Posttraumatic Stress Disorder and Not Depression Is Associated with Shorter Leukocyte Telomere Length: Findings from 3,000 Participants in the Population-Based KORA F4 Study.

Abstract:
A link between severe mental stress and shorter telomere length (TL) has been suggested. We analysed the impact of Posttraumatic Stress Disorder (PTSD) on TL in the general population and postulated a dose-dependent TL association in subjects suffering from partial PTSD compared to full PTSD. Data are derived from the population-based KORA F4 study (2006-2008), located in southern Germany including 3,000 individuals (1,449 men and 1,551 women) with valid and complete TL data. Leukocyte TL was measured using a quantitative PCR-based technique. PTSD was assessed in a structured interview and by applying the Posttraumatic Diagnostic Scale (PDS) and the Impact of Event Scale (IES). A total of 262 (8.7%) subjects qualified for having partial PTSD and 51 (1.7%) for full PTSD. To assess the association of PTSD with the average TL, linear regression analyses with adjustments for potential confounding factors were performed. The multiple model revealed a significant association between partial PTSD and TL (beta = -0.051, p = 0.009) as well as between full PTSD and shorter TL (beta = -0.103, p = 0.014) indicating shorter TL on average for partial and full PTSD. An additional adjustment for depression and depressed mood/exhaustion gave comparable
Participants with partial and full PTSD had significantly shorter leukocyte TL than participants without PTSD. The dose-dependent variation in TL of subjects with partial and full PTSD exceeded the chronological age effect, and was equivalent to an estimated 5 years in partial and 10 years in full PTSD of premature aging.