Interaction effect of yielding and support on Body Mass Index assessed at Wave II

Across three ROIs, the interaction between dlPFC-related yielding and perceived social support assessed at Wave I predicted Body Mass Index at Wave II ($\beta = 0.19$, se $= 0.09$, $z = 2.10$, $p = 0.036$, 95% CI [0.01, 0.37]; Supplementary Figure 5). The effect was strongest in the low yielding group ($\beta = -0.17$, se $= 0.07$, $t = -2.58$, $p = 0.013$, 95% CI [-0.30, -0.04]), weaker in the average yielding group ($\beta = -0.08$, se $= 0.04$, $t = -1.85$, $p = 0.070$, 95% CI [-0.17, 0.01]), and in the opposite direction in the high yielding group ($\beta = 0.01$, se $= 0.07$, $t = 0.09$, $p = 0.925$, 95% CI [-0.13, 0.15]). The interaction was not significant in other ROIs (dACC: $\beta = 0.00$, se $= 0.07$, $z = 0.02$, $p = 0.981$, 95% CI [-0.14, 0.14]; hypothalamus: $\beta = 0.09$, se $= 0.067$, $z = 1.53$, $p = 0.127$, 95% CI [-0.03, 0.20]; average: ($\beta = 0.17$, se $= 0.10$, $z = 1.72$, $p = 0.086$, 95% CI[-0.02, 0.37]).

Supplementary Table 1

## Intercorrelations among primary study variables across Wave I, II

Variable	1	2	3	4	5	6	7	8	9	10	11
1. IL-6 Level	-										
2. CRP Level	0.38***	-									
3. Baseline HRV	-0.25**	-0.20	-								
4. Recovery HRV	-0.26**	-0.19	0.85***	-							
5. Speech HRV	-0.29**	-0.29**	0.82***	0.80***	-						
6. Math HRV	-0.19	-0.19	0.74***	0.71***	0.80***	-					
7. BMI	0.35***	0.45***	-0.26**	-0.25**	-0.34***	-0.17	-				
8. Perceived Support (MSPSS)	-0.03	-0.07	0.17	0.15	0.20	0.01	-0.30***	-			
9. dlPFC Yielding	0.06	0.17	-0.29**	-0.15	-0.05	-0.09	-0.02	-0.02	-		
10. dACC Yielding	0.00	0.01	0.04	0.07	0.11	0.06	-0.04	0.07	0.07	-	
11. Hypothalamus Yielding	-0.26**	-0.01	0.19	0.21	0.13	0.06	-0.21	0.04	0.02	0.29***	-
12. Yielding across ROIs	0.05	0.16	-0.24**	-0.11	0.00	-0.06	-0.04	0.00	0.94	0.40	0.14

$^{**}p < .05.$ $^{***}p < .01.$

Intercorrelations among primary study variables across Wave I, III

Variable	1	2	3	4	5	6	7	8	9	10	11
1. IL-6 Level	-										
2. CRP Level	0.24	-									
3. Baseline HRV	-0.11	-0.41**	-								
4. Recovery HRV	-0.21	-0.43**	0.94***	-							
5. Speech HRV	-0.28	-0.31	0.77***	0.73***	-						
6. Math HRV	-0.3	-0.27	0.66***	0.69***	0.85***	-					
7. BMI	0.34**	0.61***	-0.32	-0.35**	-0.20	-0.15	-				
8. Perceived Support (MSPSS)	-0.35**	-0.05	0.07	0.00	0.11	-0.04	-0.3***	-			
9. dlPFC Yielding	-0.11	-0.02	0.07	0.01	-0.01	0.07	-0.02	-0.02	-		
10. dACC Yielding	-0.18	0.02	0.01	0.03	0.05	0.1	-0.23	0.12	0.65***	-	
11. Hypothalamus Yielding	0.05	0.08	-0.15	-0.2	-0.18	-0.24	0.01	-0.01	0.24**	0.29***	-
12. Yielding across ROIs	-0.13	-0.01	0.06	0.01	0.00	0.08	-0.08	0.02	0.98***	0.80***	0.29***

$^{**}p < .05.$ $^{***}p < .01.$
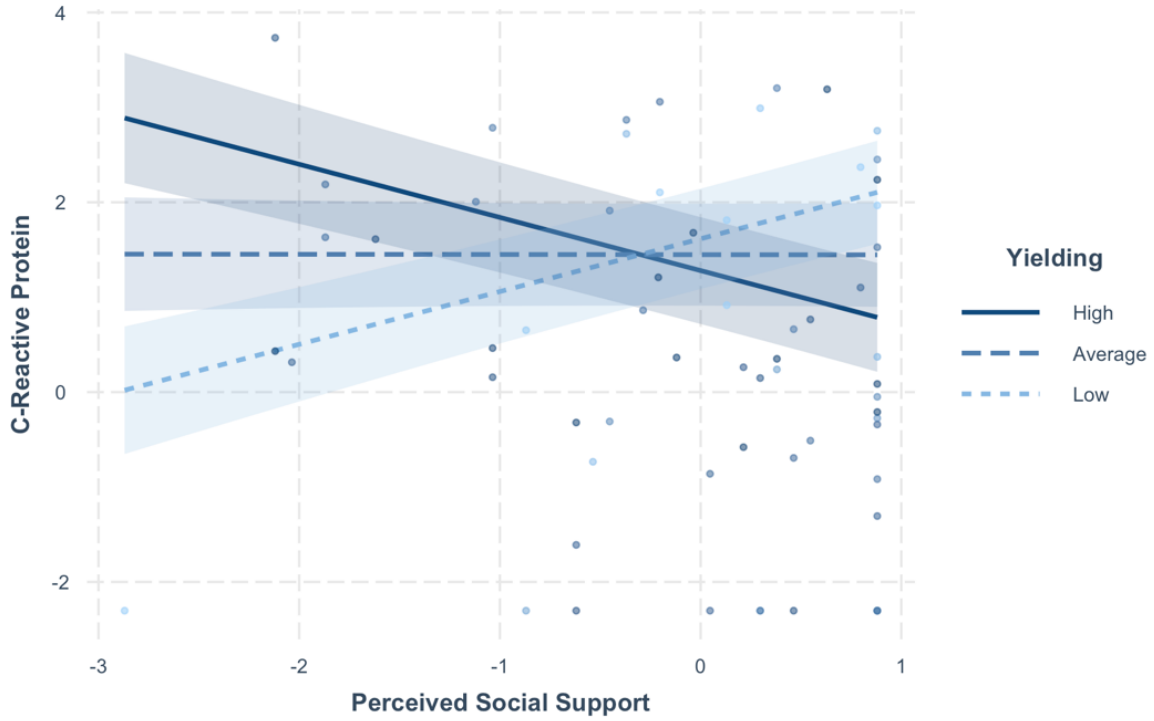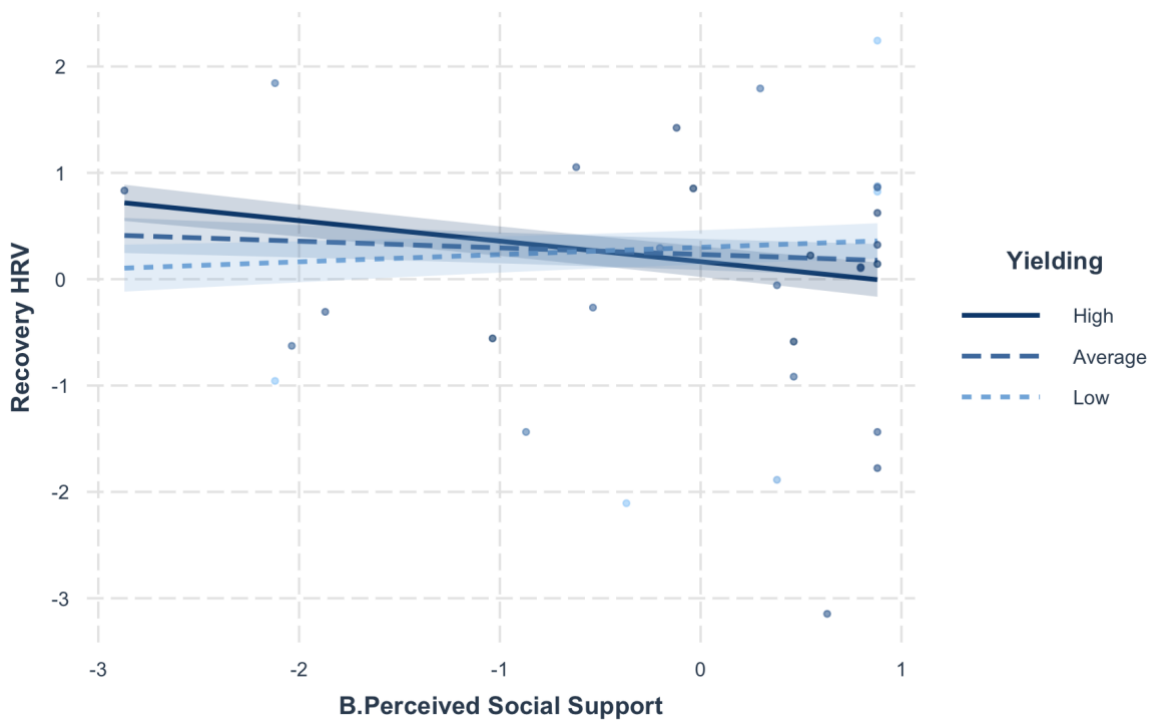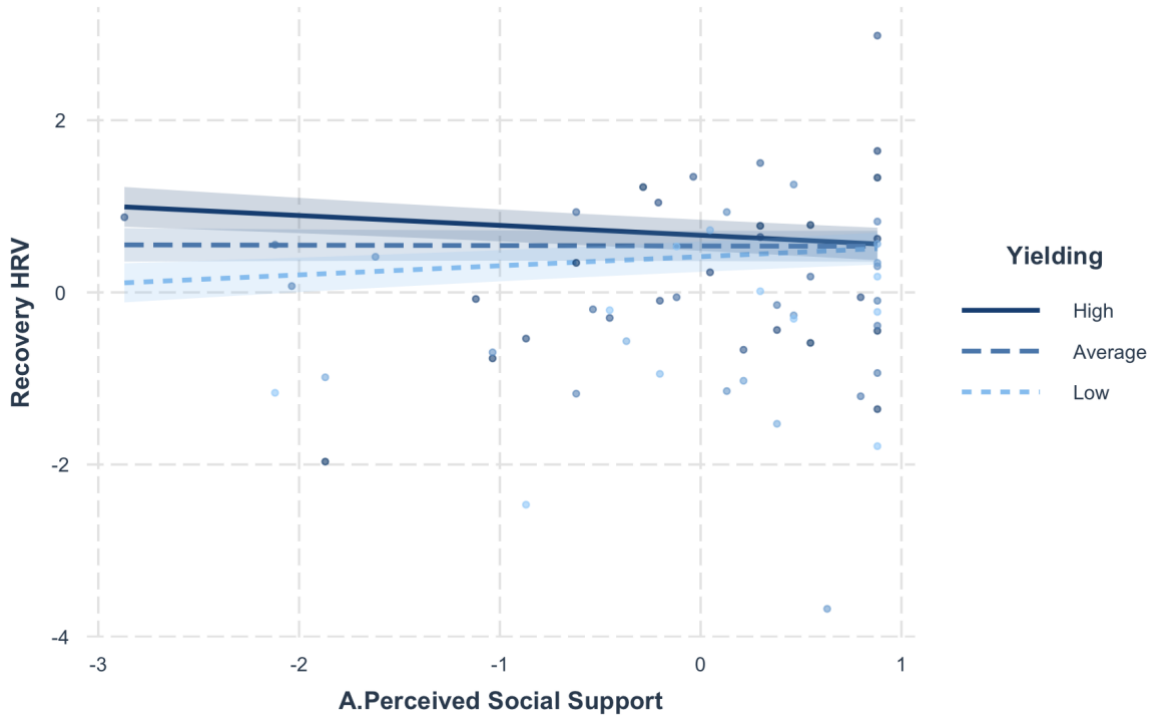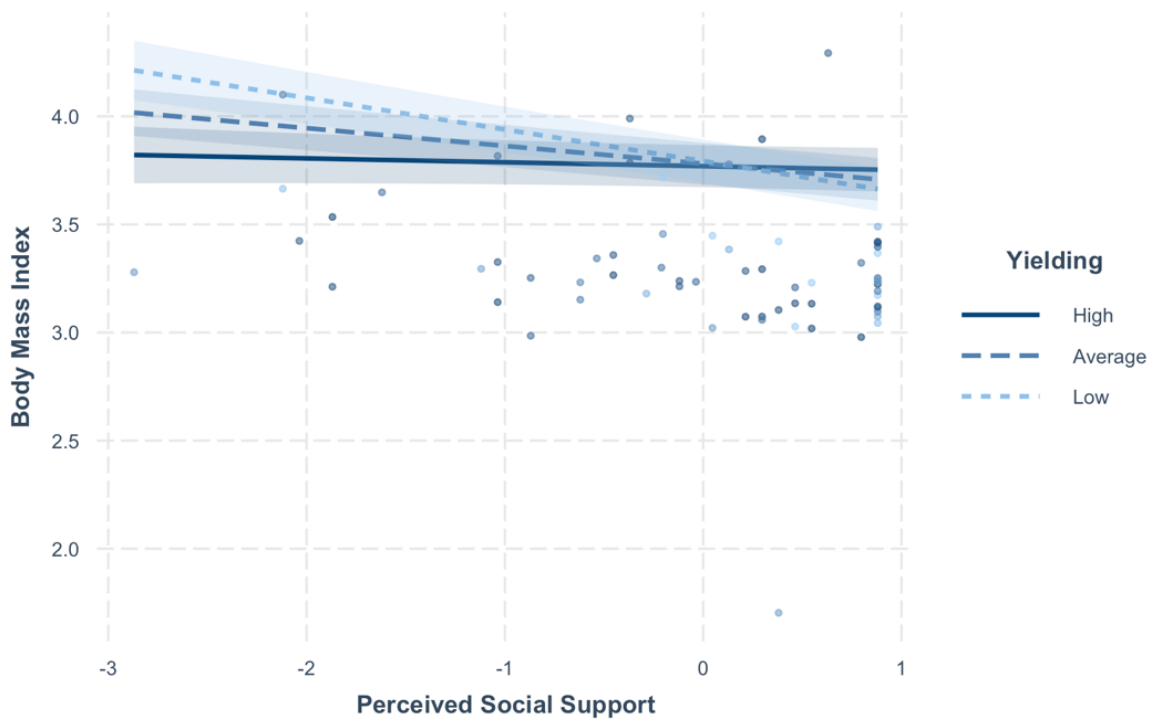
Supplementary Figure 1. The interaction between yielding and perceived social support predicted CRP level assessed at Wave II. Across the three ROIs, the interaction between yielding and perceived support was significant at **dACC**: higher perceived social support was associated with lower CRP level and this prediction was strongest in the high yielding group. The values of CRP and perceived support were after transformations.
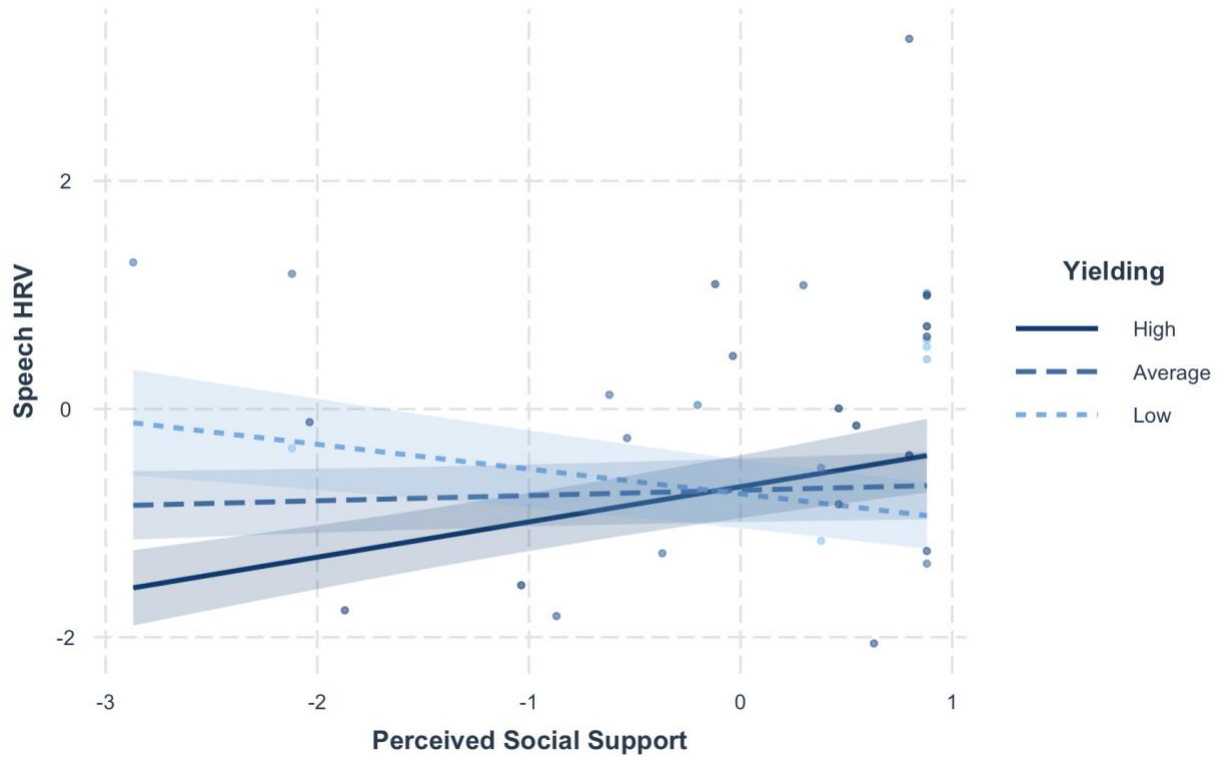
Supplementary Figure 2. The interaction between yielding and perceived social support predicted speech heart rate variability assessed at Wave III. Across the three ROIs, the interaction between yielding and perceived support was significant when **averaged across three ROIs at Wave III**: higher perceived social support was associated with greater speech heart rate variability and this prediction was strongest in the high yielding group. The values of speech HRV and perceived support were after transformations.

Supplementary Figure 3A-B. The interaction between yielding and perceived support predicted recovery heart rate variability assessed at Wave II and III. Figure 4A: Across the three ROIs, the interaction between yielding and perceived support was significant at **hypothalamus at Wave II**: higher perceived social support was associated with greater recovery heart rate variability. This prediction was strongest in the low yielding group and the opposite direction in the high yielding group. **Figure** 4B: The effect was also significant within **dACC at Wave III**, in a similar trend. The values of recovery HRV and perceived support were after transformations.

Supplementary Figure 4. The interaction between yielding and perceived social support predicted body mass index assessed at Wave II: Across the three ROIs, the interaction between yielding and perceived support was significant at **dlPFC**: higher perceived social support was associated with lower body mass index but this prediction was strongest in the low yielding group and weakest in the high yielding group. The values of BMI and perceived support were after transformations.