

RESEARCH FINDINGS SUMMARY

Childhood Adversity, Maternal Warmth, and Health



QUICK SUMMARY

Past studies have shown that when individuals who faced adversity in their childhoods have family support during those times, they are more protected from poor mental and physical health outcomes in adulthood. To better understand the biological pathways through which this occurs, we looked at how maternal warmth in childhood relates to the expression of genes among those that grew up in low socioeconomic status (SES) households. Overall, we found that higher levels of maternal warmth were linked to a reduced pro-inflammatory profile of gene expression for individuals who grew up in low SES households. Because inflammation is linked to a number of chronic diseases later in life, these findings could have implications for adult health.

WHAT IS THE RESEARCH ABOUT?



Individuals from low SES backgrounds are more vulnerable to poor mental and physical health illnesses, such as depression, anxiety, cardiovascular disease, and cancer. Despite their adverse circumstances, some are able to thrive and avoid those poor health conditions. We refer to this as resilience. Resilience comes from aspects of an individual's character or situation that helps to protect them from the effects of adversity. It has been found that supportive relationships with close family members could help boost resilience and, therefore, help to protect individuals from poor health outcomes. Currently, researchers do not know the biological processes that occur as a result of these supportive relationships. Researchers do know that poor health outcomes from adversity are linked to an excess of inflammation in the body. Therefore, in this study, we hypothesized that adults who had experienced high amounts of maternal warmth in their childhoods would display fewer signs of inflammation than individuals who had experienced low amounts of maternal warmth.

WHAT DID WE DO?

We recruited 53 participants aged 25 through 40 who were in good health and grew up in low SES households. Participants were surveyed about the amount of maternal warmth they experienced in their childhoods, and participants were split into two groups: 26 were considered to have experienced high childhood maternal warmth and 27 were considered to have experienced low maternal warmth. A blood sample was taken from each participant and analyzed to look for differences in gene expression and in inflammatory profiles.

WHAT DID WE FIND?

When compared to the low maternal warmth group, the high maternal warmth group displayed less expression of genes that drive inflammation and less immune cell responsiveness to challenges. These findings suggest that familial support during childhood might help to protect individuals who grow up in low SES households from elevations in inflammatory profiles.



WHAT SHOULD YOU REMEMBER?



Positive support factors experienced during childhood among individuals who face adversity appear to be linked to physiological profiles. Maternal warmth seems to be one such protective factor that is linked to inflammatory profiles among those that grew up in low SES households. Pro-inflammatory profiles maybe have implications for a number of mental and physical illnesses later in life.

PUBLICATIONS

1. Chen, E., Miller, G. E., Kobor, M. S., & Cole, S. W. (2011). Maternal warmth buffers the effects of low early-life socioeconomic status on pro-inflammatory signaling in adulthood. *Molecular Psychiatry*, 16(7), 729–737. <https://doi.org/10.1038/mp.2010.53>

ABOUT THIS SUMMARY

This summary was prepared by Ann Lamptey on behalf of the Foundations of Health Research Center at Northwestern University. You can access all of our research for free at our website, www.foundationsofhealth.org/publications.