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Authors

Deardorff, Julianna

Borgen, Natasha

Rauch, Stephen

et al.

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Maternal Adverse Childhood Experiences and Young Adult Latino Children's Mental Health

Julianna Deardorff, PhD^{1,2}, Natasha Borgen, MPH³, Stephen Rauch, MPH², Katherine Kogut, MPH², Brenda Eskenazi, PhD²

¹Community Health Sciences Division, School of Public Health, University of California at Berkeley, Berkeley, California 94720

²Center for Environmental Research and Community Health (CERCH), School of Public Health, University of California at Berkeley, Berkeley, California 94720

³Philip R. Lee Institute for Health Policy Studies, Bixby Center for Global Reproductive Health University of California at San Francisco, San Francisco, California 94158

Abstract

Introduction: Maternal adverse childhood experiences (ACEs) have been linked to a variety of negative health outcomes in young children, however young adults and, specifically, young adult Latinos have been vastly understudied. This study investigates the intergenerational pathway between maternal ACEs and behavioral health outcomes of their young adult (YA) children, as mediated through YAs' own ACEs and maternal depression.

Methods: Structural equation modeling was used to analyze data (in 2023) from mothers and their YA children (n=398 dyads) enrolled in the Center for the Health Assessment of Mothers and Children of Salinas (CHAMACOS) cohort, a primarily Latino agricultural sample. Maternal and YA ACEs were self-reported retrospectively at an 18 year old visit (2018–2020). YA- and maternal-reported internalizing and maternal-reported externalizing behaviors were assessed at 18 years of age with the Behavior Assessment for Children, 2nd edition. Maternal depression was assessed at a 9 year old visit (2010–2012) using the Center for Epidemiologic Studies Depression Scale.

Results: Maternal and YA ACEs were weakly but statistically significantly correlated (R=0.22). Maternal ACEs were statistically significantly associated with maternal-reported youth internalizing symptoms ($\beta=0.29$; 95%CI: 0.19, 0.38; $p<0.001$) and externalizing symptoms ($\beta=0.24$; 95%CI: 0.14, 0.33; $p<0.001$), and marginally associated with youth-reported internalizing symptoms ($\beta=0.08$; 95%CI: $-0.02, 0.18$ $p=0.13$). Youth ACEs and maternal depressive symptomatology mediated associations between maternal ACEs and YA outcomes.

Conclusion: Findings demonstrate potential impacts of adversity across generations in Latino immigrant families, an understudied population. Understanding mechanisms and factors associated with these pathways may lead to strategies that prevent poor mental health outcomes in YAs.

Introduction

Over half of US adults report at least one Adverse Childhood Experience (ACE), including household substance abuse, parental separation, or physical abuse. Rates are highest among people of color, including Latinos.¹ Early adversity increases risk for poor physical and mental health across the life course, including mental illness and substance use,^{2,3} which are prevalent among young Latinos.^{4,5} However, with few exceptions, Latinos - particularly those from immigrant families - have been underrepresented in the ACEs literature. Latino youth are more likely to experience trauma and are exposed to unique stressors that compound the effects of early adversity, including discrimination, lack of social support, threat of deportation, and poor access to healthcare.^{6,7} Moreover, evidence suggests intergenerational impacts with parents' experiences of adversity during their own childhoods predicting poorer socio-emotional and behavioral development in their children.⁸⁻¹³ Researchers have posited that ACEs exposure may be particularly detrimental for Latino parents by eroding protective cultural factors, such as familism, placing their children at higher risk for poor outcomes.¹² For this reason, research is needed to examine the effects of parental adversity on youth outcomes among Latinos.¹²

Parental ACEs may impact children's behavioral health through biological and psychosocial mechanisms. Biological mechanisms include epigenetic modifications in mothers and/or other biophysiological changes (e.g. stress response¹⁴, inflammation¹⁵), which may impact the *in utero* environment and affect the neurobiological development of the fetus.¹³ Psychosocial processes can originate in the prenatal period and unfold throughout the child's life. Research shows that maternal adverse experiences have consequences for young children's behavioral dysregulation.¹⁶ Moreover, maternal negative coping strategies (e.g., substance use during pregnancy¹⁷) have been linked to children's behavioral development.¹⁸ Parental depression, anxiety,^{19,20} and Post-Traumatic Stress Disorder (PTSD),^{21,22} may influence children's behavior via parenting behaviors (e.g., emotional availability, discipline techniques²³) and parent-child processes (e.g. attachment¹⁰). In the one study of Latino families, Ochoa et al. found that maternal depression and poor parent-adolescent communication mediated the association between parental ACEs and adolescent children's externalizing behaviors.¹² In addition, children experience their own adverse experiences, which independently influence their behavioral development.²⁴

Most studies on parental ACEs and child behavior have focused on outcomes at relatively early ages, prior to adolescence.¹³ A recent review¹³ suggests that higher maternal ACEs are consistently associated with children's internalizing and externalizing problems. This work has not been extended into late adolescence or young adulthood, a critical developmental period when the prevalence of mental health problems increases, which can set the stage for psychological disorders in adulthood.²⁵⁻²⁸²⁹ Another limitation is that mothers often are the sole reporters of ACEs and youth outcomes, and studies fail to include youth reports.

The current study addresses these gaps by examining the intergenerational impact of maternal ACEs on the behavioral health of young adults (YAs) from low-income, primarily immigrant, Latino families. Maternal depression and youth self-report of ACEs were

examined as mediators of these associations. Behavioral health was assessed using both youth and maternal report.

Methods

Study Sample

Participants are mother-child dyads enrolled in the Center for the Health Assessment of Mothers and Children of Salinas (CHAMACOS) cohort, which consists primarily of farmworker families in a California agricultural region.³⁰ Participants were enrolled in two waves. The first wave, enrolled in 1999–2000, consisted of 601 pregnant women receiving prenatal care at community clinics who were Spanish or English speaking, 18y old, <20wk gestation, and qualified for Medi-Cal. A second wave of 309 mothers of 9-year-old children (born 2000–2002) with similar demographics were recruited in 2010–2011. Dyads of both waves were assessed every 1 to 2 years. Follow-up visits when youth were 18 years of age were completed for 478 dyads (June 2018–March 2020), until COVID shelter-in-place. Of these, 26 included non-maternal caregivers, and 48 mothers and 7 youth did not complete the ACEs, resulting in 398 mother-child dyads.

Written informed consent was obtained from mothers and YAs at 18 years. Mothers and YAs were interviewed separately. Given low literacy levels among mothers, maternal interviews were conducted in mothers' language of choice (Spanish or English) by bilingual, bicultural interviewers who read questions aloud. For ACEs specifically, mothers were encouraged to read and respond independently, but most chose to have the items read to them and to answer aloud. YAs completed computerized questionnaires independently in English. The University of California Berkeley Committee for the Protection of Human Subjects approved study activities.

Measures

Maternal ACEs were assessed at the 18-year visit using an adapted version of the CDC-Kaiser ACEs checklist with minor edits for readability.³¹ Mothers answered yes/no to questions about 10 categories of adverse experiences before age 18: emotional abuse, physical abuse, sexual abuse, parental divorce/separation, household substance abuse, household mental health issues, household domestic violence, parental incarceration, emotional neglect, and physical neglect. A total ACEs score was computed (range 0–10).

Young Adult (YA) ACEs were assessed at the 18-year visit using a scale that aligned with the CDC-Kaiser ACEs,³¹ with modifications to address concerns about mandated reporting of child abuse (Appendix A). Youth were first asked to provide a count of how many items in a list of seven ACEs applied to them, with response options 0, 1, 2, 3, 4, or 5 or more. In addition, youth responded yes/no to three additional ACEs from the original scale (emotional abuse and neglect, physical neglect, and witnessing domestic violence). A total truncated YA ACEs score was computed (range 0–5, with values of 5 applied to YAs who may have experienced 6–10 ACEs).

Maternal depression was assessed using the Center for Epidemiologic Studies Depression Scale (CES-D)³¹ administered at the 9-year visit (Cronbach's alpha = 0.92).

Internalizing and externalizing outcomes were assessed at the 18-year visit using the Behavior Assessment System for Children, second edition (BASC-2). Both mothers and youth reported on youth internalizing problems.³² Only mother-reported externalizing scores were available because the BASC-2 youth self-report measure does not produce an externalizing composite score; this is supported by research which suggests that parents are better reporters of children's acting out behaviors than youth themselves.³³ BASC-2 data were continuous and standardized by age and sex (T-score mean = 50, SD = 10). Higher scores indicate more problematic behaviors, and 60+ indicates clinical risk.³²

Statistical analysis

Structural equation modeling (using Stata 16³⁴) was employed to test direct associations between maternal ACEs and youth outcomes and the mediating (indirect) effects of maternal depression and youth ACEs. The term “mediation” is used here despite the retrospective nature of ACEs assessments. This terminology, although consistent within the field, assumes temporality of events. Maternal ACEs, youth ACEs, and maternal depressive symptom scores were continuous variables in all models. Standardized coefficients were estimated.

Covariates were selected *a priori* and included maternal education at pregnancy (<6th grade, 7th–12th grade, or high school graduate and above); maternal marital status (married or living as married vs. not), household income (at or below the federal poverty level vs above), and HOME score (continuous), as reported at 9-year visit;³⁵ age mother came to the US (before 10y, 11–20y, and after 21y); and child's sex assigned at birth (male/female).

There were missing values for CES-D scores (n=37, 9.4%), household poverty (n=7, 1.8%), and HOME score (n=13, 3.3%) at 9 years. To account for these, Full Information Maximum Likelihood (FIML) was utilized. Missing values were considered to be missing at random based on Little's MCAR test.³⁶

Model goodness of fit was determined using the standardized root mean squared residual (SRMR; <0.08 indicates good fit), comparative fit index (CFI; >0.95 indicates excellent fit), and root mean square error of approximation (RMSEA; <0.08 indicates good fit).³⁷

Results

Table 1 presents sample descriptives and associations between covariates and maternal ACEs and youth behaviors. At delivery, mothers were 27.0 years old (SD=5.3) on average and 41.0% had less than a 6th grade education. Most mothers were born in Mexico (86.9%) and 83.4% moved to the US after age 10y. At the 9-year visit, 80.0% were married or living as married, and 70.1% were at or below the federal poverty level.

Over a quarter of mothers (26.6%) reported three or more ACEs with an average of 1.8 (SD=2.5). Mothers who graduated from high school, arrived in the US at or before age 10y, and were not married or living as married at the 9-year visit reported more ACEs. Mothers who were “at risk” for depression (based on a CES-D cut-point of 20³⁸) reported more ACEs, with 53.3% of mothers “at risk” reporting three or more ACEs compared to 22.3% of mothers who were not “at risk”. Among youth, 29.2% reported three or more ACEs, with

an average of 1.6 (SD=1.8). The correlation between maternal and youth ACEs was $r=0.22$ ($p<0.001$).

Mothers who were “at risk” for depression reported higher internalizing and externalizing behaviors for their youth (Table 1). In addition, mothers who graduated from high school, came to the US at or before age 10y, and did not live in poverty at the 9-year visit reported higher youth externalizing behavior scores. No sociodemographic variables were related to youth-reported internalizing scores. Youth with three or more ACEs had mothers with higher ACEs, and youth ACEs were associated with higher youth internalizing and externalizing behavior. The correlation between maternal and youth report of youth internalizing behavior was 0.30 ($p<0.001$).

As shown in Figure 1 and Appendix Table 1 (Part A), the total effect between maternal ACEs and youth-reported internalizing symptoms was marginally statistically significant ($\beta=0.08$; 95%CI: $-0.02, 0.18$. $p=0.13$). Higher maternal ACEs were statistically significantly associated with higher mother-reported youth internalizing symptoms (Part B) ($\beta=0.29$; 95%CI: $0.19, 0.38$; $p<0.001$) and with mother-reported youth externalizing symptoms (Part C) ($\beta=0.24$; 95%CI: $0.14, 0.33$; $p<0.001$). In all models (Parts A, B, and C), higher maternal ACEs were directly associated with higher youth ACEs ($\beta=0.17-0.18$; $p<0.001$) and higher maternal depressive symptoms ($\beta=0.26-0.27$; $p<0.001$).

As shown in Part A of Figure 1 and Appendix Table 1, youth ACE scores ($\beta=0.40$; 95%CI: $0.31, 0.49$; $p<0.001$) and maternal depressive symptoms ($\beta=0.13$; 95%CI: $0.03, 0.23$; $p=0.01$) were each associated with higher youth-reported internalizing. The indirect effect between maternal ACEs and youth-reported internalizing scores through youth ACEs was statistically significant ($\beta=0.07$; 95%CI: $0.03, 0.11$; $p=0.001$) as was the indirect effect through maternal depressive symptoms ($\beta=0.03$; 95%CI: $0.00, 0.06$; $p=0.02$). The combined indirect effect through youth ACEs and maternal depressive symptoms was statistically significant ($\beta=0.11$; 95%CI: $0.06, 0.16$; $p<0.001$) and accounted for most of the association between maternal ACEs and youth-reported internalizing (99.1%). The remaining direct effect of maternal ACEs on youth-reported internalizing was not statistically significant ($\beta=-0.03$; 95%CI: $-0.13, 0.07$, $p=0.57$).

As shown in Part B of Figure 1 and Appendix Table 1, youth ACEs and maternal depressive symptoms were associated with higher levels of mother-reported youth internalizing scores and statistically significant ($\beta=0.12$; 95%CI: $0.02, 0.21$, $p=0.02$; and $\beta=0.25$; 95%CI: $0.14, 0.35$; $p<0.001$, respectively). There was a marginally statistically significant indirect effect of maternal ACEs and mother-reported youth internalizing symptoms through youth ACEs ($\beta=0.02$; 95%CI: $-0.00, 0.04$; $p=0.051$) and a statistically significant indirect effect through maternal depressive symptoms ($\beta=0.07$; 95%CI: $0.03, 0.10$; $p<0.001$). The combined indirect effect between maternal ACEs and mother-reported youth internalizing symptoms via youth ACEs and maternal depressive symptoms ($\beta=0.09$, 95%CI: $0.05, 0.13$, $p<0.001$) accounted for 29.7% of the total effect. The direct effect from maternal ACEs to maternal-report of youth internalizing remained statistically significant ($\beta=0.20$, 95%CI: $0.11, 0.30$, $p<0.001$) when accounting for the mediators, indicating partial mediation.

As shown in Part C of Figure 1 and Appendix Table 1, youth ACEs were associated with higher mother-reported youth externalizing scores ($\beta=0.13$; 95% CI: 0.03, 0.22; $p=0.01$) and maternal depressive symptoms were marginally associated with this outcome ($\beta=0.09$; 95% CI: -0.01 , 0.19; $p=0.08$). There was a statistically significant indirect effect between maternal ACEs and mother-reported youth externalizing symptoms through youth ACEs ($\beta=0.02$; 95% CI: 0.00, 0.04; $p=0.04$) (Appendix Table 1), and a marginally statistically significant indirect effect through maternal depressive symptoms ($\beta=0.02$; 95% CI: -0.00 , 0.05; $p=0.09$). The combined indirect effect of youth ACEs and maternal depressive symptoms ($\beta=0.05$, 95% CI: 0.01, 0.08, $p=0.01$) comprised 19.4% of the total effect. When mediation was accounted for, the direct association between maternal ACEs and mother-reported youth externalizing scores remained statistically significant ($\beta=0.19$, 95% CI: 0.09, 0.29, $p<0.001$).

Discussion

In this cohort of Latino families in an agricultural area, results demonstrate that there is an intergenerational impact of early adversity experienced by the mother on YA outcomes. For youth-reported internalizing symptoms, the association was fully mediated by youth ACEs and maternal depressive symptoms. For maternal-reported youth internalizing and externalizing symptoms, the associations were partially mediated by these factors. These results add to an emerging body of research showing increased risk for socio-emotional problems among children whose mothers experienced early adversity during their own childhoods and extend these findings to the understudied population of US-born Latino youth whose mothers predominantly were immigrants.^{12,39,40}

This study further extends previous research by examining maternal ACEs and youth internalizing and externalizing symptoms in young adulthood. Findings suggest that mothers' early exposure to adversity has lasting effects on child well-being. This study confirmed previous findings that maternal depression mediates associations between maternal ACEs and child internalizing and externalizing symptoms.¹³ Results also support a potentially significant and as of yet under-reported mediating factor: youth's own ACEs. The finding that youth ACEs served as a mediator of associations between maternal ACEs and YA mental health indicate that youth ACEs, when available, merit inclusion in studies of this type. These findings are critically important as they lend further insight into the intergenerational challenges facing Latino immigrant families, particularly mixed-status families where one or both parents may be born outside of the United States.⁷

Studies with self-reported ACEs data from subsequent parent-child generations are rare. Schickedanz et al (2021) examined 2,205 US families with self-reported ACEs from the mother, father, and YA child.⁴¹ Results showed that YAs with at least one parent with very high ACEs (4 or more) were also at increased risk of very high ACEs.⁴¹ A study by Schofield et al (2018) reported on 451 families in rural communities with self-reported parental ACEs and an ACE measure for the YA child (co-reported by parents and child). Results showed that a 1-point increase in parents' ACEs was associated with a 0.34 increase in youth ACEs.⁴² In the current study, we also found a statistically significant, albeit modest, correlation between maternal and YA ACEs ($r=0.22$).

Research examining the effect of ACEs on Latino youth is scarce and previous findings have been mixed. A recent cross-sectional study of 456 low-income Hispanic parents and their adolescent children (ages 12–16 years) in South Florida showed that parental depression and parent-adolescent communication mediated associations between parental ACEs and youths' externalizing problems.¹² In contrast, two recent studies found that Latino children in immigrant families had significantly lower odds of ACE exposure despite higher poverty compared to Latino children with two US-born parents.^{43,44} In the present study, the long-term impact of maternal ACEs may reflect persistent struggles, such as adult mental health challenges and parenting difficulties, that mothers experience resulting from early adversity exposure.^{2,12,45,46} In addition, the majority of mothers in this sample were born outside of the United States, so it is likely that other hardships related to lack of U.S. citizenship, such as discrimination, fear of deportation, criminalization of status, poor access to healthcare, crowded housing, lack of inclusion and belonging, and limited employment opportunities, further compound these early life challenges. However, the specific cultural context and immigration-rated experiences of families in this cohort in relation to intergenerational transmission of ACEs and mental health sequelae have not yet been examined.

Future studies should incorporate measures that are specific to immigrant Latino populations to further unpack mechanisms that propagate intergenerational transmission of ACEs and poor outcomes. Research on protective factors, especially those that are specific to Latino immigrant populations,^{44,47,48} could be particularly valuable to identify areas for intervention.^{49,50} Moreover, results suggest that it is critical to evaluate not only children's ACEs in healthcare settings, but to take parental ACEs into account as well. This may be particularly true in clinics serving low-income immigrant communities, where past immigration trauma, threat of deportation, chronic stressors, lack of resources and poor access to care may deteriorate cultural protective factors and put families at even greater risk. An intergenerational, family-based, culturally-grounded model of care is arguably crucial to reduce intergenerational transmission of ACEs among Latino immigrants and mixed status families.

Limitations

The current study is subject to reporting bias. Though mothers and youth reported their ACEs at the same visit, mothers experienced a longer recall period. Moreover, maternal ACEs precede the putative mediators in time; however, they were assessed retrospectively, i.e., after maternal depression and at the same time as youth ACEs. Finally, recalling adverse experiences may be uncomfortable, resulting in underreporting. However, these limitations are inherent to studies using retrospective report of ACEs.⁵¹ It should be noted that, like many studies, method variance cannot be ruled out given mothers reported on their own ACEs, maternal depression, and child outcomes. Previous research has shown that mother's depression may bias her assessment of her child's outcomes.⁵² Future research should build on work³³ examining whether maternal ACEs and/or depression predict discrepancies in parent- and youth-report of mental health outcomes. In addition, low externalizing scores in this sample reduced variability in that outcome. Finally, the ACEs questionnaire does not assess adverse experiences that may specifically burden immigrant and/or Latino populations in the US, such as discrimination, family separation and deportation, which

represents an important next step in refining measurement tools.⁷ As ACE screening becomes more prevalent in primary care settings, it is crucial to incorporate items that assess the lived experiences of immigrant families.⁵³

Nonetheless, this study had several strengths. Longitudinal studies including self-reported ACEs from parent and child generations are scarce, particularly among Latinos. Consideration of YAs' direct experience of ACEs relative to their parents' ACEs is a valuable contribution to the growing literature on intergenerational impacts of ACEs.

Conclusions

In summary, findings revealed intergenerational associations between Latino mothers' experiences of adversity, youths' adversity, and YA children's mental and behavioral health. Most significantly, results highlight the associations of ACEs in an understudied population. Future research, including qualitative research, that centers the experiences of Latino immigrants is needed in order to better understand adverse events that may be unique to this population, which can inform programs and policies to improve health and mental health for young Latino adults. In addition to understanding the mechanisms by which adversity manifests through generations, future studies should focus on bolstering protective cultural factors that may lead to resilience in this population.

Supplementary Material

Refer to Web version on PubMed Central for supplementary material.

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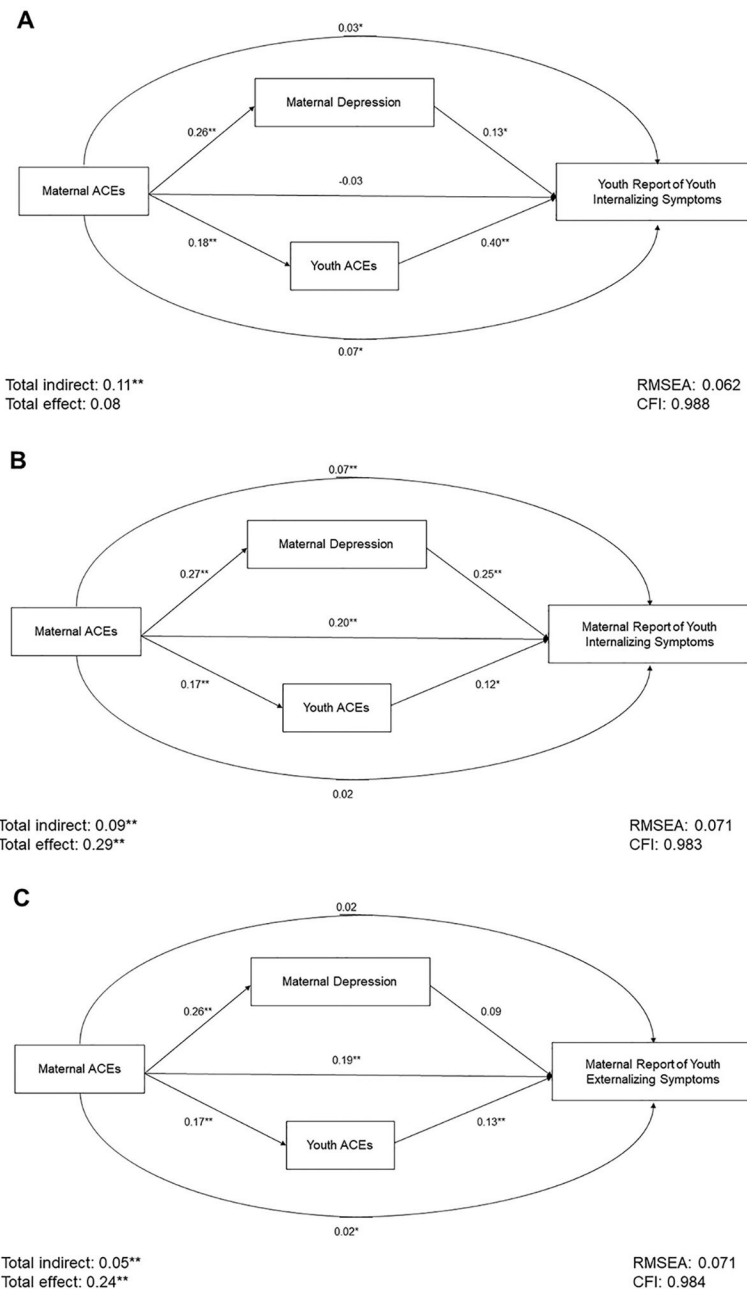


Figure 1. Results from path models^a of maternal ACEs on youth self-reported internalizing symptoms(A); mother-reported internalizing symptoms in their children (B); and mother-reported externalizing symptoms in their children (C) with maternal depression and youth ACEs as mediators. Solid lines represent statistically significant paths. Standardized β coefficients are presented.

^aModels control for youth sex; maternal education at pregnancy, age of arrival in the US, marital status at 9 years; and household poverty and HOME score at 9 years.

Abbreviations: ACEs: Adverse Childhood Experiences; HOME: Home Observation Measurement of the Environment.

Note: Boldface indicates statistical significance (* $p < 0.05$; ** $p < 0.01$).

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Table 1. Sociodemographic characteristics, young adult and maternal ACEs, and BASC Internalizing and Externalizing outcomes in CHAMACOS.

Characteristic	N (%)	Maternal ACEs Mean ± SD	Outcomes		
			YA-reported Internalizing Mean ± SD	Mother-reported Internalizing Mean ± SD	Mother-reported Externalizing Mean ± SD
Overall	398 (100.0)	1.8 ± 2.5	49.7 ± 11.2	50.3 ± 11.5	44.5 ± 7.6
Maternal education at pregnancy					
<6 th grade	163 (41.0)	1.4 ± 2.1	50.0 ± 11.3	50.0 ± 11.6	43.3 ± 7.6
7 th –12 th grade	141 (35.4)	1.8 ± 2.4	49.6 ± 11.6	51.0 ± 11.7	44.5 ± 7.0
High school graduate	94 (23.6)	2.4 ± 2.9	49.3 ± 10.3	50.1 ± 11.2	46.4 ± 8.2
Age mother arrived in US					
10 years old	66 (16.6)	2.8 ± 2.9	49.7 ± 11.5	49.5 ± 12.0	46.9 ± 8.8
11–20 years old	172 (43.2)	1.8 ± 2.5	49.9 ± 10.1	51.4 ± 12.2	45.5 ± 8.2
21 years old	160 (40.2)	1.3 ± 2.1	49.5 ± 12.2	49.6 ± 10.4	42.4 ± 5.6
Marital status at 9-year visit					
Married or living as married	318 (80.0)	1.5 ± 2.3	49.5 ± 10.9	50.1 ± 11.3	44.2 ± 7.3
Not married or living as married	80 (20.1)	2.7 ± 2.8	50.6 ± 12.3	51.4 ± 12.4	45.7 ± 8.8
Household income at 9-year visit					
At or below poverty level	279 (70.1)	1.7 ± 2.5	49.5 ± 11.7	50.4 ± 12.2	43.9 ± 6.9
Above poverty level	112 (28.1)	1.9 ± 2.4	50.5 ± 10.0	50.1 ± 9.5	46.0 ± 9.0
Missing	7 (1.8)				
Maternal depressive symptoms at 9-year visit (CES-D) ^{a,d}					
20 (at risk for depression)	60 (15.1)	3.3 ± 3.0	53.6 ± 12.6	56.3 ± 11.5	46.2 ± 7.1
<20 (not at risk for depression)	301 (75.6)	1.5 ± 2.2	48.8 ± 10.5	48.8 ± 10.5	44.1 ± 7.4
Missing	37 (9.3)				
Youth sex					
Female	212 (53.3)	1.7 ± 2.4	49.7 ± 11.1	49.8 ± 12.8	44.6 ± 7.9
Male	186 (46.7)	1.8 ± 2.5	49.7 ± 11.2	51.0 ± 9.8	44.3 ± 7.2
Home score at 9-year visit					

Characteristic	N (%)	Maternal ACEs Mean ± SD	Outcomes		
			YA-reported Internalizing Mean ± SD	Mother-reported Internalizing Mean ± SD	Mother-reported Externalizing Mean ± SD
Below mean	198 (49.8)	2.0 ± 2.5	49.6 ± 11.5	51.1 ± 12.0	45.2 ± 8.2
Above mean	187 (47.0)	1.6 ± 2.5	50.0 ± 11.0	49.5 ± 11.0	43.6 ± 6.7
Missing	13 (3.3)				
Youth ACEs at 18-year visit ^a					
0-2 ACEs	282 (70.9)	1.5 ± 2.2	47.3 ± 10.0	49.1 ± 10.0	43.4 ± 6.7
3 ACEs	116 (29.1)	2.3 ± 3.0	55.6 ± 11.6	53.5 ± 14.2	47.0 ± 9.1

^aMaternal depression and youth ACEs treated as continuous variables in models, with a range of 0-5. Values of 5 include values of 5-10.

Abbreviations: ACEs: Adverse Childhood Experiences; CES-D: Center for Epidemiologic Studies Depression Scale; HOME: Home Observation Measurement of the Environment.

Note: Boldface indicates statistical significance (p<0.05).