

# Sociocultural Risk and Resilience in the Context of Adverse Childhood Experiences

Sara B. VanBronkhorst, MD, MPH; Eyal Abraham, PhD; Renald Dambreville, MS; Maria A. Ramos-Olazagasti, PhD; Melanie Wall, PhD; David C. Saunders, MD; Catherine Monk, PhD; Margarita Alegría, PhD; Glorisa J. Canino, PhD; Hector Bird, MD; Cristiane S. Duarte, PhD, MPH

**IMPORTANCE** Knowledge about childhood resilience factors relevant in circumstances of marginalization and high numbers of adverse childhood experiences (ACEs) can improve interventions.

**OBJECTIVE** To identify sociocultural resilience factors in childhood that are associated with better young adult mental health in the context of ACEs.

**DESIGN, SETTING, AND PARTICIPANTS** This cohort study examined 4 waves of data from the Boricua Youth Study, which included Puerto Rican children from the South Bronx, New York, and San Juan, Puerto Rico. Participants were aged 5 to 17 years at waves 1 through 3 (2000-2003) and aged 15 to 29 years at wave 4 (2013-2017). Linear and logistic regression models tested the associations of 7 childhood resilience factors and their interaction with ACEs on young adult mental health outcomes. Data were analyzed from June 2021 to October 2023.

**MAIN OUTCOMES AND MEASURES** Perceived stress, major depressive disorder and/or generalized anxiety disorder (MDD/GAD), and substance use disorder (SUD) in young adulthood.

**RESULTS** Among a total 2004 participants, the mean (SD) age at wave 4 was 22.4 (2.9) years; 1024 participants (51.1%) were female, and 980 (48.9%) were male. Positive parent-child relationships and nonparental adult support during childhood were associated with both lower perceived stress ( $\beta = -0.14$ ; SE = 0.02;  $P < .001$ ;  $\beta = -0.08$ ; SE = 0.03;  $P = .003$ , respectively) and lower odds of MDD/GAD (adjusted odds ratio [aOR], 0.84; 95% CI, 0.73 to 0.97; aOR = 0.81; 95% CI, 0.69 to 0.95, respectively) in young adulthood. Maternal warmth reported during childhood was also associated with lower young adult perceived stress ( $\beta = -0.11$ ; SE = 0.02;  $P < .001$ ). None of the resilience factors were associated with SUD. The resilience factors familism, friendships, and family religiosity were not associated with any of the mental health outcomes. ACEs were associated with poorer mental health outcomes; however, none of the resilience factors exhibited interactions consistent with being protective for ACEs. Unexpectedly, higher family religiosity was associated with more perceived stress in the presence of higher ACEs.

**CONCLUSIONS AND RELEVANCE** The results of this study suggest that promoting positive relationships with adults during childhood may reduce later young adulthood stress and MDD/GAD. However, there is still a need to identify sociocultural childhood protective factors for ACEs. Caution should be taken in assuming what resilience factors are relevant for a given group, as higher family religiosity (one postulated resilience factor) was unexpectedly associated with a stronger, rather than a weaker, association between ACEs and perceived stress in young adulthood.

JAMA Psychiatry. 2024;81(4):406-413. doi:10.1001/jamapsychiatry.2023.4900  
Published online December 27, 2023.

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**Author Affiliations:** Author affiliations are listed at the end of this article.

**Corresponding Author:** Cristiane S. Duarte, PhD, MPH, New York State Psychiatric Institute, Columbia University Medical Center, 1051 Riverside Dr, New York, NY 10032 (cristiane.duarte@nyspi.columbia.edu).

Children exposed to adverse childhood experiences (ACEs) are at increased risk of developing mental disorders.<sup>1,2</sup> Identifying childhood resilience factors for ACEs is therefore important. Furthermore, socially excluded and racially and ethnically minoritized youth tend to be more exposed to adversities compared with White children,<sup>3,4</sup> yet these groups are underrepresented in research.<sup>1,5</sup> Developmental models that examine resilience factors present during childhood may provide important information to guide interventions.

Resilience is defined as positive outcomes, or the absence of negative outcomes, following adversity.<sup>6,7</sup> Resilience factors include both promotive factors that foster healthy development regardless of exposure to adversity and protective factors that are specific to shielding against the negative effects of adversity.<sup>8,9</sup> While early research focused on individual-level factors (eg, cognitive flexibility), broader sociocultural factors are increasingly recognized as important to resilience.<sup>10,11</sup> Two main sociocultural domains may contribute to resilience: social bonds and connections to sources of meaning.<sup>6</sup> These domains may interact with but also go beyond individual-level factors.<sup>6</sup> Social bonds with parents, friends, and nonparental adults have been associated with better mental health.<sup>12,13</sup> Such childhood social relationships may be particularly relevant in marginalized and minoritized communities and those that emphasize cultural values such as collectivism.<sup>10</sup> Sources of meaning, such as religious practices, can also promote resilience by conferring a sense of purpose to persevering through adversity.<sup>6</sup> In Latine communities, religiosity and familism (eg, prioritizing family needs) are common value systems<sup>14,15</sup> that are associated with a lower risk for mental health problems in some studies.<sup>14,16</sup> However, the role of resilience factors during childhood in light of ACEs in marginalized and minoritized populations is poorly understood.

Developmental trajectories can be affected by ACEs. Often occurring during sensitive periods of brain development, ACEs have been related to changes that may persist and worsen throughout childhood, into adolescence and young adulthood, leading to higher stress.<sup>17</sup> Stress, in turn, can increase vulnerability to later mental health problems.<sup>18,19</sup> Promoting resilience factors that reduce stress, in addition to directly reducing the risk of mental disorders, is also important.<sup>18</sup> Studies have mostly focused on resilience factors during later adolescence and adulthood. Less is known about how childhood resilience factors present during sensitive periods of development may be related to later stress and mental disorders for individuals exposed to ACEs.<sup>20</sup>

Research is needed on resilience in sociocultural groups experiencing high ACEs and low resources, as among those who have been marginalized and minoritized. Furthermore, resilience factors may vary based on sociocultural and economic experiences.<sup>8,10</sup> For example, cultural identification may promote resilience for those experiencing discrimination but play a less-defining role for others.<sup>21</sup> Suppressing emotions may function as resilience in an environment or culture where emotional expression is not well regarded, whereas in

## Key Points

**Question** What childhood sociocultural resilience factors are relevant in the context of adverse childhood experiences (ACEs)?

**Finding** This cohort study found that positive adult-child relationships were associated with a lower odds of later young adulthood depression and anxiety disorders regardless of exposure to ACEs. Higher family religiosity, unexpectedly, was associated with more perceived stress when ACEs were high.

**Meaning** Positive relationships with parents and with nonparental adults during childhood may reduce the risk of later mental disorders regardless of exposure to ACEs, but factors involving sources of meaning, such as family religiosity, may not be protective among children highly exposed to ACEs.

environments that encourage emotional expression, it may increase the risk of mental health problems.<sup>22</sup> Supporting the same point, the relationship between a protective factor like education, for example, and physical health has varied by the social construct of race, being present among White but not Black participants.<sup>23</sup> Expanding research to include youth who have been racially or ethnically minoritized and those living in contexts of marginalization and high adversity is therefore needed to understand resilience factors relevant to these groups.

We used data from the Boricua Youth Study, a longitudinal study of youth of Puerto Rican descent. We tested promotive and protective resilience factors representing both social relationships and connections to sources of meaning. We hypothesized that resilience factors during childhood would be associated with less perceived stress and lower odds of mental disorders in young adulthood and that these associations would be strengthened at higher ACEs.

## Methods

### Sample

The Boricua Youth Study included children (aged 5-13 years at enrollment) who had a primary caretaker of Puerto Rican background, recruited from the South Bronx, New York, and the standard metropolitan area of San Juan and Caguas, Puerto Rico. Study methodology is described elsewhere.<sup>24,25</sup> Briefly, multistage household probability samples were used to represent the target populations. Up to 3 children per household were included. Children (N = 2491; South Bronx n = 1138, Puerto Rico n = 1353; female = 1207 [48.5%]; mean age, 9.2 years at wave 1) and primary caretakers (n = 1643) completed 3 yearly assessments (waves 1-3, years 2000-2003) and 1 later assessment (wave 4, years 2013-2017; young adult n = 2004; female = 1024 [51.1%]; aged 15-29 years; mean [SD] age, 22.9 [2.9] years; retention rate >80%) (eMethods in Supplement 1). Data were analyzed from June 2021 to October 2023.

Children older than 7 years provided assent, and adults provided consent. Procedures were approved by the institutional review boards at the New York State Psychiatric Insti-

tute, University of Puerto Rico Medical School, Cambridge Health Alliance, and Massachusetts General Hospital. Guidelines from Strengthening the Reporting of Observational Studies in Epidemiology (STROBE) were followed.

### Measures and Resilience Factors

Resilience factors and ACEs were assessed at each childhood time point (waves 1-3); mean scores of resilience factors across these waves were used with all available data. Demographic data were collected at wave 1. Perceived stress and mental disorders were assessed at wave 4.

#### Social Bonds

An abbreviated version of the Hudson Index of Parental Attitudes assessed maternal warmth by caregiver report.<sup>26</sup> The measure contains 13 items assessing trust, closeness, and understanding ( $\alpha = .68$ ). Child report of the parent-child relationship was measured with a 12-item scale<sup>27</sup> assessing positive experiences (eg, "How often do your parents/caretakers pay attention to your opinion or what you say?" 0 = never or almost never, 1 = often;  $\alpha = .75$ ). Nonparental adult support was assessed with, "Besides your mother and father, how many adults (a) give you advice and make you feel better? (b) help you when you have a problem or need something?" Friendship was assessed with, "How many good friends do you have who are about your age?" Answers were coded on a scale of 0 to 3 (0 friends = 0; 1 friend = 1; 2-3 friends = 2;  $\geq 4$  friends = 3).

#### Sources of Meaning

Family religiosity was assessed through caregiver report on 5 questions from a religiosity scale.<sup>28</sup> Family intrinsic religiosity was a sum score of 3 questions (eg, "In general, how important is religion or spirituality in your family?" 0-2 = not important to very important;  $\alpha = .67$ ). Family extrinsic religiosity was based on 2 questions assessing frequency of religious activities (eg, "How often does [your child] attend a church, temple or house of prayer or any other religious services?" 0-5 = everyday/more than once a week to never;  $\alpha = .61$ ). Response options were coded so that higher scores indicated higher religiosity. Familism was assessed with a 10-item adapted version of the Sabogal Familism Scale.<sup>29</sup> Using a 4-point Likert scale, the caregiver reported attitudes in this scale related to familial obligations, support from family, and family as referents ( $\alpha = .76$ ).

#### Adverse Childhood Experiences

Eleven childhood adversities were assessed by both child and caretaker report and included physical abuse, sexual abuse, emotional abuse, and neglect; caretaker intimate partner violence, incarceration, mental health problems, and substance abuse; parental divorce/separation; parental death; and exposure to violence. Responses were combined across waves 1 through 3 to indicate the presence of a lifetime occurrence of each ACE at any one of these waves. A cumulative score indicating the count of types of ACEs was calculated and analyzed as a linear variable (range 0-11). Additional information about the measurement of ACEs in this study can be found elsewhere.<sup>30,31</sup>

#### Perceived Stress and Mental Disorders

Perceived stress was assessed with the Perceived Stress Scale, a widely used and validated measure of the degree to which life situations are deemed stressful<sup>32</sup> ( $\alpha = .81$ ), with higher scores indicating more perceived stress. The World Health Organization Composite International Diagnostic Interview (CIDI)<sup>33</sup> assessed past 12-month diagnoses of major depressive disorder and/or generalized anxiety disorder (MDD/GAD), and substance use disorder (SUD) (alcohol use disorder and/or an illicit substance use disorder).

#### Statistical Analyses

Frequencies and statistical analyses were estimated using survey procedures in SAS version 9.4 (SAS Institute) to incorporate sampling weights and adjust for the nested structure of the data (to account for up to 3 individuals nested within a household and to account for households nested within US Census block groups in the South Bronx sample). Continuous variables, including the cumulative ACEs count, were standardized. Site-specific weights were used to reflect sex and age distributions in the 1990 US Census and the 2000 US Census and to adjust for nonresponse at wave 4.<sup>25</sup>

Bivariate Pearson correlation coefficients were calculated to quantify correlations among childhood factors. We assessed the links between childhood factors and perceived stress (linear regressions) and mental disorders (MDD/GAD and SUD, using logistic regressions) with separate models for each childhood factor. The regression analyses were also conducted with the inclusion of ACEs in the models. Cubic splines examining the relationships between ACEs and outcomes were visually examined to assess the linearity assumption.

To test protective resilience factors, interaction terms between ACEs and resilience factors were added into each of the models. To test whether these relationships varied by site, we conducted additional 3-way interaction analyses (each resilience factor  $\times$  site  $\times$  ACEs). In a sensitivity analysis to examine the stability of results, we used the Bonferroni method to correct for multiple comparisons. Site, age, gender, use of public assistance at wave 1, and a binary variable that indicated participation in all of the first 3 time points, were included as covariates.

## Results

### Descriptive Characteristics

The sample included 2004 young adults (1083 in Puerto Rico; 921 in South Bronx). Mean (SD) age was 22.4 (2.9) years at wave 4 (only 10 participants were aged 15-16 years at wave 4, and we therefore refer to this group as young adults). A total of 1024 participants (51.1%) were female and 980 (48.9%) were male; 774 (38.8%) received public assistance; 1351 (67.4%) had an income below the poverty line. The mean (SD) score of ACEs was 2.5 (1.8); 688 (34.7%) of the sample had 0 or 1 ACE, 764 (38.5%) had 2 or 3 ACEs, and 532 (26.8%) had 4 or more ACEs. Past-year prevalence of MDD/GAD was 197 participants (9.84%) and of SUD was 191 (9.53%). The mean (SD) score on the Perceived Stress Scale was 12.21 (6.39).

Table 1. Bivariate Pearson Correlations Between Childhood Factors

| Factor                       | Maternal warmth    | Parent-child relationship | Nonparental adult support | Friendships        | Family religiosity |                    |                    | ACEs |
|------------------------------|--------------------|---------------------------|---------------------------|--------------------|--------------------|--------------------|--------------------|------|
|                              |                    |                           |                           |                    | Intrinsic          | Extrinsic          | Familism           |      |
| Maternal warmth              | NA                 | NA                        | NA                        | NA                 | NA                 | NA                 | NA                 | NA   |
| Parent-child relationship    | 0.24 <sup>a</sup>  | NA                        | NA                        | NA                 | NA                 | NA                 | NA                 | NA   |
| Nonparental adult support    | 0.01               | 0.17 <sup>a</sup>         | NA                        | NA                 | NA                 | NA                 | NA                 | NA   |
| Friendships                  | 0.02               | 0.09 <sup>a</sup>         | 0.19 <sup>a</sup>         | NA                 | NA                 | NA                 | NA                 | NA   |
| Family intrinsic religiosity | 0.09 <sup>a</sup>  | 0.04                      | 0.03                      | 0.11 <sup>a</sup>  | NA                 | NA                 | NA                 | NA   |
| Family extrinsic religiosity | 0.12 <sup>a</sup>  | 0.06 <sup>a</sup>         | 0.01                      | 0.08 <sup>a</sup>  | 0.54 <sup>a</sup>  | NA                 | NA                 | NA   |
| Familism                     | 0.08 <sup>a</sup>  | 0.00                      | -0.01                     | 0.01               | 0.16 <sup>a</sup>  | 0.09 <sup>a</sup>  | NA                 | NA   |
| ACEs                         | -0.29 <sup>a</sup> | -0.21 <sup>a</sup>        | -0.03                     | -0.07 <sup>a</sup> | -0.12 <sup>a</sup> | -0.10 <sup>a</sup> | -0.11 <sup>a</sup> | NA   |

Abbreviations: ACEs, adverse childhood experiences; NA, not applicable.

<sup>a</sup> Correlation is significant at the .01 level.

Table 2. Resilience Factors and Young Adulthood Mental Health Outcomes

| Resilience factor <sup>a</sup> | Perceived Stress Scale score |         | Major depressive disorder/generalized anxiety disorder |         | Substance use disorder |         |
|--------------------------------|------------------------------|---------|--|---------|------------------------|---------|
|                                | $\beta$ std (SE)             | P value | aOR (95% CI)   | P value | aOR (95% CI)           | P value |
| Maternal warmth                | -0.11 (0.02)                 | <.001   | 0.88 (0.74 to 1.03)                                    | .10     | 0.91 (0.78 to 1.06)    | .22     |
| Parent-child relationship      | -0.14 (0.02)                 | <.001   | 0.84 (0.73 to 0.97)                                    | .02     | 1.00 (0.85 to 1.19)    | .96     |
| Nonparental adult support      | -0.08 (0.03)                 | .003    | 0.81 (0.69 to 0.95)                                    | .008    | 1.08 (0.90 to 1.30)    | .41     |
| Friendships                    | 0.01 (0.03)                  | .69     | 1.01 (0.86 to 1.19)                                    | .88     | 0.96 (0.82 to 1.12)    | .58     |
| Family intrinsic religiosity   | 0.03 (0.03)                  | .30     | 1.11 (0.92 to 1.35)                                    | .27     | 0.97 (0.79 to 1.20)    | .79     |
| Family extrinsic religiosity   | 0.02 (0.03)                  | .54     | 1.07 (0.91 to 1.26)                                    | .42     | 1.08 (0.91 to 1.29)    | .39     |
| Familism                       | 0.01 (0.02)                  | .80     | 0.96 (0.81 to 1.13)                                    | .59     | 0.86 (0.73 to 1.02)    | .08     |

Abbreviations: aOR, adjusted odds ratio; std, standardized.

<sup>a</sup> Each standardized factor was tested in separate regression analyses and each

model adjusted for age, gender, use of public assistance, site, and a binary variable that accounted for missing data across waves.

### Correlation Analyses

Correlation coefficients among resilience factors were mostly positive and of small magnitude, and all resilience factors apart from nonparental adult support were negatively correlated with ACEs (Table 1). In other words, high scores on 1 resilience factor were, in general, accompanied by high scores on other resilience factors and by fewer ACEs.

### Promotive Processes

The association of each resilience factor (promotive factor) with young adulthood outcomes is demonstrated in the adjusted regression analyses in Table 2. Results varied by outcome. Three measures of social bonds were associated with lower perceived stress: maternal warmth ( $\beta = -0.11$ ; SE = 0.02;  $P < .001$ ), positive parent-child relationship ( $\beta = -0.14$ ; SE = 0.02;  $P < .001$ ), and nonparental adult support ( $\beta = -0.08$ ; SE = 0.03;  $P = .003$ ). Adjusted  $R^2$  values for the models addressing perceived stress ranged from  $R^2 = 0.06$  for the model with family extrinsic religiosity and  $R^2 = 0.08$  for the model with parent-child relationship. Two measures of social bonds were associated with lower odds of MDD/GAD: positive parent-child relationship (adjusted odds ratio [aOR], 0.84; 95% CI, 0.73 to 0.97) and nonparental adult sup-

port (aOR, 0.81; 95% CI, 0.69 to 0.95). No factors from the domain of sources of meaning (familism and religiosity) were associated with the outcomes, and no resilience factors were associated with SUD. Additional analyses testing the associations between resilience factors and outcomes demonstrated that the only association no longer significant after ACEs were included in the models was that between parent-child relationship and MDD/GAD (eTable in Supplement 1). In summary, resilience factors representing social bonds were associated with perceived stress and MDD/GAD while no resilience factors were associated with SUD.

### Protective Processes

As expected, ACEs were associated with outcomes (Table 3). Visual inspection of the relationship between ACEs and outcomes supported their linear association (eFigure in Supplement 1). ACEs were associated with higher perceived stress ( $\beta = 0.13$ ; SE = 0.02;  $P < .001$ ) and higher odds of MDD/GAD (aOR, 1.36; 95% CI, 1.16-1.60) and SUD (aOR, 1.20; 95% CI, 1.02-1.41). However, analyses testing protective processes associated with each resilience factor (through moderation of the association between ACEs and outcomes) yielded unexpected results (Table 3). We found significant interactions between

**Table 3. Adverse Childhood Experiences and Moderation of Adverse Childhood Experiences by Resilience Factors**

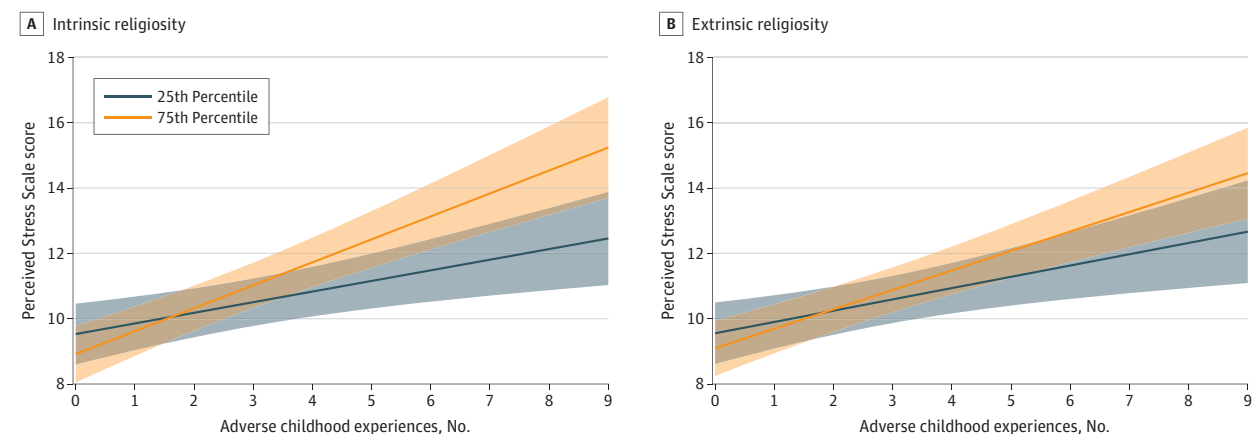
| Factor                                     | Perceived Stress Scale score |         | Major depressive disorder/generalized anxiety disorder |         | Substance use disorder |         |
|--|------------------------------|---------|--|---------|------------------------|---------|
|  | $\beta$ std (SE)             | P value | aOR (95% CI)   | P value | aOR (95% CI)           | P value |
| ACEs                                       | 0.13 (0.02)                  | <.001   | 1.36 (1.16 to 1.60)                                    | <.001   | 1.20 (1.02 to 1.41)    | .03     |
| Interaction terms <sup>a</sup>             |                              |         |  |         |                        |         |
| Maternal warmth $\times$ ACEs              | 0.00 (0.02)                  | >.99    | 0.94 (0.81 to 1.10)                                    | .47     | 0.99 (0.85 to 1.16)    | .86     |
| Parent-child relationship $\times$ ACEs    | -0.02 (0.02)                 | .30     | 1.03 (0.90 to 1.18)                                    | .63     | 1.02 (0.86 to 1.22)    | .82     |
| Nonparental adult support $\times$ ACEs    | 0.03 (0.03)                  | .23     | 0.94 (0.81 to 1.10)                                    | .43     | 1.04 (0.89 to 1.22)    | .63     |
| Friendships $\times$ ACEs                  | 0.03 (0.02)                  | .18     | 0.94 (0.82 to 1.08)                                    | .37     | 1.14 (0.99 to 1.31)    | .08     |
| Family intrinsic religiosity $\times$ ACEs | 0.07 (0.02)                  | .002    | 1.08 (0.91 to 1.29)                                    | .35     | 1.14 (0.95 to 1.36)    | .14     |
| Family extrinsic religiosity $\times$ ACEs | 0.05 (0.02)                  | .04     | 1.06 (0.91 to 1.24)                                    | .45     | 0.98 (0.82 to 1.17)    | .77     |
| Familism $\times$ ACEs                     | 0.01 (0.02)                  | .75     | 1.02 (0.96 to 1.08)                                    | .86     | 1.01 (0.85 to 1.20)    | >.99    |

Abbreviations: ACEs, adverse childhood experiences; aOR, adjusted odds ratio; std, standardized.

<sup>a</sup> Each standardized factor was tested in separate regression analyses and each

model adjusted for age, gender, use of public assistance, site, and a binary variable that accounted for missing data across waves. Models also included main effects of each variable, not included here for brevity.

**Figure. Moderation of the Association Between Adverse Childhood Experiences and Perceived Stress by Specific Resilience Factors**



Intrinsic religiosity refers to intrinsic family religiosity, and extrinsic religiosity refers to extrinsic family religiosity. Higher scores on the Perceived Stress Scale indicate more perceived stress. Analyses were adjusted for age, gender, use of public assistance, site, and a binary variable that accounted for missing data

across waves. Note: the confidence intervals (shaded areas) represent uncertainty related to levels of religiosity and not uncertainty related to the overall interaction test.

ACEs and both family intrinsic religiosity ( $b = 0.07$ ;  $SE = 0.02$ ;  $P = .002$ ) and family extrinsic religiosity ( $b = 0.05$ ,  $SE = 0.02$ ;  $P = .04$ ), whereby at higher ACEs, religiosity was associated with higher perceived stress (Figure). The 3-way interaction analyses (resilience factor  $\times$  site  $\times$  ACEs) were not statistically significant, supporting the null hypothesis that these relationships did not vary based on study site. In summary, no resilience factors were protective against ACEs, and religiosity, unexpectedly, was associated with higher stress at higher ACEs.

Sensitivity analyses accounting for multiple comparisons using Bonferroni correction within each outcome measure yielded an adjusted significance level of .006. Reported results met this adjusted significance level except for the associations of parent-child relationship and nonparental adult

support with MDD/GAD, ACEs with SUD, and the interaction term between family extrinsic religiosity and ACEs in association with perceived stress.

## Discussion

This longitudinal study of youth from a Latine subgroup with high ACEs in low-resource settings supports a developmental model that emphasizes that childhood social bonds are prospectively linked to a lower risk of later stress and mental disorders. Specifically, relationships with adults both within and outside of the family during childhood were the factors most strongly related to lower stress and lower risk of MDD/GAD in young adulthood.

Consistent with prior research, we found support for the importance of promotive processes associated with childhood social bonds with adults. Positive parent-child relationship and nonparental adult support were associated with lower perceived stress and a lower odds of MDD/GAD, and maternal warmth was also associated with lower perceived stress. These results underscore that promoting positive adult-child relationships, both within and outside of the family, may be linked to lower risk of later stress and MDD/GAD, regardless of exposure to ACEs.

No resilience factor was consistent with being protective in the relationship between ACEs and outcomes. That is, higher scores on resilience factors were not found to be associated with weaker associations between ACEs and any of the outcomes. Some studies have reported protective processes related to resilience factors and ACEs (eg, parent-child relationship moderating the effects of maltreatment<sup>34,35</sup>). However, a review article examining moderators of childhood adversity on young adult mental health in longitudinal studies found that of 22 resilience factors tested, for only 10 factors was moderation detected.<sup>22</sup> Our results are consistent with these findings. However, the effect sizes of some of the associations that were not statistically significant were similar to those that were statistically significant (eg, maternal warmth and MDD/GAD, familism and SUD). For this reason, null findings should be interpreted cautiously. Our results indicate the need to identify childhood resilience factors that are particularly relevant for children who experience ACEs.

Importantly, at higher levels of family religiosity, a child's vulnerability to ACEs may be high. We found that higher religiosity was associated with more perceived stress when a child experienced high ACEs. An explanation for this unexpected finding could be that religious families may experience higher levels of shame and guilt related to ACEs (eg, ACEs of parental substance use or incarceration) leading to higher stress.<sup>36</sup> In adult studies, some have found that religiosity may be protective,<sup>6</sup> while others have reported results similar to ours.<sup>37</sup> A large cross-sectional study involving African American women found that higher religiosity was related to a stronger association between major discrimination and poor self-reported health.<sup>38</sup> Religiosity has been less studied than other resilience factors during childhood,<sup>39</sup> limiting our understanding of its role early in life. Additionally, the effects of religiosity may vary across racial or ethnic groups. Of the few studies investigating this, findings have been inconsistent. For example, one small study found religiosity to be protective for suicidal ideation among European American but not African American individuals,<sup>40</sup> while another study found that religiosity was associated with better cognitive functioning in Black women but worse cognitive functioning among White women.<sup>41</sup> Future studies could examine if other sociocultural factors may influence whether religiosity functions as a risk or resilience factor.

Our findings may be best understood within a developmental framework. The childhood resilience factors most strongly associated with young adulthood mental health in these analyses were social bonds with adults, while peer relationships and sociocultural sources of meaning (family religiosity and familism) did not demonstrate a promotive process. These results differ from prior studies, which, for example, report a lower risk of depression with familism<sup>14</sup> and a lower risk of substance use with religiosity.<sup>42</sup> However, whereas most studies have focused on adults or older adolescents, we were interested in resilience factors during childhood, when sensitive periods of socioemotional development are more likely to occur.<sup>20</sup> Perhaps the positive influences of sources of meaning and peer relationships begin later in development when, through the process of identity formation, family beliefs are progressively accepted or rejected by the individual.<sup>43</sup> Future studies could address these questions by assessing resilience factors during childhood and again during adolescence, as well as assessing potential differential effects of resilience factors based on the timing of ACEs.

### Limitations

First, there was heterogeneity in how resilience factors were measured (eg, parent report vs child report), although there were no patterns in the results related to this heterogeneity. Second, the age range of participants was broad. Additionally, to reduce recall bias and test associations reflecting temporal sequencing, we did not include retrospective reports of ACEs during young adulthood. Finally, in the sensitivity analyses accounting for multiple comparisons, some of the associations were no longer statistically significant (eg, parent-child relationship with MDD/GAD and ACEs with SUD) indicating that findings need to be reproduced in future studies.

### Conclusions

The results of this study suggest that, regardless of exposure to ACEs, promoting positive adult-child relationships could help prevent young adulthood perceived stress and MDD/GAD. No resilience factor was considered protective in relation to ACEs, underscoring the importance of reducing exposure to ACEs and examining other sources of resilience. We recommend caution in generalizing resilience factors across developmental time periods, populations, and sociocultural contexts. Unlike some other studies, among individuals with high levels of family religiosity in this sample, ACEs were associated with more perceived stress in young adulthood. Using a developmental framework, sociocultural factors that promote resilience to ACEs during childhood need to be further explored.

#### ARTICLE INFORMATION

Accepted for Publication: October 30, 2023.

Published Online: December 27, 2023.

doi:10.1001/jamapsychiatry.2023.4900

Author Affiliations: Department of Psychiatry, Columbia University Medical Center, New York,

New York (VanBronkhorst, Abraham, Wall, Saunders, Monk, Bird, Duarte); Department of Child and Adolescent Psychiatry, New York State Psychiatric Institute, New York (VanBronkhorst,

Abraham, Ramos-Olagagasti, Saunders, Monk, Bird, Duarte); Area Mental Health Data Science, New York State Psychiatric Institute, New York (Dambreville, Wall); Child Trends, Hispanic Institute, Bethesda, Maryland (Ramos-Olagagasti); Department of Obstetrics & Gynecology, Columbia University Medical Center, New York, New York (Monk); Massachusetts General Hospital, Boston (Alegría); University of Puerto Rico, San Juan, Puerto Rico (Canino).

**Author Contributions:** Drs VanBronkhorst and Duarte had full access to all of the data in the study and take responsibility for the integrity of the data and the accuracy of the data analysis.

**Concept and design:** VanBronkhorst, Ramos-Olagagasti, Wall, Monk, Canino, Duarte.  
**Acquisition, analysis, or interpretation of data:** VanBronkhorst, Abraham, Dambreville, Ramos-Olagagasti, Saunders, Alegría, Canino, Bird, Duarte.

**Drafting of the manuscript:** VanBronkhorst, Abraham, Wall, Saunders, Canino, Duarte.

**Critical review of the manuscript for important intellectual content:** Abraham, Dambreville, Ramos-Olagagasti, Saunders, Monk, Alegría, Canino, Bird, Duarte.

**Statistical analysis:** Abraham, Dambreville, Ramos-Olagagasti, Wall, Duarte.

**Obtained funding:** Monk, Canino, Bird, Duarte.

**Administrative, technical, or material support:** Ramos-Olagagasti, Canino, Duarte.

**Supervision:** Ramos-Olagagasti, Alegría, Canino, Duarte.

**Conflict of Interest Disclosures:** Dr Duarte reported being a council member of the American Psychopathological Association outside the submitted work. No other disclosures were reported.

**Funding/Support:** The Boricua Youth Study has been supported by the National Institutes of Health (UH3OD023328, Drs Monk, Canino, and Duarte; MH098374, Drs Alegría, Canino, and Duarte; MH56401, Dr Bird; DA033172, Dr Duarte).

**Role of the Funder/Sponsor:** The funder had no role in the design and conduct of the study; collection, management, analysis, and interpretation of the data; preparation, review, or approval of the manuscript; and decision to submit the manuscript for publication.

**Data Sharing Statement:** See Supplement 2.

**Additional Information:** We use the word *Latine* as a nonbinary, gender-inclusive term to refer to individuals of Latin-American and Caribbean background. Unlike, for example, *Latinx*, which is mostly used in the mainland United States, *Latine* can be pronounced and conjugated in Spanish and other Latin languages. We acknowledge that the limitation of any of these terms is that, at this time, they are not widely used by the majority of the members of the communities they are used to represent.

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