on internalizing behavior problems than their male counterparts. Adolescents aged 14 or 15 years, on average, scored 2.55 points higher on internalizing behaviors ( $p = 0.02$ ) than those between the ages of 11 and 13 years. Adolescents who self-identified as Hispanic, on average, scored 3.15 points higher on internalizing behaviors those who self-identified as White ( $p = 0.03$ ).

Finally, in Model 3, three variables were associated with externalizing behaviors: caregiver education, caregiver closeness, and adolescent age. Compared to adolescents whose caregiver had less than a high school education, those whose caregiver had a high school education scored 2.69 points higher on the depression severity scale ( $p = 0.02$ ). Adolescents aged 14 or 15 years scored, on average, 2.50 points higher on externalizing behavior problems than adolescents between the ages of 11 and 13 years ( $p = 0.03$ ). As in the other models, caregiver–adolescent closeness was protective. A one-unit increase in perceived closeness with caregiver was associated with a 2.98-point decrease in externalizing behavior problems ( $p = 0.009$ ).

## 4. Discussion

Using a longitudinal, nationally representative sample of caregivers and adolescents engaged with the CW system, this work investigated the impact of caregiver characteristics and caregiver–adolescent closeness on adolescent internalizing and externalizing behaviors. Although parent–child relationship satisfaction (including closeness) has been found to be important to internalizing (Boutelle et al., 2009; Bulanda & Majumdar, 2009) and externalizing (Cederbaum, Hutchinson, Duan,

**Table 2**  
Multivariate regression models of adolescent mental and behavioral health.

	Depression ( $n = 730$ )			Internalizing behavior ( $n = 733$ )			Externalizing behavior ( $n = 733$ )		
	<i>b</i>	<i>SE</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>p</i>	<i>b</i>	<i>SE</i>	<i>p</i>
<i>Caregiver characteristics</i>									
<i>Age</i>									
35–44	2.17	0.90	<b>0.02</b>	1.79	1.18	0.13	1.96	1.31	0.14
45+	2.69	1.30	<b>0.04</b>	2.85	1.84	0.13	1.15	1.70	0.50
<i>Education</i>									
High school	2.79	0.93	<b>0.004</b>	2.23	1.33	0.10	2.69	1.16	<b>0.02</b>
Beyond high school	0.47	1.12	0.68	−0.14	1.46	0.92	1.30	1.68	0.44
Depression	0.96	0.97	0.33	1.02	1.06	0.34	0.10	1.08	0.93
Physical health	0.01	0.03	0.64	−0.02	0.04	0.66	0.02	0.04	0.56
<i>Child characteristics</i>									
<i>Female</i>									
	1.02	0.87	0.25	2.44	0.98	<b>0.02</b>	0.37	1.09	0.73
<i>Age</i>									
14 or 15	1.87	0.75	<b>0.01</b>	2.55	1.04	<b>0.02</b>	2.50	1.14	<b>0.03</b>
16 or 17	−2.60	1.76	0.15	−3.11	1.94	0.11	−1.20	2.46	0.63
<i>Race</i>									
Black	0.30	0.80	0.71	0.40	1.41	0.78	−1.09	1.40	0.44
Hispanic	3.68	1.13	<b>0.002</b>	3.15	1.42	<b>0.03</b>	1.21	1.89	0.52
Other	0.39	1.46	0.79	−0.58	1.77	0.74	−1.25	1.63	0.45
<i>Allegation type</i>									
Sexual abuse	1.03	1.16	0.38	1.79	1.81	0.33	0.06	1.75	0.97
Emotional abuse	1.72	1.55	0.27	0.79	1.82	0.67	3.65	3.84	0.35
Physical abuse	1.50	0.95	0.12	2.34	1.60	0.15	1.73	1.51	0.26
Other	0.47	1.11	0.68	−0.20	1.47	0.89	−1.46	1.39	0.30
Closeness with caregiver	−3.62	0.76	<b>&lt;0.001</b>	−3.63	1.03	<b>0.001</b>	−2.98	1.12	<b>0.009</b>
$R^2$	0.2459			0.1847			0.1221		

Note. Bold indicates statistical significance at  $p < 0.05$ .

& Jemmott, 2013; Habib et al., 2010; Markham et al., 2010) behaviors, this work contributes to our understanding of the influence of caregiver–child relationship closeness in highly vulnerable CW-involved families. In these analyses, adolescents who reported higher levels of closeness with their caregiver had lower rates of internalizing and externalizing problems 18 months later. Our findings show that, even in disrupted family systems, closeness between adolescents and caregiver can serve as a protective factor against poor behavioral outcomes for this high-risk population.

The primary hypotheses guiding these analyses were that caregiver depression and poor caregiver–child closeness would be associated with increased internalizing and externalizing behaviors among adolescents. Study findings support these hypotheses in that caregiver–child closeness was associated with greater internalizing and externalizing behaviors. However, caregiver depression, often linked to child depression (Goodman et al., 2011; Schleider, Chorpita, & Weisz, 2014), was not significantly associated with adolescent depression or other internalizing and externalizing behaviors in this sample. Further, other individual caregiver characteristics, including physical health status and clinical substance abuse, were not associated with adolescent internalizing or externalizing behaviors. These results are surprising, because previous research has found that these factors have the potential to affect child well-being (Pakenham & Cox, 2014). One explanation for the lack of findings consistent with previous studies may be related to the independent impact of caregiver characteristics. In other words, caregivers with mental or physical health problems or substance abuse issues may be less successful in forming supportive relationships with adolescents.

In this study, caregiver–child closeness was independently protective against internalizing and externalizing behaviors in adolescents. The protective nature of caregiver–child relationships has been noted by others, particularly in relation to mental health (Sang, Cederbaum, & Hurlburt, 2014), sexual health (Cederbaum et al., 2013; Guilamo-Ramos et al., 2012), and substance use (Cederbaum, Barman-Adhikari, Guerrero, & Hutchinson, 2016; Visser, de Winter, & Reijneveld, 2012). The current study, however, is among few that have shown that even among families experiencing stressors that lead to engagement with CW systems, parent–child relationships are protective against adolescents experiencing internalizing and externalizing symptoms. This aligns with previous literature that found that closeness in CW-involved families serves as a protective factor against substance use behaviors, specifically alcohol and polysubstance use (Cheng & Lo, 2010; Snyder et al., 2015; Traube et al., 2012), and delinquency behaviors (Snyder & Smith, 2015). Further, there is evidence that closeness with caregivers reduces suicidal ideation in CW-involved adolescents (He et al., 2015). This work extends the prior literature by examining depressive symptoms (as measured by the Children's Depression Inventory) and other internalizing symptoms (i.e., anxiety and social isolation; YSR). Given that symptoms of depression and anxiety are more common in CW-involved populations than the general population, revealing important associations between caregiver–child closeness and adolescent mental health problems provides direction for family-level interventions to reduce the exacerbation of these issues over time.

Additionally, several individual adolescent baseline characteristics were found to be associated with internalizing (as measured by the Children's Depression Inventory and YSR) and externalizing (YSR) behaviors. Although few differences were correlated with individual characteristics, both adolescent age and gender were predictive of well-being. As compared to younger adolescents, slightly older adolescents (aged 14 or 15) experienced greater internalizing and externalizing symptoms, whereas no differences were found between the youngest (aged 11 to 13) and oldest (aged 16 or 17) adolescents in our sample. This suggests that CW-involved children in midadolescence may be at greater risk of reactions to CW involvement, indicating that these adolescents specifically could benefit from targeted behavioral prevention and intervention practices. We found more limited influence of gender

in this work. As noted in previous empirical studies, girls, as compared to boys, are more likely to internalize responses to difficult experiences (Asselmann et al., 2015; Kort-Butler, 2009). In contrast, externalizing behaviors are more frequently noted among boys who are experiencing family stressors (Chaplin & Aldao, 2013). However, in this work, we found no significant differences in reported levels of externalizing behaviors by gender.

These discrepant results may be attributed to the fact that prior studies did not account for closeness in relationships to caregivers or other adults. Because caregiver–child closeness served as a strong protective factor, this may have ameliorated the effects of gender in our study. Expanded research should therefore examine the potential moderating role of caregiver–child closeness (e.g., interactions between caregiver–child closeness and gender) in relation to problematic behaviors among CW-involved youth. Last, we are unable in this work to account for resiliency; resiliency may be an important protective factor against internalizing and externalizing behaviors. Prior work has shown that individual coping (Zimmer-Gembeck & Skinner, 2011) and resilience (Weissman et al., 2016) in youth with a history of maltreatment were protective against negative outcomes. Further work should include measures of resiliency, along with measures of risk, to better understand the factors that may be protective against negative outcomes among adolescents who have experienced maltreatment.

#### 4.1. Limitations

Although this exploration of the impact of caregiver characteristics and caregiver–child closeness on adolescent well-being provided valuable insights to apply in the CW system, there are relevant limitations to note. First, the construct of caregiver mental health was limited to depressive symptoms only; the authors acknowledge that other mental health stressors experienced by caregivers may also (or potentially more significantly) affect adolescent mental health. Future work would be bolstered by inclusion of other measures of caregiver mental health to explore their effect on adolescent well-being. Further, the caregiver physical health measure was limited; this might explain why this construct had no significant influence on adolescent well-being. More comprehensive measures of physical health would better inform our understanding of how caregiver illness affects adolescent well-being. Further, we were unable to parse the nature of the relationships among caregiver mental health, child mental health, and caregiver–child closeness. Although mental health and closeness were used as predictive variables, child mental health could be predictive of caregiver–child closeness. Further work that explicates the directionality of the relationships between these variables is highly warranted. Finally, because the current study used data from a national sample, it would be prudent to perform location-specific data analysis before applying findings to changes in CW agency policy.

## 5. Conclusion

These findings have important implications for children and adolescents in the CW system. Understanding factors that contribute to the mental health of these children has far-reaching implications, particularly for the success of placements. The results of the current study suggest that improving the quality of relationships between CW-involved youth and their caregivers can have a strong impact on the functioning of children and adolescents. Directing resources toward relationship development may therefore serve a preventive purpose by reducing instances of adolescents whose escalating mental health needs require more intensive clinical intervention. Family treatment, which provides the opportunity to build strong and supportive relationships, may be a particularly effective means of intervening with CW-involved youth.

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