The importance of secure attachment on later child development has been well documented. While attachment is considered to be relatively stable over time, significant environmental experiences may influence changes in the quality of attachment (Belsky et al., 2002). Early researchers have demonstrated stability of attachment across time in middle-class samples where the environment is assumed to remain stable (Waters, 1978), and instability in high-risk samples where the environment may be unstable or stressful (Vaughn et al., 1979). Such environmental experiences include those more distal to the child, such as his or her neighborhood or family income, or more proximal factors such as parental psychopathology, the effects of which are transmitted through the intimate bonds children share with their caregivers. Disruptive life events, domestic violence, and income have been associated with stability and change in attachment insecurity in high-risk samples in more recent work (Vondra et al., 1999; Levendosky et al., 2011). However, few studies have examined the trajectories of both proximal and more distal aspects of the caregiving environment in relation to the stability/instability of attachment over time.

**Participants**

- 120 pregnant women were recruited through the posting of flyers in pregnancy agencies and community organizations. The first interview took place during the third trimester of pregnancy (T1), with subsequent interviews at 3-months postpartum (T2), 1-year postpartum (T3), and 2-years postpartum (T4). Retention (n): T2 (119), T3 (115), T4 (99).

**RESULTS**

Repeated measures ANOVAs were used to examine within-subject and between-groups main effects, as well as Group x Time interactions in order to explore how changes in the caregiving environment were related to attachment patterns over time. A significant Time x Group interaction for total PTSD symptoms, F(6, 86)=2.23, p < .05, η²=.07, with a significant quadratic effect, F(3, 86)=5.78, p < .01, η²=.17 was found (see Figure 1). While maternal PTSD symptoms steadily decreased overtime for the S-S, S-I, and I-I groups, for the I-S group, symptoms started out rather high in pregnancy, dropped considerably at age 1, and increased again at age 2. There was a main effect for time for negative life events, F(2, 86)=4.08, p < .05, η²=.05, with a significant quadratic effect, F(1, 86)=6.07, p < .05, η²=.07; there was an increase from pregnancy to age 1 and a decrease from age 1 to age 2 for all groups. Additionally, there was a trend-level Group x Time interaction for negative life events, F(6, 86)=1.83, p = .09, η²=.06, with a trend-level linear effect, F(3, 86)=2.70, p < .05, η²=.09 (see Figure 2). The were no significant results regarding the association between monthly income and attachment instability/visibility (see Figure 3). Post hoc analyses revealed significant change across time in regards to PTSD symptoms in the I-S group, F(2, 11)=3.90, p < .05, η²=25, with a significant quadratic effect F(1, 12)=10.47, p < .01, η²=.47. PTSD symptoms in this group started high, then dropped, then increased again.

**DISCUSSION**

- The results of the present study indicate that both proximal and distal contextual factors have an impact on the stability/instability of attachment security.
- In regard to the effects of life events, it appears that women initially experience a moderate level of negative events during pregnancy, followed by an increase in the first year postpartum and a decrease in the second year postpartum. This makes sense because women tend to experience several changes and strains in the first year with a new baby such as economic and relationship strain.
- While the effects of monthly income are visually notable, with clear patterns in expected directions, there were no significant results. This may be due to overall low sample size resulting in small groups for comparison. Further, it is possible that a family’s income per se does not have a significant impact on the stability/instability of attachment, but rather, affects other important variables that are more proximal to the infant.
- For the insecure-secure group, the relationship between concurrent maternal PTSD symptoms and attachment security is counter-intuitive. While one would expect higher levels of PTSD to be associated with insecure attachment at the same time point, the results for this group indicate otherwise. One possible explanation of this finding is that mothers’ PTSD symptoms have a lagged or delayed effect on infant attachment such that PTSD symptoms during pregnancy are influencing attachment at age 1, and PTSD symptoms at age 1 are affecting attachment at age 2 for this group.
- The results of this study provide implications for child development as it is well known that secure attachment, and the stability thereof, holds numerous benefits for child development reaching from infancy into adulthood.
- Future research will be benefited by the examination of other factors, both proximal and distal, such as maternal symptoms of depression and social support, for example, on the stability/instability of attachment security.