




Advancing understanding of the mechanistic pathways underlying close relationships and physical health: Conclusion to the special issue

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In the 30+ years since House, Landis, and Umberson (1988) published one of the first papers establishing links between close relationships and physical health, this subfield has blossomed substantially. We have an ever-growing body of evidence indicating that higher-quality relationships are associated with better physical health outcomes (Slatcher & Selcuk, 2017; Smith & Weihs, 2019). Meta-analyses suggest that the quantity and quality of close relationships have a comparable (or even larger) effect size on mortality rates than classic health risk factors such as cigarette use, exercise, and body mass index (Holt-Lunstad, Smith, & Layton, 2010; Robles, Slatcher, Trombello, & McGinn, 2014). The strength of these associations, along with well-documented links between relationship quality, mental health, and well-being, has led researchers to call for social connections to be treated as a public health issue (Holt-Lunstad, Robles, & Sbarra, 2017) and has increased enthusiasm for relationship-focused health interventions.

Despite the exciting work that has been conducted in this area over the past several decades, we know surprisingly little about *why* and *how* relationships promote better health, making it difficult to design efficient interventions and test their effectiveness. A recent review of the mechanistic literature on relationships and health found that although many mechanisms underlying relationship–health links have been proposed, psychological and behavioral mechanisms have been woefully understudied and the types of evidence that would establish these variables as true mechanisms are lacking (Farrell & Stanton, 2019). Our recent special issue of *Personal Relationships* (Vol. 27, Issue 3) aimed to begin filling this gap and galvanize research on biological, psychological, and behavioral mechanisms linking close relationships and health.

1 | VARIETY AND COMMON THEMES

The 10 papers in the special issue highlighted the breadth of current mechanistic work on relationships and health. Although seven papers focused on romantic relationships and health, two examined parent–child relationships (Alen, Sloan, Seeman, & Hostinar, 2020; Woods, Roberson, & Priest, 2020), and one (Maki, 2020) considered the impact of romantic partners, friends, and family members on health outcomes. The samples included individuals at all stages of adulthood, ranging from emerging adulthood (Cortez, Lee, & Roberson, 2020) to older adults (Jaremka, Kane, Sunami, Lebed, & Austin, 2020). Moreover, some examined unique samples at high risk for poor health, such as individuals who have recently lost a spouse (LeRoy et al., 2020) or couples with one partner who has cancer (Ramos et al., 2020). The papers also investigated the effects of relationship functioning on several different types of health outcomes, including biomarkers (Jaremka et al., 2020; Maki, 2020), perceived health (Ramos et al., 2020; Roddy & Doss, 2020; Stanton, Spence, Kähkönen, & Dobson, 2020; Woods et al., 2020), health behavior (Crowley, Burke, Denes, Allred, & Carberry, 2020), symptoms and diagnoses (Cortez et al., 2020; LeRoy et al., 2020; Woods et al., 2020), and mortality (Alen et al., 2020). Most of the papers documented significant associations between relationship functioning, mechanistic variables, and health outcomes. This range of findings suggests that the pathways linking relationships and health are likely to be multiply determined and active throughout the lifespan.

Theoretical models of relationships and physical health suggest that the mechanisms underlying relationship–health pathways fall into three categories: psychological (e.g., cognitive, affective), biological, and behavioral (for a review, see Farrell & Stanton, 2019). The papers in the special issue provided evidence for all these categories. In terms of psychological variables, Maki (2020) investigated the role of locus of control, whereas Stanton et al. (2020) investigated positive and negative affect as potential mechanisms. Alen et al. (2020), Jaremka et al. (2020), and LeRoy et al. (2020) all examined biological mechanisms by testing the mediating role of heart rate variability, inflammation, and Epstein–Barr virus antibody titers, respectively. The behavioral variables investigated include support marshaling (Crowley et al., 2020), communication behaviors (Ramos et al., 2020), and conflict frequency (Roddy & Doss, 2020). Woods et al. (2020) offered a cross-category perspective by examining the unique roles of negative affect reactivity (a psychological mediator) and allostatic load (a biological mediator). Collectively, the 10 papers covered the full range of basic relationship–health pathways.

Despite the diversity of potential mechanisms and outcomes investigated in the special issue, these papers shared some common themes. First, the availability of large sample, longitudinal, publicly available datasets have been a huge boon to relationships and health researchers. Four of the papers in the special issue use data from the Midlife in the United States (MIDUS) Study, and two others (Cortez et al., 2020; Jaremka et al., 2020) use data from other publicly available sources (i.e., the National Longitudinal Study of Adolescent to Adult Health [Add Health], the National Social Life Health and Aging Project [NSHAP], and the Panel Study of Income Dynamics [PSID]). Recruiting thousands of participants, collecting health information from them (particularly biological measures), and tracking them over time is a huge undertaking that is often not feasible for individual labs to pursue. However, when resources are created and made available, they allow many research teams to address a broader range of important health-relevant questions. Moving forward, we urge funding agencies and collaborative research teams to recognize the significant impact of these studies and to support, share, and utilize them more.

A second common theme that emerged from these papers speaks to the complexity of human health. Potential mechanisms appear to serve distinct functions; that is, some mechanistic pathways may primarily operate by improving health outcomes, whereas other pathways may primarily operate by impairing them. Thus, certain psychological, biological, and behavioral variables may explain how positive features of relationships benefit health *and* how negative features of relationships can undermine it. For instance, Alen et al. (2020) found that high-frequency heart rate variability plays a protective role that explains how higher perceptions of parental warmth in childhood predict better cardiovascular health and lower mortality risk in midlife, and Stanton et al.'s (2020) findings suggest that self-expansion potential—positive, optimistic beliefs about how relationships will help us grow in the future—is associated with more positive perceptions of health via greater positive affect. In contrast, Roddy and Doss (2020) found that psychological distress and insomnia predict poorer health outcomes. Interestingly, some mechanisms may branch into both protective and deleterious health pathways; Crowley et al. (2020), for example, showed that support marshaling is associated with better or poorer health depending on whether the support is perceived by recipients as effective. Collectively, the papers in the special issue point to the varied, yet specific, roles that different mechanisms may play in relationships-to-health connections.

2 | ROADMAP FOR THE FUTURE

The papers in the special issue also highlighted some important avenues for future research in this field. First, given the strong focus on romantic and parent–child relationships in the existing literature, we may be missing the full impact of close relationships on health. Findings from the special issue indicate that relationships with family members beyond parent–child relationships (e.g., siblings, grandparents) and friends may also be meaningful and perhaps independent predictors of health-relevant outcomes (Maki, 2020; Woods et al., 2020). Future work should broaden the types of relationships studied to address these gaps. Second, there is a dearth of research on relationships and health that meaningfully addresses causality. Similar to the field as a whole (Cohen & Janicki-Deverts, 2009), most of the papers in the special issue are cross-sectional and correlational, so they cannot rule out reverse causality (i.e., health outcomes affecting relationship outcomes). However, some papers in the special issue propose promising methodological strategies for better addressing causality. For instance, Roddy and Doss (2020) conducted a randomized control trial of multiple online-based self-help programs for couples with a waitlisted control group, and Cortez et al. (2020) used a sample assessed four times over an 8-year period when individuals frequently enter marriage for the first time to compare selective versus causal effects of marriage on health. Utilizing a wider range of methods, including experimental ones, will help the relationships and health field document and estimate causal effects more precisely as the field moves forward.

Finally, many of the papers note that the measurement of relationship quality has been inadequate to date. Indeed, many of the studies reported in the special issue used broad and/or brief self-report measures of relationship quality. Although some of these measures are efficient and well-validated, many lack the nuance necessary to understand what specific aspects of relationships, such as their degree of intimacy, commitment, satisfaction, love, trust, and/or passion (see Fletcher, Simpson, & Thomas, 2000), have the strongest impact on health in specific contexts. The current set of papers suggest that taking a more refined approach could be generative. Both Woods et al. (2020) and Roddy and Doss (2020), for example, tested the effects of positive

and negative relationship processes separately. Even within positive and negative relationship processes, further narrowing to more specific relationship processes that promote better health may be useful for finding “active ingredients” that can be targeted in future interventions. Moreover, Ramos et al. (2020) and Stanton et al. (2020) found dyadic effects across partners, showing that efforts to recruit and analyze data from *both* dyad members can provide interesting and unique information. Moving forward, we hope to see more research examining specific elements of relationship quality. We also hope that future research moves beyond the exclusive use of global self-reports to utilize multiple perspectives and behavioral measures, which should help researchers identify exactly what it is about relationships that affects specific health outcomes.

In sum, we hope the special issue emphasizes the importance of testing and considering mechanisms as we enter this next era of relationships and health research. We see that a wide variety of mechanistic pathways link different types of relationships with a range of health outcomes across the lifespan; we now need to focus in and determine which facets of relationship quality are most impactful, which mechanisms are truly causal, and when and how we can intervene with to promote longer, healthier, and more interconnected lives.

CONFLICT OF INTEREST

The authors declare no conflicts of interest..

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