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Salivary oxytocin and touch in everyday life: Results from an EMA study during Covid-19 lockdown

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Background: Affectionate touch is important in human social life. Previous research demonstrated that touch is associated with release of endogenous oxytocin and has calming and stress reducing effects. Less is known about the impact of Covid-19-related lockdown on psychobiological outcomes in everyday life. We, thus, focused on the relationship between daily social touch and oxytocin levels during Covid-19 lockdown.

Methods: 173 women and 74 men (age: M=32.01, SD=13.1) participated in ecological momentary assessment on two consecutive days during Covid-19 pandemic in Spring 2020. At 6 timepoints per day participants collected saliva samples and simultaneously reported subjective momentary burden, mood and social interactions, including social touch. Concentrations of salivary oxytocin, cortisol, and alpha amylase were analyzed using enzyme linked immunosorbassay.

Results: Hierarchical linear model (HLM) analyzes showed a significantly negative association between social touch intensity and self-reported burden levels (t=-2.683; p=.007) as well as positive association with oxytocin concentrations (t=2.476; p=.013).

Conclusions: These preliminary findings show that individuals experiencing intense social touch have higher salivary oxytocin concentrations and report less burden in their everyday life. While further analyses within this study are being conducted, these results suggest that oxytocin might play a mediating role between social touch and the individual's well-being.

Hair cortisol predicts susceptibility to increased depressive symptoms among older women during the COVID-19 pandemic: implications for the vulnerability-stress model of psychopathology

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Background: Early life stress may influence the interaction between stress and immune systems, leading to disruptions in glucocorticoid sensitivity. In pregnant women, studies utilized the association between cortisol and inflammation as a marker. We investigate how maternal early life stress alters the association between prenatal cortisol awakening response and acute inflammation marker of CRP. We hypothesize that women with low early life stress will exhibit a negative correlation between cortisol and CRP, while those with high early life stress will fail to show the same pattern.

Methods: Participants were 78 pregnant women (Mage=32.01, SDage=4.10) from the BABIP cohort in Istanbul, Turkey. Early life stress was measured by Childhood Trauma Questionnaire. Cortisol awakening response was measured as change in cortisol from awakening to 30min after awakening. CRP was measured from blood plasma.

Results: A regression revealed a significant interaction between cortisol awakening response and early life stress on CRP, controlling for age, gestation week and disease status (p = .04). Women with low early life stress showed a negative association between cortisol and CRP, while an opposite pattern was observed in women with high early life stress.

Conclusion: Our findings support the role of maternal early life stress on prenatal glucocorticoid sensitivity. Future studies would benefit from considering the impact on fetal outcomes.