

Characterizing the Life Stressors of Children of Alcoholic Parents

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The current study examined differences between children of alcoholic (COAs) and nonalcoholic parents in their experience of negative life events across 3 longitudinal studies together spanning the first 3 decades of life. The authors posited that COAs would differ from their peers in the life domains in which they are vulnerable to stressors, in the recurrence of stressors, and in the severity of stressors. Scale- and item-level analyses of adjusted odds ratios based on stressors across 7 life domains showed that COAs consistently reported greater risk for stressors in the family domain. COAs were also more likely to experience stressors repetitively and to rate their stressors as more severe (in adulthood). Implications for prevention and intervention programs targeting this risk group are discussed.

Keywords: life stress, children of alcoholic parents, family

By young adulthood, children of alcoholic parents (COAs) show rates of psychopathology that far exceed those of non-COAs for a broad range of outcomes, including alcohol use, drug use, and affective and anxiety disorders (Chassin, Pitts, DeLucia, & Todd, 1999; Sher, 1991). Previous studies have shown that greater life stress partly accounts for this increased risk (Chassin, Curran, Hussong, & Colder, 1996, 1997; Grekin, Brannan, & Hammen, 2005; Griffin, Amodeo, Fassler, Ellis, & Clay, 2005; Sher, Gershuny, Peterson, & Raskin, 1997). In these studies, life stress is typically defined by a count of negative life events endorsed by participants. The experience of more negative life events is posited to increase internal distress for COAs, thereby taxing available coping resources and, in turn, increasing the risk for maladaptive responses, including psychopathology. Although supporting the significance of stress in understanding COAs' risk for negative outcomes, such studies have ignored some of the important distinctions that underlie the broad construct of stress (Seyle, 1993). In the current study, we pursued a more nuanced understand-

ing and highly resolved characterization of the life stressors that underlie these findings.

To this end, we recognize an important distinction offered by Seyle (1993) between *stress* as the nonspecific mental or somatic impact of any demand on the body and *stressors* as agents or demands that evoke these responses. In the current study, we focused on stressors (specifically, negative life events) because our goal was to understand the developmental context of COAs rather than the impact of that context on development (which would require consideration of stress as well). Thus, we adopted a broader definition of *stressors*, particularly in our adult assessments, but consider the different interpretations that a blurring of this distinction may yield. We also explicitly defined three dimensions of stressors that provide a framework for understanding how these events may more frequently arise in the lives of COAs as compared with their peers. These dimensions are based on the seminal work of Dohrenwend (2000) and differentiate among stressors on the basis of their (a) relation to various *life domains* and centrality, (b) *chronicity* or repetition, and (c) perceived *severity* or magnitude. This approach to decomposing stressors into meaningful components is consistent with work by Kessler and Magee (1994) demonstrating specificity in the relation between the components of stressors and phases of disorder (e.g., onset vs. recurrence) and the process by which coping and support buffer this risk.

Although the unique life domains in which COAs are particularly vulnerable to stressors are rarely studied, existing evidence does show that COAs report greater negative experiences within familial (Anda et al., 2002; Dube et al., 2001; Floyd, Cranford, Daugherty, Fitzgerald, & Zucker, 2006; Pillow, Barrera, & Chassin, 1998), educational and occupational (Jacob & Windle, 2000; McGrath, Watson, &

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Chassin, 1999; Poon, Ellis, Fitzgerald, & Zucker, 2000; Sher, Walitzer, Wood, & Brent, 1991), and interpersonal life domains (Hussong, Zucker, Wong, Fitzgerald, & Puttler, 2005). Our hypothesis about the life domains to which COAs are vulnerable to stressors considered the developmental salience of those domains. Thus, we posited that the life domains in which COAs are particularly vulnerable to experience stressors change with age.

Core to several theories of development is the identification of central challenges or tasks that require resolution as part of children's growth. For example, given the centrality of family life to forming healthy attachments in early childhood (Bowlby, 1988), children may show greater vulnerability for negative life events within the family domain. As they mature toward adolescence, peers and friends become an important life domain as developmental challenges associated with social functioning take center stage (Brown, 1990). Similarly, with development into young adulthood, developmental challenges concern growing autonomy and independence as well as identity formation (Arnett, 2001). The challenges accompanying these developmental tasks may create greater opportunities for stressors in the lives of COAs than of non-COAs. The reason for this vulnerability is that new areas of growth present unresolved challenges for which COAs may lack the resources and coping skills both to successfully negotiate stressors once experienced but also to preemptively maneuver to avoid such stressors (Hussong & Chassin, 2004). Consistent with this notion are greater educational and occupational problems among COAs than among their peers evident in young adulthood (e.g., Jacob & Windle, 2000; McGrath et al., 1999; Poon et al., 2000; Sher, 1991).

In brief, we posited that COAs would show greater risk for family-related stressors in childhood, for peer-related stressors in adolescence, and for stressors related to independent functioning (e.g., work and occupational functioning) in adulthood. Because stressors related to independent functioning may by definition also reflect other factors that impair functioning, such as stress, the distinction between stressors and stress may be increasingly blurred with development. This may occur for several reasons. For example, the family- and peer-related stressors that may be more strongly affected by parent alcoholism earlier in development result in functional impairments that then themselves become stressors for COAs in young adulthood. Alternatively, functional impairments resulting from early life stressors may result in COAs living in more high-risk environments in young adulthood that in turn increase their risk for life stressors. Thus, life stressors reflecting independent functioning may be more apparent in young adult COAs (vs. non-COAs or younger COAs) and arise from different stress-coping processes than those occurring earlier in life, but also still serve as a contributor to greater environmental press or stressors on the individual. In the current study, we did not examine the origins of stressors across different life domains but instead focused on the initial question of whether COAs differ from their peers in the life domains to which they are particularly vulnerable to stressors from whatever source.

Moreover, COAs may differ in the perceived severity of these life stressors. Because negative life events are complex stressors, often comprising a set of related but discrete experiences, individual differences in severity ratings may reflect variation in the life events themselves. These variations may be evident both in differences in stressor ratings across individuals as well as within the same individual over time. Individual differences in severity ratings for stressors, however, may also reflect how individuals interpret and respond to otherwise comparable events. COAs may be at risk for greater stressor severity from both of these sources. Notably, information processing biases related to risk for depression and hostility are elevated in COAs (Sher, 1991). These biases can serve, for example, to increase the potential for erroneous event appraisals pertaining to personal failure or the hostile intentions of others (Crick & Dodge, 1994; Krantz & Hammen, 1979). Such biases in turn may change the meaning of the event and increase its perceived severity. Previous studies have primarily used severity ratings to create weighted stress scales, thus confounding the experience of more stressors with that of more severe stressors. In the current study, we tested these two dimensions separately, positing that COAs experience more life stressors and that they rate stressors as more severe in comparison to non-COAs.

Chronicity acknowledges that COAs and their peers may experience similar stressors but differ in the extent to which they are able to avoid these stressors or to disentangle themselves from the stressor. Previous studies have shown that the related concept of chronic strain within the family environment uniquely contributes to the prediction of children's functioning above and beyond the contributions of maternal depression (Hammen et al., 1987). Pearlman, Menaghan, Lieberman, and Mullan (1981) noted that chronic strain may create an impoverished environment that in turn magnifies the impact of discrete stressors (perhaps by reducing self-regulation; Muraven & Baumeister, 2000) and generates new stressors. COAs may experience stressors more repetitively than their peers because they lack the resources to resolve the mitigating circumstance (i.e., social support, coping, financial) or because the actual stressor is more complex, entrenched, or salient in the lives of COAs than of their peers. In any case, COAs' more chronic stressors may result in greater accumulation of stressors over time, imparting greater physiological, psychological, and somatic costs as compared with episodic stressors (Lepore, Miles, & Levy, 1997).

In sum, we hypothesized that COAs experience more stressors and show a particular risk for stressors in life domains salient for developmental tasks (i.e., the family in childhood, peers in adolescence, and independent functioning in adulthood). We also hypothesized that COAs rate those stressors as more severe and experience stressors more repetitively than their peers. We examined these hypotheses through analysis of three independent, longitudinal studies of COAs and their peers. Across these three studies, we were able to compare samples of COAs and matched controls from ages 2 through 33 years. Differences in measurement across studies precluded pooling of these data;

rather, we tested each hypothesis across studies that differ in developmental focus, sampling frame, and instrumentation, thus providing the potential for more generalizable findings. These three studies are age-graded, beginning in early childhood (the Michigan Longitudinal Study [MLS]), early adolescence (Adolescent/Adult Family Development Project [AFDP]), and early adulthood (the Alcohol and Health Behavior Project [AHBP]), thus providing an opportunity for replication across the early life span.

Method and Results by Study

We separately analyzed three longitudinal studies of COAs and controls with nonalcoholic parents. Below we describe the samples, procedures, measures, and results for each study separately. (Also see Tables 1 and 2 for study comparisons.) However, because we used similar analytic techniques across studies, we first present our general analytic approach.

General Analytic Approach

We conducted three types of analyses. First, we conducted analyses within all three studies to examine whether

COAs experience different types of life events than do their peers. We were particularly interested in scale and item differences as a function of life domain affected. Outcomes were analyzed as a function of participants' age rather than assessment wave (see Mehta & West, 2000). These analyses relied primarily on descriptive statistical techniques.

We created a priori categories for life domains underlying stressors rated in previous studies as negative. Based on the Life Stressors and Social Resources Inventory (Moos, 1995; Moos, Fenn, & Billings, 1988) and other life stress measures (Domains of Stress instrument, De Coster & Kort-Butler, 2006; Illness Intrusiveness Ratings Scale, Devins et al., 2001; Life Events Inventory, Gall, Evans, & Bellerose, 2000), we identified major domains of life events that we adapted to be inclusive of those most relevant for children and adolescents. This process resulted in a final set of seven life domains labeled *physical health*, *general family stressors*, *family separations*, *financial*, *work/academics*, *spouse/partner*, and *peers*. The first author then assigned all 76 items culled from the three studies to one of these seven domains or to an eighth "unassigned" category. We then recruited 14 research assistants (i.e., junior and senior psychology majors) charged with carrying out a similar

Table 1
Summary of Study Characteristics

	MLS	AFDP	AHBP
Design			
Recruitment	Rolling community-based recruitment with COA families identified through father's court or arrest records and community canvassing.	A community-based sample with alcoholic parents identified through court records, health maintenance organization wellness questionnaires, and telephone surveys.	Recruited through a screening of 3,156 first-time freshmen at the University of Missouri who reported on paternal alcoholism using the Father—SMAST.
Assessment schedule	Mothers and fathers completed up to four assessments when the children were between ages 2–5, 6–8, 9–11, and 11–15 years at 3-year intervals.	Mothers, fathers, and one child completed the first three annual waves of data on children age 10–17 years and two subsequent follow-up waves at 5-year intervals; age-appropriate siblings were also included as targets in the follow-up waves.	Children completed four annual assessments (Years 1–4) and two additional post-college follow-ups (at 3- and 4-year intervals, or Years 7 and 11).
Variables			
Parent alcoholism	Lifetime diagnosis was made by a trained clinician based on <i>DSM-IV</i> criteria with parent self-report at each wave using three instruments: DIS, SMAST, and the Drinking and Drug History Questionnaire.	Lifetime diagnosis was made by interviews based on <i>DSM-III</i> criteria with parent self-report at the first wave using the computerized version of the DIS. In cases where a biological parent was not directly interviewed, the reporting parent was used as the informant using the FH-RDC.	Lifetime diagnosis was made by survey assessment based on <i>DSM-III</i> criteria with target (child) report at baseline using the Parent—SMAST and FH-RDC.
Life stressors	Assessed by parent reports using a modified version of the Coddington Family Events Questionnaire.	Assessed by parent and child reports using a modified version of the General Life Events Schedule for Children and Children of Alcoholics Life Events Schedule.	Assessed by child reports using a modified version of the Life Events Survey.

Note. MLS = Michigan Longitudinal Study; AFDP = Adolescent and Family Development Project; AHBP = Alcohol and Health Behavior Project; COA = child of alcoholics; SMAST = Short Michigan Alcoholism Screening Test; DIS = Diagnostic Interview Schedule; FH-RDC = Family History Research Diagnostic Criteria.

Table 2
*Demographic Characteristics of the Three
 Longitudinal Studies*

Characteristic	MLS	AFDP	AHBP
Observations, n^a	1,262	2,093	2,703
Participants, n	464	806	482
Families, n	313	453	482
COAs (%)	75	50	48
Gender (% male)	68	51	47
Ethnicity (% Caucasian)	98	70 ^b	94
Parent education (%)			
High school or less	55	27	19
Some post-high school training	22	41	26
College degree or more	23	32	55
Age range (years)	2–15	11–33	17–33

Note. MLS = Michigan Longitudinal Study; AFDP = Adolescent and Family Development Project; AHBP = Alcohol and Health Behavior Project; COA = child of alcoholics.

^a The number of observations for the analysis of any given item varied depending on the number of waves on which it was administered. The number of participants and families, however, was constant over analyses of items. ^b Remaining participants self-identified as Hispanic.

sorting procedure to evaluate the reliability of this classification scheme across independent raters. These research assistants completed a rating sheet in which they indicated to which of the seven life domains each item could “reasonably belong” as well as the one domain that provided the “best fit.” We calculated agreement rates as the percentage of raters who included the life domain identified by the first author as among those to which a given item could “reasonably belong.”¹ For all items reaching agreement rates of 75% or higher (58 of 67 classified by the first author), we accepted the item classification. We also created scale scores on the basis of this classification by averaging items in each life domain within study. We retained items not reaching this agreement rate as “unassigned.”

We then used statistical methods to summarize differences between COAs and their peers in their experience of stressful life events. Specifically, we conducted generalized estimating equations (GEE) analyses of our cluster-correlated data with a logit link (appropriate to our dichotomous outcome of whether or not a stressor was experienced). These analyses produced odds ratios describing the magnitude of group differences after adjusting for control variables (i.e., participant gender and age, centered at the earliest observation within study to reflect time). These analyses produced adjusted odds ratios that accounted for the nesting of repeated assessments within individuals (in the AHBP) who were themselves nested within families (in the MLS and the AFDP). We estimated these GEE models with PROC GENMOD (in SAS, 2004) using the alternating logistic regression estimator that permits specification of subclusters (repeated measures on children) within clusters (families). Thus, GEE is a statistical procedure that adjusts for nonindependence of observations (i.e., correlation) among scores that are nested within individuals and families. An autoregressive working correlation struc-

ture was specified for the two-level nesting in the AHBP (to account for continuity in stressors experienced over time), and an exchangeable nested correlation structure was specified for the three-level nesting in the MLS and the AFDP.² The latter structure implied one correlation for siblings within families (clusters) and a second, higher correlation for repeated measures within sibling (subclusters).

We first conducted these analyses on the subscales reflecting the seven life domains identified by our raters. Because these subscales reflect broad categories of events, we also conducted item-level analyses to provide a better understanding of the types of events for which COAs are especially at risk. Because these analyses were conducted at the item level, repeated testing resulted in significant alpha inflation and thus undermined the utility of inferences based on significance tests. Instead, group differences were quantified through the adjusted odds ratios. We then compared items with sizable odds ratios (of 1.5 or greater), as reflecting COA effects, with those with smaller odds ratios and noted item differences. We also considered differences in these items related to the frequency of their endorsement.³

¹ We calculated the percentage agreement in two ways. First, we calculated the portion of raters who identified the category identified a priori by the first author as the “best fit” category for a given item. Given the great potential for diversity in these life stressors, “best fit” agreement rates between the first author and the “best fit” categories of the raters were modest. The second method of calculating agreement is reported in the text, and higher agreement rates were found. We report these rates because they recognize the complexity of life events and that these items may reasonably be classified multiple ways.

² Estimates obtained from the GEE approach are robust to misspecification of the working correlation structure. So even if the exchangeability (or auto-regressive [AR]) assumption is wrong, then the odds ratio estimates and their confidence intervals are still consistent. This is an advantage of GEE relative to random effects models. A disadvantage of GEE, however, is that it requires missing data to be missing completely at random (MCAR), whereas the maximum likelihood estimator typically used with random effects models requires only that the data be missing at random (MAR; see Schafer & Graham, 2002, for a nontechnical review of these terms). To probe whether our analyses were sensitive to the MCAR assumption of the GEE estimator in PROC GENMOD, we also estimated these models using a pseudo-likelihood estimator in PROC GLIMMIX, which assumes MAR missing data. Although a small number of items with low base rates did not converge in GLIMMIX (that did using GENMOD), results were otherwise highly consistent across the analyses.

³ In addition, follow-up analyses tested for age differences in the effect of parent alcoholism on negative life events by including an interaction between age and parent alcoholism in the same GENMOD models described above for the prediction of each item. However, this interaction was significant for very few items within any study (three items within the MLS, two items in the AFDP, and one item in the AHBP). Because of the high number of repeated tests, the lack of a consistent pattern in significant interaction effects, and the small number of findings, we concluded that the association between parent alcoholism and these negative life events was relatively robust across the ages examined and results of these analyses are not reported here.

A second set of analyses tested whether COAs and their peers differed on the recurrence of negative stressful life events. For these analyses, we computed proportion scores for each participant who was assessed on at least three occasions to index the number of times each participant endorsed an item over all periods assessed. Due to study design, these inclusion criteria resulted in lower sample sizes than for other analyses.⁴ After defining our samples, we then averaged our item-level indices of recurrence to compute a scale-level index of recurrence and conducted multiple regression analyses (extended to the two-level GEE modeling framework conducted in PROC GENMOD for the MLS to account for family nesting in the data set) in which we regressed each scale-level index of recurrence on participant gender, age, and COA status.

A third set of analyses tested for differences in the severity ratings of negative life events for COAs and their peers based on reports from participants in the AHBP (the only study for which these data were available). These analyses included tests of statistical significance to determine whether COAs and controls differed in the severity of their stress ratings as averaged across items after accounting for the number of stressors they experienced as well as for participant gender and age. Specifically, we conducted a two-level GEE analysis with an identity link function (as appropriate for this continuous measure of stressor severity and paralleling standard ordinary least squares regression), specifying an autoregressive error structure, again using PROC GENMOD.

The Michigan Longitudinal Study

MLS Sample and Procedures

The MLS assessed three cohorts of children using a rolling, community-based recruitment (Zucker et al., 2000). In Cohort 1, 338 boys (ages 2–5 years; 262 COAs and 76 matched controls) and their parents completed in-home interviews. Inclusion criteria were that fathers meet (Feighner et al., 1972) diagnostic criteria for adult alcoholism by self-report, reside with their biological sons ages 3–5 years, be in intact marriages with their sons' biological mothers at the time of first contact, and that sons show no evidence of fetal alcohol syndrome. Contrast families were matched to COA families on the basis of age and sex of the target child; both parents of controls had to be free of lifetime adult alcoholism and drug abuse or dependence diagnoses. Seventy percent of eligible families with court records and 93% of community-canvassed families agreed to participate (overall participation rate was 84%). Cohort 2 members were girls (ages 3–11 years) from the Cohort 1 families who were recruited when Cohort 1 boys were at Wave 2. Cohort 3 contained all additional siblings (ages 3–11 years) of the male target children in Cohort 1 across subsequent waves of assessment. A total of 152 girls (from 152 families) made up Cohort 2, and an additional 106 siblings (from 84 families) made up Cohort 3. Across all three cohorts, 596 children from 338 families provided up to four waves of data, with

an overall participation rate of 73% for those with at least two waves of data in the sample. Participants with missing demographics or reports on life stressors across all waves were omitted, resulting in an analysis sample of 464 children (78% of the total sample; see Table 2). Comparisons between retained and excluded participants showed that those excluded were older and more likely to be male, although they did not differ on parental education, parental alcoholism, or child ethnicity. Each family completed a primarily in-home assessment conducted by trained staff that was blind to family diagnostic status. Although protocol length varied by wave of assessment, assessments were typically 9–10 hr for parents and 7 hr for children, each spread over seven testing sessions. Families were compensated between \$300 and \$375, depending on the number of children interviewed.

MLS Measures

Control variables included participant gender (0 = girls) and age. Parental alcohol use disorder⁵ at Wave 1 was assessed by the Diagnostic Interview Schedule (DIS—Version III; Robins, Helzer, Croughan, & Ratcliff, 1980), the Short Michigan Alcohol Screening Test (SMAST; Selzer, Vinokur, & van Rooijan, 1975), and the Drinking and Drug History Questionnaire (Zucker, Fitzgerald, & Noll, 1990). On the basis of information collected by all three instruments, a lifetime diagnosis was made by a trained clinician using *Diagnostic and Statistical Manual of Mental Disorders* (4th ed.; *DSM-IV*; American Psychiatric Association, 1994) criteria (interrater $\kappa = 0.81$). In subsequent waves, past 3-year diagnoses were made. The diagnosis of an alcohol use disorder was based on either biological parent meeting criteria at any assessment prior to the first wave of data collection for that child⁶; however, study inclusion criteria required COAs to have an alcoholic father, with no restrictions on maternal alcoholism, and controls to have parents with no alcoholism. Finally, life stressors were assessed via parent reports using modified versions of the

⁴ In the MLS, this occurred because siblings of the target 3- to 5-year-old boys entered the study later in time and sometimes at older ages. As such, by design, fewer assessments of these participants had accrued. In the AFDP, siblings of the target adolescents all entered in the study at Wave 4 and, by design, completed only two assessments. Thus, all siblings in the AFDP were dropped. These patterns of missingness account for most of participants lost in the recurrence analyses, and because these cases are missing by design, their exclusion can be considered missing completely at random, yielding little bias in our analysis.

⁵ In all cases, the parent of interest is the biological parent, regardless of residence. Given the inability of the current study designs to parse environmental and genetic risk, we consider this index the most appropriate to the current questions of interest.

⁶ Because parents could, for example, complete a lifetime assessment for their first child at Wave 1 and subsequently a past 3-year assessment for a second child entering the study at Wave 2, a diagnosis was given if the parent met criteria at any wave of assessment prior to that child's entry into the study. Thus, for each child, parent disorder was a child-level variable representing a lifetime diagnosis temporally precedent to the child's first wave of data collection.

Coddington Family Events Questionnaire (Coddington, 1972a, 1972b). To capture developmental changes in stressors from the preschool to adolescent years, some items from this measure were modified slightly in wording across waves (e.g., *preschools* was changed to *schools*) and some additional items were added (e.g., stepparents separated or divorced, friend/relative moved in). We selected items that were previously rated in the literature as negative life events from among those administered at any wave. (Because all items were endorsed with respect to occurrence within the past year, repetition of an event represents recurrence or continuity of a stressor, rather than “double counting” of a single stressor event at more than one assessment occasion.) All items were coded as having occurred (1) within the past year if either parent endorsed the event or as having not occurred (0) if neither parent endorsed the event or a single reporting parent did not endorse the event. The resulting set of items for the MLS appears in Table 3.

MLS Results

COAs' risk for specific types of stressors. Results of our GEE analyses based on the five scale scores for life domains assessed in the MLS (e.g., family, family separation, financial, work/academics, and peers) showed that family events more generally and family separations specifically were more common stressors in COAs than in controls (see Table 3). The single item assessing work/academics (e.g., repeating a grade) was also more common in COAs than controls. To better understand these findings, adjusted odds ratios from item-level analyses testing whether COAs were more likely to experience each individual stressor are reported in Table 3. These odds ratios were derived from our GEE analyses for most items, but low base rates on 13 items (marked by asterisks in Table 3) led to nonconvergence of GEE models. To address this issue, we obtained adjusted odds ratios using logistic regression, in which nesting over

Table 3
Observed Stressor Occurrence in the Michigan Longitudinal Study

Item wording	Rater agreement (%)	Adjusted OR	Lower 95% CI	Upper 95% CI	Control endorsement (%)	COA endorsement (%)
Family						
Grandparent ill or hospitalized	100	1.51	1.17	1.97		
Grandparent died	80	0.85	0.58	1.24	42.06	38.44
Parent returned to school	81	0.97	0.67	1.42	30.77	27.95
Parent away more due to job	81	1.01	0.52	1.95	11.21	9.45
Increased arguments between parent and child	100	1.09	0.80	1.49	41.88	40.63
Increased arguments between parents	100	1.27	0.94	1.71	40.17	43.23
*Parent seriously ill	92	1.43	0.99	2.06	30.77	34.01
Friend or relative moved in	92	1.86	N/A	N/A	13.68	23.92
Sibling seriously ill	92	2.02	1.33	3.08	20.51	33.14
*Sibling involved with drugs or alcohol	92	2.11	1.06	4.19	8.55	13.83
		2.81	N/A	N/A	3.42	8.07
Family separation						
(Step) mother begins to work	91	2.08	1.48	2.93		
*New stepparent	91	1.25	0.85	1.83	28.21	27.95
*(Step) parents separated or divorced	83	1.61	N/A	N/A	4.27	7.20
*Parent received jail sentence	100	4.04	N/A	N/A	1.87	6.51
Parent moved away	92	32.60	N/A	N/A	0.85	19.31
	100	N/A	N/A	N/A	0.00	2.93
Financial						
(Step) mother quit work	91	1.37	1.01	1.87		
Financial condition worsened	100	0.59	0.30	1.17	13.08	6.84
*Family evicted	100	1.46	1.02	2.10	32.48	34.87
Parent lost job	83	1.69	N/A	N/A	1.71	2.31
*Family cut off welfare	92	1.85	1.13	3.02	13.68	23.05
	100	4.05	N/A	N/A	0.85	5.19
Work/academics						
*Child repeated a grade	75	3.07	N/A	N/A		
Peers						
Child changed schools	91	1.07	0.79	1.45	0.91	2.44
*Family moved	91	0.92	0.66	1.29	49.09	42.99
Child picked on by mates	81	1.04	N/A	N/A	16.82	14.98
*Child's friend died	100	1.32	0.85	2.04	24.30	29.97
	100	5.96	N/A	N/A	1.71	8.36
Unassigned						
Sibling moved away	70	1.05	0.58	1.89	10.26	10.95
Child's pet died	N/A	1.27	0.94	1.72	47.01	46.11
Child needed medical attention	67	1.57	0.79	3.10	10.28	14.01
*Child seriously ill or hospitalized	67	1.69	N/A	N/A	3.42	5.19
*Child in serious accident	58	2.51	N/A	N/A	5.13	10.37

Note. OR = odds ratio; CI = confidence interval; COA = child of alcoholics; N/A = not applicable. Items with asterisks had low base rates in one subgroup and, for simplification, ORs are unadjusted based on logistic analyses. One item (parent moved far away) was not endorsed by controls and so no adjusted OR could be computed. Bold OR are those over 1.5 and evidencing greater difference in the likelihood of occurrence for COAs and controls.

time and within family were ignored, for all items receiving less than 3% endorsement by either COAs or controls. (Note that confidence intervals for these items were not examined given the low base rates).

Our item-level analyses revealed several stressors that were more evident in COAs. First, parents of COAs in the MLS tended to endorse items that our rating system left unassigned (due to rater nonagreement) but that revolved around the theme of physical health. The primary reason for nonagreement between the first author's and assistants' ratings of these events as physical health stressors was due to some confusion by the raters in the wording of the questions (i.e., whether the stressor of the child's health problems was relative to the parent or to the child). Second, parents of COAs were more likely to note *major changes in the household membership* as compared with parents of controls. Examples included parents serving jail sentences, divorcing, or separating. Other family stressors with notable odds ratios also referred to physical health problems by various family members (e.g., siblings and parents) and changes in the household (i.e., friend or relative moved in). An additional stressor within the family was having a sibling involved with alcohol or drugs. Items about more distant relatives (i.e., grandparents), changes in the amount of time parents may spend at home, but not necessarily a change in family membership per se (i.e., parent returned to school, mother began to work, parent away more due to jobs), generally did not differ between COAs and controls.

COAs' risk for stressor recurrence. After dropping participants assessed on fewer than three occasions to create indicators of stressor recurrence (see *General Analytic Approach* above), the sample contained 277 children from 215 families for the MLS. As reported in Table 4, COAs showed greater recurrence of negative, stressful life events, although these differences were only marginally significant ($b = 0.01, p < .10$).

The Adolescent and Family Development Project

AFDP Sample and Procedures

In the AFDP (Chassin, Flora, & King, 2004; Chassin, Rogosch, & Barrera, 1991), a community sample of 454 families (246 COAs and 208 matched controls) completed three annual interviews when the target child was an ado-

lescent (ages 10–15 years at Wave 1). At a young adult follow-up (Wave 4), full biological siblings were included if they were in the age range of 18–26 years, and all of these siblings were again invited to participate at Wave 5, 5 years later. A total of 327 siblings (78% of eligible participants) were interviewed at Wave 4, and 350 siblings (83%) were interviewed at Wave 5 ($n = 378$ interviewed at either wave). The combined sample of original targets and their siblings was 734 at Wave 4 (M age = 21.1 years), 762 at Wave 5 (M age = 26.6 years), and 817 with at least one wave of measurement. Retention in young adulthood was excellent, with 407 (90%) of the original target sample interviewed at Wave 4 and 411 (91%) interviewed at Wave 5 (96% had data at either time point). After dropping participants with missing demographics or reports on life stressors across all waves, the resulting analysis sample included 806 children (97% of total sample; see Table 2 for demographic characteristics).

Details of sample recruitment are reported elsewhere and in Table 1 (Chassin, Barrera, Bech, & Kossakfuller, 1992). Inclusion criteria for COA families were living with a biological child ages 11–15 years, non-Hispanic Caucasian or Hispanic ethnicity, English speaking, and a biological and custodial parent who met *Diagnostic and Statistical Manual of Mental Disorders* (3rd ed.; *DSM-III*; American Psychiatric Association, 1980) lifetime criteria for alcohol abuse or dependence. Control families were matched to these COA families on the basis of ethnicity, family structure, socioeconomic status, and the adolescent's age and sex. Data were collected with computer-assisted interviews either at families' homes or on campus, or by telephone for out-of-state, young adult participants. Interviews required 1 to 3 hr, and participants were paid up to \$70 at each wave.

AFDP Measures

Control variables included participant gender and age. In the AFDP, parents were directly interviewed (when possible) about alcohol disorders at Wave 1 using a computerized version of the DIS to assess diagnostic status using *DSM-III* lifetime criteria. In cases where a biological parent was not directly interviewed, the reporting parent was used as the informant using the Family History Research Diagnostic Criteria (FH-RDC; Andreasen, Endicott, Spitzer, & Wino-

Table 4
Results of Stress Repetition Analyses by Study

Predictor	MLS		AFDP		AHBP	
	Parameter	<i>t</i>	Parameter	<i>t</i>	Parameter	<i>t</i>
Participant gender	0.01	1.67	0.00	-0.03	0.01	0.48
Participant age	0.00	-0.81	-0.01	-1.34	0.01	1.15
COA effect	0.01	1.89 ⁺	0.04	4.25 ^{***}	0.05	4.87 ^{***}
Effect size (R^2)	.05		.05		.05	

Note. MLS = Michigan Longitudinal Study; AFDP = Adolescent and Family Development Project; AHBP = Alcohol and Health Behavior Project; COA = child of alcoholics.

⁺ $p < .10$. ^{***} $p < .0001$.

Table 5
Observed Stressor Occurrence in the Adolescent and Family Development Project

Item wording	Rater agreement (%)	Adjusted OR	Lower 95% CI	Upper 95% CI	Control endorsement (%)	COA endorsement (%)
Physical health		1.21	0.94	1.55		
Child illness or injury	64	1.21	0.94	1.55	26.55	32.01
Family		1.74	1.45	2.08		
Sibling illness or injury	83	1.11	0.74	1.66	12.95	14.09
Parent fought with relatives	100	1.24	0.94	1.62	31.38	34.57
Relatives said bad things about parents	100	1.54	1.15	2.05	23.47	31.12
Parent illness or injury	92	1.58	1.25	1.99	30.77	39.95
Sibling had trouble with law	100	2.06	1.52	2.80	18.39	30.66
Parent acted badly in front of friends	83	2.09	1.36	3.20	8.93	16.40
Parent got arrested	100	3.91	2.17	7.05	4.22	13.65
Family separation		2.68	N/A	N/A		
*Parent got divorced	92	2.68	N/A	N/A	5.46	15.38
Financial		1.58	1.29	1.94		
Parent lost job	92	1.70	1.27	2.28	18.11	27.05
Parent money trouble	100	1.73	1.34	2.24	31.63	44.27
Peers		1.08	0.88	1.32		
Friend trouble	100	1.05	0.80	1.37	33.93	34.75
Friend died	100	1.16	0.86	1.58	18.86	22.33
Friend moved	92	1.19	0.89	1.60	27.81	30.24
Unassigned						
Family member died	67	1.06	0.86	1.30	42.43	45.41
Child was victim of crime	N/A	1.42	1.01	1.98	18.11	23.61
*Neighbors said bad things about parents in front of child	N/A	2.60	N/A	N/A	3.57	9.26

Note. OR = odds ratio; CI = confidence interval; COA = child of alcoholics; N/A = not applicable. Items with asterisks had low base rates in one subgroup and, for simplification, ORs are unadjusted based on logistic analyses. Bold OR are those over 1.5 and evidencing greater difference in the likelihood of occurrence for COAs and controls.

kur, 1977). The diagnosis of an alcohol disorder was based on either parent meeting lifetime criteria for alcohol abuse or dependence at the first wave of data collection for the family. COAs had a biological father or a biological mother evidencing alcoholism. In addition, life stressors were assessed using an adapted version of the General Life Events Schedule for Children (Sandler, Ramirez, & Reynolds, 1986) and Children of Alcoholics Life Events Schedule (Roosa, Sandler, Gehring, Beals, & Cappo, 1988). All items were previously rated in the literature as negative events, and only items that used a past-year timeframe for assessment (to create a comparable window of assessment over items and studies) were retained for analysis. (See Table 5 for negative, life event items selected for analysis.) Items were coded as having occurred if any reporter (mother, father, or child) indicated that the event had taken place for the child within the past year. Parents' reports of stress items were available for only Waves 1–3, or ages 10–17, and subsequent assessments were based solely on child reports.⁷

AFDP Results

COAs' risk for specific types of stressors. Five classes of life domains were represented in the AFDP stressors items; these included physical health, general family stressors, family separation (i.e., one item assessing parental divorce), financial, and peers. Of these, COAs showed greater risk for general family stressors, family separation, and financial stressors (see Table 5). Adjusted odds ratios

from item-level GEE analyses for the AFDP are also reported in Table 5. Unlike in the MLS, COAs in the AFDP did not differ from controls in the item assessing physical health. Note that no differences were also found in other items assessing threats to physical welfare (i.e., sibling ill or injured). However, within the domain of general family and financial stressors, COAs were more likely to endorse items reflecting *direct results of parent impairment* (e.g., parents getting arrested, divorced, acting badly in front of friends, losing a job, having money trouble, and being ill or becoming injured). Reflections of parental impairment in the child's social network were also more evident in COAs as reflected by greater endorsement of items indicating that neighbors and relatives said bad things about the parent.

COAs' risk for stressor recurrence. Because analyses of stressor recurrence included only participants assessed on at least three occasions, all siblings of target participants (who completed only two waves of AFDP data collection) were dropped from analysis, leaving a final sample of 383 (with no family nesting). As reported in Table 4, COAs showed greater recurrence of negative, stressful life events compared with controls ($b = 0.04, p < .001$).

⁷ Analyses were repeated that separated parent- from child-reported stressors. No substantive findings were noted over reporter, although fewer items were available for parent-report analyses.

The Alcohol Health and Behavior Project

AHBP Sample and Procedures

In the AHBP (Sher et al., 1991), 487 college freshmen (250 COAs and 237 controls) completed four annual assessments (Years 1–4) as well as two additional post-college follow-ups (at 3- and 4-year intervals, or Years 7 and 11, respectively). Participants were recruited through a screening of 3,156 first-time freshmen at the University of Missouri who reported on paternal alcoholism using the Father—Short Michigan Alcoholism Screening Test (Crews & Sher, 1992; Sher & Descutner, 1986). Of these, 808 were selected for more intensive assessment using the FH-RDC (Endicott, Andreasen, & Spitzer, 1978) to confirm reports of parent alcoholism, with the remainder of participants excluded primarily because of a surplus of non-COA participants in addition to other reasons (e.g., they were adopted, they were nonnative English speakers). An additional 319 participants were subsequently excluded because of questionable data, refusal to participate, inconsistent reports of family alcoholism, and psychopathology (i.e., drug abuse or antisocial personality disorder) in first-degree relatives that violated inclusion criteria for controls. At each follow-up, diagnostic interviews and questionnaires were primarily completed in person, but telephone interviews (and mailed questionnaires) were used more commonly as increasing numbers of participants relocated over time (1%, 4%, 13%, 27%, and 42% of the diagnostic interviews at Years 2, 3, 4, 7, and 11, respectively, were conducted by phone). The sample has excellent retention, with 84% of the original participants completing the Year 11 interview. After dropping participants with missing demographics or reports on life stressors across all waves, the resulting analyses sample included 482 (99%) participants (see Table 2 for demographic characteristics).

AHBP Measures

Control variables included participant gender and age. In the AHBP, college students completed the Parent—SMAST and FH-RDC to determine whether parents met lifetime criteria for alcoholism. The inclusion criteria for COAs were scoring 5 or greater on the Father—SMAST or having a biological father diagnosed with alcoholism using the FH-RDC. Participants were counted as controls if they scored a 0 or a 1 on the Father—SMAST and Mother—SMAST and if the FH-RDC did not yield a diagnosis of alcoholism. Life stressors were assessed via self-report using a modified version of the Life Events Survey (Sarason, Johnson, & Siegel, 1978), designed to capture developmentally and contextually salient events (e.g., items from the Life Events Survey that were unlikely to occur in a college population were dropped in administration). Selected items were previously rated in the literature as negative and then coded as occurring (1) or not (0) within the past year. In addition, these items were rated for their severity by participants on a scale ranging from –3 (*very negative*) to +3 (*very positive*). Because the focus was on college students

living away from home, items emphasized those outside of the family. As a result, most of these items may reflect stressors resulting from functional impairment. All items are reported in Table 6; those that may be particularly likely to reflect functional impairment appear in italics.

AHBP Results

COAs' risk for specific types of stressors. Six of our life domains were assessed in the AHBP life stressor items: physical health, general family stressors, financial, work/academics, spouse/partner, and peers. Of these, COAs showed greater risk for stressors occurring in the family, financial, work/academic, and peer domains. Results of item-level GEE analyses for the AHBP are also reported in Table 6. Similar to the other studies, the item reflecting the greatest difference between COAs and controls in the AHBP was family problems. In addition, items showing a significant COA effect in the financial, work/academic, and even the unassigned domains seem to reflect deficits in role functioning, particularly those having an important impact on the stability of daily life. These items included having financial problems, being fired from a job, being dismissed from a dorm, failing a course, and being on academic probation. What may be deemed less severe indicators of role failures (such as having difficulty with career decisions, bad grades, and failing an exam) were not more common in COAs than in controls.

COAs' risk for stressor recurrence. A total of 468 AHBP participants who were assessed on at least three occasions made up the sample for this analysis. As reported in Table 4, COAs showed greater recurrence of negative, stressful life events ($b = 0.05, p < .001$).

COAs' risk for greater stress severity. Because only AHBP participants rated stressor severity, analyses assessing COAs' risk for experiencing more severe life stressors were performed in this study only. Results of these GEE analyses are reported in Table 7 and show that COAs reported a higher level of stress from their negative, life events than did non-COAs. However, COAs also reported a higher number of stressful life events and thus may simply have increased opportunity for more severe events. To address this concern, we reestimated the effect of parent alcoholism on stressor severity and included the number of negative life events as a control variable. After accounting for the number of life events, COAs continued to show marginally higher stress severity ratings than their peers.

General Discussion

The current study examined whether COAs are vulnerable to certain types of negative life stressors on the basis of the life domain affected, repetition, and severity. Because of the heterogeneity in measures, methods, and samples across studies, we emphasize common findings across studies in our interpretation of effects because of our confidence in their generalizability. In this vein, the most consistent and robust effect across all three studies was for COAs to

Table 6
Observed Stressor Occurrence in the Alcohol and Health Behavior Project

Item wording	Rater agreement (%)	Adjusted OR	Lower 95% CI	Upper 95% CI	Control endorsement (%)	COA endorsement (%)
Physical health		1.17	1.00	1.38		
Minor personal illness or injury	100	1.14	0.97	1.34	73.90	77.25
Major personal illness or injury	100	1.47	1.05	2.05	19.28	24.46
Family		2.80	2.39	3.28		
Problems in family	100	2.80	2.39	3.28	67.47	90.56
Financial		2.63	2.25	3.08		
<i>Financial problems</i>	100	2.63	2.25	3.08	75.9	93.13
Work/academics		1.63	1.37	1.93		
<i>Failed exams</i>	100	1.22	1.01	1.47	65.86	71.67
<i>Bad grades</i>	100	1.31	1.09	1.57	74.3	81.12
<i>Difficulty with career decisions</i>	92	1.32	1.14	1.55	79.52	84.12
<i>Problems at work</i>	75	1.43	1.21	1.69	71.08	84.55
<i>Academic probation</i>	100	1.52	1.20	1.91	37.75	47.64
<i>Trouble with teacher</i>	92	1.59	0.96	2.65	8.43	13.73
<i>Failed courses</i>	92	1.97	1.54	2.52	32.53	50.21
Spouse/partner		1.17	1.00	1.37		
<i>Separation from partner due to conflict</i>	100	1.09	0.92	1.28	77.51	80.26
Sexual problems	75	1.49	1.21	1.83	44.58	57.08
Peers		1.61	1.37	1.89		
<i>Same-sex friend problems</i>	100	1.20	1.01	1.44	63.86	68.67
<i>Opposite-sex friend problems</i>	92	1.28	1.07	1.53	63.05	68.24
<i>Getting rejected (socially)</i>	100	1.29	1.09	1.53	66.67	72.53
<i>Not fitting in</i>	92	1.41	1.17	1.69	52.21	62.23
<i>Problems with roommates</i>	83	1.44	1.22	1.71	73.9	81.97
<i>Rejected from fraternity or sorority</i>	92	1.55	0.96	2.48	95.18	96.57
Unassigned						
<i>Partner separation due to work</i>	67	0.89	0.75	1.06	74.7	69.1
Death of someone close	N/A	1.02	0.85	1.22	69.48	71.24
Victim of crime	N/A	1.14	0.87	1.51	30.52	36.48
<i>Minor law violations</i>	N/A	1.15	0.98	1.36	79.52	80.69
Illness or injury of someone close	N/A	1.17	0.98	1.38	69.88	72.96
<i>Not having enough leisure time</i>	N/A	1.36	1.16	1.60	10.44	15.45
<i>Difficulty finding job</i>	67	1.50	1.23	1.84	51	62.66
<i>Abortion (self or partner)</i>	67	1.63	0.99	2.67	8.84	14.16
<i>Being fired from job</i>	67	2.14	1.38	3.33	10.84	20.6
<i>Dismissed from dorm</i>	N/A	2.42	1.10	5.36	3.21	8.15

Note. OR = odds ratio; CI = confidence interval; COA = child of alcoholics; N/A = not applicable. All items relate to occurrence of event to the participating COA. Italicized items represent those most likely to reflect functional impairment. ORs are unadjusted based on logistic analyses. Bold OR are those over 1.5 and evidencing greater difference in the likelihood of occurrence for COAs and controls.

evidence greater risk for family-related stressors than controls. Although this risk was supported by a single-item assessment in the AHBP, findings in the other two studies indicated that COAs experience greater general family stressors as well as greater family separations than their peers. This finding may be particularly of note in the AHBP college sample, an age period when peer stressors are often emphasized over family stressors. However, just as prior work has shown that parents continue to influence young adults' substance use in the college years (Cremeens et al., 2008), the family may also continue to be a significant source of stress for COAs even into emerging adulthood.

One potential source of these stressors, most evident in the AFDP item-level analyses but also found in the MLS, is the direct impact of parent impairment. Stressors for these children that may be directly related to parent alcoholism and co-occurring antisocial behavior included parents serving jail time, being arrested, and acting poorly in front of the children's friends. These events may also reflect the early signs of chaos and disruption in the alcoholic home as

Table 7
Results of Stress Severity Analyses in the Alcohol and Health Behavior Project

Model	Outcome: Stress severity		Outcome: Number of stressful life events	
	Parameter	Z	Parameter	Z
A				
Participant gender	0.02	0.70	0.19	0.79
Participant age	-0.02	-6.52***	-0.36	-20.37***
COA	0.07	2.25*	1.38	5.67***
B				
Participant gender	0.02	0.59		
Participant age	-0.01	-4.61***		
COA	0.05	1.69 ⁺		
Number of stressful life events	0.01	3.99***		

Note. COA = child of alcoholics.
⁺ $p < .10$. * $p < .05$. *** $p < .0001$.

marked by such events as more frequent rates of divorce (Leonard & Rothbard, 1999), the addition of new stepparents, and parents moving away. Additional indicators of how parent impairment and family chaos due to parent alcoholism may affect children were evident in COAs' increased risk for certain financial stressors, such as eviction, parental job loss, being cut off from welfare, and parents' financial trouble. That these stressors are more common in COAs than in controls is not surprising given that they may be the direct manifestation of impairment within the alcoholic parent or the indirect manifestation of this impairment in increasing family chaos and instability. Previous studies have shown that the maintenance of family routines and stability is one of the protective factors that can reduce risk for alcohol use and dysfunction in COAs (Husong & Chassin, 1994; Wolin & Bennett, 1984). Thus, we speculate that the extent to which these stressors are present in the family and the destabilizing impact that they may have for the family are important markers of environmental disruption for these children.

We found few differences between COAs and controls in peer-related stressors, although our measure of this domain was admittedly limited. No differences were also found for physical health-related stressors in two of our studies (AFDP and AHBP), although the parents of COAs were more likely to report the need for medical attention, serious accidents, and illness and need for hospitalization in their children than did the parents of controls in our remaining study (MLS). It is unclear whether these differences are due to study factors (e.g., differences in assessment, item coverage, or sample characteristics such as greater parent antisociality and lower income in the MLS vs. the AFDP) or to differences in development such that physical health-related stressors are elevated only in young COAs (in the MLS vs. the older participants in the AFDP and the AHBP). Further study of this possibility is needed. If such support is found, then a unique early risk for physical health problems in COAs could reflect the relative vulnerability of these young children to injury and illness associated with living in more chaotic and violent homes. Alternatively, such differences may reflect greater reporting of children's health problems by alcoholic parents and their spouses because these parents feel more overwhelmed by their children's illnesses and thus are more likely to identify these stressors. The meaning of such differences is thus also a topic in need of further study.

In the AHBP, we found that COAs were more likely to report financial and work/academic stressors than were their peers. Unlike items assessing financial stressors in the MLS and the AFDP, items rated by the young adult AHBP participants were in reference to their own financial functioning rather than to that of their families. As with most of the items assessing stressors in the AHBP, these items are the result of multiple forces reflecting both environmental press on the individual (i.e., stressors) but also the extent to which these individuals may actively create their own stressors (i.e., functional impairment). In studies of stress and health behavior, this distinction is critical in that these stressor items may assess both constructs, so the direction of

effect is ambiguous. However, given that the goal of the current study was more simply to characterize the stressors unique to COAs, these findings indicate that COAs may both be at risk for stressors that are less likely under their control (e.g., parental divorce) as well as those that may be a result or even an indicator of their own functional impairment (e.g., personal financial problems). It is important to note that the sources that give rise to these different types of stressors likely differ. In addition, previous studies have indicated that the support and coping approaches that may best address uncontrollable versus controllable stressors may also differ (Folkman & Lazarus, 1980). However, both items reflecting external stressors as well as those that may in part or whole reflect functional impairment contribute to the environmental press to which individuals must respond.

A final theme present across all three studies was that COAs were more likely to endorse rare events than were non-COAs. (COAs were more likely to endorse 12 of 13 items showing less than a 5% endorsement rate by controls in the MLS as well as items showing such lower endorsement rates in the AFDP and the AHBP.) Given that more severe life events are typically less common, this finding suggests that COAs may experience more severe life events than their peers. Indeed, we found evidence that COAs tend to rate the negative life events they experience as more severe than do their counterparts, even after controlling for the greater number of life events that COAs experience. Moreover, across all three studies, COAs experienced these negative life events more chronically or repetitively than their peers, although effect sizes were modest. Thus, COAs appear to differ from their peers in terms of the types of events they experience, in the severity of those stressors and, to some extent, in the chronicity of their exposure.

These findings have significant implications for prevention and intervention efforts targeting COAs. First, alcoholism in a parent presents a significant stress not only to himself or herself but also to the family, and this stress is evident from an early age and persists into adulthood. As such, stress reduction is a family-level problem for COAs deserving of early intervention, probably at the family level, and occurring in some instances as young as preschool.

Second, COAs are more vulnerable to relatively rare, severe negative life events. However, these events occur in tandem with a similar susceptibility to more common negative life events as well. Thus, COAs and their families need skills to cope not only with a high stress load that includes common stressors but also severe events. We speculate that such skills may draw on crisis management approaches, to address more rare severe events, and also more adaptive family coping processes, to address more common events. Learning how to integrate these skills and when each may be useful could be an important tool for families with alcoholic parents.

Third, because COAs experience life events as more severe than their peers regardless of the number of stressors they experience, a greater understanding is needed of how COAs experience these stressors. Negative life events are complex stressors, typically comprising multiple, unfolding daily hassles and more discrete life events. For this reason,

these negative life events may simply occur in more complicated contexts, having a broader impact on daily living and with additional severity in COAs. However, COAs may also in part be prone to experience similar life events as more severe than do non-COAs given a relative lack of parental support, positive family functioning, and personal coping resources. In other words, the chaotic and conflict-ridden family environment may simply magnify life events so that they are experienced as more severe by COAs. Higher rates of psychiatric disorder among COAs (Chassin et al., 1999) also indirectly speak to this issue because they suggest that the earlier experienced stressful environment may play a role in the development of more enduring personal negative consequences, which in turn may also reduce the coping capability of the individual. Understanding the relative contributions of complex stressors and COAs' vulnerability to magnify their experience of these events is critical to informing preventive intervention efforts while at the same time signifying the relative utility of problem- versus emotion-focused coping skills.

Fourth, that such stressors are more repetitive in the lives of COAs than in the lives of their peers indicates that further adversity is to be expected and part of successful intervention is likely to be creating reasonable expectations and plans for responding to future adversity. Such an approach could be informed by the perspective of relapse prevention, in which more positive coping responses to potential triggers are identified and rehearsed in advance of vulnerable situations. They may also be informed by more recent acceptance and commitment therapies, in which the therapeutic goal may shift from alleviating suffering to accepting this aspect of life but still learning how to best cope and respond to life stress (Hapes, Strosahl, & Wilson, 1999).

In conclusion, the current study indicates that COAs are not only at greater risk for more negative life events than are their peers, but that they also differ from their peers in the types of stressors that they experience, in the severity of these stressors, and in the chronicity of stress exposure. These findings are strengthened by our use of three longitudinal studies that avoid biases inherent in treatment-based samples. However, our findings should also be tempered by study limitations. These include a greater number of items assessing some life domains as compared with others, although our pattern of findings did not suggest that differences in the life domains to which COAs are vulnerable were driven by this issue. Other distinctions in stressors, such as their controllability, were not clearly assessed in these studies, although the MLS and the AFDP selected measures with items previously rated in the literature as uncontrollable per se. Thus, we were unable to make this distinction clearly in our analysis. Moreover, study differences in terms of sampling, number and identity of reporters, and measurement make it difficult to integrate results to address developmental trends. Nonetheless, results provide a richer understanding of the life experiences of COAs and suggest implications for treatment and intervention programs aimed at ameliorating the nega-

tive impact of such life stressors for this major at-risk population.

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