

Parental Separation and Death During Childhood as Predictors of Adult Psychopathology: An Examination of Racial Differences

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Objective: Parental separation and parental death during childhood are common but understudied forms of adverse childhood events (ACEs), thus little is known about the impact on psychological functioning in adulthood. We examined whether parental death and parental separation during childhood was associated with risk of diagnostic criteria for depressive disorders, anxiety disorders, posttraumatic stress disorder (PTSD), or personality disorders during adulthood. Second, we compared parental separation and parental death and psychopathology across African Americans ($N = 499$) and Whites ($N = 782$). **Method:** The sample consists of 1,211 participants ($n = 669$ females). Diagnostic interviews were administered by master's or doctorate-level degree holders in Clinical Psychology or Social Work. There was good to excellent interrater reliabilities (mean kappa of $.84 \pm .05$; range: $.79$ – $.93$) spanning anxiety, mood, anxiety, trauma, and personality disorders. **Results:** White participants reporting parental separation during childhood were more likely to report depressive disorders ($OR = 2.151, p < .001$), PTSD ($OR = 2.218, p < .01$) and personality disorders ($OR = 1.764, p < .001$) during adulthood. African American endorsement of parental separation during childhood did not predict depressive disorders ($OR = 1.21, p = .357$), anxiety disorders ($OR = 1.107, p = .659$), PTSD ($OR = 1.351, p = .425$) or personality disorders ($OR = 1.432, p = .098$) during adulthood. Overall, participants who reported parental death did not have significantly higher rates of depressive disorders ($OR = 1.100, p = .668$), anxiety disorders ($OR = 1.357, p = .207$), PTSD ($OR = 1.351, p = .425$), and personality disorders ($OR = 1.432, p = .098$). **Conclusions:** Parental separation was a significant risk factor for adult psychopathology, but only for White participants. Parental death was not a risk factor for adult psychopathology no matter the person's race.

Clinical Impact Statement

Parental separation was a significant risk factor for adult psychopathology, but only for White participants. Parental death was not a risk factor for adult psychopathology no matter the person's race. These results highlight the need for early intervention and identification of children whose parents are getting a divorce, especially since the rates of divorce are high in the United States. Lastly, these results provide evidence that African American children appear to be resilient following parental divorce or parental separation.

Keywords: parental separation, parental death, adult psychopathology, African Americans

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Research has indicated that between 52.1% and 85% of adolescents experience at least one adverse childhood event (ACE; e.g., physical abuse, sexual abuse, parental separation, and parental death) before the age of 18 (e.g., Felitti et al., 1998; Soares et al., 2016). ACEs not only impact childhood functioning (e.g., Felitti et al., 1998) but can also yield negative effects that persist into adulthood (e.g., Lindstrom, 1995; Sands et al., 2017; Tebeka et al., 2016). Parental separation and parental death during childhood are two common but relatively understudied forms of ACEs. Therefore, our understanding about the impact of these specific ACEs on psychological functioning in adulthood is not well understood. Moreover, research is further limited in evaluating the effects of parental separation and parental death on psychopathology in diverse populations, such as African Americans. This is despite research indicating African Americans experience parental separation and parental death during childhood at higher rates than their White counterparts, and the strong association between parental divorce and psychopathology

during adulthood (Tebeka et al., 2016). It is imperative to evaluate parental separation and parental death during childhood as possible risk factors for psychopathology during adulthood, including a comparison of these associations between White and African American adults.

Parental Separation and Adult Psychopathology

As the number of parents separating continues to increase in the United States (Centers for Disease Control and Prevention, 2020), it is important to identify the possible long-term psychological effects of parental separation during childhood. Studies suggest parental separation is likely to be related to mood disorders, including depression (Ainsworth & Bowlby, 1991; Bowlby, 2008), but the relationship between parental separation and anxiety and stress-related disorders is less clear. For example, meta-analytic findings (Sands et al., 2017) indicated that parental divorce resulted in higher rates of adult depressive disorders, but not anxiety disorders. In contrast, within a sample of more than 28,000 adults between the age of 18 and 40, parental separation was predictive of adult anxiety disorders (Lindström & Rosvall, 2015). Also, a recent study of data within the World Mental Health Database suggested that parental separation was not a direct risk factor for posttraumatic stress disorder (PTSD; McLaughlin et al., 2017). This research provides evidence that parental separation is a robust risk factor for some psychological disorders, such as depressive disorders. However, research is equivocal when examining anxiety disorders and PTSD.

There is also a limited amount of research that has examined the effects of parental separation on personality disorders with the paucity of studies limited by their small sample sizes. Similar to anxiety disorders, there has historically been an inconsistent relationship between parental separation and personality disorders. Brennan and Shaver (1998) found that adults whose parents divorced when they were a child reported more attachment insecurity and had a higher risk for personality disorders, in comparison to adults whose parents were married throughout their childhood. A more recent study of 121 individuals (Schaan et al., 2019) utilized the Structured Clinical Interview for Psychological Disorders (SCID) in order to evaluate whether parental separation predicted higher rates of personality disorders during adulthood. Parental separation was not found to predict higher rates of personality disorders. Notably, only 1% of the sample had a personality disorder, which might represent the base rate for the general population, but limits power to identify significance and increases the risk for a type II error. It is possible that parental separation may be identified as a risk factor for personality disorders in a larger subsample.

Parental Death and Adult Psychopathology

Studies that examined the effects of parental death on adult psychopathology have primarily focused on depressive disorders. These studies have found that children who lose a parent during childhood report significantly higher rates of adult depressive disorders (e.g., major depressive disorder; persistent depressive disorder; e.g., Simbi et al., 2020; Stikkelbroek et al., 2016). For example, Simbi and colleagues (2020) identified nine case-control studies that all found that parental death during childhood significantly predicted adult depressive disorders. In contrast, parental

death during childhood has been equivocal as numerous studies have found parental death does not predict anxiety disorders during adulthood (Pham et al., 2018; Stikkelbroek et al., 2016; Tyrka et al., 2008); yet, one study (Tebeka et al., 2016) of almost 44,000 participants found that parental death was a significant predictor of anxiety disorders. As with parental separation, there was only one study identified (McLaughlin et al., 2017) that examined parental death during childhood as a risk factor for PTSD during adulthood. This study found that parental death during childhood did not significantly predict PTSD as an adult. It should be noted that the studies that found parental death was not a predictor of anxiety or trauma/stress-related disorders during adulthood were limited to a predominantly White population and most had small sample sizes (e.g., Schaan et al., 2019 only had 121 individuals in their study), which limits their power to identify significance (i.e., increasing the odds of a type II error).

Similar to the literature on PTSD, there are a paucity of studies (Brennan & Shaver, 1998; Tebeka et al., 2016) that have examined parental death as a possible risk factor for personality disorders. First, Brennan and Shaver (1998) enrolled 1,407 college students and used the Personality Diagnostic Questionnaire to evaluate if the participant had a personality disorder. They found that parental death was not a risk factor for personality disorders. This finding is limited, as the subjects were college students, and the evaluation of personality disorders was survey-based, which limits the specificity required to appropriately diagnose personality disorders. Nonetheless, even when using a valid structured diagnostic instrument, Tebeka and colleagues (2016) found similar results, as parental death was not a significant predictor of personality disorders in a sample of college students. The studies that have examined parental death as a possible risk factor for personality disorders have set the groundwork, but as with research that has examined parental death as a risk factor for other psychopathology (e.g., anxiety; PTSD), further investigation is warranted in order to unequivocally identify if parental death is a risk factor.

The Present Study

Research on parental separation and parental death as risk factors for adult psychopathology is limited, in that samples are predominantly White and/or have small sample sizes that would not allow for evaluation of differences between racial/ethnic groups. There are no studies to our knowledge that have investigated racial differences when evaluating parental separation and parental death as distinct risk factors for adult psychopathology. This is despite evidence that African Americans adults report experiencing parental separation and parental death during childhood at higher rates than their White counterparts, and the strong association between parental divorce and psychopathology during adulthood (Tebeka et al., 2016). There is one study (Logan-Greene et al., 2014) that examined a global score of ACEs (i.e., a continuous variable that indexed whether participants experienced parental separation, physical abuse, emotional abuse, sexual abuse, and/or witnessed violence as a child), as a risk factor for worse mental health functioning, including regression analyses controlling for racial/ethnic background. Results indicated that racial/ethnic background (Black vs. White) was not a significant covariate in the model examining the association between number of ACEs and mental health functioning. This study did not examine ACEs individually, only as an aggregate,

and parental death was not one of the ACEs used in their analysis. Considering racial differences in adaptation to parental separation or death might help in identifying possible at-risk populations as well as creating culturally informed interventions.

Past research has provided evidence that parental separation and parental death in childhood (under 18) is associated with higher rates of depressive disorders as an adult, whereas the link between parental separation and parental death during childhood and rates of anxiety disorders, PTSD and personality disorders during adulthood remains unclear. Further, both are forms of losses and research has found that nondeath losses (e.g., parental separation; job loss; divorce) have similar symptoms and pathology than loss of a person (Papa et al., 2014). Therefore, we aimed to bridge that gap by examining whether parental death and/or parental separation during childhood was associated with increased risk of meeting diagnostic criteria for any depressive disorder, anxiety disorder, PTSD, or personality disorder at any point during adulthood. Given the acute and long-term stressful nature of parental separation and parental death, we hypothesized that parental separation and parental death during childhood would be associated with greater risk of any depressive disorder, anxiety disorder, PTSD, and personality disorder. Second, as studies have failed to examine how parental separation or parental death in childhood may differentially impact racially/ethnically diverse populations (e.g., African Americans), we explored the independent associations between parental separation and parental death and psychopathology across African Americans and White participants individually. As aim two was exploratory, we did not have any hypotheses.

Method

Participants

All participants were recruited to participate in a larger scale study of physically healthy adults as part of a clinical research program designed to study behavioral and biological correlates of impulsive aggressive, and other personality-related, behaviors in human subjects. Accordingly, all participants, procedures, and measures described were from that study (Coccaro et al., 2016). The entire sample consisted of 1,355 individuals; however, only 1,211 participants ($n = 669$ females) with a mean age of 35.34 ($SD = 11.05$) were used in this study as we only aimed to examine African Americans and White participants. The rest of the sample were "Other," which consisted of Latinx, Asian American, and Native Americans. Participants' ages ranged from 18 to 82 years of age. There were 782 (64.6%) participants who endorsed being White and 499 (35.4%) who endorsed being African American. The sample consisted of 331 (27.3%) individuals who endorsed their parents separated before they turned 18 years old. There were 95 (7.8%) participants who endorsed that they had a mother or father who passed away before they turned 18 years of age. Approximately 12.1% of participants reported a household income of less than \$10,000 a year, 8.6% reported a household income between \$10,001 and \$20,000, 44.5% reported a household income between \$20,001-\$34,999, 20.7% reported a household income between \$35,000 and \$49,999, and 24% reported a household income of \$50,000 and over. This sample consisted of 468 (38.6%) individuals who endorsed a depressive disorder sometime

during their adulthood (18 and over), with 195 being African American and 273 being White. Also, 289 (23.9%) participants endorsed any anxiety disorder during their adulthood (18 and over), with 121 being African American and 168 being White. There were 85 (7%) individuals in this study who endorsed PTSD sometime in their adulthood (18 and over), with 54 being African American and 31 being White. Lastly, 555 (45.8%) participants in this study endorsed that they had a personality disorder in their adulthood (18 and over), with 255 being African American and 300 being White. There were some significant differences between African American and White participants as far as age (African Americans were older), sex (more African American females), and household income (African Americans had lower income). We controlled for all of these factors in the logistic regressions.

Procedure and Measures

Participants were recruited from the community through public service announcements (e.g., advertisements; flyers). All study participants provided informed consent before completing the measures in this study and in accordance with procedures approved by the Institutional Review Board of the University of Chicago. Exclusion criteria included life history of psychosis, mania, intellectual disability or organic brain disorder or current history of substance use disorder. Participants were not compensated for being in the study.

DSM-5 criteria were used to determine psychiatric diagnoses (del Barrio, 2017) based on information gathered from (a) the Structured Clinical Interview for DSM Diagnoses (First et al., 1995) for syndromal (formerly Axis I) disorders and the Structured Interview for the Diagnosis of Personality Disorder (Pfohl et al., 1997) for personality (formerly Axis II) disorders; (b) a clinical interview with a research psychiatrist; and, (c) a review of all other available clinical data. Research diagnostic interviews were administered by a master's or doctorate-level degree holder in Clinical Psychology or Social Work. All diagnostic raters underwent a rigorous training program including lectures on DSM diagnoses and rating systems, videos of expert raters conducting SCID/SIDP interviews, and practice interviews and ratings until raters' performance was deemed reliable with the trainer. These procedures resulted in good to excellent interrater reliabilities (mean kappa of $.84 \pm .05$; range: .79-.93) spanning anxiety, mood, anxiety, trauma/stress, and personality disorders. Final diagnoses were assigned by team best-estimate consensus procedures involving research psychiatrists and clinical psychologists (see Coccaro et al., 2016 for a full description). For the purposes of the current study, current or past diagnosis of each category of disorders during adulthood (i.e., at or after 18 years of age to current age) were collapsed and coded dichotomously (yes/no) in participants' research record.

Statistical Analysis Plan

Descriptive statistics, correlations, and logistic regressions were used to analyze the data. Logistic regressions were used to examine if parental death or parent separation during childhood resulted in higher rates of meeting diagnostic criteria (0 = no; 1 = yes) for depressive disorders, anxiety disorders, PTSD, or personality disorders during adulthood (past or present) when controlling for sex (Male = 1; Female = 2), age, and household income. All logistic

regressions were first performed with the entire sample, then individually with only the White participants and finally with African American participants. Visual comparisons of odds ratios across racial groups were made. A Bonferroni correction was used in order to adjust for the increased chance of type I error, which occurs when multiple tests are conducted. As such, the critical value level was set at .01. For all analyses there was no missing data.

Results

After descriptives were conducted, correlations between parental separation, parental death, age, sex, and current household income were run. Parental separation and household income was significant and negatively correlated, $r(1211) = -.030, p < .001$. Parental separation and sex was not significant, but was trending, $r(1211) = .053, p = .067$. Parental separation and age was not significantly correlated, $r(1211) = -.030, p = .298$. Parental death and age were significantly positively correlated, $r(1211) = .079, p < .01$. Parental death and sex, $r(1211) = .022, p = .450$ and income, $r(1211) = -.006, p = .822$ were not significantly correlated.

Any Depressive Disorder During Adulthood

Results for the entire sample indicated that participants who endorsed their parents separated during their childhood (OR = 1.72, CI: .447, .756; see Table 1) were more likely to meet criteria for a depressive disorder during adulthood, when controlling for sex, age, and household income. When examining only White participants, participants who endorsed their parents separated (OR = 2.15, CI: .328, .659) were more likely to report a depressive disorder during adulthood, when controlling for sex, age, and household income. However, when examining only the African American participants, endorsement of parental separation during childhood (OR = 1.21, CI: .551, 1.240) did not predict depressive disorders during adulthood, when controlling for sex, age, and household income.

The results for the entire sample indicated that parental death (OR = 1.100, CI: .589–1.404) did not predict a depressive disorder during adulthood when controlling for sex, age, and household income. When examining only the White participants, parental death (OR = .929, CI: .557, 2.082) did not predict any depressive disorder during adulthood, when controlling for sex, age, and household income. Also, when examining only the African American participants, parental death (OR = 1.147, CI: .481, 1.580) did not predict any depressive disorder during adulthood when controlling for sex, age, and household income.

Any Anxiety Disorder During Adulthood

Results indicated that parental separation during childhood (OR = 1.29, CI: .581, 1.048; see Table 2) did not predict an anxiety disorder during adulthood, when controlling for sex, age, and household income. Subgroup analyses of White (OR = 1.364, CI: .460, 1.183) and African American (OR = 1.107, CI: .575, 1.419) participants indicated that, across both racial subgroups, parental separation did not predict any anxiety disorder during adulthood, when controlling for sex, age, and household income.

Table 1
Any Lifetime Depression Disorder

Predictors	All			White			African American			
	B	SE B	Wald	OR	95% CI]	B	SE B	Wald	OR	95% CI]
Parent's separated <18	-.543	.134	16.393	1.72***	[.447, .756]	-.766	.178	18.496	2.15***	[.328, .659]
Sex	-.674	.124	29.603	1.96***	[.400, .650]	-.570	.156	13.339	1.770***	[.416, .768]
Age	.011	.005	4.384	1.012*	[1.001, 1.022]	.020	.007	8.088	1.020**	[1.006, 1.035]
Household income	-.053	.016	11.575	1.053***	[.920, .978]	-.057	.022	6.24	1.059*	[.905, .985]
Parent death <18	-.095	.222	.184	1.100	[.589, 1.404]	.074	.336	.049	.929	[.557, 2.082]
Sex	-.688	.123	31.285	31.285***	[.395, .640]	-.574	.154	13.873	1.773***	[.416, .762]
Age	.011	.005	3.779	.989+	[1.000, 1.022]	.019	.007	6.885	.981*	[1.005, 1.033]
Household income	-.059	.222	14.804	1.060***	[.915, .972]	-.065	.021	9.151	1.067**	[.899, .977]

Note. + $p < .10$. * $p < .01$. ** $p < .005$. *** $p < .001$.

Table 2
Any Lifetime Anxiety Disorder

Predictors	All				White				African American						
	B	SE B	Wald	OR	[95% CI]	B	SE B	Wald	OR	[95% CI]	B	SE B	Wald	OR	[95% CI]
Parent's separated <18	-.247	.150	2.708	1.29	[.581, 1.048]	-.311	.201	2.383	1.364	[.494, 1.087]	-.102	.230	.195	1.107	[.575, 1.419]
Sex	-.809	.145	31.052	2.25***	[.335, .592]	-.529	.179	8.704	1.698**	[.415, .837]	-1.289	.265	23.677	3.623***	[.164, .463]
Age	-.003	.006	.236	1.003	[.985, 1.009]	-.009	.008	1.026	1.008	[.975, 1.008]	.002	.010	.036	1.002	[.983, 1.021]
Household income	-.044	.017	6.911	1.045*	[.927, .989]	-.034	.024	1.967	1.033	[.923, 1.013]	-.045	.025	3.353	1.046+	[.910, 1.003]
Parent death <18	-.305	.241	1.595	1.357	[.460, 1.183]	-.284	.366	.600	1.328	[.367, 1.544]	-.258	.330	.611	1.294	[.405, 1.475]
Sex	-.816	.145	31.684	2.26***	[.333, .587]	-.535	.179	8.940	1.706**	[.412, .832]	-1.293	.265	23.838	3.649***	[.163, .461]
Age	-.004	.006	.390	1.004	[.984, 1.008]	-.010	.008	1.307	1.010	[.974, 1.007]	.001	.010	.017	1.001+	[.982, 1.021]
Household income	-.047	.016	8.042	1.048**	[.924, .986]	-.037	.024	2.397	1.037	[.920, 1.010]	-.047	.025	3.651	1.048	[.909, 1.001]

Note. + $p < .10$. * $p < .01$. ** $p < .005$. *** $p < .001$.

As with participants who reported parental separation, participants who reported parental death (OR = 1.357, CI: .460, 1.183) did not have significantly higher rates of anxiety disorders during adulthood, when controlling for sex, age, and household income, when compared to those participants whose parent did not pass away during their childhood. Subgroup analyses of White (OR = 1.328, CI: .367, 1.544) and African American (OR = 1.294, CI: .405, 1.475) participants indicated that parental death did not predict any anxiety disorder during adulthood, when controlling for sex, age, and household income.

Posttraumatic Stress Disorder During Adulthood

The logistic regression supported that participants who endorsed their parents separated during childhood were more likely to report PTSD during adulthood (OR = 1.736, CI: .362, .916; see Table 3), when controlling for sex, age, and household income. When examining the White participants alone, parental separation during childhood (OR = 2.218, CI: .211, 1.001) significantly predicted PTSD during adulthood, when controlling for sex, age, and household income. In contrast, when examining the African American participants alone, parental separation during childhood (OR = 1.269, CI: .435, 1.427) did not predict PTSD when controlling for sex, age, and household income.

The results for the entire sample indicated that parental death (OR = 1.351, CI: .353, 1.551) did not predict a diagnosis of PTSD during adulthood, when controlling for sex, age, and household income. When examining the White participants alone, parental death (OR = 1.100, CI: .001, .001) did not predict adulthood PTSD, when controlling for sex, age, and household income. Similarly, when examining the African American participants alone, parental death (OR = 1.579, CI: .284, 1.412) did not predict PTSD, when controlling for sex, age, and household income.

Any Personality Disorder During Adulthood

Data supported that parental separation during adulthood (OR = 1.658, CI: .465, .782; see Table 4) predicted increased likelihood of having a personality disorder during adulthood when controlling for sex, age, and household income. When examining the White participants alone, participants who endorsed their parents separated (OR = 1.764, CI: .403, .800) were more likely to meet criteria for a personality disorder during adulthood, when controlling for sex, age, and household income. When examining only the African American participants, parental separation during childhood (OR = 1.261, CI: .526, 1.195) did not predict any adulthood personality disorder diagnosis when controlling for sex, age, and household income.

The results for the entire sample indicated that parental death during childhood (OR = 1.432, CI: .456, 1.069) did not predict a personality disorder when controlling for sex, age, and household income. Also, when examining the White participants alone, parental death during childhood (OR = 1.701, CI: .315, 1.094) did not predict any personality disorder diagnoses during adulthood but was trending when controlling for sex, age, and household income. Last, when examining the African American participants alone, parental death during childhood (OR = 1.061, $p = .845$) did not predict having a personality disorder during adulthood, when controlling for sex, age, and household income.

Discussion

This study explored the overall and racial-specific impacts of parental separation and parental death, two relatively common yet understudied ACEs, on psychopathology during adulthood. Findings indicated that parental separation during childhood was related to increased risk of psychopathology during adulthood, whereas parental death during childhood was not related to risk of any psychological disorder during adulthood. When comparing odds ratios across racial groups, the same findings emerged but only in White participants. That is, White participants who reported a parental separation during childhood were more likely to report psychopathology during adulthood in comparison to White participants who did not report a parental separation during childhood. African American participants who experienced a parental separation or parental death during childhood were no more likely to report psychopathology during adulthood than African American participants who did not report these ACEs. The findings provide evidence of the differential impacts of parental separation and parental death on functioning later in life, while also indicating additional supports for children who experience parental separation may be warranted to improve wellbeing across the life span. Moreover, the findings suggest African Americans may be particularly resilient to the negative effects found for these particular ACEs. Ongoing research is needed to identify contextual factors within the African American community (e.g., culturally embedded grieving and coping practices, extended family networks of support, connection with peers who have had similar experiences) that could serve as protective factors and promote resilience.

Prior studies that have examined the impact of parental separation during childhood on psychological functioning during adulthood have indicated separation increases the risk of adult depression (Larson & Halfon, 2013; Sands et al., 2017) and anxiety (Auersperg et al., 2019; Larson & Halfon, 2013; Sands et al., 2017); yet the possibility of separation increasing risk of PTSD and personality disorders has not been thoroughly investigated. Though we did not find parental separation increased risk of anxiety disorders or personality disorders, findings of the current study supported the associations between parental separation and depression and PTSD.

Given the continued inconsistencies in the literature, it is possible that parental separation during childhood is related to increased internalizing disorders, including depression, and PTSD, and the associations may be further explained by gene-environment interactions (Esposito et al., 2018; Thapar et al., 2007). Specifically, it may be that individuals who have a family psychiatric history of internalizing disorders or PTSD are at a predisposition for psychopathology and the experience of an ACE further exacerbates that risk. On the other hand, it may be stress reactivity and other neurobiological development during the time of the parental separation that could negatively impact mental health and increase risk of psychopathology during adulthood (Romeo, 2010). Further, it could be an interaction between genetics and environment (Conradt, 2017) as it might not only be the parental separation but the cascading effects of the separation that lead to a nonresilient response. For example, if parents are not supportive of the child, not physically present, a parent remarries, and/or the child lacks coping resources (e.g., family and friends), these environmental factors could contribute to worse outcomes, over and above the stress of parental separation. It could be that the African American participants in this study might have

Table 3
Posttraumatic Stress Disorder

Predictors	All				White				African American						
	B	SE B	Wald	OR	[95% CI]	B	SE B	Wald	OR	[95% CI]	B	SE B	Wald	OR	[95% CI]
Parent's separated <18	-.552	.237	5.424	1.736*	[.362, .916]	-.754	.385	3.832	2.128	[.221, 1.001]	-.238	.303	.618	1.269	[-.435, 1.427]
Sex	-1.252	.280	20.030	3.497***	[.165, .495]	-1.058	.420	6.362	2.882*	[.152, .790]	-1.217	.383	10.091	3.378**	[.140, .627]
Age	.010	.010	1.036	1.010	[.991, 1.030]	.003	.017	.037	1.003	[.970, 1.038]	.006	.013	.242	1.006	[.981, 1.032]
Household income	-.070	.024	8.517	1.072***	[.889, .977]	-.038	.048	.629	1.038	[.877, 1.057]	-.056	.030	3.433	1.057+	[.892, 1.003]
Parent death <18	-.301	.378	.637	1.351	[.553, 1.551]	-.059	.220	.180	1.100	[.001, .001]	-.457	.410	1.248	1.579	[.284, 1.412]
Sex	-1.274	.279	20.798	3.571***	[.162, .484]	-1.078	.419	6.638	2.941*	[.150, .773]	-1.230	.383	10.296	3.424**	[.138, .619]
Age	.009	.010	.803	1.009	[.990, 1.028]	.003	.017	.027	1.003	[.970, 1.037]	.005	.013	.175	1.005	[.980, 1.031]
Household income	-.078	.024	10.839	1.081**	[.883, .969]	-.048	.047	1.015	1.048	[.869, 1.046]	-.060	.030	4.036	1.063*	[.888, .999]

Note. + $p < .10$. * $p < .01$. ** $p < .005$. *** $p < .001$.

Table 4
Any Lifetime Personality Disorder

Predictors	All				White				African American						
	B	SE B	Wald	OR	[95% CI]	B	SE B	Wald	OR	[95% CI]	B	SE B	Wald	OR	[95% CI]
Parent's separated <18	-.506	.132	14.622	1.658***	[.465, .782]	-.567	.175	10.477	1.764**	[.403, .800]	-.233	.210	1.230	1.261	[.526, 1.195]
Sex	.022	.118	.033	1.022	[.810, 1.289]	.248	.150	2.746	1.281+	[.956, 1.718]	-.168	.207	.663	1.183	[.564, 1.267]
Age	.010	.005	3.404	1.010+	[.999, 1.021]	.010	.007	1.957	1.010	[.996, 1.023]	.002	.009	.039	1.002	[.984, 1.019]
Household income	-.072	.016	20.685	1.075***	[.902, .960]	-.047	.021	4.830	1.048*	[.915, .995]	-.070	.026	7.252	1.072**	[.886, .981]
Parent death <18	-.360	.217	2.738	1.432	[.456, 1.069]	-.532	.317	2.808	1.701+	[.315, 1.094]	.059	.303	.038	1.061	[.586, 1.921]
Sex	.004	.118	.001	1.004	[.797, 1.265]	.234	.149	2.473	1.263	[.944, 1.691]	-.178	2.016	.745	1.195	[.559, 1.254]
Age	.009	.005	2.595	1.009	[.998, 1.019]	.008	.007	1.239	1.008	[.994, 1.021]	.002	.009	.037	1.002	[.984, 1.019]
Household income	-.078	.016	24.367	1.081***	[.897, .954]	-.053	.021	6.176	1.054*	[.910, .989]	-.071	.206	7.591	1.074*	[.885, .980]

Note. + $p < .10$. * $p < .01$. ** $p < .005$. *** $p < .001$.

had greater support following their ACE, as well as other protective factors, compared with the White participants. These constructs should be examined as mediating factors in future studies.

When investigating potential differences in effect sizes across racial groups, African Americans were found to be relatively resilient whereas White participants reported an increased risk of depression, PTSD, and personality disorders. This is the first study, to our knowledge, that has examined racial differences in a large sample. Prior studies have predominately examined the association between parental separation and psychopathology in samples of White adults, thus the findings of increased risk of depression, PTSD, and personality disorders within this demographic group is contextually unremarkable. However, the lack of significant findings in the subsample of African Americans may be attributed to the generally high chronic stress levels reported in African American communities. Particularly, increased chronic stress is related to reduced health in African American adults (Cavanagh & Obasi, 2021) suggesting low or acute stress levels, such as those short-term spikes in stress level that might arise in response to a single stressor (i.e., parental separation or parental death) in comparison to multiple concurrent stressors, may have limited impact on functioning within this demographic group. Instead, the accumulative effects of multiple life stressors, including those that are unique to the African American experience (e.g. repeated interpersonal and racial trauma; Comas-Díaz et al., 2019; Metzger et al., 2021), across the life span and limited access to effective coping strategies to assuage the impact of stress on psychological functioning may contribute to increased psychopathology in this demographic, specifically.

Results examining the impact of parental death during childhood on functioning in adulthood were less equivocal, with no differences found in the level of risk for any form of psychopathology during adulthood including across racial groups. This is consistent with previous studies that indicate parental separation may yield more long-standing impairments in wellbeing and mental health functioning in comparison to parental death during childhood (Maier & Lachman, 2000; Tebeka et al., 2016), and loss of a parent during childhood independently is unrelated to psychopathology during adulthood (Lu et al., 2008). The current study extends prior findings highlighting the limited impact of parental death on adulthood functioning to include additional forms of psychopathology, including personality disorders. Moreover, findings are consistent with theories of resilience, which highlight that most individuals are resilient following a loss and do not experience clinically significant symptoms of psychological disorders in the long-term (Bonanno, 2004). Nonetheless, there are data that suggest a positive association between parental death and psychopathology, including anxiety (Tyrka et al., 2008) and depressive disorders (Appel et al., 2016; Tyrka et al., 2008). The differences of findings in our study might in part be explained by the inclusion/exclusion criteria used, as prior studies have excluded participants with trauma or stress-related disorders and more severe psychopathology (Tyrka et al., 2008). Also, within the current study, we accounted for the possibility that participants met diagnostic criteria for psychological disorders anytime during adulthood, not solely at the time of enrollment. Therefore, the findings of our study might capture risk of psychopathology during adulthood and in the broader general population.

Limitations

The findings of the study should be considered in the context of some limitations. First, we did not control for the participants'

family psychological history or participants' previous engagement in psychological treatment (i.e., therapy; medication). Second, our sample only included White and African American adults and we did not consider ethnicity; therefore, our results might not generalize to other diverse ethnic groups (e.g., Hispanic). Third, we did not assess other possible factors that have been found to increase psychological disorders, such as life stressors (e.g., financial problems; other forms of ACEs; age at the time of the ACE). Relatedly, though not assessed within the current study, it is possible that continued support from both parents or other salient networks (e.g., extended family; faith community) after parental separation might have impacted the relationship between parental separation and psychopathology during adulthood. While we examined the association between psychosocial characteristics during childhood as they relate to psychological functioning during adulthood, data are cross sectional and therefore a cause-and-effect argument cannot be made at this time. In addition, we examined the study relationships at the between-persons level, which does not account for individual variation in the relationships or allow for identification of subgroups of long-term responses to parental separation or distinguish this from parental divorce. Lastly, this sample had a large sample of participants with personality disorders, which is not consistent with the general population. This was most likely due to many of the public service announcements being placed in clinical settings.

Conclusions and Future Directions

The findings of the study allow for multiple recommendations. Continued investigation into the role of parental separation and parental death during childhood on adult psychopathology is warranted, including an assessment of their differential impact on all psychological diagnoses (e.g., substance use; schizophrenia), the impact of ACE-related factors (e.g., age at the time of the parental separation or parental death; attachment to caregivers pre- and post-ACE) on the relationship between parental separation, parental death, and psychopathology, and the potential for gene-environment interaction in explaining these associations. Such research should be conducted longitudinally, account for individual variation and subgroups of response and variation, and account for positive attributes (e.g., the multiple facets of well-being) as potential protective factors against psychopathology. Future studies are needed to examine these nuances and help clarify any potential differences across demographic groups in stress responses associated with particular ACEs, and individual and contextual coping resources that might serve as protective factors promoting resilience. Furthermore, recognizing that the DSM and ICD diagnostic systems might not fully capture diverse populations' experiences of distress and compromised functioning, culturally responsive and community-based intervention approaches are needed that attend not only to African American patients' symptoms, but also their broader well-being and functioning. Moreover, the racial differences found in the current study indicate the need for an extension of this research using more racially diverse sample, as well as across various ethnic groups.

Clinical Implications

Based on the findings, in providing clinical services to adults, it will be important to screen for whether patients experienced parental separation and/or parental death during childhood and, if so, consider

the need for more thorough psychological assessment and treatment. Clinicians would benefit from assessing each patient's perspective about the ACE(s) experienced, as well as contextual influences (e.g., social support; family support) that may serve as risk or protective factors. There are a multitude of resources to assess and treat patients in their navigation of life postloss. For example, the Prolonged Grief Disorder-12 measure maps onto the Prolonged Grief Disorder in the DSM-5-TR (Prigerson et al., 2021).

Last, although African Americans were found to be relatively resilient, it is important to still routinely screen and treat members of this group as appropriate. While parental separation and parental death during childhood may not predict psychopathology in adulthood, it is possible that ACEs that are specific to diverse cultures, such as interpersonal and racial trauma, which African American youth are highly susceptible to experiencing repeatedly (Metzger et al., 2021), may increase risk for later psychopathology. Accordingly, psychosocial screenings should be adapted to account for these forms of stressors. For those patients who demonstrate limited exposure to ACEs and/or subclinical levels of psychopathology, providers might consider recommending patients access brief, targeted interventions rather than long-term intervention, which will ensure this historically underserved population is provided preventative psychological care without over pathologizing an initial reaction to a stressor. One adaptation might be examining Afrocentric and indigenous perspectives (e.g., Logan, 2018; McNeil Smith & Landor, 2018) and adding items or scales that examine family strengths and values in order to more effectively improve the patient's quality of life. This may be useful in reducing the burden of accessing lifelong, intensive services, including difficulties with acquiring insurance coverage of psychological services. Notwithstanding, those individuals demonstrating clinically significant symptoms of psychological disorders should be referred for long-term intervention, and treatment should be culturally informed.

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