



Measurement Invariance of Adverse Childhood Experiences Across Teacher Age and Race

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Abstract

Adverse Childhood Experiences (ACEs) confer considerable risk for negative outcomes across the lifespan, but there is limited research examining whether the measurement of ACEs can be interpreted the same way across diverse groups of individuals. In particular, the measurement of ACEs among early child education teachers has received little attention. Given that millions of children receive care from early child education teachers, and evidence that ACEs can severely disrupt teacher's abilities to support young children, it is critical to accurately assess for and respond to teacher ACEs. The present study examined the factor structure and measurement invariance of the 11-item Behavioral Risk Factor Surveillance Survey (BRFSS) version of the ACEs measure across a diverse group of teachers. Data were collected from 605 teachers in a southeastern state between 2018 and 2021. Teachers ranged in age from 18 to 81 years (35% young; 56% middle; and 9% older adults) and were diverse across race (46% White; 53% Black). Teachers completed the BRFSS version of the ACEs measure and a demographics questionnaire. Factor analyses replicated the theorized three-factor solution, with household dysfunction, emotional/psychological abuse, and sexual abuse emerging as distinct factors. Multigroup confirmatory factor analyses demonstrated measurement invariance across teacher age and race. Comparisons of scores indicated ACEs levels varied across teacher age and race. Overall, findings suggest the BRFSS version of the ACEs measure can be used to assess adverse childhood experiences across diverse groups of early child education teachers.

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Ethical Standards and Informed Consent

All procedures followed were in accordance with the ethical standards of the responsible committee on human experimentation [institutional and national] and with the Helsinki Declaration of 1975, as revised in 2000. The Institutional Review Board at the first author's institution deemed the current research quality improvement and provided approval prior to conducting data analysis on a deidentified database.

Keywords

measurement invariance; early childhood teachers; adverse childhood experiences; ACEs; factor analysis

Adverse childhood experiences (ACEs) are a prevalent concern across the United States (US), with 62% of adults reporting exposure to a potentially traumatic event (e.g., physical assault, sexual assault) before age 18 (Merrick et al., 2018). In light of the significant risk ACE exposure confers on health outcomes (Gilgoff et al., 2020; Petrucci et al., 2019), the measurement of ACEs represents a critical public health priority (Holden et al., 2020). However, limited research examines whether ACEs measurement can be interpreted the same way across diverse groups of individuals. In particular, the measurement of ACEs among early child education (ECE) teachers has received little attention. Given that over 50% of young children in the US receive care from ECE teachers (McFarland et al., 2018), and evidence that ACEs can severely disrupt the emotional classroom climate (Hubel et al., 2020), lower teacher-child interaction quality (Rancher & Moreland, 2023), and increase teacher's emotional exhaustion and burnout (Grist & Caudle, 2021) – it is critical to accurately assess for teacher ACEs. Thus, to clarify if ACEs scores can be reliably interpreted across diverse groups of teachers, the present study explores the factor structure and measurement invariance of ACEs.

Although ACEs can take many forms (Holden et al., 2020), most ACEs measures assess for physical, emotional, and sexual child abuse, household violence, exposure to alcohol or substance use, mental illness, incarceration, and parent separation or divorce. Typically, dichotomous items are summed to generate a single composite score, which has yielded undisputed evidence of the adverse dose-dependent effects of ACEs among teachers (Grist & Caudle, 2021; Hubel et al., 2020; Rancher & Moreland, 2023). Scholars note this approach may minimize effects of adversity on health, as not all ACEs impact health equally (Briggs et al., 2021). For this reason, recent conceptualizations have proposed a two-factor solution focused on child maltreatment and household dysfunction (McLaughlin, 2016), which has received some empirical support in populations of adults (Afifi et al., 2020; Mersky et al., 2017). Other research suggests that a 3-factor solution (i.e., household dysfunction, emotional/physical abuse, and sexual abuse) best describes ACE item structure (Ford et al., 2014). In sum, substantial evidence links ACEs with negative health outcomes (see Gilgoff et al., 2020; Petrucci et al., 2019, for reviews), and ACEs have been found to impair teacher-child relationships and well-being (Grist & Caudle, 2021; Hubel et al., 2020; Rancher & Moreland, 2023), however, more research is needed to clarify the factor structure of ACE measures.

Behavioral Risk Factor Surveillance System ACEs Measure

Although over 20 different ACEs measures have been administered (Holden et al., 2020), the Behavioral Risk Factor Surveillance System (BRFSS) survey version has undergone the most rigorous psychometric evaluation (Ford et al., 2014; Hartwell et al., 2023). This 11-item measure has been administered to the largest, nationally representative sample of adults

(Holden et al., 2020) and has demonstrated robust internal consistency and measurement invariance across gender and age (Ford et al., 2014). Using the BRFSS ACEs measure, Hubel and colleagues (2020) found that 73% of teachers experienced at least one ACE and 22% experienced 4 or more ACEs (Hubel et al., 2020). Higher levels of ACEs on this measure relate to negative social-emotional classroom climate (Hubel et al., 2020) and lower teacher-child interaction quality (Rancher & Moreland, 2023). Despite broad use and some evidence of psychometric validity among broad populations of adults, the BRFSS ACEs measure has yet to undergo psychometric evaluation among teachers.

ACEs Among Teachers

It is critical to examine the measurement of ACEs among teachers, as this is a population that consistently reports high rates of ACEs. Specifically previous research suggests approximately 70% of teachers report experiencing at least one ACE (Hubel et al., 2020; Rancher & Moreland, 2023) compared to 60% of adults in national community samples (Merrick et al., 2018). This is similar to populations of child service providers and social workers who frequently report higher levels of ACEs compared to the general population (Hiles Howard et al., 2015; Lee et al., 2017). As a profession, ECE teachers experience numerous stressors, including poor compensation, limited workplace resources, inconsistent job demands, and high rates of poverty (Phillips et al., 2016; Whitebook & Sakai, 2004). Teacher's experiences of ACEs can have a negative impact on their ability to provide a nurturing, quality classroom environment (Hubel et al., 2020; Rancher & Moreland, 2023) and can lead to teacher burnout (Grist & Caudle, 2021). Given the looming "child-care crisis" as ECE centers face national shortages of teachers and families struggle to find care (Jones, 2023), it is critical to accurately assess for stressors (i.e., exposure to ACEs) that are disrupting teacher well-being.

It may be particularly important to assess for measurement invariance across teacher age as items measuring ACEs among younger generations may not work the same for older generations. For example, interpretation of items such as, "*Did you live with anyone who was depressed, mentally ill, or suicidal?*" may hold different stigma and subjective interpretation across adult age. Research on mental health literacy suggests that older adults are less accurate in recognizing depression compared to those in younger and middle adulthood (Farrer et al., 2008) and young adults are more likely to believe mental health services could be helpful, compared to both middle and older adults (Farrer et al., 2008). It seems plausible that generational differences in understanding mental illness and perceptions of mental health services may influence how teachers of different generations complete the ACEs measure. It may also be important to consider how aging affects memory, as ACEs measures require retrospective recall of childhood experiences. Specifically, research on memory and aging suggests there are no differences across adult age in memory of general events, but the ability to recall specific details in long-term memory declines with age (Greene & Naveh-Benjamin, 2022). In sum, in order to make confident comparisons in ACEs scores across teacher age, it is critical to establish the measurement of ACEs is assessing the same construct across generations.

Similarly, it may be important to establish measurement invariance of ACEs across teacher race. Research has found that ACEs may be experienced differently across racial groups due to entrenched social discrimination and differential levels of incarceration, poverty, and neighborhood violence (Bernard et al., 2021; Cole et al., 2022; Maguire-Jack et al., 2019). Previous research has also found between-group differences in ACEs levels, as Black children report experiencing more ACEs compared to White children (Maguire-Jack et al., 2019; Slopen et al., 2016). However, the enduring “Black-White” paradox, seen in large epidemiological surveys, suggests that Black Americans report better mental health than White Americans, despite exposure to more stressful events (Barnes & Bates, 2017; Louie et al., 2022). It seems plausible the assessment of these stressful events may be interpreted differently across White and Black adults. Drawing conclusions on between-group differences in teacher ACEs, and their potential influence on health outcomes, demands confident understanding in whether the same ACEs measure can be used across Black and White teachers.

Present Study

Uncertainty in whether ACEs measures can be used equivocally across diverse groups of teachers can hamper scientists and practitioners abilities to confidently interpret observed group-level differences. This study extends the ACEs measurement literature by examining the factor structure, measurement invariance, and mean-level differences in ACEs across a convenience sample of ECE teachers. First, we conducted exploratory factor analyses on items from the BRFSS ACEs measure. Consistent with previous literature, we explored one, two-, and three-factor solutions. Second, we evaluated whether the best-fitting model replicated across different groups of teachers by examining measurement invariance across teacher age (young adulthood [18-30 years]; middle adulthood [31-60 years]; older adulthood [61 years+]) and teacher race (White; Black). Finally, we explored mean-level differences in ACEs across teacher age and race.

Method

Participants and Procedures

Data were collected from a convenience sample of ECE teachers working at 99 different centers in a southeastern state in the US between 2018 and 2021. All centers were full-day programs and had varying funding sources including, 40% private, 19% faith-based, 8% public, 15% Head Start, and 6% non-profit. Participants were recruited as part of a larger program evaluation study of a teacher well-being intervention (Baum et al., 2022). All teachers were invited to participate in the well-being intervention and more than 99% of teachers agreed to participate in pre- and post-intervention assessments. The variables of interest (ACEs and demographic characteristics) were only measured at one assessment, therefore, the current study only included data completed at the pre-intervention, baseline assessment. We obtained Institutional Review Board approval prior to conducting data analysis on a deidentified database. Teachers ($N = 605$) in the current study ranged in age from 18 to 81 years ($M = 39.14$, $SD = 14.03$; 35% young; 56% middle; and 9% older adults) and were diverse across race (46% White; 53% Black; <1% Other). Most teachers identified

as female (99%) and approximately one-third (27%) reported their annual household income was equal to or less than \$15,000, which is well below the state's poverty level.

Measures

Adverse Childhood Experiences.—Teachers completed the 11-item BRFSS ACEs measure (Centers for Disease Control and Prevention, 2014) assessing childhood experiences of physical, sexual, and emotional abuse, witnessing domestic violence, parental divorce, family member incarceration, exposure to substance use, and household mental illness. Responses were coded into 0 = Never, 1 = One or more times, reflecting exposure status. Items assessing ACEs are listed in Table 1.

Demographics.—Teachers completed single item demographic questions assessing their age and race.

Statistical Analysis

First, we conducted Exploratory Factor Analyses (EFA) in SPSS Version 28 using mean- and variance-adjusted weighted least squares estimation on the categorical ACEs items. We used Promax (oblique) rotation, although solutions using varimax (orthogonal) rotation were estimated and produced similar, often identical, loading patterns. The best factorial solution was chosen based on scree-plot analyses, Kaiser criterion (eigenvalues greater than 1) (Kaiser, 1960), and examination of factor loadings (Tabachnick & Fidell, 2013). We validated the EFA results in subsequent Confirmatory Factor Analyses (CFA) using R and its package lavaan (Rosseel, 2012). We examined the Root Mean Square Error of Approximation (RMSEA), 90% confidence interval for RMSEA, Standardized Root Mean square Residual (SRMR), and Comparative Fit Index (CFI). We utilized the following fit criteria: RMSEA values $\leq .05$ indicate good fit and values $\leq .08$ indicate reasonable fit (Browne & Cudeck, 1992); SRMR scores $\leq .08$ indicate acceptable fit; and CFI scores $\geq .90$ indicate reasonably good fit and scores $\geq .95$ indicate good fit (Hu & Bentler, 1999).

Next, we conducted Multigroup CFA to examine measurement invariance of the best-fitting factor model across groups. We conducted two group comparisons: (1) teacher age (young adulthood [18-30 years]; middle adulthood [31-60 years]; older adulthood [61 years+]); and (2) teacher race (White; Black). We first examined the CFA model for each group and then examined three different measurement invariance models (configural, metric, and scalar) (Putnick & Bornstein, 2016). Each model requires stricter conditions to be met. Configural invariance allows factor loadings and intercepts to load freely and assesses whether groups share the same underlying factor structure. Metric invariance constrains factor loadings and assesses whether groups share units of measurement. Scalar invariance constrains both factor loadings and intercepts and assesses whether latent factors are related to observed scores.

To evaluate measurement invariance, we conducted chi-square difference tests, however, this statistic is sensitive to departures from normality and is nearly always large and statistically significant among larger samples. Therefore, we also compared three goodness of fit indices:

RMSEA $< .015$, SRMR $< .03$ for metric invariance and SRMR $< .015$ for scalar

invariance indicate acceptable model fit (Chen, 2007). To explore differences in ACE endorsements we conducted ANOVAs and independent sample t-tests.

Our sample size of 605 exceeds conservative suggestions of at least 300 subjects for conducting CFA (Tabachnick & Fidell, 2013). Generally, guidelines recommend at least 100 participants per group for multigroup CFA; however, other widely accepted ratios include 5 to 10 participants per indicator variable (Kyriazos, 2018). Therefore, our most disparate comparison (age) is adequate but may contribute to difficulties with model convergence and robust estimates. A sensitivity power analysis of the most disparate comparison (age) indicated that with $\alpha = .05$ and $N = 605$, power exceeds .90 to detect small-sized effects ($f = .15$).

Results

Factor Analysis

Scree-plot analyses suggested a two-factor solution, while the Kaiser criterion suggested extracting a three-factor solution (Kaiser, 1960). A single factor explained 27% of the variance, the second and third factors added an additional 13% and 7% explained variance, respectively. The three-factor solution exhibited sufficient item loading (at least 3 items) across each factor, suggesting the three-factor solution best fit the data.

Standardized factor solutions from the CFA for the three-factor model are reported in Table 1. The model demonstrated good fit, RMSEA (90% CI) = .04 (.03, .06), SRMR = .04, CFI = .97. We used the following thresholds for evaluating factor loadings: .32 (poor), .45 (fair), .55 (good), and .71 (excellent) (Tabachnick & Fidell, 2013). Factor loadings on the household dysfunction scale ranged from .57 to .75. with three of the four in the excellent range. Factor loadings on the child emotional/physical abuse scale ranged from .37 to .70 with three of the four in the good range. Factor loadings on the sexual abuse scale ranged from .70 to .80 with all three in the good to excellent range. Factors were moderately correlated, household dysfunction and emotional/physical abuse, $r = .50$, household dysfunction and sexual abuse, $r = .32$, emotional/physical abuse and sexual abuse, $r = .43$.

Measurement Invariance

Teacher Age—Results of the measurement invariance analyses across teacher age are presented in Table 2. The model demonstrated reasonably good fit across young adulthood, RMSEA (90% CI) = .07 (.05, .09), SRMR = .06, CFI = .93, middle adulthood, RMSEA (90% CI) = .05 (.03, .07), SRMR = .04, CFI = .97, and older adulthood, RMSEA (90% CI) = .09 (.03, .13), SRMR = .09, CFI = .83. Results of the chi-square analyses indicated the metric model fit significantly worse than the configural model, $\chi^2(16) = 58.39, p < .001$, and the scalar model fit significantly worse than the metric model, $\chi^2(16) = 32.02, p < .001$. Comparison of the fit indices (RMSEA and SRMR) supported measurement invariance and indicated no difference in model fits.

Teacher Race—Results of the measurement invariance analyses across teacher race are presented in Table 2. The model demonstrated good fit across both Black, RMSEA (90%

CI) = .06 (.04, .08), SRMR = .05, CFI = .96, and White teachers, RMSEA (90% CI) = .04 (.00, .06), SRMR = .04, CFI = .98. Results of chi-square analyses indicated no difference in fit between the metric and configural models, $\chi^2(8) = 9.42, p > .05$, but the scalar model fit significantly worse than the metric model, $\chi^2(8) = 38.58, p < .001$. Comparison of the fit indices (RMSEA and SRMR) supported measurement invariance and indicated no difference in model fits.

Comparison of ACEs Across Groups

Building on evidence of measurement invariance, we summed items in the household dysfunction, emotional/physical abuse, and sexual abuse subscales. Results comparing observed ACEs scores are presented in Table 3. Results indicated teachers in middle adulthood endorsed higher levels of ACEs compared to teachers in young and older adulthood, $ps < .05$. White teachers endorsed higher levels of ACEs compared to Black teachers, $ps < .05$.

Discussion

This study examined the factor structure, measurement invariance, and observed differences in the BRFSS ACEs measure across a diverse group of ECE teachers. Factor analyses replicated the theorized three-factor solution examining household dysfunction, emotional/physical abuse, and sexual abuse (Ford et al., 2014). The model demonstrated good fit, and most factor loadings were good to excellent. Multigroup CFA indicated the three-factor structure was invariant across teacher age and race, suggesting the BRFSS ACEs measure can be used to compare ACEs across diverse groups of teachers.

Evidence of measurement invariance across teacher age suggests that mean-level differences in ACEs between young, middle, and older adulthood can be meaningfully interpreted. Teachers in middle adulthood reported higher levels of ACEs compared to teachers in young and older adulthood. This is consistent with patterns of ACEs in broader adult populations, suggesting that older and younger adults report lower levels of ACEs compared to those in middle adulthood (Giano et al., 2020; Iniguez & Stankowski, 2016). Interestingly, teachers in middle adulthood report lower coping skills and higher burnout than young and older adult teachers (Jeon et al., 2018; Skaalvik & Skaalvik, 2015). It may be that teachers in middle adulthood are at a particularly vulnerable period of accumulated life and work stress. This holds important implications for interventions designed to promote teacher well-being. Specifically, administrators and practitioners may consider approaching teachers in middle adulthood as a potentially high-risk group, that warrants additional assessment and resources. Teacher well-being programs may need to explicitly target the unique stressors faced by teachers in middle adulthood, such as changes in physical health and transitioning family dynamics as adult children leave home or aging parents require caregiving (Scott et al., 2013).

It is also possible that other factors are driving age cohort differences in ACEs scores. Although this is outside the scope of the current study, we offer several plausible explanations. Older adults may downplay or minimize their experience of ACEs compared to younger generations (Felitti et al., 2019). Longitudinal retrospective recall may also

contribute to underestimating childhood adversity (Reuben et al., 2016), which may influence ACE endorsement across age cohorts. The correlation between ACEs and early mortality rates may also influence older adults reporting ACEs, as those with the highest number of ACEs may not live to older adulthood due to myriad physical health complications (Giano et al., 2020). In general, limited research examines ACEs across adult age, with even fewer comparisons of ACEs across teacher age, but present findings suggest this is an important area for research.

We also found evidence of measurement invariance across teacher race indicating differences across Black and White teachers can be meaningfully interpreted. Results suggest White teachers reported higher levels of ACEs compared to Black teachers across the household dysfunction and sexual abuse domains. Findings diverge from prior research illustrating that Black individuals report higher levels of ACEs than White individuals (Maguire-Jack et al., 2019; Slopen et al., 2016). Although these findings were unanticipated, it is important to note that ACEs, on the BRFSS measure, do not include more contemporary forms of adversity (e.g., poverty, racism, community violence) which disproportionately impact historically marginalized communities (Bernard et al., 2021; Cronholm et al., 2015). Considering that these more culturally bound ACEs co-occur with traditional ACEs, and in some cases predict health outcomes beyond traditional ACEs (Bernard et al., 2022), there is a critical need to expand what is included in the BRFSS before making final conclusions regarding mean-level differences in ACEs across teacher race.

Although the BRFSS ACEs measure is arguably the most frequently administered, and most psychometrically evaluated, results suggests that ACEs measurement warrants additional research. Most research examining ACEs combines items to generate a single composite score, and in fact, this is the only published scoring method among teachers (Hubel et al., 2020; Rancher & Moreland, 2023; Whitaker et al., 2014). However, findings suggest the ACEs items load onto separate, distinct factors that were only moderately correlated ($r_s = .32 - .50$). Further, the three-factor solution was nearly identical to research examining the factor structure of the BRFSS ACEs measure in a broad population of adults (Ford et al., 2014), suggesting robust differences in these subscales. Altogether standard use of the ACEs measure may not best align with its psychometric properties. Future research examining the incremental validity of the ACEs subscales – whether scoring ACEs items into household dysfunction, emotional/psychological abuse, and sexual abuse provides unique predictive information on health outcomes – is needed.

Limitations

This study has several strengths, including one of the first examinations of measurement invariance among a diverse sample of ECE teachers. Still, there are several noteworthy limitations. Foremost, there are limitations related to assessment of ACEs severity and chronicity that are not addressed by the BRFSS ACEs measure. As noted above, there are also several important domains excluded from the 11-item measure (e.g., racism, peer rejection). Future research may consider administration of ACEs measures that assess more broad definitions of child adversity among teachers. It is also noteworthy that the BRFSS ACEs measure includes three items assessing sexual abuse, which loaded onto a distinct

factor in our analyses. Several ACEs measures only include a single item assessing a history of sexual abuse (e.g., Did you experience unwanted sexual contact (such as fondling or oral/anal/vaginal intercourse/penetration?)) (see Holden et al., 2020, for review), which may challenge the generalizability of the observed factor structure across other ACEs measures. Sample size limitations in this convenience sample prohibited comparisons across subgroups, such as, Black older adulthood teachers with Black young adulthood teachers. Relatedly, the proportion of males (< 1%) prohibited examination of invariance across gender. Although our analyses included the vast majority of our sample (46% White; 53% Black) – future research with more diverse teachers is warranted to establish measurement invariance across other races, ethnicities, and genders. Further, one of our Multigroup CFA comparisons had a group with less than 100 participants. Although we did not experience any issues with model convergence, this can challenge our ability to obtain robust estimates. As noted in our Introduction, teachers may also represent a unique population that experiences higher rates of ACEs, therefore caution should be taken in generalizing our results to other populations or making casual inferences.

Conclusions

In conclusion, this study extends the psychometric evaluation of the BRFSS ACEs measure and addresses a critical gap in ACEs measurement among ECE teachers. We found support for a three-factor solution and most items evidenced good to excellent loading. We established measurement invariance of the ACEs three-factor solution across diverse groups of teacher age and race, which may allow providers and researchers to draw more confident conclusions about observed group differences. Comparison of mean-level differences suggest ACEs varied across teacher age and race. Although there are noteworthy limitations to ACEs measurement, overall, findings suggest the BRFSS ACEs measure can be used to assess ACEs across diverse groups of teachers.

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Table 1.

Items Assessing Adverse Childhood Experiences (ACEs)

Label	Item description	ACE Type	1	2	3
Household dysfunction					
ACE1	Did you live with anyone who was depressed, mentally ill, or suicidal?	Household mental illness	.601		
ACE2	Did you live with anyone who was a problem drinker or alcoholic?	Household alcohol abuse	.650		
ACE3	Did you live with anyone who used illegal street drugs or who abused prescription medications?	Household substance abuse	.749		
ACE4	Did you live with anyone who served time or was sentenced to serve time in a prison, jail, or other correctional facility?	Incarcerated family member	.568		
Emotional/Physical abuse					
ACE5	Were your parents separated or divorced?	Parental separation/divorce		.368	
ACE6	How often did your parents or adults in your home ever slap, hit, kick, punch, or beat each other up?	Household physical violence		.675	
ACE7	Before age 18, how often did a parent or adult in your home ever hit, beat, kick, or physically hurt you in any way? Do not include spanking.	Physical abuse		.696	
ACE8	How often did a parent or adult in your home ever swear at you, insult you, or put you down?	Emotional abuse		.676	
Sexual abuse					
ACE9	How often did anyone at least five years older than you or an adult ever touch you sexually?	Sexual abuse		.800	
ACE10	How often did anyone at least five years older than you or an adult try to make you touch them sexually?	Sexual abuse		.858	
ACE11	How often did anyone at least five years older than you or an adult force you to have sex?	Sexual abuse		.701	

Note: Items were drawn from the “Adverse Childhood Experiences” module of the Behavioral Risk Factor Surveillance System (BRFSS) Questionnaire. Standardized factor solutions for the three-factor model are depicted.

Confirmatory Factor Analysis model fit: RMSEA (90% CI) = .04 (.03, .06), SRMR = .04, CFI = .97

RMSEA: root mean square error of approximation; SRMR: standardized root mean square residual; CFI: comparative fit index.

Table 2.

Model Fit Statistics Across Groups

Model	χ^2 (df)	χ^2 (df)	RMSEA	RMSEA	SRMR	SRMR	CFI
Teacher Age							
Young adulthood (18-30 years, $n = 213$)	83.98 (41)	.07	.06	.06	.93		
Middle adulthood (31-60 years, $n = 337$)	73.10 (41)	.05	.04	.04	.97		
Older adulthood (61+ years, $n = 55$)	59.99 (41)	.09	.09	.09	.83		
Configural							
Metric	275.46 (139)	.07	.008	.06	.01	.93	
Scalar	307.48 (155)	.07	.000	.07	.01	.92	
Teacher Race							
Black ($n = 322$)	85.95 (41)	.06	.05	.05	.96		
White ($n = 279$)	55.86 (41)	.04	.04	.04	.98		
Configural							
Metric	141.81 (82)	.05	.04	.04	.97		
Scalar	151.23 (90)	.05	.001	.05	.01	.97	
	189.81 (98)	.06	.008	.05	.00	.95	

Note.

p < .001;

RMSEA: root mean square error of approximation; SRMR: standardized root mean square residual; CFI: comparative fit index.

Table 3.

Item-Level Differences Across Groups

		<i>Young Adulthood (n = 213)</i>	<i>Middle Adulthood (n = 337)</i>	<i>Older Adulthood (n = 55)</i>	<i>Black(n = 322)</i>	<i>White(n = 279)</i>
<i>Item description</i>		<i>Mean (SD)</i>			<i>Mean (SD)</i>	
Household dysfunction		0.70 (1.12)	0.63 (1.08)	0.40 (0.78)	0.42 (0.87)	0.91 (1.24)
ACE1	Did you live with anyone who was depressed, mentally ill, or suicidal?	0.24 (0.43)	0.23 (0.42)	0.16 (0.37)	0.14 (0.35)	0.34 (0.47)
ACE2	Did you live with anyone who was a problem drinker or alcoholic?	0.18 (0.39)	0.19 (0.39)	0.13 (0.34)	0.12 (0.32)	0.25 (0.44)
ACE3	Did you live with anyone who used illegal street drugs or who abused prescription medications?	0.15 (0.35)	0.13 (0.33)	0.07 (0.26)	0.19 (0.40)	0.08 (0.28)
ACE4	Did you live with anyone who served time or was sentenced to serve time in a prison, jail, or other correctional facility?	0.13 (0.33)	0.09 (0.29)	0.04 (0.19)	0.08 (0.28)	0.12 (0.33)
Emotional/Physical abuse		1.18 (1.18)^a	1.24 (1.34)^a	0.64 (0.99) ^b	1.12 (1.24)	1.26 (1.34)
ACE5	Were your parents separated or divorced?	0.42 (0.50)^a	0.41 (0.49)^a	0.16 (0.37) ^b	0.43 (0.50)	0.37 (0.48)
ACE6	How often did your parents or adults in your home ever slap, hit, kick, punch, or beat each other up?	0.18 (0.39)	0.22 (0.42)	0.20 (0.40)	0.21 (0.41)	0.23 (0.42)
ACE7	Before age 18, how often did a parent or adult in your home ever hit, beat, kick, or physically hurt you in any way? Do not include spanking.	0.16 (0.37) ^{a, b}	0.23 (0.42)^a	0.09 (0.29) ^b	0.18 (0.39)	0.20 (0.40)
ACE8	How often did a parent or adult in your home ever swear at you, insult you, or put you down?	0.42 (0.49)^a	0.39 (0.49)^a	0.18 (0.39) ^b	0.30 (0.46)	0.46 (0.50)
Sexual abuse		0.24 (0.69) ^b	0.41 (.90)^a	0.18 (.43) ^b	0.27 (0.76)	0.39 (0.83)
ACE9	How often did anyone at least five years older than you or an adult ever touch you sexually?	0.11 (0.32)	0.18 (0.38)	0.13 (0.34)	0.11 (0.31)	0.20 (0.40)
ACE10	How often did anyone at least five years older than you or an adult try to make you touch them sexually?	0.08 (0.27) ^b	0.14 (0.34)^a	0.02 (0.13) ^b	0.09 (0.28)	0.12 (0.33)
ACE11	How often did anyone at least five years older than you or an adult force you to have sex?	0.05 (0.21)	0.10 (0.30)	0.04 (0.19)	0.07 (0.26)	0.07 (0.26)

Note: **Boldface** values indicate differences between groups at $p < .05$, superscripts denote post-hoc between group differences.