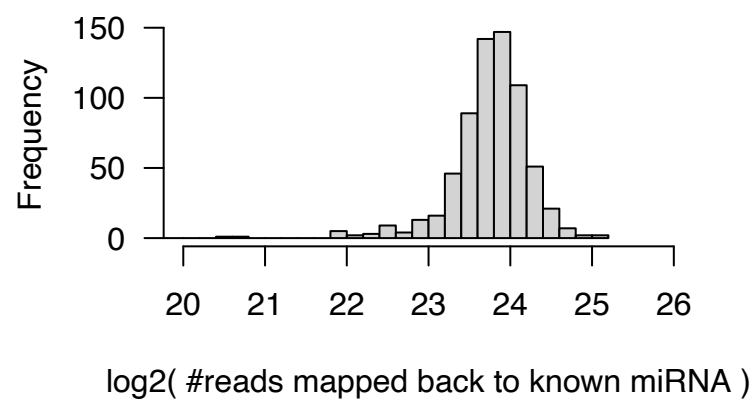


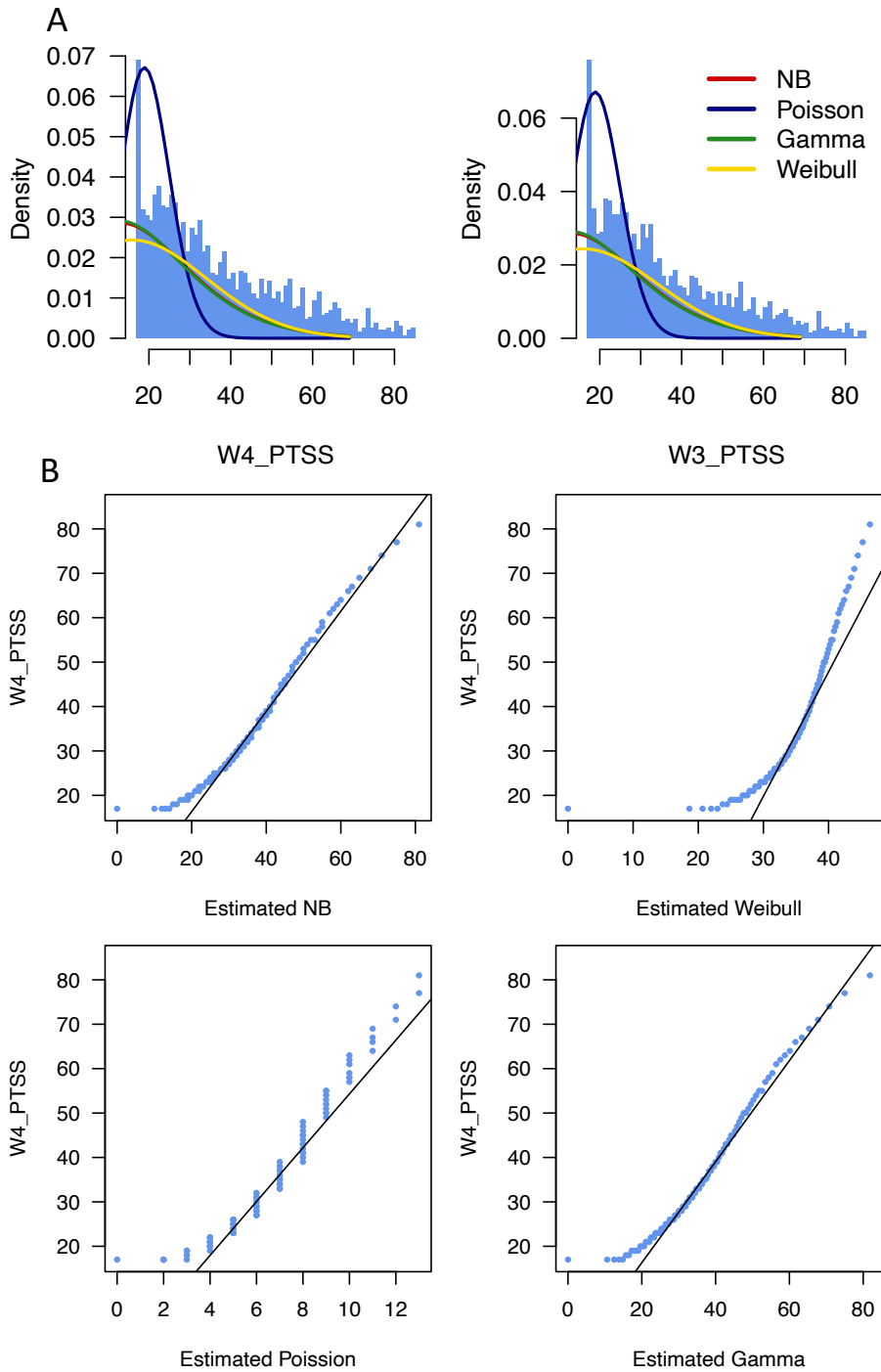
The relationship between social adversity, micro-RNA expression and post-traumatic stress in a prospective, community-based cohort

In the format provided by the
authors and unedited

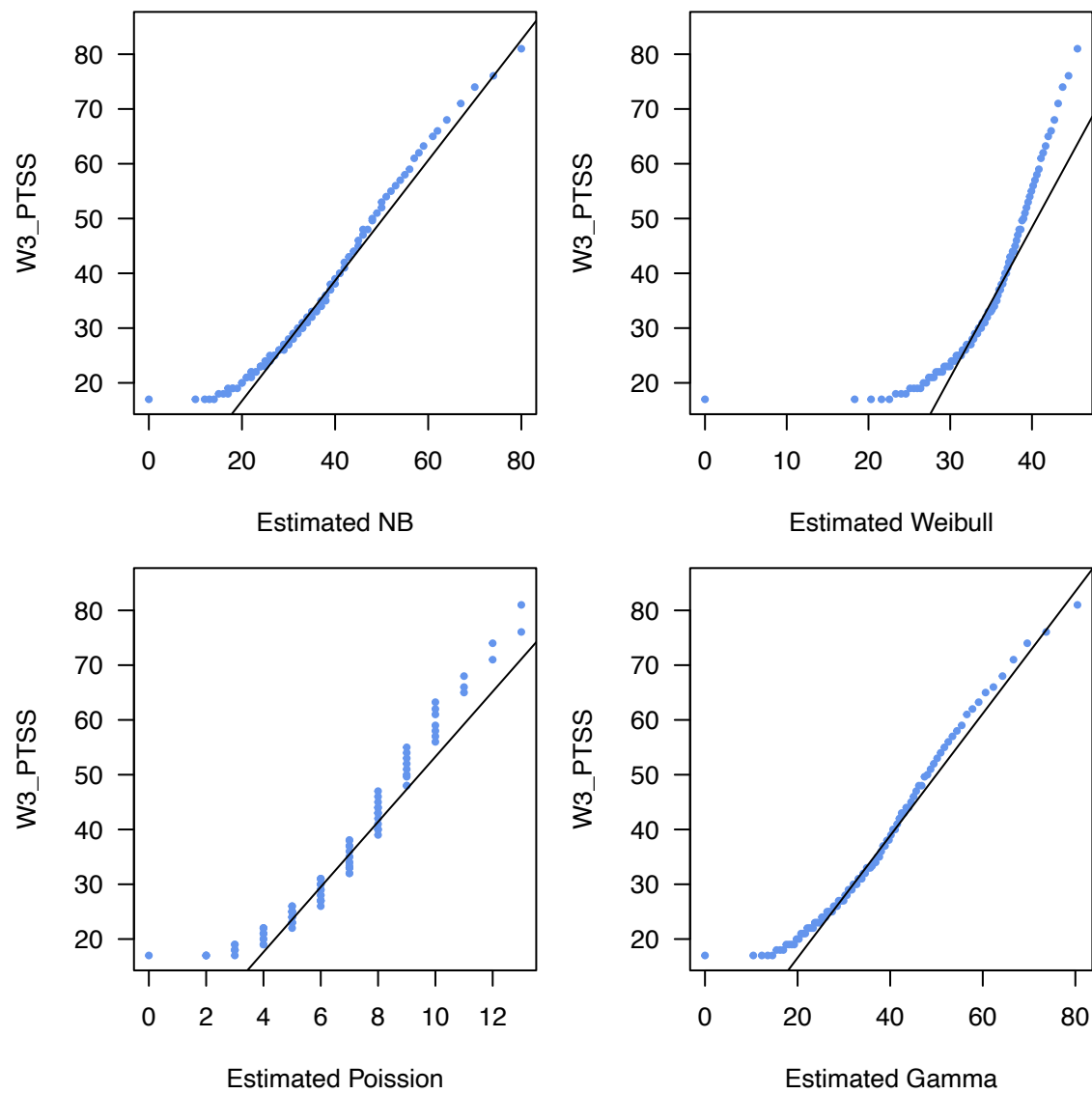
SUPPLEMENTARY FIGURES



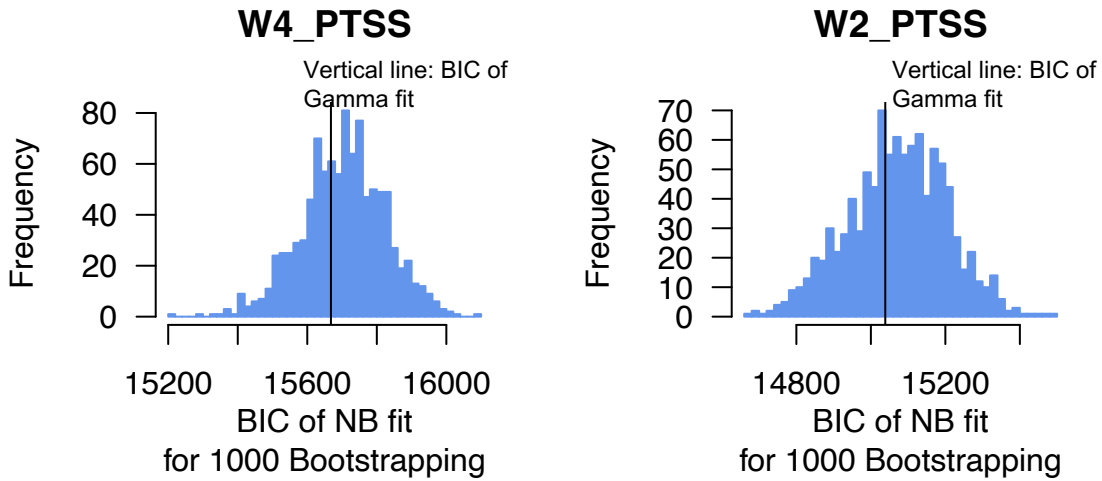
Supplementary Fig. 1. Read Counts aligned to known miRNAs for each participant sample.



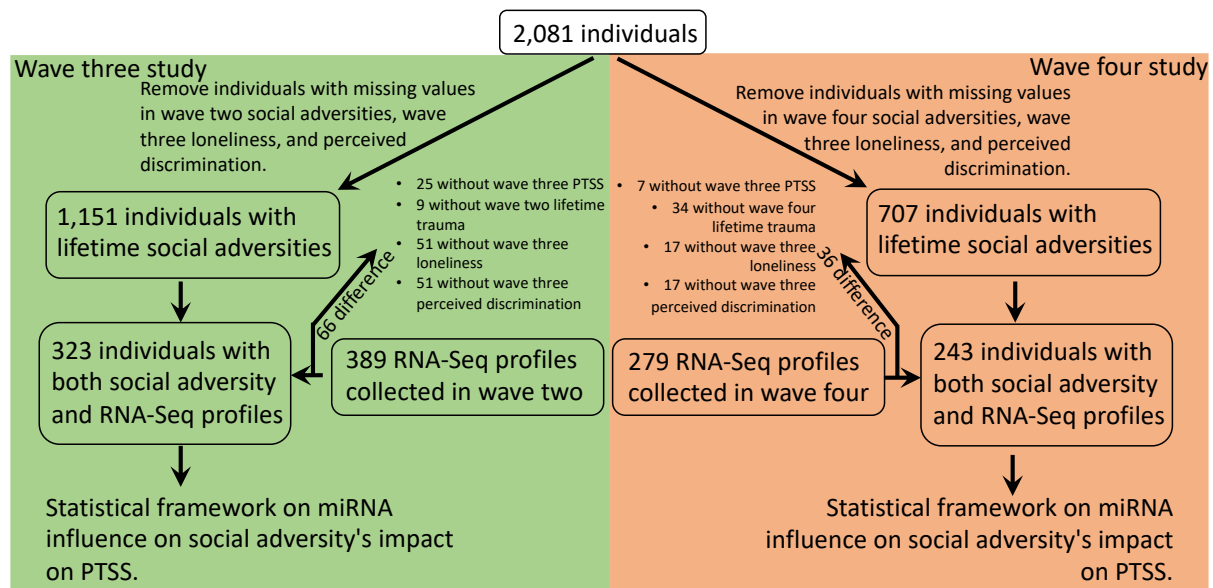
Supplementary Fig. 2. The Bayesian Information Criterion (BIC) is used to assess the goodness of fit of each distribution to PTSS.



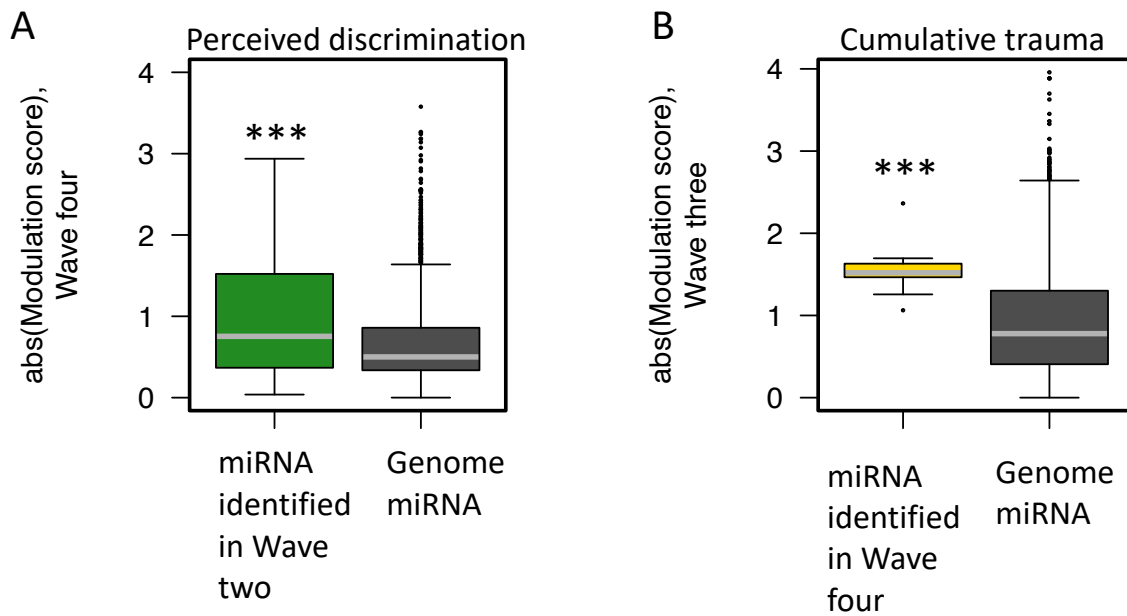
Supplementary Fig. 3. The Q-Q plot is utilized to evaluate the goodness of fit for various distributions in wave 2.



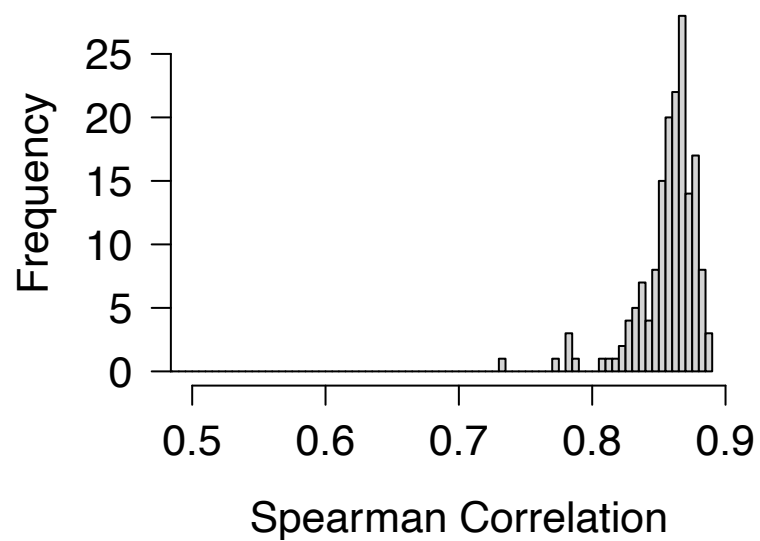
Supplementary Fig. 4. BIC distributions obtained from negative binomial fitting for 1,000 bootstraps of data from wave three and four PTSS. The vertical line in the plot represents the BIC value in gamma fitting. To calculate the p-value, we determined the fraction of the 1,000 bootstrapped datasets where the negative binomial fitting resulted in a higher BIC compared to the gamma fitting. For W4 PTSS, effect size $\Delta = -28.1$; 95% CI: -266.9 to 210.5 ; $P = 0.628$; For W2 PTSS, effect size $\Delta = -37.1$; 95% CI: -288.5 to 236.4 ; $P = 0.605$



Supplementary Fig. 5. The workflow for selecting individuals to assess the modulatory effects of miRNA signatures on the relationship between social adversity and PTSS.



Supplementary Fig. 6. The consistency in identifying miRNA across different waves to modulate the association between social adversity and PTSS is notable. **A.** the miRNA identified in modulating wave three's perceived discrimination and PTSS also displayed a significant modulating profile (defined as z-score in NB regression) when investigating wave four, in comparison to genome-wide miRNA (Wilcoxon test $p = 2.6e-3$, two-sided). **B.** Similar to A, but present the miRNA identified in wave four's cumulative trauma and PTSS, and its consistence with wave three results (Wilcoxon test $p = 6.6e-4$, two-sided). '***' represents



Supplementary Fig. 7. Spearman correlation for each miRNA between wave 2 and wave 4 across all individual samples.