

Table I. P-values for Table 3: Intercorrelations (Pearson r) among cardiovascular parameters, psychological distress, and cold pressor pain outcomes for overall chronic pain sample ($n= 649$ to 877 ; Panel A), chronic pain males ($n= 250$ to 341 ; Panel B) and chronic pain females ($n = 403$ to 536 ; Panel C) in Tromsø 6. Partial correlation p-values controlling for age and BMI (and sex in Panel A) are shown in bold below the diagonal.

A.

Total ($n= 649 - 877$)	rMSSD	SDNN	BRS	HSCL-10	CPT	CPI
rMSSD		<0.001	<0.001	0.026	0.412	0.557
SDNN	--		<0.001	0.073	0.388	0.303
BRS	--	--		0.107	0.278	0.102
HSCL-10	0.063	0.102	0.208		<0.001	<0.001
CPT (sec)	0.875	0.901	0.363	<0.001		<0.001
CPI	0.846	0.971	0.199	<0.001	--	

CPT, cold pressor tolerance; CPI, cold pressor intensity; BRS, baroreflex sensitivity; rMSSD, root mean square of the successive differences of the R-R intervals; SDNN, standard deviation of R-R intervals; HSCL-10, Hopkins symptom checklist-10

B.

Males (n= 250 - 341)	rMSSD	SDNN	BRS	HSCL-10	CPT	CPI
rMSSD		<0.001	<0.001	0.015	0.138	0.313
SDNN	--		<0.001	0.020	0.072	0.563
BRS	--	--		0.176	0.153	0.147
HSCL-10	0.041	0.026	0.211		0.006	0.068
CPT (s)	0.239	0.286	0.116	0.018		<0.001
CPI	0.244	0.550	0.144	0.162	--	

BRS, baroreflex sensitivity; rMSSD, root mean square of the successive differences of the R-R intervals; SDNN, standard deviation of R-R intervals; CPT, cold pressor tolerance; CPI, cold pressor intensity; HSCL-10, Hopkins symptom checklist-10

C.

Females (n= 403 - 536)	rMSSD	SDNN	BRS	HSCL-10	CPT	CPI
rMSSD		<0.001	<0.001	0.290	0.997	0.958
SDNN	--		<0.001	0.681	0.964	0.464
BRS	--	--		0.459	0.831	0.414
HSCL-10	0.294	0.556	0.409		<0.001	<0.001
CPT (s)	0.549	0.604	0.990	<0.001		<0.001
CPI	0.467	0.707	0.602	<0.001	--	

BRS, baroreflex sensitivity; rMSSD, root mean square of the successive differences of the R-R intervals; SDNN, standard deviation of R-R intervals; CPT, cold pressor tolerance; CPI, cold pressor intensity; HSCL-10, Hopkins symptom checklist-10

Table II. P-values for Table 4: Correlations for (Pearson r) between clinical chronic pain measures (pain intensity and number of chronic pain sites) and cardiovascular parameters, psychological distress, and cold pressor measures in the Tromsø 6 chronic pain population.

	Total (n = 651 - 877)		Females (n = 401 - 536)		Males (n = 250 - 341)	
Cardiovascular measures	Usual pain intensity	Number of chronic pain sites	Usual pain intensity	Number of chronic pain sites	Usual pain intensity	Number of chronic pain sites
rMSSD	0.058	0.102	0.022	0.029	0.938	0.837
SDNN	0.091	0.003	0.017	0.005	0.706	0.416
BRS	0.049	0.893	0.011	0.242	0.901	0.132
HSCL-10	<0.001	<0.001	<0.001	<0.001	0.238	0.001
CPT	0.001	0.008	0.015	0.198	0.059	0.319
CPI	0.002	0.121	0.005	0.004	0.257	0.507

Pearson correlation coefficients were given. Number of chronic pain sites = total number of pain locations

BRS, baroreflex sensitivity; rMSSD, root mean square of the successive differences of the R-R intervals; SDNN, standard deviation of R-R intervals; CPT, cold pressor tolerance; CPI, cold pressor intensity; HSCL-10, Hopkins symptom checklist-10

Table III. Mediation analyses without imputing missing data for Table 5: The total direct effect and indirect effect (via psychological distress) of cardiovascular parameters on cold pressor pain tolerance and intensity in the overall Tromsø 6 chronic pain population (Panel A), in men only (Panel B), in women only (Panel C), and between men and women (Panel D).

A. Overall chronic pain population ($n = 561 - 760$)

Cardiovascular parameter	Cold pressor outcome	Without Imputing Missing Data ($n = 561-760$) Total	
		Direct Effect (95% CI)	Indirect/mediated effect via HSCL-10 (95% CI)
rMSSD	CPT	0.003 (-0.081, 0.080)	0.019 (0.004, 0.037)
	CPI	0.0001 (-0.007, 0.006)	-0.001 (-0.003, -0.0003)
SDNN	CPT	0.007 (-0.076, 0.079)	0.014 (-0.002, 0.030)
	CPI	-0.001 (-0.007, 0.005)	-0.001 (-0.002, 0.00004)
BRS	CPT	0.061 (-0.077, 0.150)	0.029 (0.007, 0.061)
	CPI	-0.007 (-0.017, 0.005)	-0.002 (-0.004, -0.0006)

BRS, baroreflex sensitivity; rMSSD, root mean square of the successive differences of the R-R intervals; SDNN, standard deviation of R-R intervals

** $p < 0.05$*

B. Male chronic pain participants only (n = 217 – 297)

Cardiovascular parameter	Cold pressor outcome	Without Imputing Missing Data (n = 217 – 297) Male	
		Direct Effect (95% CI)	Indirect/mediated effect via HSCL-10 (95% CI)
rMSSD	CPT	0.075 (-0.036, 0.176)	0.024 (0.004, 0.051)
	CPI	-0.005 (-0.016, 0.006)	-0.001 (-0.003, 0.0003)
SDNN	CPT	0.058 (-0.057, 0.163)	0.022 (0.003, 0.050)
	CPI	-0.002 (-0.013, 0.008)	-0.001 (-0.003, 0.0002)
BRS	CPT	0.123 (0.047, 0.392)	0.019 (-0.0008, 0.067)
	CPI	-0.009 (-0.026, 0.0002)	-0.0009 (-0.004, 0.001)

BRS, baroreflex sensitivity; rMSSD, root mean square of the successive differences of the R-R intervals; SDNN, standard deviation of R-R intervals

**p<0.05*

C. Female chronic pain participants only (n = 344 – 463)

Cardiovascular parameter	Cold pressor outcome	Without Imputing Missing Data (n = 344 – 463)	
		Direct Effect (95% CI)	Indirect/mediated effect via HSCL-10 (95% CI)
rMSSD	CPT	-0.041 (-0.164, 0.073)	0.012 (-0.010, 0.036)
	CPI	0.003 (-0.005, 0.010)	-0.0009 (-0.003, 0.0006)
SDNN	CPT	-0.028 (-0.143, 0.072)	0.003 (-0.021, 0.024)
	CPI	0.00008 (-0.007, 0.008)	-0.0003 (-0.002, 0.001)
BRS	CPT	-0.036 (-0.465, 0.145)	0.021 (-0.045, 0.069)
	CPI	-0.003 (-0.024, 0.021)	-0.002 (-0.006, 0.003)

BRS, baroreflex sensitivity; rMSSD, root mean square of the successive differences of the R-R intervals; SDNN, standard deviation of R-R intervals

**p*<0.05

D. Moderated mediation for chronic pain participants ($n = 877$)

Cardiovascular parameter	Cold pressor outcome	Without Imputing Missing Data ($n = 561 - 760$)	
		Difference in mediated effects between males and females	Percentile method: bootstrapped 95% CI for the difference
rMSSD	CPT	0.01179	(-0.0211, 0.0465)
	CPI	-0.000366	(-0.0027, 0.0020)
SDNN	CPT	0.0189	(-0.010, 0.0553)
	CPI	-0.00089	(-0.0035, 0.0013)
BRS	CPT	-0.0022	(-0.0605, 0.0776)
	CPI	0.00092	(-0.0046, 0.0051)