Making Contact: The Association Between Regular Friendly Physical Touch and Heart Rate in the Context of Stress

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Background: Past research on physical contact has largely been focused on parent-child and intimate partner relationships. In these contexts, touch has been shown to produce physiological changes in the body, alleviate stress, and reduce pain, but little is known about the association between day-to-day non-romantic touch and physiological health outcomes. Thus, our aim was to examine the association between average frequency of non-romantic physical touch and heart rate measurements before, during and after a social stress task.

Methods: 71 undergraduate students (mean age=19.5, 63.4% Female, 83.1% caucasian) were recruited through a university subject pool. We used the recently developed 20-item Personal Affection & Touch Scale (PATS) to assess general frequency of physical contact (e.g., hugs, high fives, hand shaking) with non-romantic partners. Heart rate (HR) was measured at baseline, during, and after the Trier Social Stress Test. We also assessed demographics relevant to the variables of interest. Bivariate Pearson’s correlations and multiple regression analyses were utilized to examine the associations between physical touch and heart rate. Only participants with complete data were used in each analysis.

Results: Unadjusted analyses revealed that higher frequency of physical touch was associated with lower average baseline HR ($r(69)=-.409, p<.001$), as well as lower HR during ($r(67)=-.383, p=.001$) and after stress ($r(69)=-.339, p=.004$). The associations still held when controlling for age, race, gender and specific health behaviors. In further exploration, most individual items of the PATS (e.g. arms around shoulder, gentle touching) were associated with a lower baseline heart rate, indicating that these findings are not due to a single form of physical contact.

Conclusions: Higher levels of non-romantic touch are associated with lower heart rate in general, including in times of stress. These results support previous studies suggesting that physical touch is an important factor for well-being.