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Supplementary information

Investigating the ‘I’ in team: development and evaluation of an individual-level IMO model for augmented reality-mediated remote collaboration

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Table S1. Measurement of the assessed variables used for analyses in the paper at hand.

	Variable	Description	Special Notes/ Further Description	Coding Scheme	Interpretation	Example Item
MTP 1	Sex	Recorded as female; male; others; no indication Female: 68.18% Male: 30.91 % Other: 0.91 %	Two participants identified as non-binary and had to be excluded from correlation analyses with the sex variable due to the small sample size	Female = 0 Male = 1	Positive correlations = relationships to male sex negative correlations = relationships to female sex	
	Age	Measured in whole years *M* = 24.98; *SD* = 3.71 Range = 19; 44				
	General Mental Abilities	German version of the Wonderlic Personnel Test (Wonderlic, 2002). *M* = 24.98; *SD* = 6.12 Range = 5; 21	• 50 Items • 12 minutes to answer • Correct answer = 1 point • Analysis of sum scores		Higher sum scores = higher general mental abilities	Which number should come next: 8, 4, 2, 1, ½, ¼?
	Retentivity	Wilde Intelligence Test 2 (WIT-2)/ module retentivity (Kersting et al., 2008). *M* = 14.08; *SD* = 3.06 Range = 1; 5	• 4 minutes to memorize a story including graphic elements • 15 minutes engaging in other questionnaires • 21 items in relation to the previously presented story and the graphic elements • 3.5 minutes to answer • Correct answer = 1 point • Analysis of sum scores		Higher sum scores = higher retentivity	
	Team Partner Familiarity	Dyadic teams who knew their team partner beforehand = 29.09%		Yes = 1 No = 0	Positive correlation = relationship to knowing the team partner beforehand	
	Interest in AR	Interest in the topic of AR = 29.09%		Yes = 1 No = 0	Positive correlation = relationship to interest in AR	
	Interest in VR	Interest in the topic of VR = 85.91%		Yes = 1 No = 0	Positive correlation = relationship to interest in VR	
	Frequency AR Usage	*M* = 1.08; *SD* = 0.37 Range = 1; 5	• 5-point Likert scale; 1 = never; 5 = daily • Analysis of mean values		Higher values = higher usage frequency	
	Frequency VR Usage	*M* = 1.3; *SD* = 0.59 Range = 1; 5	• 5-point Likert scale; 1 = never; 5 = daily • Analysis of mean values		Higher values = higher usage frequency	
MTP2	Post-Training Self-Efficacy	Post-Training Self-Efficacy Scale (Kluge, 2004) *M* = 3.59; *SD* = 0.75 Range = 1;5 Cronbachs α = .79; CI [.75; .84]	• 5 items • Items were inverted before data analyses • 5- point Likert scale; 1 = totally agree; 5 = totally disagree		Higher values = higher self-efficacy	I feel confident operating WaTrSim successfully.

MTP3	Performance Output	Measured in liters *M* = 328.40; *SD* = 100.87 Range = 1.92;557.03	• Analysis of mean values		Higher values = higher performance output	
	Performance Time	Measured in seconds *M* = 155.58; *SD* = 24.79 Range = 103.88; 229.25	• Analysis of mean values		Lower values = faster performance speed	
	Performance Errors	Measured by numbers of errors made *M* = 0.5; *SD* = 1.06 Range = 0; 4	Errors were defined as either adjustment errors (incorrect value setting) or procedure error (adjustment on a wrong plant part) • Analysis of mean values		Higher values = lower performance accuracy	
	Mental Load	Measured by applying a secondary task paradigm *M* = 1.54; *SD* = 1.06 Range = 0; 4	Participants had to additionally press a "monitoring" button every 50 seconds • Analysis of mean values		Higher values = lower mental load	
MTP4	Collective Orientation	Collective Orientation Questionnaire (Hagemann, 2017) Affiliation: *M* = 3.02; *SD* = 0.75 Range = 1.20; 4.80 Cronbachs α = .88, CI [.86; .90} Dominance: *M* = 3.35; *SD* = 0.70 Range = 1.76; 5.00 Cronbachs α = .77, CI [.72; .82]	• Subscales: Affiliation, dominance • Inverse coded items were recoded prior to data analyses • Affiliation: 10 items • Dominance: 6 items • 5-point Likert scale • 1 = do not agree at all; 2 = totally agree • Analysis of mean values		Higher values = higher collective orientation	Affiliation: I find working on team projects to be very satisfying. Dominance: When I disagree with other team members, I tend to go with my own gut feelings.
	Spatial Presence & Satisfaction	Presence Scale for Lab-Based Microworld Research (Frank & Kluge, 2014a) Spatial presence: *M* = 2.84; *SD* = 0.87 Range = 1; 4.75 Cronbachs α = .64, CI [.56; .71] Satisfaction: *M* = 3.76; *SD* = 0.93 Range = 1.5; 5 Cronbachs α = .71, CI [.62; .78]	• Inverse coded items were recoded prior to data analyses • Spatial presence: 4 items • Satisfaction: 2 items • 5-point Likert-scale • 1 = totally disagree; 5 = totally agree • Analysis of mean values		Higher values = higher spatial presence and satisfaction	Spatial presence: I felt that I was part of the WaTrSim world. Satisfaction: Working in the WaTrSim environment was satisfying for me.
	Task Complexity	Subscale Intrinsic Cognitive Load of the Cognitive Load Scale (Klepsch et al., 2017) *M* = 4.47; *SD* = 1.26 Range = 1; 7 Cronbachs α = .76, CI [.69; .82]	• 7-point Likert scale • 1 = totally wrong; 7 = totally correct • Analysis of mean values		Higher values = higher perceived task complexity	This task was very complex.
	Work Group Cohesion	Work Group Identification Questionnaire/ subscale Work Group Cohesiveness (Riordan & Weatherly, 1999)	As participants could not communicate, the item "In my work group, individuals take the time to listen to coworkers' problems and worries" was		Higher values = higher work group cohesion	In my work group, group members work as a team.

		M = 3.45; *SD* = 0.84 Range = 1;5 Cronbachs α = .94, CI [.93; .95]	excluded • 5-point Likert scale • 1 = do not agree; 5 = totally agree • Analysis of mean values			
	Simulator Sickness	Simulator Sickness Questionnaire (Kennedy et al., 1993) *M* = 27.22; *SD* = 27.69 Range = 0; 175.78 Cronbachs α = .85, CI [.82; .88]	• 0 = not present • 1 = slight • 2 = moderate • 3 = strong • Analysis of total scores as suggested by Kennedy et al. (1993)		Higher values = higher simulator sickness	
	Physiological Stability	Participants were asked whether they felt any change in their physical condition compared to the beginning of the experiment (pre AR-use) Changed physical condition: 31.82%		Yes = 0 (change) No = 1 (no change)	Positive correlations = relationship to unchanged physiological state Negative correlations = relationship to changed physiological state	

Table S2. Correlation matrix.

	Sex	Age	Team Partner Familiarity	Frequency AR Use	Frequency VR Use	Interest AR	Interest VR	General Mental Abilities	Retentivity	Post-Training Self-Efficacy	Simulator Sickness	Physiological Stability	Spatial Presence	Satisfaction	Work Group Cohesion	Collective Orientation Affiliation	Collective Orientation Dominance	Task Complexity	Performance Output	Performance Time	Secondary Tasks	Performance Errors
Sex	X																					
Age	*r* = .067, *p* = .322	X																				
Team Partner Familiarity	***r* = .029, *p* < .00**	***r* = -.147, *p* =**	X																			

	1	**.029**																				
Frequency AR Use	ρ = .167, *p* = .137	ρ = .041, *p* = .544	ρ = .008, *p* = .909	X																		
Frequency VR Use	**ρ = .263, *p* < .001**	ρ = -.022, *p* = .744	ρ = .019, *p* = .780	**ρ = .262, *p* < .001**	X																	
Interest AR	***r* = .230, *p* = .001***	*r* = .037, *p* = .584	*r* = .026, *p* = .701	ρ = .008, *p* = .911	ρ = .034, *p* = .617	X																
Interest VR	***r* = .230, *p* = .001**	*r* = .012, *p* = .864	*r* = .012, *p*= .076	ρ = -.008, *p* = .903	ρ = .027, *p* = .692	***r* = .970, *p* < .001**	X															
General Mental Abilities	*r* = -.011, *p* = .871	ρ = -.126, *p* = .062	*r* = .026, *p* = .703	**ρ = .151, *p* = .025**	**ρ = .216, *p* = .001**	ρ = -.079, *p* = .245	*r* = -.107, *p* = .113	X														

Retentivity	**$r = -.280, p < .001$**	$\rho = -.115, p = .088$	$r = -.027, p = .690$	$\rho = .005, p = .944$	$\rho = .004, p = .954$	$\rho = .040, p = .555$	$r = .028, p = .680$	**$\rho = .397, p < .001$**	X												
Post-Training Self-Efficacy	**$r = .140, p = .040$**	$\rho = -.117, p = .083$	$r = .017, p = .797$	$\rho = -.114, p = .091$	$\rho = -.030, p = .660$	**$r = .172, p = .012$**	**$r = .158, p = .020$**	$\rho = -.063, p = .357$	$\rho = -.047, p = .493$	X											
Simulator Sickness	**$r = -.185, p = .006$**	$\rho = -.035, p = .601$	$r = .025, p = .715$	$\rho = -.114, p = .091$	$\rho = -.084, p = .216$	$r = -.068, p = .314$	$r = -.075, p = .268$	$\rho = .016, p = .818$	$\rho = .020, p = .769$	$\rho = -.072, p = .290$	X										
Physiological Stability	**$r = .360, p < .001$**	$r = .035, p = .602$	$r = -.024, p = .723$	$\rho = .089, p = .188$	$\rho = .128, p = .057$	**$r = .220, p = .001$**	**$r = .270, p < .001$**	$r = -.022, p = .748$	$r = -.004, p = .952$	$r = -.081, p = .230$	**$r = -.396, p < .001$**	X									
Spatial Presence	$r = .028, p = .685$	$\rho = -.106, p = .116$	$r = .046, p = .501$	$\rho = -.035, p = .609$	$\rho = -.006, p = .930$	**$r = .232, p = .001$**	**$r = .224, p = .001$**	$\rho = .113, p = .093$	$\rho = -.022, p = .750$	**$\rho = .203, p = .002$**	**$\rho = -.133, p = .049$**	$r = .057, p = .398$	X								
Satisfacti	$r = .0$	$\rho = -$	$r = .110$	$\rho = .0$	$\rho = .0$	**$r = .3$**	**$r = .3$**	**$\rho = -$**	$\rho = -$	**$\rho = .2$**	**$\rho = -$**	**$r = .229,$**	**$\rho = .4$**	X							

on	80, *p* = .241	.109, *p* = .1088	, *p* = .102	07, *p* = .914	09, *p* = .899	**25, *p* < .001**	**76, *p* < .001**	**.165, *p* = .014**	.060, *p* = .379	**96, *p* < .001**	**.201, *p* = .003**	***p* = .001**	**88, *p* < .001**							
Work Group Cohesion	*r* = .067, *p* = .322	ρ = .0700, *p* = .301	*r* = .104, *p* = .124	ρ = -.079, *p* = .243	ρ = .001, *p* = .984	*r* = -.017, *p* = .806	*r* = -.055, *p* = .419	ρ = .101, *p* = .137	ρ = -.038, *p* = .577	ρ = -.074, *p* = .276	ρ = -.036, *p* = .594	*r* = -.051, *p* = .452	ρ = -.082, *p* = .224	ρ = .0400, p = .551	X						
Collective Orientation Affiliation	*r* = .067, *p* = .322	ρ = .0360, *p* = .600	*r* = .153, *p* = .023	ρ = .004, *p* = .954	ρ = .010, *p* = .884	*r* = .006, *p* = .930	*r* = -.035, *p* = .607	*r* = .011, *p* = .868	ρ = -.025, *p* = .708	ρ = .008, *p* = .908	ρ = -.106, *p* = .118	*r* = .0800, *p* = .239	ρ = .012, *p* = .856	ρ = .1200, p = .076	**ρ = .216, *p* = .001**	X					
Collective Orientation Dominance	*r* = .055, *p* = .422	ρ = -.1244, *p* = .067	*r* = -.067, *p* = .320	ρ = -.049, *p* = .472	ρ = -.048, *p* = .478	*r* = -.101, *p* = .135	***r* = -.146, *p* = .031**	*r* = -.047, *p* = .490	ρ = -.168, *p* = .013	**ρ = -.232, *p* < .001**	ρ = -.052, *p* = .439	*r* = .0422, *p* = .538	ρ = -.009, *p* = .890	ρ = -.1075, *p* = .115	ρ = -.019, *p* = .778	**ρ = .199, *p* = .003**	X				
Task Complexity	*r* = -.111, *p* = .102	ρ = -.0099, *p* = .892	*r* = .040, *p* = .555	ρ = .083, *p* = .217	ρ = -.006, *p* = .931	*r* = .023, *p* = .735	*r* = .036, *p* = .591	ρ = .121, *p* = .073	**ρ = .162, *p* = .016**	**ρ = -.151, *p* = .026**	**ρ = .205, *p* = .002**	*r* = -.029, *p* = .670	ρ = -.037, *p* = .589	ρ = -.0811, *p* = .234	ρ = .021, *p* = .751	ρ = -.0700, *p* = .298	ρ = -.0011, *p* = .989	X				
Performance Outpu	*r* = .102, *p*	**ρ = -.318**	*r* = .129, *p* = .0	ρ = -.042, *p* =	ρ = .118, *p* =	***r* = .148, *p* =**	***r* = .1884, *p* =**	**ρ = .2896, *p* <**	**ρ = .2841, *p* <**	**ρ = .3011, *p* <**	**ρ = -.145, *p***	*r* = .104, *p* = .123	ρ = .057, *p* =	ρ =.0 93, *p* = .168	ρ = .045, *p* =	ρ = -.025, *p* = .71	ρ = -.061, *p* = .37	ρ = .0477, *p* = .485	X			

t	= .133	, **p < .001**	56	.533	.080	**.029**	**.006**	**.001**	**.001**	**= .032**		.400		.508	1	0					
Performance Time	r = -.112, p = .100	**ρ = .3061, p < .001**	r = -.127, p = .059	ρ = .037, p = .585	ρ = -.105, p = .121	**r = -.151, p = .026**	**r = -.189, p = .005**	**ρ = -.284, p < .001**	**ρ = -.284, p < .001**	**ρ = -.289, p < .001**	**ρ = .163, p = .015**	r = -.122, p = .070	ρ = -.105, p = .121	ρ = -.082, p = .224	ρ = -.068, p = .316	ρ = -.034, p = .615	ρ = .072, p = .289	ρ = -.047, p = .491	**ρ = -.985, p < .001**	X		
Secondary Tasks	r = .0166, p = .815	ρ = -.0133, p = .852	r = -.028, p = .684	ρ = -.032, p = .638	ρ = .012, p = .858	r = -.008, p = .906	r = -.033, p = .631	**ρ = .294, p < .001**	**ρ = .362, p < .001**	ρ = .045, p = .510	**ρ = -.133, p = .049**	**r = .214, p = .001**	ρ = -.059, p = .381	ρ =.007, p = .914	ρ = .030, p = .661	ρ = .047, p = .489	ρ = .009, p = .891	ρ = .110, p = .103	**ρ = -.340, p < .001**	**ρ = -.355, p < .001**	X	
Performance Error	r = -.039, p = .563	ρ = .0833, p = .235	r = -.106, p = .118	ρ = -.025, p = .710	ρ = -.057, p = .402	r = -.106, p = .115	r = -.086, p = .204	**ρ = -.144, p = .033**	**ρ = -.203, p = .002**	ρ = -.055, p = .421	**ρ = .214, p = .001**	**r = -.205, p = .002**	ρ = -.063, p = .349	ρ = -.060, p = .373	ρ = -.040, p = .551	ρ = .009, p = .896	ρ = -.056, p = .412	ρ = -.085, p = .210	**ρ = -.348, p <.001**	**ρ = .331, p < .001**	**ρ = -.319, p < .001**	X

Table S3. Applied correlaiton types.

	Scale Level	dichotomous	metric	dichotomous	ordinal	ordinal	dichotomous	dichotomous	metric	metric	metric	metric	dichotomous	metric	metric	metric	metric	metric	metric	metric	metric	metric
Scale Level	Variable	Sex	Age	Team Partner Familiarity	Frequency ARUse	Frequency VRUse	InterestAR	InterestVR	General Mental Abilities	Retentivity	Post-Training Self-Effi	Simulator Sickness	Physiological Stability	Spatial Presence	Satisfaction	Work Group Cohesion	Collective Orientation Af	Collective Orientation D	Task Complexity	Performance Output	Performance Time	Secondary Tasks	Performance Errors

											cacy						filiation	ominance					
dichotomous	Sex	X																					
metric	Age	point-biserial	X																				
dichotomous	TeamPartnerFamiliarity	point-tetrachoric	point-biserial	X																			
ordinal	FrequencyARUse	biserialrangcorrelation	Spearman'sRho	biserialrangcorrelation	X																		
ordinal	FrequencyVRUse	biserialrangcorrelation	Spearman'sRho	biserialrangcorrelation	Spearman'sRho	X																	
dichotomous	InterestAR	point-tetrachoric	point-biserial	point-tetrachoric	biserialrangcorrelation	biserialrangcorrelation	X																

dichotomous	InterestVR	point-tetrachoric	point-biserial	point-tetrachoric	biserialrangcorrelation	biserialrangcorrelation	point-tetrachoric	X													
metric	GeneralMentalAbilities	point-biserial	SpearmanRho	point-biserial	SpearmanRho	SpearmanRho	point-biserial	point-biserial	X												
metric	Retentivity	point-biserial	SpearmanRho	point-biserial	SpearmanRho	SpearmanRho	point-biserial	point-biserial	SpearmanRho	X											
metric	Post-TrainingSelf-Efficacy	point-biserial	SpearmanRho	point-biserial	SpearmanRho	SpearmanRho	point-biserial	point-biserial	SpearmanRho	SpearmanRho	X										
metric	SimulatorSickness	point-biserial	SpearmanRho	point-biserial	SpearmanRho	SpearmanRho	point-biserial	point-biserial	SpearmanRho	SpearmanRho	SpearmanRho	X									
dichotomous	PhysiologicalStability	point-tetrachoric	point-biserial	point-tetrachoric	biserialrangcorrelati	biserialrangcorrelati	point-tetrachoric	point-tetrachoric	point-biserial	point-biserial	point-biserial	point-biserial	X								

					on	on																
metric	Spatial Presence	point-biserial	Spearman'sRho	point-biserial	Spearman'sRho	Spearman'sRho	point-biserial	point-biserial	Spearman'sRho	Spearman'sRho	Spearman'sRho	Spearman'sRho	point-biserial	X								
metric	Satisfaction	point-biserial	Spearman'sRho	point-biserial	Spearman'sRho	Spearman'sRho	point-biserial	point-biserial	Spearman'sRho	Spearman'sRho	Spearman'sRho	Spearman'sRho	point-biserial	Spearman'sRho	X							
metric	Work Group Cohesion	point-biserial	Spearman'sRho	point-biserial	Spearman'sRho	Spearman'sRho	point-biserial	point-biserial	Spearman'sRho	Spearman'sRho	Spearman'sRho	Spearman'sRho	point-biserial	Spearman'sRho	Spearman'sRho	X						
metric	Collective Orientation Affiliation	point-biserial	Spearman'sRho	point-biserial	Spearman'sRho	Spearman'sRho	point-biserial	point-biserial	Spearman'sRho	Spearman'sRho	Spearman'sRho	Spearman'sRho	point-biserial	Spearman'sRho	Spearman'sRho	Spearman'sRho	X					
metric	Collective Orientation Dominance	point-biserial	Spearman'sRho	point-biserial	Spearman'sRho	Spearman'sRho	point-biserial	point-biserial	Spearman'sRho	Spearman'sRho	Spearman'sRho	Spearman'sRho	point-biserial	Spearman'sRho	Spearman'sRho	Spearman'sRho	Spearman'sRho	X				
metri	Task C	point-	Spe	point-	Spe	Spe	point-	point-	Spe	Spe	Spe	Spe	point-	Spe	Spe	Spe	Spe	Spe	X			

c	omplexity	biserial	armann'sRho	biserial	armann'sRho	armann'sRho	biserial	biserial	armann'sRho	armann'sRho	armann'sRho	armann'sRho	armann'sRho	biserial	armann'sRho	armann'sRho	armann'sRho	armann'sRho	armann'sRho					
metric	PerformanceOutput	point-biserial	Spearmann'sRho	point-biserial	Spearmann'sRho	Spearmann'sRho	point-biserial	point-biserial	Spearmann'sRho	Spearmann'sRho	Spearmann'sRho	Spearmann'sRho	Spearmann'sRho	point-biserial	Spearmann'sRho	Spearmann'sRho	Spearmann'sRho	Spearmann'sRho	Spearmann'sRho	Spearmann'sRho	X			
metric	PerformanceTime	point-biserial	Spearmann'sRho	point-biserial	Spearmann'sRho	Spearmann'sRho	point-biserial	point-biserial	Spearmann'sRho	Spearmann'sRho	Spearmann'sRho	Spearmann'sRho	Spearmann'sRho	point-biserial	Spearmann'sRho	Spearmann'sRho	Spearmann'sRho	Spearmann'sRho	Spearmann'sRho	Spearmann'sRho	Spearmann'sRho	X		
metric	SecondaryTasks	point-biserial	Spearmann'sRho	point-biserial	Spearmann'sRho	Spearmann'sRho	point-biserial	point-biserial	Spearmann'sRho	Spearmann'sRho	Spearmann'sRho	Spearmann'sRho	Spearmann'sRho	point-biserial	Spearmann'sRho	Spearmann'sRho	Spearmann'sRho	Spearmann'sRho	Spearmann'sRho	Spearmann'sRho	Spearmann'sRho	Spearmann'sRho	X	
metric	PerformanceErrors	point-biserial	Spearmann'sRho	point-biserial	Spearmann'sRho	Spearmann'sRho	point-biserial	point-biserial	Spearmann'sRho	Spearmann'sRho	Spearmann'sRho	Spearmann'sRho	Spearmann'sRho	point-biserial	Spearmann'sRho	Spearmann'sRho	Spearmann'sRho	Spearmann'sRho	Spearmann'sRho	Spearmann'sRho	Spearmann'sRho	Spearmann'sRho	Spearmann'sRho	X

Table S4. Correlations among input variables.

		Predispositions		Traits & Attitudes				States					CF
		Sex	Age	General Mental Abilities	Retentivity	Collective Orientation Affiliation	Collective Orientation Dominance	Post-Training Self-Efficacy	Interest AR	Interest VR	Frequency AR Use	Frequency VR Use	Team Partner Familiarity
Predis-positions	Sex	x											
	Age	r = .067, p = .322	x										
Traits & Attitude	General Ment	r = -.011,	ρ = -.126, p =	x									

	al Abilities	p = .871	.062										
	Retentivity	**r = -.280, p < .001**	ρ = -.115, p = .088	**ρ = .397, p < .001**	x								
	Collective Orientation Affiliation	r = .067, p = .322	ρ = .036, p = .600	r = .011, p = .868	ρ = -.025, p = .708	x							
	Collective Orientation Dominance	r = .055, p = .422	ρ = -.124, p = .067	r = -.047, p = .490	ρ = -.168, p = .013	**ρ = .199, p = .003**	x						
States	Post-Training Self-Efficacy	**r = .140, p = .040**	ρ = -.117, p = .083	ρ = -.063, p = .357	ρ = -.047, p = .493	ρ = .008, p = .908	**ρ = -.232, p < .001**	x					
	Interest AR	**r = .230, p = .001**	r = .037, p = .584	ρ = -.079, p = .245	ρ = .040, p = .555	r = .006, p = .930	r = -.101, p = .135	**r = .172, p = .012**	x				
	Interest VR	**r = .230, p = .001**	r = .012, p = .864	r = -.107, p = .113	r = .028, p = .680	r = -.035, p = .607	**r = -.146, p = .031**	**r = .158, p = .020**	**r = .970, p < .001**	x			
	Frequency AR Use	ρ = .167, p = .137	ρ = .041, p = .544	**ρ = .151, p = .025**	ρ = .005, p = .944	ρ = .004, p = .954	ρ = -.049, p = .472	ρ = -.114, p = .091	ρ = .008, p = .911	ρ = -.008, p = .903	x		
	Frequency VR Use	**ρ = .263, p < .001**	ρ = -.022, p = .744	**ρ = .216, p = .001**	ρ = .004, p = .954	ρ = .010, p = .884	ρ =.-.048, p = .478	ρ = -.030, p = .660	ρ = .034, p = .617	ρ = .027, p = .692	**ρ = .262, p < .001**	x	
CF	Team Partner Familiarity	**r = .029, p < .001**	**r = -.147, p = .029**	r = .026, p = .703	r = -.027, p = .690	r = .153, p = .023	r = -.067, p = .320	r = .017, p = .797	r = .026, p = .701	r = .012, p= .076	ρ = .008, p = .909	ρ = .019, p = .780	x

Note. The α-level was set at .05. Secondary tasks were used to operationalize mental load (more secondary tasks = less mental load). Physiological stability was coded 1 = no change (stable), 0 = change (unstable), so that positive correlations indicated an unchanged physiological state. Male sex was coded as 1, female sex was coded as 0, so positive correlations refer to relationships with males, and negative correlations to relationships with females. CF = contextual factors.

Table S5. Correlations among psychological emergent state variables and among physiological emergent state variables.

	Work Group Cohesion	Spatial Presence	Secondary Tasks	Perceived Task Complexity	Satisfaction
Work Group Cohesion	x				
Spatial Presence	ρ = -.082, *p* = .224	x			
Secondary Tasks	ρ = .030, *p* = .661	ρ = -.059, *p* = .381	x		
Perceived Task Complexity	ρ = .021, *p* = .751	ρ = -.037, *p* = .589	ρ = .110, *p* = .103	x	
Satisfaction	ρ = .040, p = .551	**ρ = .488, *p* < .001**	ρ =.007, *p* = .914	ρ = -.081, *p* = .234	x

Note. The α-level was set at .05. Secondary tasks were used to operationalize mental load (more secondary tasks = less mental load).
Correlation between physiological emergent states **simulator sickness** and **physiological stability**: $r = -.396$, $p < .001$.

Table S6. Correlations among output variables.

	Performance Output	Performance Time	Performance Errors
Performance Output	x		
Performance Time	**ρ = -.985, *p* < .001**	x	
Performance Errors	**ρ = -.348, *p* <.001**	**ρ = .331, *p* < .001**	x

Note. The α-level was set at .05.