

Physiology and human relationships: An introduction to the special issue

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This special issue of the *Journal of Social and Personal Relationships* brings together cutting-edge work on the interplay between human relationships and physiological processes. Although scholars in many disciplines have long recognized the inherent interdependence between physiology and relational behavior, those in other disciplines have only more recently taken up the topic. It is my hope that this special issue will not only showcase some of the exemplary work in this area but also spur newer, more enlightening research in the future.

This collection is both eclectic and provocative. It addresses a range of personal relationships, from marital and parental bonds to friendships and adolescent romantic partnerships. It also focuses on a range of physiological processes, including neurological, endocrine, and autonomic nervous system activities. Finally, it offers empirical, theoretical, and methodological contributions to extend thinking and practice. The lead article by Linda Luecken and colleagues delineates a cognitive-affective model suggesting that family-of-origin relationships influence the development of stress responses in adulthood, affecting adults' vulnerability to stress-related disorders. This article describes an extensive program of research from this and other research teams that contributes to our understanding of the relationship between stress and family life. The influence of early-life relationships on adulthood experiences is also addressed in the article by Diamond and colleagues, which focuses on how styles of childhood attachment affect strategies for emotion regulation among adults. Their study demonstrated that attachment avoidance predicted heightened skin conductance reactivity to psychological stressors and discussions of attachment-related issues.

Kaiser and Powers address the conflict tactics used by late adolescents in their romantic relationships and how these are associated with testosterone. One compelling finding from this study was that the *interaction* between partners' testosterone levels predicted the male's frequency of psychological aggression and physical assault, suggesting the importance of studying physiological processes within established relationships. The

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contribution by Heisel and Beatty focuses on the neurological processes that transpire when people attempt to construct cognitive representations regarding a friend's refusal of a request. Using electroencephalography, these researchers focus on activity in the orbitofrontal and dorsolateral prefrontal cortices and find that activity in both regions is increased by the cognitive exercise.

Granger and colleagues offer an introduction to salivary α -amylase, a potential surrogate marker for sympathetic nervous system activity, and describe four studies in which α -amylase measures have been used with children and adolescents. In addition to presenting evidence from their own studies, these authors describe several ways in which the measurement of α -amylase can be integrated into other research on personal relationships.

The study by MacDonald and Kingsbury tests the hypothesis of social pain theory that pain affect signals perceived social exclusion. Their results indicate that pain affect – the feelings of unpleasantness that often accompany the sensation of pain – is directly related to anxious attachment, but not to avoidant attachment. On the basis of their findings, the authors suggest that pain may be associated with depression and anxiety because of heightened concerns over social rejection.

Marital conflict, and its effects on stress hormones, is the topic of the final article, by Robles and colleagues. Their study of 90 newlywed couples found that husbands' positive behaviors during conflict were associated with steeper declines in their wives' levels of cortisol and adrenocorticotropic hormone (ACTH), whereas wives' positive behaviors were inversely related to flatter declines in their own cortisol levels. This study, like many of the others in this special issue, highlights the often-consequential associations between physiological processes, individual health, and personal relationships. Such information can be useful to scholars and clinicians alike in their efforts to understand and improve the human social condition.

I am indebted to Paul Mongeau for suggesting this special issue and inviting me to edit it, and to an exceptional group of *ad hoc* referees who reviewed the many excellent submissions we received. Most of all, I am grateful to the authors whose works appear herein, and I hope this collection will spur future discovery along these and many other important lines of inquiry.