

שם: נורית הומינר קליפר

שם העבודה:

Biological Aging and Social Interaction: The role of positive and negative social interactions in telomere length, stress and perceived health

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Abstract

Background:

Social relationships are associated with lower prevalence of morbidity and mortality among individuals, yet this may be affected by the quality of the relationship. Telomeres, the protective "caps" at the end of chromosomes, serve as biomarkers for cellular aging. Enhanced telomere shortening is related to aging, disease and mortality from both psychological and physiological stressors and disorders. Individuals engaged in social relationships, exhibit better health and longer telomeres. Nonetheless, individuals experiencing high negative interactions exhibit shorter telomeres, which is especially prominent in women. Cortisol, a glucocorticoid steroid hormone, plays a major role in the body's response to stress. Previous research has linked high levels of cortisol, secreted in response to a laboratory psychosocial stressor, with shortened telomeres, suggesting that cortisol might be a mediator in the relationship between psychological stress and cellular aging.

Objective:

To examine the effect of positive and negative social interactions and stress, both psychological and physiological, on telomere length and self-reported health among Jewish and Arab women in Israel, measured one month postpartum and one year postpartum and to assess whether social interactions mediate the relationship between stress and health indices.

Methodology:

A prospective study design encompassing a one year follow up. Participants will comprise of healthy married Jewish and Arab postpartum mothers, aged 25-35, gravida 1, para 1, following a normal delivery of a healthy baby. Data collection will take place one month and one year after birth at Mother and Child Health Centers and will include blood and saliva samples to determine telomere length and cortisol levels, respectively. In addition, participants will answer a questionnaire assessing perceived stress, reported health, postnatal depression and positive and negative social interactions. As well as questions on health behaviors and demographic information. Analysis will include assessing the association between the change in TL overtime and social interactions and stress.

Significance of proposed research:

Research demonstrates that mothers exposed to higher levels of stress postpartum, are more likely to experience poorer health. Social support, especially that provided by family or lack of it, is recognized as a major potential psychosocial stressor among women. This study will help unravel the pathway by which stress and social interactions may affect health. This may help in developing interventions to prevent the negative effects of social interactions on health. This study highlights the different needs that mothers from different backgrounds and cultures may have.