

# **Supplementary Material**

Article Title: Adverse Childhood Experiences and Risk for First-Episode Major Depression During the

Menopause Transition

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#### **SUPPLEMENTAL METHODS:**

### Menopausal Status:

At every assessment period, each participant was assigned to one of the following categories based on bleeding patterns: Stage 1) pre-menopausal: regular menstrual cycles in the 22- to 35-day range; Stage 2) late pre-menopause: change in cycle length of 7 days or longer in either direction from the participant's own baseline for at least 1 cycle; Stage 3) early transition: change in cycle length of 7 days or longer in either direction from the participant's own baseline for at least 2 cycles up to 60 days of amenorrhea; Stage 4) late transition: 3–11 months of amenorrhea; and Stage 5) post-menopausal: 12 months or more of amenorrhea without hysterectomy.

#### Statistical Methods:

Students t test or chi square methods were utilized to determine whether women remaining in the POAS cohort and available for inclusion in this analysis were similar with respect to demographics, body mass index, baseline depression symptom severity and history of depression to the participants that comprised the original cohort (Supplemental Table 1).

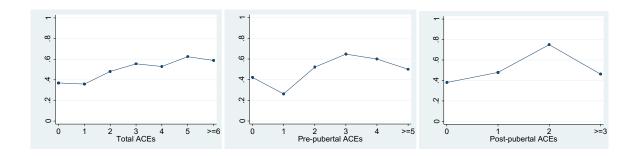
For the purposes of this study, we defined the high ACE group as those women with 2+ ACEs. A binomial test of proportions was used to compare lifetime prevalence of MDD in individuals with 1 ACE to 2 ACEs directly, considering total, prepubertal and postpubertal ACEs separately (Supplemental Figure 1).

#### SUPPLEMENTAL RESULTS

# Supplemental Table 1. Baseline Characteristics for Current Study Cohort Versus Those Who Dropped Out of the Penn Ovarian Aging Study

| VARIABLE                 | CURRENT STUDY<br>COHORT (N=243) |      | DROP OUTS FROM<br>POAS (N=195) |      | P VALUE |
|--------------------------|---------------------------------|------|--------------------------------|------|---------|
|                          | Mean                            | SD   | Mean                           | SD   |         |
| Age                      | 41.6                            | 3.5  | 41.3                           | 3.4  | 0.422   |
| Body Mass Index          | 29.3                            | 8.3  | 29.1                           | 7.3  | 0.776   |
|                          | N                               | %    | N                              | %    |         |
| Race                     |                                 |      |                                |      |         |
| Caucasian                | 128                             | 52.7 | 89                             | 46.1 | 0.174   |
| African American         | 115                             | 47.3 | 104                            | 53.9 |         |
| Education                |                                 |      |                                |      |         |
| High School or Less      | 98                              | 40.3 | 94                             | 48.7 | 0.080   |
| College                  | 145                             | 59.7 | 99                             | 51.3 |         |
| Employed                 | 200                             | 82.3 | 155                            | 80.3 | 0.595   |
| Marital Status (Married) | 138                             | 56.8 | 112                            | 58.0 | 0.795   |
| CES-D >=16               | 97                              | 40.3 | 85                             | 44.0 | 0.426   |
| MDD Diagnosis (Yes)      | 23                              | 9.5  | 24                             | 12.4 | 0.321   |

LEGEND: Comparison between the entire POAS cohort and those for whom ACE-Q data was collected revealed no significant baseline differences with respect to race, age, BMI, employment, CES-D scores, smoking, or marital status (all p>0.05). Likewise, the proportion with lifetime or incident menopause MDD diagnoses at baseline and across the study did not differ (p>0.05).



# Supplemental Figure 1: Proportion of Women With Lifetime MDD Based on Number of ACEs

**LEGEND:** Comparing lifetime incidence of major depressive disorder (MDD) between women with 1 ACE and women with 2 ACEs for each definition of ACE (total, prepubertal and postpubertal), there was a significant increase in MDD risk when considering pre-pubertal ACE [Pearson Chi-square (df=1) = 4.95, p-value=0.026], but not for post-pubertal ACE [Pearson Chi-square (df=1) = 3.55, p-value= 0.060] or total ACE [Pearson Chi-square (df=1) = 1.27, p-value=0.261].