

Online Supplemental Materials

When Organizational Dehumanization Hits Home: Short Scale Validation and Test of a Spillover-Crossover Model

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Section 1

Table S1. Results of Cortina et al.'s (2020) R Shiny App

Items	Chronbach's alpha	Guttman's Lambda2	Part-whole correlation	OmegaH
OD_1, OD_2, OD_3, OD_10, OD_11	0.877	0.859	0.957	0.77
OD_1, OD_2, OD_3, OD_4, OD_10	0.869	0.851	0.965	0.797
OD_1, OD_2, OD_3, OD_4, OD_11	0.871	0.853	0.964	0.775
OD_1, OD_2, OD_3, OD_4, OD_5	0.865	0.848	0.957	0.791
OD_1, OD_2, OD_3, OD_4, OD_6	0.871	0.853	0.96	0.836
OD_1, OD_2, OD_3, OD_4, OD_7	0.87	0.852	0.965	0.797
OD_1, OD_2, OD_3, OD_4, OD_8	0.873	0.855	0.961	0.807
OD_1, OD_2, OD_3, OD_4, OD_9	0.867	0.849	0.964	0.785
OD_1, OD_2, OD_3, OD_5, OD_10	0.86	0.843	0.964	0.784
OD_1, OD_2, OD_3, OD_5, OD_11	0.862	0.845	0.963	0.787
OD_1, OD_2, OD_3, OD_5, OD_6	0.863	0.845	0.958	0.806
OD_1, OD_2, OD_3, OD_5, OD_7	0.861	0.844	0.964	0.781
OD_1, OD_2, OD_3, OD_5, OD_8	0.863	0.846	0.96	0.837
OD_1, OD_2, OD_3, OD_5, OD_9	0.858	0.841	0.962	0.783
OD_1, OD_2, OD_3, OD_6, OD_10	0.871	0.853	0.961	0.779
OD_1, OD_2, OD_3, OD_6, OD_11	0.87	0.852	0.963	0.812
OD_1, OD_2, OD_3, OD_6, OD_7	0.872	0.854	0.961	0.833
OD_1, OD_2, OD_3, OD_6, OD_8	0.876	0.858	0.955	0.806
OD_1, OD_2, OD_3, OD_6, OD_9	0.867	0.85	0.961	0.796
OD_1, OD_2, OD_3, OD_7, OD_10	0.873	0.855	0.962	0.761
OD_1, OD_2, OD_3, OD_7, OD_11	0.872	0.854	0.964	0.787
OD_1, OD_2, OD_3, OD_7, OD_8	0.872	0.855	0.963	0.802
OD_1, OD_2, OD_3, OD_7, OD_9	0.867	0.85	0.964	0.791

OD_1, OD_2, OD_3, OD_8, OD_10	0.871	0.853	0.964	0.759
OD_1, OD_2, OD_3, OD_8, OD_11	0.87	0.853	0.966	0.786
OD_1, OD_2, OD_3, OD_8, OD_9	0.867	0.849	0.964	0.781
OD_1, OD_2, OD_3, OD_9, OD_10	0.872	0.855	0.957	0.769
OD_1, OD_2, OD_3, OD_9, OD_11	0.876	0.858	0.954	0.755
OD_1, OD_2, OD_4, OD_10, OD_11	0.88	0.862	0.969	0.833
OD_1, OD_2, OD_4, OD_5, OD_10	0.868	0.85	0.97	0.777
OD_1, OD_2, OD_4, OD_5, OD_11	0.871	0.853	0.968	0.781
OD_1, OD_2, OD_4, OD_5, OD_6	0.874	0.856	0.96	0.804
OD_1, OD_2, OD_4, OD_5, OD_7	0.873	0.855	0.964	0.774
OD_1, OD_2, OD_4, OD_5, OD_8	0.876	0.858	0.96	0.786
OD_1, OD_2, OD_4, OD_5, OD_9	0.867	0.849	0.967	0.77
OD_1, OD_2, OD_4, OD_6, OD_10	0.876	0.857	0.971	0.823
OD_1, OD_2, OD_4, OD_6, OD_11	0.875	0.857	0.973	0.859
OD_1, OD_2, OD_4, OD_6, OD_7	0.88	0.861	0.966	0.85
OD_1, OD_2, OD_4, OD_6, OD_8	0.885	0.866	0.96	0.776
OD_1, OD_2, OD_4, OD_6, OD_9	0.873	0.855	0.97	0.835
OD_1, OD_2, OD_4, OD_7, OD_10	0.878	0.86	0.97	0.833
OD_1, OD_2, OD_4, OD_7, OD_11	0.878	0.86	0.973	0.843
OD_1, OD_2, OD_4, OD_7, OD_8	0.882	0.864	0.966	0.801
OD_1, OD_2, OD_4, OD_7, OD_9	0.874	0.856	0.973	0.85
OD_1, OD_2, OD_4, OD_8, OD_10	0.877	0.859	0.972	0.783
OD_1, OD_2, OD_4, OD_8, OD_11	0.877	0.859	0.974	0.824
OD_1, OD_2, OD_4, OD_8, OD_9	0.874	0.856	0.972	0.801
OD_1, OD_2, OD_4, OD_9, OD_10	0.875	0.857	0.969	0.8
OD_1, OD_2, OD_4, OD_9, OD_11	0.879	0.861	0.967	0.799

OD_1, OD_2, OD_5, OD_10, OD_11	0.87	0.853	0.969	0.793
OD_1, OD_2, OD_5, OD_6, OD_10	0.866	0.849	0.97	0.81
OD_1, OD_2, OD_5, OD_6, OD_11	0.867	0.849	0.971	0.819
OD_1, OD_2, OD_5, OD_6, OD_7	0.872	0.854	0.964	0.858
OD_1, OD_2, OD_5, OD_6, OD_8	0.876	0.858	0.959	0.844
OD_1, OD_2, OD_5, OD_6, OD_9	0.864	0.847	0.968	0.821
OD_1, OD_2, OD_5, OD_7, OD_10	0.869	0.851	0.97	0.834
OD_1, OD_2, OD_5, OD_7, OD_11	0.87	0.852	0.971	0.845
OD_1, OD_2, OD_5, OD_7, OD_8	0.873	0.855	0.965	0.819
OD_1, OD_2, OD_5, OD_7, OD_9	0.865	0.847	0.971	0.834
OD_1, OD_2, OD_5, OD_8, OD_10	0.867	0.849	0.972	0.779
OD_1, OD_2, OD_5, OD_8, OD_11	0.867	0.85	0.973	0.83
OD_1, OD_2, OD_5, OD_8, OD_9	0.864	0.846	0.972	0.831
OD_1, OD_2, OD_5, OD_9, OD_10	0.866	0.848	0.969	0.787
OD_1, OD_2, OD_5, OD_9, OD_11	0.87	0.853	0.965	0.763
OD_1, OD_2, OD_6, OD_10, OD_11	0.88	0.862	0.967	0.81
OD_1, OD_2, OD_6, OD_7, OD_10	0.881	0.863	0.965	0.862
OD_1, OD_2, OD_6, OD_7, OD_11	0.879	0.86	0.97	0.854
OD_1, OD_2, OD_6, OD_7, OD_8	0.886	0.868	0.959	0.783
OD_1, OD_2, OD_6, OD_7, OD_9	0.876	0.858	0.968	0.846
OD_1, OD_2, OD_6, OD_8, OD_10	0.881	0.863	0.965	0.771
OD_1, OD_2, OD_6, OD_8, OD_11	0.879	0.861	0.97	0.779
OD_1, OD_2, OD_6, OD_8, OD_9	0.877	0.859	0.966	0.757
OD_1, OD_2, OD_6, OD_9, OD_10	0.877	0.859	0.965	0.8
OD_1, OD_2, OD_6, OD_9, OD_11	0.878	0.86	0.966	0.802
OD_1, OD_2, OD_7, OD_10, OD_11	0.886	0.867	0.963	0.802

OD_1, OD_2, OD_7, OD_8, OD_10	0.881	0.863	0.967	0.827
OD_1, OD_2, OD_7, OD_8, OD_11	0.88	0.861	0.972	0.85
OD_1, OD_2, OD_7, OD_8, OD_9	0.876	0.858	0.971	0.81
OD_1, OD_2, OD_7, OD_9, OD_10	0.881	0.863	0.963	0.785
OD_1, OD_2, OD_7, OD_9, OD_11	0.882	0.864	0.963	0.807
OD_1, OD_2, OD_8, OD_10, OD_11	0.88	0.862	0.97	0.771
OD_1, OD_2, OD_8, OD_9, OD_10	0.876	0.858	0.969	0.779
OD_1, OD_2, OD_8, OD_9, OD_11	0.878	0.86	0.969	0.758
OD_1, OD_2, OD_9, OD_10, OD_11	0.889	0.871	0.953	0.8
OD_1, OD_3, OD_4, OD_10, OD_11	0.877	0.859	0.964	0.84
OD_1, OD_3, OD_4, OD_5, OD_10	0.863	0.845	0.968	0.802
OD_1, OD_3, OD_4, OD_5, OD_11	0.866	0.848	0.966	0.834
OD_1, OD_3, OD_4, OD_5, OD_6	0.864	0.846	0.964	0.794
OD_1, OD_3, OD_4, OD_5, OD_7	0.864	0.846	0.968	0.789
OD_1, OD_3, OD_4, OD_5, OD_8	0.866	0.849	0.964	0.781
OD_1, OD_3, OD_4, OD_5, OD_9	0.861	0.843	0.966	0.82
OD_1, OD_3, OD_4, OD_6, OD_10	0.869	0.85	0.971	0.826
OD_1, OD_3, OD_4, OD_6, OD_11	0.869	0.85	0.973	0.83
OD_1, OD_3, OD_4, OD_6, OD_7	0.869	0.851	0.971	0.838
OD_1, OD_3, OD_4, OD_6, OD_8	0.874	0.856	0.965	0.822
OD_1, OD_3, OD_4, OD_6, OD_9	0.865	0.847	0.971	0.835
OD_1, OD_3, OD_4, OD_7, OD_10	0.872	0.854	0.971	0.826
OD_1, OD_3, OD_4, OD_7, OD_11	0.872	0.854	0.972	0.846
OD_1, OD_3, OD_4, OD_7, OD_8	0.872	0.854	0.971	0.801
OD_1, OD_3, OD_4, OD_7, OD_9	0.866	0.848	0.973	0.856
OD_1, OD_3, OD_4, OD_8, OD_10	0.87	0.852	0.972	0.815

OD_1, OD_3, OD_4, OD_8, OD_11	0.871	0.853	0.974	0.812
OD_1, OD_3, OD_4, OD_8, OD_9	0.866	0.848	0.973	0.798
OD_1, OD_3, OD_4, OD_9, OD_10	0.872	0.854	0.965	0.826
OD_1, OD_3, OD_4, OD_9, OD_11	0.876	0.858	0.962	0.826
OD_1, OD_3, OD_5, OD_10, OD_11	0.868	0.85	0.964	0.833
OD_1, OD_3, OD_5, OD_6, OD_10	0.859	0.841	0.97	0.797
OD_1, OD_3, OD_5, OD_6, OD_11	0.86	0.842	0.971	0.806
OD_1, OD_3, OD_5, OD_6, OD_7	0.861	0.843	0.969	0.821
OD_1, OD_3, OD_5, OD_6, OD_8	0.864	0.846	0.965	0.81
OD_1, OD_3, OD_5, OD_6, OD_9	0.856	0.838	0.969	0.817
OD_1, OD_3, OD_5, OD_7, OD_10	0.862	0.845	0.97	0.82
OD_1, OD_3, OD_5, OD_7, OD_11	0.863	0.845	0.971	0.826
OD_1, OD_3, OD_5, OD_7, OD_8	0.862	0.844	0.971	0.805
OD_1, OD_3, OD_5, OD_7, OD_9	0.858	0.84	0.971	0.844
OD_1, OD_3, OD_5, OD_8, OD_10	0.859	0.841	0.973	0.805
OD_1, OD_3, OD_5, OD_8, OD_11	0.86	0.842	0.974	0.807
OD_1, OD_3, OD_5, OD_8, OD_9	0.856	0.838	0.973	0.817
OD_1, OD_3, OD_5, OD_9, OD_10	0.862	0.845	0.964	0.823
OD_1, OD_3, OD_5, OD_9, OD_11	0.867	0.85	0.96	0.841
OD_1, OD_3, OD_6, OD_10, OD_11	0.876	0.858	0.964	0.839
OD_1, OD_3, OD_6, OD_7, OD_10	0.873	0.855	0.967	0.835
OD_1, OD_3, OD_6, OD_7, OD_11	0.87	0.852	0.972	0.821
OD_1, OD_3, OD_6, OD_7, OD_8	0.874	0.856	0.966	0.754
OD_1, OD_3, OD_6, OD_7, OD_9	0.867	0.849	0.971	0.85
OD_1, OD_3, OD_6, OD_8, OD_10	0.872	0.854	0.968	0.796
OD_1, OD_3, OD_6, OD_8, OD_11	0.87	0.852	0.972	0.802

OD_1, OD_3, OD_6, OD_8, OD_9	0.867	0.85	0.97	0.802
OD_1, OD_3, OD_6, OD_9, OD_10	0.872	0.854	0.963	0.839
OD_1, OD_3, OD_6, OD_9, OD_11	0.874	0.856	0.963	0.805
OD_1, OD_3, OD_7, OD_10, OD_11	0.882	0.864	0.96	0.859
OD_1, OD_3, OD_7, OD_8, OD_10	0.873	0.855	0.969	0.846
OD_1, OD_3, OD_7, OD_8, OD_11	0.871	0.853	0.974	0.827
OD_1, OD_3, OD_7, OD_8, OD_9	0.867	0.849	0.974	0.848
OD_1, OD_3, OD_7, OD_9, OD_10	0.876	0.858	0.961	0.858
OD_1, OD_3, OD_7, OD_9, OD_11	0.878	0.86	0.96	0.831
OD_1, OD_3, OD_8, OD_10, OD_11	0.876	0.858	0.967	0.836
OD_1, OD_3, OD_8, OD_9, OD_10	0.871	0.853	0.967	0.78
OD_1, OD_3, OD_8, OD_9, OD_11	0.873	0.855	0.967	0.83
OD_1, OD_3, OD_9, OD_10, OD_11	0.889	0.871	0.945	0.799
OD_1, OD_4, OD_5, OD_10, OD_11	0.881	0.863	0.963	0.819
OD_1, OD_4, OD_5, OD_6, OD_10	0.875	0.857	0.967	0.809
OD_1, OD_4, OD_5, OD_6, OD_11	0.876	0.858	0.967	0.795
OD_1, OD_4, OD_5, OD_6, OD_7	0.88	0.862	0.961	0.815
OD_1, OD_4, OD_5, OD_6, OD_8	0.884	0.866	0.956	0.821
OD_1, OD_4, OD_5, OD_6, OD_9	0.873	0.855	0.965	0.771
OD_1, OD_4, OD_5, OD_7, OD_10	0.879	0.861	0.965	0.769
OD_1, OD_4, OD_5, OD_7, OD_11	0.88	0.862	0.965	0.787
OD_1, OD_4, OD_5, OD_7, OD_8	0.883	0.865	0.961	0.806
OD_1, OD_4, OD_5, OD_7, OD_9	0.875	0.857	0.966	0.816
OD_1, OD_4, OD_5, OD_8, OD_10	0.877	0.859	0.968	0.781
OD_1, OD_4, OD_5, OD_8, OD_11	0.879	0.861	0.968	0.856
OD_1, OD_4, OD_5, OD_8, OD_9	0.874	0.857	0.967	0.846

OD_1, OD_4, OD_5, OD_9, OD_10	0.876	0.858	0.964	0.826
OD_1, OD_4, OD_5, OD_9, OD_11	0.882	0.864	0.959	0.789
OD_1, OD_4, OD_6, OD_10, OD_11	0.885	0.867	0.968	0.845
OD_1, OD_4, OD_6, OD_7, OD_10	0.885	0.867	0.967	0.83
OD_1, OD_4, OD_6, OD_7, OD_11	0.884	0.865	0.972	0.813
OD_1, OD_4, OD_6, OD_7, OD_8	0.891	0.872	0.961	0.823
OD_1, OD_4, OD_6, OD_7, OD_9	0.88	0.862	0.97	0.842
OD_1, OD_4, OD_6, OD_8, OD_10	0.885	0.867	0.967	0.796
OD_1, OD_4, OD_6, OD_8, OD_11	0.884	0.866	0.971	0.809
OD_1, OD_4, OD_6, OD_8, OD_9	0.882	0.864	0.968	0.821
OD_1, OD_4, OD_6, OD_9, OD_10	0.881	0.863	0.967	0.826
OD_1, OD_4, OD_6, OD_9, OD_11	0.884	0.866	0.967	0.821
OD_1, OD_4, OD_7, OD_10, OD_11	0.892	0.874	0.962	0.847
OD_1, OD_4, OD_7, OD_8, OD_10	0.887	0.869	0.967	0.821
OD_1, OD_4, OD_7, OD_8, OD_11	0.886	0.868	0.971	0.819
OD_1, OD_4, OD_7, OD_8, OD_9	0.882	0.864	0.971	0.81
OD_1, OD_4, OD_7, OD_9, OD_10	0.887	0.868	0.964	0.859
OD_1, OD_4, OD_7, OD_9, OD_11	0.889	0.871	0.963	0.828
OD_1, OD_4, OD_8, OD_10, OD_11	0.887	0.869	0.969	0.791
OD_1, OD_4, OD_8, OD_9, OD_10	0.882	0.864	0.97	0.789
OD_1, OD_4, OD_8, OD_9, OD_11	0.885	0.867	0.968	0.828
OD_1, OD_4, OD_9, OD_10, OD_11	0.896	0.878	0.952	0.816
OD_1, OD_5, OD_6, OD_10, OD_11	0.876	0.858	0.968	0.793
OD_1, OD_5, OD_6, OD_7, OD_10	0.876	0.859	0.966	0.815
OD_1, OD_5, OD_6, OD_7, OD_11	0.875	0.857	0.97	0.817
OD_1, OD_5, OD_6, OD_7, OD_8	0.882	0.864	0.96	0.847

OD_1, OD_5, OD_6, OD_7, OD_9	0.872	0.854	0.968	0.834
OD_1, OD_5, OD_6, OD_8, OD_10	0.875	0.858	0.967	0.773
OD_1, OD_5, OD_6, OD_8, OD_11	0.875	0.857	0.971	0.795
OD_1, OD_5, OD_6, OD_8, OD_9	0.872	0.855	0.967	0.832
OD_1, OD_5, OD_6, OD_9, OD_10	0.872	0.855	0.966	0.835
OD_1, OD_5, OD_6, OD_9, OD_11	0.876	0.858	0.965	0.777
OD_1, OD_5, OD_7, OD_10, OD_11	0.883	0.866	0.962	0.844
OD_1, OD_5, OD_7, OD_8, OD_10	0.877	0.86	0.968	0.818
OD_1, OD_5, OD_7, OD_8, OD_11	0.877	0.859	0.971	0.812
OD_1, OD_5, OD_7, OD_8, OD_9	0.872	0.855	0.97	0.827
OD_1, OD_5, OD_7, OD_9, OD_10	0.878	0.86	0.963	0.848
OD_1, OD_5, OD_7, OD_9, OD_11	0.881	0.863	0.961	0.798
OD_1, OD_5, OD_8, OD_10, OD_11	0.876	0.859	0.97	0.781
OD_1, OD_5, OD_8, OD_9, OD_10	0.872	0.854	0.97	0.773
OD_1, OD_5, OD_8, OD_9, OD_11	0.875	0.858	0.968	0.785
OD_1, OD_5, OD_9, OD_10, OD_11	0.888	0.87	0.951	0.878
OD_1, OD_6, OD_7, OD_10, OD_11	0.892	0.873	0.961	0.823
OD_1, OD_6, OD_7, OD_8, OD_10	0.89	0.872	0.961	0.826
OD_1, OD_6, OD_7, OD_8, OD_11	0.887	0.869	0.968	0.825
OD_1, OD_6, OD_7, OD_8, OD_9	0.884	0.866	0.966	0.811
OD_1, OD_6, OD_7, OD_9, OD_10	0.888	0.87	0.96	0.822
OD_1, OD_6, OD_7, OD_9, OD_11	0.888	0.87	0.962	0.808
OD_1, OD_6, OD_8, OD_10, OD_11	0.887	0.869	0.967	0.782
OD_1, OD_6, OD_8, OD_9, OD_10	0.884	0.866	0.965	0.793
OD_1, OD_6, OD_8, OD_9, OD_11	0.885	0.867	0.967	0.763
OD_1, OD_6, OD_9, OD_10, OD_11	0.895	0.877	0.952	0.845

OD_1, OD_7, OD_8, OD_10, OD_11	0.892	0.874	0.963	0.869
OD_1, OD_7, OD_8, OD_9, OD_10	0.888	0.87	0.963	0.845
OD_1, OD_7, OD_8, OD_9, OD_11	0.888	0.87	0.965	0.818
OD_1, OD_7, OD_9, OD_10, OD_11	0.903	0.884	0.945	0.861
OD_1, OD_8, OD_9, OD_10, OD_11	0.894	0.876	0.956	0.855
OD_2, OD_3, OD_4, OD_10, OD_11	0.876	0.859	0.967	0.759
OD_2, OD_3, OD_4, OD_5, OD_10	0.866	0.849	0.966	0.772
OD_2, OD_3, OD_4, OD_5, OD_11	0.872	0.854	0.961	0.774
OD_2, OD_3, OD_4, OD_5, OD_6	0.874	0.856	0.954	0.789
OD_2, OD_3, OD_4, OD_5, OD_7	0.872	0.854	0.96	0.788
OD_2, OD_3, OD_4, OD_5, OD_8	0.879	0.861	0.951	0.785
OD_2, OD_3, OD_4, OD_5, OD_9	0.867	0.85	0.961	0.769
OD_2, OD_3, OD_4, OD_6, OD_10	0.872	0.854	0.969	0.852
OD_2, OD_3, OD_4, OD_6, OD_11	0.874	0.856	0.968	0.845
OD_2, OD_3, OD_4, OD_6, OD_7	0.877	0.859	0.964	0.852
OD_2, OD_3, OD_4, OD_6, OD_8	0.885	0.867	0.953	0.81
OD_2, OD_3, OD_4, OD_6, OD_9	0.871	0.853	0.967	0.853
OD_2, OD_3, OD_4, OD_7, OD_10	0.873	0.855	0.971	0.798
OD_2, OD_3, OD_4, OD_7, OD_11	0.875	0.857	0.97	0.842
OD_2, OD_3, OD_4, OD_7, OD_8	0.881	0.863	0.961	0.859
OD_2, OD_3, OD_4, OD_7, OD_9	0.87	0.853	0.971	0.8
OD_2, OD_3, OD_4, OD_8, OD_10	0.876	0.858	0.967	0.805
OD_2, OD_3, OD_4, OD_8, OD_11	0.878	0.861	0.966	0.837
OD_2, OD_3, OD_4, OD_8, OD_9	0.874	0.857	0.965	0.84
OD_2, OD_3, OD_4, OD_9, OD_10	0.871	0.853	0.968	0.77
OD_2, OD_3, OD_4, OD_9, OD_11	0.877	0.86	0.962	0.771

OD_2, OD_3, OD_5, OD_10, OD_11	0.867	0.85	0.967	0.782
OD_2, OD_3, OD_5, OD_6, OD_10	0.863	0.846	0.968	0.802
OD_2, OD_3, OD_5, OD_6, OD_11	0.866	0.848	0.966	0.833
OD_2, OD_3, OD_5, OD_6, OD_7	0.869	0.851	0.962	0.845
OD_2, OD_3, OD_5, OD_6, OD_8	0.877	0.859	0.951	0.801
OD_2, OD_3, OD_5, OD_6, OD_9	0.863	0.846	0.964	0.843
OD_2, OD_3, OD_5, OD_7, OD_10	0.864	0.847	0.97	0.795
OD_2, OD_3, OD_5, OD_7, OD_11	0.867	0.85	0.968	0.833
OD_2, OD_3, OD_5, OD_7, OD_8	0.873	0.855	0.96	0.849
OD_2, OD_3, OD_5, OD_7, OD_9	0.862	0.845	0.968	0.794
OD_2, OD_3, OD_5, OD_8, OD_10	0.866	0.848	0.967	0.799
OD_2, OD_3, OD_5, OD_8, OD_11	0.869	0.852	0.965	0.838
OD_2, OD_3, OD_5, OD_8, OD_9	0.865	0.848	0.964	0.838
OD_2, OD_3, OD_5, OD_9, OD_10	0.862	0.845	0.967	0.782
OD_2, OD_3, OD_5, OD_9, OD_11	0.869	0.852	0.96	0.773
OD_2, OD_3, OD_6, OD_10, OD_11	0.875	0.857	0.968	0.795
OD_2, OD_3, OD_6, OD_7, OD_10	0.874	0.856	0.968	0.797
OD_2, OD_3, OD_6, OD_7, OD_11	0.874	0.856	0.97	0.807
OD_2, OD_3, OD_6, OD_7, OD_8	0.884	0.866	0.956	0.859
OD_2, OD_3, OD_6, OD_7, OD_9	0.87	0.853	0.968	0.836
OD_2, OD_3, OD_6, OD_8, OD_10	0.878	0.86	0.963	0.796
OD_2, OD_3, OD_6, OD_8, OD_11	0.878	0.86	0.964	0.782
OD_2, OD_3, OD_6, OD_8, OD_9	0.876	0.858	0.961	0.792
OD_2, OD_3, OD_6, OD_9, OD_10	0.871	0.854	0.966	0.753
OD_2, OD_3, OD_6, OD_9, OD_11	0.875	0.857	0.964	0.789
OD_2, OD_3, OD_7, OD_10, OD_11	0.879	0.861	0.965	0.767

OD_2, OD_3, OD_7, OD_8, OD_10	0.877	0.859	0.967	0.826
OD_2, OD_3, OD_7, OD_8, OD_11	0.877	0.86	0.968	0.816
OD_2, OD_3, OD_7, OD_8, OD_9	0.873	0.856	0.968	0.82
OD_2, OD_3, OD_7, OD_9, OD_10	0.874	0.856	0.966	0.766
OD_2, OD_3, OD_7, OD_9, OD_11	0.877	0.86	0.963	0.751
OD_2, OD_3, OD_8, OD_10, OD_11	0.877	0.859	0.967	0.783
OD_2, OD_3, OD_8, OD_9, OD_10	0.873	0.855	0.967	0.763
OD_2, OD_3, OD_8, OD_9, OD_11	0.877	0.86	0.964	0.787
OD_2, OD_3, OD_9, OD_10, OD_11	0.884	0.866	0.954	0.767
OD_2, OD_4, OD_5, OD_10, OD_11	0.876	0.859	0.971	0.778
OD_2, OD_4, OD_5, OD_6, OD_10	0.874	0.856	0.97	0.84
OD_2, OD_4, OD_5, OD_6, OD_11	0.878	0.86	0.968	0.821
OD_2, OD_4, OD_5, OD_6, OD_7	0.884	0.865	0.959	0.842
OD_2, OD_4, OD_5, OD_6, OD_8	0.892	0.873	0.948	0.837
OD_2, OD_4, OD_5, OD_6, OD_9	0.875	0.857	0.965	0.848
OD_2, OD_4, OD_5, OD_7, OD_10	0.876	0.858	0.971	0.828
OD_2, OD_4, OD_5, OD_7, OD_11	0.88	0.862	0.968	0.846
OD_2, OD_4, OD_5, OD_7, OD_8	0.889	0.87	0.955	0.874
OD_2, OD_4, OD_5, OD_7, OD_9	0.875	0.857	0.969	0.852
OD_2, OD_4, OD_5, OD_8, OD_10	0.879	0.861	0.967	0.837
OD_2, OD_4, OD_5, OD_8, OD_11	0.883	0.865	0.964	0.839
OD_2, OD_4, OD_5, OD_8, OD_9	0.879	0.861	0.963	0.835
OD_2, OD_4, OD_5, OD_9, OD_10	0.871	0.854	0.972	0.785
OD_2, OD_4, OD_5, OD_9, OD_11	0.879	0.861	0.965	0.775
OD_2, OD_4, OD_6, OD_10, OD_11	0.88	0.862	0.977	0.794
OD_2, OD_4, OD_6, OD_7, OD_10	0.883	0.864	0.973	0.844

OD_2, OD_4, OD_6, OD_7, OD_11	0.883	0.865	0.975	0.827
OD_2, OD_4, OD_6, OD_7, OD_8	0.896	0.877	0.956	0.875
OD_2, OD_4, OD_6, OD_7, OD_9	0.88	0.861	0.973	0.855
OD_2, OD_4, OD_6, OD_8, OD_10	0.887	0.868	0.967	0.869
OD_2, OD_4, OD_6, OD_8, OD_11	0.888	0.869	0.968	0.864
OD_2, OD_4, OD_6, OD_8, OD_9	0.885	0.868	0.965	0.852
OD_2, OD_4, OD_6, OD_9, OD_10	0.877	0.858	0.976	0.806
OD_2, OD_4, OD_6, OD_9, OD_11	0.881	0.863	0.973	0.787
OD_2, OD_4, OD_7, OD_10, OD_11	0.885	0.867	0.973	0.822
OD_2, OD_4, OD_7, OD_8, OD_10	0.887	0.869	0.97	0.843
OD_2, OD_4, OD_7, OD_8, OD_11	0.888	0.87	0.971	0.827
OD_2, OD_4, OD_7, OD_8, OD_9	0.884	0.866	0.971	0.825
OD_2, OD_4, OD_7, OD_9, OD_10	0.88	0.862	0.975	0.819
OD_2, OD_4, OD_7, OD_9, OD_11	0.884	0.866	0.971	0.811
OD_2, OD_4, OD_8, OD_10, OD_11	0.884	0.866	0.975	0.787
OD_2, OD_4, OD_8, OD_9, OD_10	0.88	0.862	0.975	0.777
OD_2, OD_4, OD_8, OD_9, OD_11	0.885	0.867	0.971	0.787
OD_2, OD_4, OD_9, OD_10, OD_11	0.887	0.869	0.966	0.861
OD_2, OD_5, OD_6, OD_10, OD_11	0.871	0.854	0.976	0.786
OD_2, OD_5, OD_6, OD_7, OD_10	0.874	0.856	0.971	0.851
OD_2, OD_5, OD_6, OD_7, OD_11	0.875	0.857	0.972	0.814
OD_2, OD_5, OD_6, OD_7, OD_8	0.888	0.87	0.954	0.874
OD_2, OD_5, OD_6, OD_7, OD_9	0.872	0.854	0.97	0.843
OD_2, OD_5, OD_6, OD_8, OD_10	0.878	0.859	0.967	0.868
OD_2, OD_5, OD_6, OD_8, OD_11	0.879	0.861	0.967	0.821
OD_2, OD_5, OD_6, OD_8, OD_9	0.877	0.859	0.964	0.825

OD_2, OD_5, OD_6, OD_9, OD_10	0.868	0.85	0.974	0.798
OD_2, OD_5, OD_6, OD_9, OD_11	0.873	0.855	0.97	0.782
OD_2, OD_5, OD_7, OD_10, OD_11	0.877	0.859	0.972	0.809
OD_2, OD_5, OD_7, OD_8, OD_10	0.878	0.86	0.97	0.863
OD_2, OD_5, OD_7, OD_8, OD_11	0.879	0.861	0.97	0.819
OD_2, OD_5, OD_7, OD_8, OD_9	0.875	0.857	0.969	0.825
OD_2, OD_5, OD_7, OD_9, OD_10	0.871	0.854	0.973	0.807
OD_2, OD_5, OD_7, OD_9, OD_11	0.876	0.859	0.969	0.811
OD_2, OD_5, OD_8, OD_10, OD_11	0.874	0.856	0.975	0.788
OD_2, OD_5, OD_8, OD_9, OD_10	0.87	0.852	0.975	0.785
OD_2, OD_5, OD_8, OD_9, OD_11	0.875	0.858	0.97	0.791
OD_2, OD_5, OD_9, OD_10, OD_11	0.879	0.861	0.965	0.778
OD_2, OD_6, OD_7, OD_10, OD_11	0.885	0.867	0.972	0.821
OD_2, OD_6, OD_7, OD_8, OD_10	0.89	0.872	0.964	0.869
OD_2, OD_6, OD_7, OD_8, OD_11	0.889	0.871	0.968	0.837
OD_2, OD_6, OD_7, OD_8, OD_9	0.886	0.868	0.965	0.834
OD_2, OD_6, OD_7, OD_9, OD_10	0.881	0.863	0.971	0.807
OD_2, OD_6, OD_7, OD_9, OD_11	0.883	0.865	0.971	0.783
OD_2, OD_6, OD_8, OD_10, OD_11	0.885	0.867	0.972	0.782
OD_2, OD_6, OD_8, OD_9, OD_10	0.882	0.864	0.97	0.781
OD_2, OD_6, OD_8, OD_9, OD_11	0.884	0.867	0.969	0.776
OD_2, OD_6, OD_9, OD_10, OD_11	0.886	0.868	0.966	0.752
OD_2, OD_7, OD_8, OD_10, OD_11	0.888	0.87	0.971	0.825
OD_2, OD_7, OD_8, OD_9, OD_10	0.883	0.866	0.971	0.817
OD_2, OD_7, OD_8, OD_9, OD_11	0.886	0.868	0.97	0.789
OD_2, OD_7, OD_9, OD_10, OD_11	0.892	0.874	0.961	0.812

OD_2, OD_8, OD_9, OD_10, OD_11	0.888	0.87	0.967	0.771
OD_3, OD_4, OD_5, OD_10, OD_11	0.874	0.857	0.965	0.812
OD_3, OD_4, OD_5, OD_6, OD_10	0.868	0.85	0.97	0.835
OD_3, OD_4, OD_5, OD_6, OD_11	0.872	0.854	0.967	0.805
OD_3, OD_4, OD_5, OD_6, OD_7	0.874	0.855	0.963	0.826
OD_3, OD_4, OD_5, OD_6, OD_8	0.882	0.863	0.953	0.84
OD_3, OD_4, OD_5, OD_6, OD_9	0.868	0.85	0.966	0.811
OD_3, OD_4, OD_5, OD_7, OD_10	0.87	0.852	0.97	0.789
OD_3, OD_4, OD_5, OD_7, OD_11	0.874	0.856	0.967	0.81
OD_3, OD_4, OD_5, OD_7, OD_8	0.879	0.861	0.96	0.853
OD_3, OD_4, OD_5, OD_7, OD_9	0.868	0.85	0.968	0.802
OD_3, OD_4, OD_5, OD_8, OD_10	0.872	0.854	0.967	0.801
OD_3, OD_4, OD_5, OD_8, OD_11	0.876	0.858	0.964	0.821
OD_3, OD_4, OD_5, OD_8, OD_9	0.872	0.854	0.964	0.814
OD_3, OD_4, OD_5, OD_9, OD_10	0.868	0.851	0.967	0.803
OD_3, OD_4, OD_5, OD_9, OD_11	0.877	0.859	0.959	0.805
OD_3, OD_4, OD_6, OD_10, OD_11	0.877	0.859	0.973	0.814
OD_3, OD_4, OD_6, OD_7, OD_10	0.875	0.857	0.974	0.843
OD_3, OD_4, OD_6, OD_7, OD_11	0.876	0.857	0.976	0.829
OD_3, OD_4, OD_6, OD_7, OD_8	0.885	0.866	0.962	0.855
OD_3, OD_4, OD_6, OD_7, OD_9	0.871	0.853	0.975	0.834
OD_3, OD_4, OD_6, OD_8, OD_10	0.879	0.861	0.969	0.833
OD_3, OD_4, OD_6, OD_8, OD_11	0.88	0.862	0.97	0.816
OD_3, OD_4, OD_6, OD_8, OD_9	0.877	0.859	0.968	0.815
OD_3, OD_4, OD_6, OD_9, OD_10	0.872	0.854	0.973	0.826
OD_3, OD_4, OD_6, OD_9, OD_11	0.877	0.859	0.969	0.803

OD_3, OD_4, OD_7, OD_10, OD_11	0.882	0.864	0.969	0.833
OD_3, OD_4, OD_7, OD_8, OD_10	0.879	0.861	0.971	0.839
OD_3, OD_4, OD_7, OD_8, OD_11	0.881	0.862	0.972	0.807
OD_3, OD_4, OD_7, OD_8, OD_9	0.876	0.858	0.973	0.823
OD_3, OD_4, OD_7, OD_9, OD_10	0.876	0.858	0.971	0.827
OD_3, OD_4, OD_7, OD_9, OD_11	0.881	0.863	0.967	0.806
OD_3, OD_4, OD_8, OD_10, OD_11	0.881	0.862	0.971	0.813
OD_3, OD_4, OD_8, OD_9, OD_10	0.875	0.857	0.972	0.824
OD_3, OD_4, OD_8, OD_9, OD_11	0.881	0.863	0.967	0.798
OD_3, OD_4, OD_9, OD_10, OD_11	0.887	0.869	0.957	0.805
OD_3, OD_5, OD_6, OD_10, OD_11	0.868	0.85	0.972	0.808
OD_3, OD_5, OD_6, OD_7, OD_10	0.866	0.849	0.973	0.844
OD_3, OD_5, OD_6, OD_7, OD_11	0.867	0.85	0.973	0.81
OD_3, OD_5, OD_6, OD_7, OD_8	0.876	0.858	0.961	0.858
OD_3, OD_5, OD_6, OD_7, OD_9	0.863	0.846	0.972	0.829
OD_3, OD_5, OD_6, OD_8, OD_10	0.869	0.851	0.969	0.811
OD_3, OD_5, OD_6, OD_8, OD_11	0.871	0.853	0.969	0.792
OD_3, OD_5, OD_6, OD_8, OD_9	0.868	0.85	0.966	0.807
OD_3, OD_5, OD_6, OD_9, OD_10	0.863	0.846	0.971	0.809
OD_3, OD_5, OD_6, OD_9, OD_11	0.869	0.851	0.967	0.795
OD_3, OD_5, OD_7, OD_10, OD_11	0.873	0.856	0.968	0.817
OD_3, OD_5, OD_7, OD_8, OD_10	0.87	0.852	0.971	0.853
OD_3, OD_5, OD_7, OD_8, OD_11	0.871	0.853	0.971	0.811
OD_3, OD_5, OD_7, OD_8, OD_9	0.866	0.849	0.972	0.82
OD_3, OD_5, OD_7, OD_9, OD_10	0.867	0.85	0.97	0.811
OD_3, OD_5, OD_7, OD_9, OD_11	0.873	0.855	0.965	0.8

OD_3, OD_5, OD_8, OD_10, OD_11	0.87	0.853	0.971	0.811
OD_3, OD_5, OD_8, OD_9, OD_10	0.865	0.847	0.972	0.811
OD_3, OD_5, OD_8, OD_9, OD_11	0.871	0.853	0.967	0.823
OD_3, OD_5, OD_9, OD_10, OD_11	0.879	0.861	0.956	0.811
OD_3, OD_6, OD_7, OD_10, OD_11	0.88	0.862	0.97	0.834
OD_3, OD_6, OD_7, OD_8, OD_10	0.881	0.863	0.967	0.824
OD_3, OD_6, OD_7, OD_8, OD_11	0.88	0.862	0.971	0.784
OD_3, OD_6, OD_7, OD_8, OD_9	0.876	0.859	0.97	0.786
OD_3, OD_6, OD_7, OD_9, OD_10	0.875	0.857	0.97	0.849
OD_3, OD_6, OD_7, OD_9, OD_11	0.878	0.86	0.969	0.79
OD_3, OD_6, OD_8, OD_10, OD_11	0.879	0.861	0.971	0.793
OD_3, OD_6, OD_8, OD_9, OD_10	0.876	0.858	0.969	0.798
OD_3, OD_6, OD_8, OD_9, OD_11	0.878	0.861	0.968	0.793
OD_3, OD_6, OD_9, OD_10, OD_11	0.884	0.866	0.959	0.772
OD_3, OD_7, OD_8, OD_10, OD_11	0.883	0.865	0.969	0.844
OD_3, OD_7, OD_8, OD_9, OD_10	0.878	0.86	0.97	0.848
OD_3, OD_7, OD_8, OD_9, OD_11	0.88	0.862	0.969	0.784
OD_3, OD_7, OD_9, OD_10, OD_11	0.891	0.873	0.954	0.842
OD_3, OD_8, OD_9, OD_10, OD_11	0.886	0.868	0.96	0.784
OD_4, OD_5, OD_6, OD_10, OD_11	0.884	0.866	0.968	0.784
OD_4, OD_5, OD_6, OD_7, OD_10	0.885	0.867	0.965	0.829
OD_4, OD_5, OD_6, OD_7, OD_11	0.887	0.869	0.964	0.823
OD_4, OD_5, OD_6, OD_7, OD_8	0.899	0.88	0.947	0.873
OD_4, OD_5, OD_6, OD_7, OD_9	0.884	0.866	0.963	0.86
OD_4, OD_5, OD_6, OD_8, OD_10	0.889	0.871	0.96	0.802
OD_4, OD_5, OD_6, OD_8, OD_11	0.891	0.873	0.959	0.839

OD_4, OD_5, OD_6, OD_8, OD_9	0.889	0.871	0.957	0.835
OD_4, OD_5, OD_6, OD_9, OD_10	0.88	0.862	0.967	0.77
OD_4, OD_5, OD_6, OD_9, OD_11	0.886	0.868	0.962	0.786
OD_4, OD_5, OD_7, OD_10, OD_11	0.89	0.872	0.963	0.782
OD_4, OD_5, OD_7, OD_8, OD_10	0.89	0.872	0.961	0.823
OD_4, OD_5, OD_7, OD_8, OD_11	0.893	0.874	0.96	0.828
OD_4, OD_5, OD_7, OD_8, OD_9	0.888	0.87	0.96	0.818
OD_4, OD_5, OD_7, OD_9, OD_10	0.884	0.867	0.964	0.779
OD_4, OD_5, OD_7, OD_9, OD_11	0.89	0.872	0.959	0.812
OD_4, OD_5, OD_8, OD_10, OD_11	0.888	0.87	0.965	0.792
OD_4, OD_5, OD_8, OD_9, OD_10	0.883	0.866	0.966	0.784
OD_4, OD_5, OD_8, OD_9, OD_11	0.89	0.872	0.96	0.789
OD_4, OD_5, OD_9, OD_10, OD_11	0.893	0.875	0.955	0.84
OD_4, OD_6, OD_7, OD_10, OD_11	0.893	0.875	0.969	0.83
OD_4, OD_6, OD_7, OD_8, OD_10	0.897	0.879	0.962	0.853
OD_4, OD_6, OD_7, OD_8, OD_11	0.897	0.879	0.965	0.838
OD_4, OD_6, OD_7, OD_8, OD_9	0.894	0.876	0.963	0.839
OD_4, OD_6, OD_7, OD_9, OD_10	0.889	0.871	0.969	0.828
OD_4, OD_6, OD_7, OD_9, OD_11	0.892	0.873	0.968	0.794
OD_4, OD_6, OD_8, OD_10, OD_11	0.893	0.875	0.969	0.788
OD_4, OD_6, OD_8, OD_9, OD_10	0.89	0.872	0.968	0.778
OD_4, OD_6, OD_8, OD_9, OD_11	0.893	0.875	0.966	0.786
OD_4, OD_6, OD_9, OD_10, OD_11	0.895	0.877	0.963	0.776
OD_4, OD_7, OD_8, OD_10, OD_11	0.898	0.879	0.966	0.831
OD_4, OD_7, OD_8, OD_9, OD_10	0.893	0.874	0.967	0.826
OD_4, OD_7, OD_8, OD_9, OD_11	0.896	0.878	0.965	0.837

OD_4, OD_7, OD_9, OD_10, OD_11	0.902	0.883	0.956	0.817
OD_4, OD_8, OD_9, OD_10, OD_11	0.898	0.88	0.962	0.782
OD_5, OD_6, OD_7, OD_10, OD_11	0.885	0.867	0.968	0.819
OD_5, OD_6, OD_7, OD_8, OD_10	0.889	0.871	0.961	0.862
OD_5, OD_6, OD_7, OD_8, OD_11	0.889	0.871	0.964	0.825
OD_5, OD_6, OD_7, OD_8, OD_9	0.886	0.868	0.962	0.82
OD_5, OD_6, OD_7, OD_9, OD_10	0.881	0.863	0.967	0.811
OD_5, OD_6, OD_7, OD_9, OD_11	0.884	0.866	0.965	0.79
OD_5, OD_6, OD_8, OD_10, OD_11	0.884	0.866	0.969	0.784
OD_5, OD_6, OD_8, OD_9, OD_10	0.881	0.863	0.967	0.784
OD_5, OD_6, OD_8, OD_9, OD_11	0.885	0.867	0.965	0.78
OD_5, OD_6, OD_9, OD_10, OD_11	0.886	0.869	0.961	0.767
OD_5, OD_7, OD_8, OD_10, OD_11	0.888	0.871	0.966	0.835
OD_5, OD_7, OD_8, OD_9, OD_10	0.883	0.866	0.967	0.811
OD_5, OD_7, OD_8, OD_9, OD_11	0.887	0.87	0.964	0.792
OD_5, OD_7, OD_9, OD_10, OD_11	0.894	0.876	0.954	0.814
OD_5, OD_8, OD_9, OD_10, OD_11	0.888	0.871	0.962	0.776
OD_6, OD_7, OD_8, OD_10, OD_11	0.898	0.879	0.964	0.824
OD_6, OD_7, OD_8, OD_9, OD_10	0.894	0.876	0.963	0.821
OD_6, OD_7, OD_8, OD_9, OD_11	0.895	0.877	0.965	0.785
OD_6, OD_7, OD_9, OD_10, OD_11	0.9	0.882	0.957	0.854
OD_6, OD_8, OD_9, OD_10, OD_11	0.897	0.879	0.961	0.775
OD_7, OD_8, OD_9, OD_10, OD_11	0.902	0.884	0.957	0.825

Note: $N = 1209$. The items retained for the five-item short scale are highlighted in yellow. OD_1 = first item of Caesens et al.'s (2017) 11-item scale; OD_2 = second item of Caesens et al.'s (2017) 11-item scale; OD_3 = third item of Caesens et al.'s (2017) 11-item scale; OD_4 = fourth item of Caesens et al.'s (2017) 11-item scale; OD_5 = fifth item of Caesens et al.'s (2017) 11-item scale; OD_6 = sixth item of Caesens et al.'s

(2017) 11-item scale; OD_7 = seventh item of Caesens et al.'s (2017) 11-item scale; OD_8 = eighth item of Caesens et al.'s (2017) 11-item scale; OD_9 = ninth item of Caesens et al.'s (2017) 11-item scale; OD_10 = tenth item of Caesens et al.'s (2017) 11-item scale; OD_11 = eleventh item of Caesens et al.'s (2017) 11-item scale.

Section 2

Item Selection Process

As we explained in the full paper, our item selection process was informed by a combination of empirical (e.g., psychometric) and theoretical criteria (Heggstad et al., 2019; Kruyen et al., 2013; Smith et al., 2000; Stanton et al., 2002).

Regarding empirical criteria, we adopted the approach proposed by Cortina et al. (2020) and their R Shiny app, which offers a “psychometrically defensible optimization strategy that considers multiple important criteria simultaneously” (Cortina et al., 2020, p. 1375). That is, instead of separately considering indices such as factor loadings or internal validity (e.g., Cronbach’s α , McDonald’s ω), the procedure proposed by Cortina et al. (2020) allows one to simultaneously attend multiple criteria to determine the optimal solution. This is because, as Cortina et al. (2020) noted, “an ideal shortened scale would attend to a variety of indicators of scale quality, such as internal consistency reliability, part-total correlations, general factor loadings, convergent and discriminant validity, and content coverage of the items” (p. 1375). From a practical standpoint, Cortina et al.’s (2020) Shiny app identifies all five-item scales that can be formed from the original 11-item scale ($N = 462$), and then calculates the scale quality indices of each combination. The app therefore allows one to have an overall measure of the quality of each five-item scale combination. From the 462 possible combinations identified by the R Shiny app, we first retained the ones displaying very good psychometric indices, that is Cronbach’s α , McDonald’s ω and Guttman’s λ greater than .80, as well as part-whole correlations greater than .95. In doing so, we removed 182 combinations and were left with 280 combinations.

We then applied our theoretical criteria, which consisted of deleting the combinations that involved the problematic items that we identified in the manuscript. We therefore eliminated the combinations with item 1 (“My organization makes me feel that one worker is

easily as good as any other”; $N = 137$), leaving us with 143 combinations. Next, we disregarded the combinations with item 3 (“If my job could be done by a machine or a robot, my organization would not hesitate to replace me by this new technology”; $N = 64$), which resulted in 79 remaining combinations. We also removed the combinations with item 2 (“My organization would not hesitate to replace me if it enabled the company to make more profit”; $N = 47$), leaving us with 32 combinations. In addition, as item 4 (“My organization considers me as a tool to use for its own ends”) and item 5 (“My organization considers me as a tool devoted to its own success”) are grammatically redundant, we deleted the combinations that included item 5 ($N = 23$). This resulted in nine remaining combinations – we decided to keep item 4 instead of item 5 because the former had a greater standardized factor loading (.79 vs .73). Similarly, because item 9 (“My organization treats me as if I were a robot”) and item 11 (i.e., “My organization treats me as if I were an object”) are grammatically redundant, we removed the combinations involving item 9 ($N = 6$), which left us with three combinations. Here again, we decided to keep item 11 instead of item 9 because the former had a greater standardized factor loading (.81 vs .79).

The three retained combinations included a mix of item 4, item 6, item 7, item 8, item 10, and item 11. More precisely, combination 1 included item 4, item 6, item 7, item 10, and item 11. Combination 2 included item 4, item 6, item 7, item 8, and item 10. Combination 3 included item 4, item 7, item 8, item 10, and item 11. We thoroughly examined each combination and eventually kept combination 3 because (1) its items best reflected the concept of organizational dehumanization and (2) it displayed overall better psychometric indices than combinations 1 and 2.

Section 3

Table S2. *Standardized Factor Loadings of the 11-Item Scale of Organizational Dehumanization for Study 1*

Items	Standardized factors loadings (CFA)
1. My organization makes me feel that one worker is easily as good as any other	.74
2. My organization would not hesitate to replace me if it enabled the company to make more profit	.74
3. If my job could be done by a machine or a robot, my organization would not hesitate to replace me by this new technology	.70
4. My organization considers me as a tool to use for its own ends	.79
5. My organization considers me as a tool devoted to its own success	.73
6. My organization makes me feel that my only importance is my performance at work	.78
7. My organization is only interested in me when it needs me	.80
8. The only thing that counts for my organization is what I can contribute to it	.80
9. My organization treats me as if I were a robot	.79
10. My organization considers me as a number	.80
11. My organization treats me as if I were an object	.81

Note. $N = 1209$. CFA = confirmatory factor analysis. Respondents are invited to indicate the extent to which they agree with the above-mentioned statements. All items are assessed using a 7-point Likert agreement scale (1 = *strongly disagree*; 2 = *moderately disagree*; 3 = *slightly disagree*; 4 = *neither agree nor disagree*; 5 = *slightly agree*; 6 = *moderately agree*; 7 = *strongly agree*). The items retained for the five-item short scale of organizational dehumanization are indicated in bold.

Section 4

Table S3. Fit Indices for Measurement Models for Study 2

Model	χ^2	<i>df</i>	SRMR	CFI	TLI	SCF	$\Delta\chi^2_{SB} (\Delta df)$
1. Eight-factor model	2162.07	832	.07	.93	.92	1.157	-
2. Seven-factor model (OD and job satisfaction = 1 factor)	2951.173	839	.08	.89	.88	1.162	528.29(7)***
3. Seven-factor model (OD and affective commitment = 1 factor)	2965.159	839	.08	.89	.88	1.163	511.00(7)***
4. Seven-factor model (OD and turnover intentions = 1 factor)	3053.982	839	.08	.88	.87	1.166	476.34(7)***
5. Seven-factor model (OD and emotional exhaustion = 1 factor)	4027.613	839	.14	.83	.82	1.166	981.77(7)***
6. Seven-factor model (OD and organizational citizenship behaviors = 1 factor)	4351.966	839	.09	.81	.80	1.151	6841.48(7)***
7. Seven-factor model (OD and psychological contract breach = 1 factor)	3264.125	839	.08	.87	.86	1.165	625.20(7)***
8. Seven-factor model (OD and overall organizational injustice = 1 factor)	3077.103	839	.07	.88	.87	1.168	458.16(7)***
9. Seven-factor model (psychological contract breach and overall organizational injustice = 1 factor)	2954.923	839	.07	.89	.88	1.172	329.20(7)***
10. Six-factor model (OD, psychological contract breach, and overall organizational injustice = 1 factor)	3803.346	845	.07	.84	.83	1.180	749.13(13)***
11. Three-factor model (OD and outcomes = 1 factor)	7508.197	857	.12	.65	.63	1.184	3067.80(25)***
12. Three-factor model (psychological contract breach and outcomes = 1 factor)	7646.536	857	.12	.64	.62	1.193	2772.95(25)***
13. Three-factor model (overall organizational injustice and outcomes = 1 factor)	7822.167	857	.12	.63	.61	1.194	2849.42(25)***
14. One-factor model	9315.073	860	.12	.55	.53	1.211	3130.80(28)***

Note. $N = 460$. SRMR = standardized root mean square residual; CFI = comparative fit index; TLI = Tucker-Lewis index; SCF = scaling

correction factor; $\Delta\chi^2_{SB}$ = strictly positive Satorra-Bentler chi-square difference test; OD = organizational dehumanization. The final model is indicated in bold.

*** $p < .001$.

Section 5

Table S4. Fit Indices for Measurement Models for Study 3

Model	χ^2	<i>df</i>	SRMR	CFI	TLI	SCF	$\Delta\chi^2_{SB} (\Delta df)$
1. Eight-factor model	1817.56	791	.06	.93	.92	1.171	-
2. Seven-factor model (OD and perceived organizational obstruction = 1 factor)	2702.49	798	.07	.87	.86	1.175	634.94(7)***
3. Seven-factor model (OD and psychological contract breach = 1 factor)	2729.16	798	.07	.87	.86	1.171	903.04(7)***
4. Seven-factor model (OD and job satisfaction = 1 factor)	2788.92	798	.08	.87	.85	1.174	725.58(7)***
5. Seven-factor model (OD and affective commitment = 1 factor)	2440.53	798	.08	.89	.88	1.180	335.48(7)***
6. Seven-factor model (OD and turnover intentions = 1 factor)	2772.45	798	.08	.87	.86	1.177	619.02(7)***
7. Seven-factor model (OD and emotional exhaustion = 1 factor)	3382.33	798	.12	.83	.81	1.175	1089.87(7)***
8. Seven-factor model (OD and organizational citizenship behaviors = 1 factor)	3159.49	798	.09	.84	.83	1.176	878.17(7)***
9. Six-factor model (OD, perceived organizational obstruction, and psychological contract breach = 1 factor)	3209.54	804	.07	.84	.83	1.188	754.01(13)***
10. Two-factor model (OD, perceived organizational obstruction, and psychological contract breach = 1 factor; job satisfaction, affective commitment, turnover intentions, emotional exhaustion, organizational citizenship behaviors = 1 factor)	6811.55	818	.11	.59	.57	1.206	2751.35(27)***
11. One-factor model	7826.88	819	.12	.52	.50	1.221	2817.54(28)***

Note. $N = 435$. SRMR = standardized root mean square residual; CFI = comparative fit index; TLI = Tucker-Lewis index; SCF = scaling correction factor; $\Delta\chi^2_{SB}$ = strictly positive Satorra-Bentler chi-square difference test; OD = organizational dehumanization. The final model is indicated in bold.

*** $p < .001$.

Section 6

Table S5. Fit Indices for Measurement Models for Study 4

Model	χ^2	<i>df</i>	SRMR	CFI	TLI	SCF	$\Delta\chi^2_{SB}$ (Δdf)
1. Six-factor model	449.55	215	.05	.96	.96	1.204	-
2. Five-factor model (OD and abusive supervision = 1 factor)	599.00	220	.10	.85	.83	1.297	76.90(5) ^{***}
3. Five-factor model (OD and interpersonal justice = 1 factor)	826.52	220	.09	.76	.73	1.218	355.61(5) ^{***}
4. Five-factor model (abusive supervision and interpersonal justice = 1 factor)	417.62	220	.06	.92	.91	1.285	15.94(5) ^{***}
5. Five-factor model (OD and work-to-family conflict = 1 factor)	1032.22	220	.15	.68	.63	1.198	933.14(5) ^{***}
6. Five-factor model (work-to-family conflict and displaced aggression = 1 factor)	824.23	220	.09	.76	.73	1.244	222.47(5) ^{***}
7. Five-factor model (work-to-family conflict and relationship tension = 1 factor)	560.50	220	.07	.87	.85	1.203	261.10(5) ^{***}
8. Five-factor model (displaced aggression and relationship tension = 1 factor)	822.639	220	.09	.76	.73	1.242	228.07(5) ^{***}
9. Four-factor model (OD, abusive supervision, and interpersonal justice = 1 factor)	898.48	224	.10	.74	.70	1.299	223.81(9) ^{***}
10. Four-factor model (work-to-family conflict, displaced aggression, and relationship tension = 1 factor)	835.40	224	.14	.76	.73	1.306	193.05(9) ^{***}
11. Three-factor model (OD and abusive supervision = 1 factor; work-to-family conflict, displaced aggression, and relationship tension = 1 factor)	1320.83	227	.13	.57	.52	1.303	438.72(12) ^{***}
12. Three-factor model (OD and interpersonal justice = 1 factor; work-to-family conflict, displaced aggression, and relationship tension = 1 factor)	1388.06	227	.13	.55	.49	1.236	744.41(12) ^{***}
13. Two-factor model (OD, abusive supervision, and interpersonal justice = 1 factor; work-to-family conflict, displaced aggression, and relationship tension = 1 factor)	1424.16	229	.14	.53	.48	1.312	493.08(14) ^{***}
14. One-factor model	1869.83	230	.16	.36	.29	1.358	698.95(15) ^{***}

Note. $N = 323$. SRMR = standardized root mean square residual; CFI = comparative fit index; TLI = Tucker-Lewis index; SCF = scaling correction factor; $\Delta\chi^2_{SB}$ = strictly positive Satorra-Bentler chi-square difference test; OD = organizational dehumanization. The final model is indicated in bold.

** $p < .01$. *** $p < .001$.

Section 7

Table S6. Fit Indices for Structural Models for Study 4

Model	χ^2	<i>df</i>	SRMR	CFI	TLI	SCF	$\Delta\chi^2_{SB} (\Delta df)$	Model comparison
1. Hypothesized model	312.98	219	.05	.96	.96	1.204	-	-
2. Alternative 1 (path added between OD and relationship tension)	312.43	218	.05	.96	.96	1.204	0.49(1)	Alternative 1 vs. Hypothesized
3. Alternative 2 (path added between abusive supervision and relationship tension)	312.70	218	.05	.96	.96	1.204	0.30(1)	Alternative 2 vs. Hypothesized
4. Alternative 3 (path added between interpersonal justice and relationship tension)	312.54	218	.05	.96	.96	1.195	0.57(1)	Alternative 3 vs. Hypothesized

Note. $N = 323$. SRMR = standardized root mean square residual; CFI = comparative fit index; TLI = Tucker-Lewis index; SCF = scaling correction factor; $\Delta\chi^2_{SB}$ = strictly positive Satorra-Bentler chi-square difference test; OD = organizational dehumanization. The final model is indicated in bold.

Section 8

Lewbel's (2012) approach can be summarized by the following equations (Baum & Lewbel, 2019):

$$(1) Y_1 = X'\beta + Y_2\gamma + \epsilon_1$$

$$(2) Y_2 = X'\alpha + \epsilon_2$$

where Y_1 is the outcome, Y_2 the endogenous variable that needs to be instrumented, and X is a vector of control variables.

Lewbel's (2012) heteroskedasticity-based approach leads to consistent estimates under the assumptions that $\text{Cov}(Z, \epsilon_1\epsilon_2) = 0$ and $\text{Cov}(Z, \epsilon_2^2) \neq 0$, where $Z = X$ in our case (we followed the recommendations of Mishra and Smyth [2015] and used all the control variables to generate the set of instruments).

As Baum and Lewbel (2019) argue, one can assess the plausibility of these assumptions by gauging the extent to which the conditions described below hold. It should however be noted that while fulfilling these conditions provides support for the above-mentioned assumptions, failing to do so does not invalidate the estimator.

Condition 1. The errors ϵ_1 and ϵ_2 have the factor structure

$$\epsilon_1 = cU + V_1$$

$$\epsilon_2 = U + V_2$$

where c is a constant and U , V_1 , and V_2 are unobserved error terms that are mutually independent conditional on Z . We believe this condition to be plausible as, given the cross-sectional nature of Study 4, endogeneity is likely to arise from unobserved factors that influence both work-to-family conflict and organizational dehumanization in the a-path, and relationship tension and work-to-family conflict in the b-path (e.g., job autonomy, see Lagios et al., 2022; Michel et al., 2011; Thompson & Prottas, 2005).

Condition 2. U^2 is not correlated with Z . In other words, U should be homoscedastic. We can gauge this condition by performing a Pagan and Hall (1983) test on the second stage of our IV (Equation [1] in Lewbel's [2012] model outlines above). The results of the test are reported in Panel A of Table S7, both for the second stage of the a-path and b-path. In both cases, we fail to reject the null hypothesis of homoskedastic disturbance, which lends credence to Condition 2.

Condition 3. ϵ_2^2 is correlated with Z , meaning that V_2 should be heteroskedastic relative to Z . We can assess this condition by performing a Breusch-Pagan (1979) test on the first stage (Equation [2]) to investigate the presence of heteroskedasticity. The results of the test are reported in Panel B of Table S7. While we manage to reject the null hypothesis of homoskedastic disturbance for the b-path, we fail to do so for the a-path.

Condition 4. All instruments yield the same coefficient estimates. We can gauge the plausibility of this condition with the Sargan (1958) J -test, where one needs to fail to reject the null hypothesis. As shown by Panel C of Table S7, for both the a- and b-paths, we fail to reject the overidentification test, which provides evidence that the instruments yield the same coefficient estimates.

Overall, the results bolster our confidence regarding the validity of Lewbel's (2012) heteroskedasticity-based approach.

Table S7

Results of Lewbel's (2012) Conditions

Test	a-path	b-path
Panel A. Pagan and Hall (1983) test p-value	0.328	0.801
Panel B. Breusch-Pagan (1979) test p-value	0.540	0.004
Panel C. Sargan (1958) J -test p-value	0.071	0.446

Note. $N = 208$.

Section 9

Instrumental variables can be biased in the case of weak instruments. To address this concern, we construct weak-instrument robust confidence intervals, which are valid even when the instruments are weak and which therefore allow researchers to conduct correct inference in case of weak instruments (Andrews et al., 2019). Specifically, we construct those weak-instrument robust confidence intervals by using the Conditional Likelihood Ratio test of Moreira (2003). Reassuringly, the results remain qualitatively similar to the baseline, as shown by Table S8.

Table S8

Study 4. Weak-Instrument Robust Inference

Test	95% CLR CI^a
<i>a-path</i> Organizational dehumanization → Work-to-family conflict	[0.269, 1.108]
<i>b-path</i> Work-to-family conflict → Relationship tension	[0.216, 3.910]

Note: 208. ^a CLR CI refers to the weak-instrument confidence intervals constructed using Conditional Likelihood Ratio (CLR) test of Moreira (2003).

Section 10

Table S9. Fit Indices for Measurement Models for Study 5

Model	χ^2	<i>df</i>	SRMR	CFI	TLI	SCF	$\Delta\chi^2_{SB}$ (Δdf)
1. Five-factor model	96.24	80	.04	.99	.99	1.039	-
2. Four-factor model (OD and trait anger = 1 factor)	307.379	84	.14	.86	.82	1.037	219.41(4)***
3. Four-factor model (OD and negative affectivity = 1 factor)	248.876	84	.10	.89	.87	1.031	179.79(4)***
4. Four-factor model (trait anger and negative affectivity = 1 factor)	542.208	84	.16	.70	.63	1.06	320.77(4)***
5. Four-factor model (OD and work-to-family conflict = 1 factor)	222.936	84	.09	.91	.89	1.045	114.14(4)***
6. Four-factor model (work-to-family conflict and relationship tension = 1 factor)	382.21	84	.11	.81	.76	1.115	123.78(4)***
7. Three-factor model (OD, trait anger, and negative affectivity = 1 factor)	549.997	87	.14	.70	.64	1.054	391.46(7)***
8. Three-factor model (OD and trait anger = 1 factor; work-to-family conflict and relationship tension = 1 factor)	548.343	87	.17	.70	.64	1.118	253.88(7)***
9. Three-factor model (OD and negative affectivity = 1 factor; work-to-family conflict and relationship tension = 1 factor)	494.288	87	.13	.74	.68	1.113	229.82(7)***
10. Two-factor model (OD, trait anger, and negative affectivity = 1 factor; work-to-family conflict and relationship tension = 1 factor)	769.481	89	.16	.56	.48	1.135	388.95(9)***
11. One-factor model	1105.193	90	.19	.34	.23	1.15	574.57(10)***

Note. $N = 208$. SRMR = standardized root mean square residual; CFI = comparative fit index; TLI = Tucker-Lewis index; SCF = scaling correction factor; $\Delta\chi^2_{SB}$ = strictly positive Satorra-Bentler chi-square difference test; OD = organizational dehumanization. The final model is indicated in bold.

*** $p < .001$.

Section 11

Table S10. Fit Indices for Structural Models for Study 5

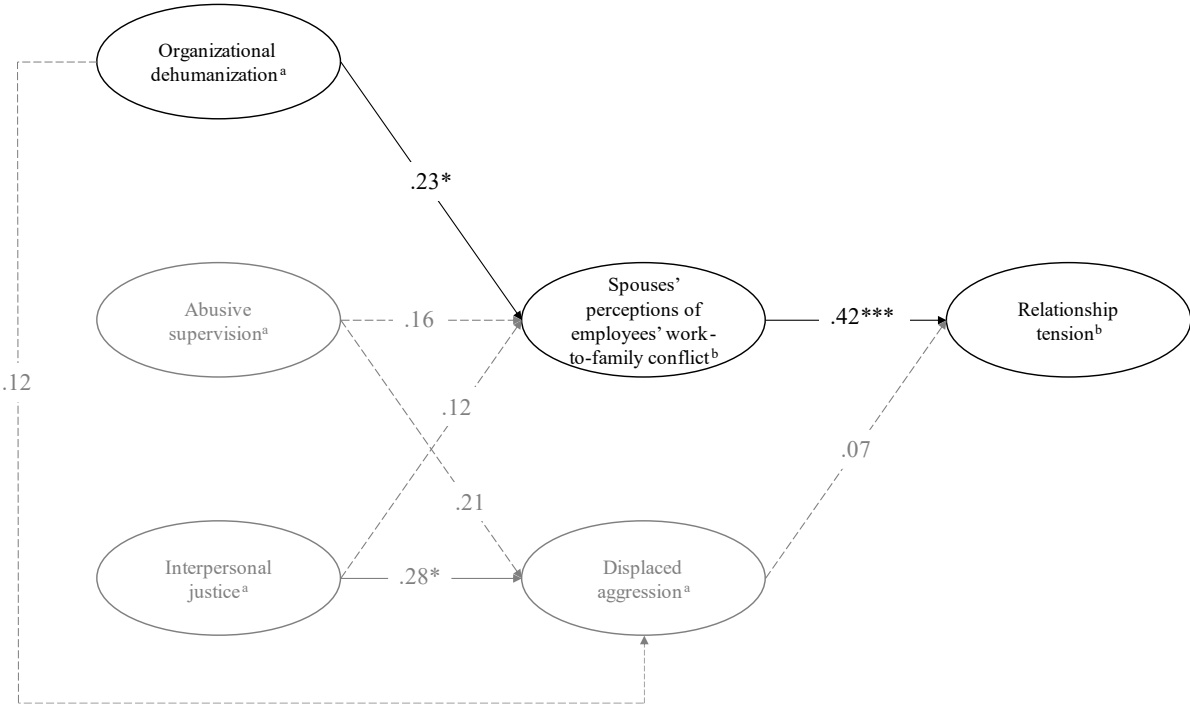
Model	χ^2	<i>df</i>	SRMR	CFI	TLI	SCF	$\Delta\chi^2_{SB} (\Delta_{df})$	Model comparison
1. Hypothesized model	145.07	97	.09	.97	.96	1.040	-	-
2. Alternative 1 (path added between OD and relationship tension)	142.07	96	.07	.97	.96	1.027	2.58(1)	Alternative 1 vs. Hypothesized
3. Alternative 2 (path added between trait anger and relationship tension)	144.97	96	.08	.97	.96	1.039	1.04(1)	Alternative 2 vs. Hypothesized
4. Alternative 3 (path added between negative affectivity and relationship tension)	115.41	96	.04	.99	.99	1.036	23.31(1)***	Alternative 3 vs. Hypothesized
5. Alternative 4 (alternative 3 + added between OD and relationship satisfaction)	115.70	95	.04	.99	.98	1.032	0.19(1)	Alternative 4 vs. Alternative 3
6. Alternative 5 (alternative 3 + path added between work-to-family conflict and relationship tension)	113.06	95	.05	.99	.99	1.036	2.36(1)	Alternative 5 vs. Alternative 3
7. Alternative 6 (alternative 3 + path added between trait anger and relationship satisfaction)	110.26	95	.04	.99	.99	1.038	5.86(1)*	Alternative 6 vs. Alternative 3
8. Alternative 7 (alternative 6 + path added between negative affectivity and relationship satisfaction)	110.01	94	.04	.99	.99	1.037	0.28(1)	Alternative 7 vs. Alternative 6

Note. $N = 208$. SRMR = standardized root mean square residual; CFI = comparative fit index; TLI = Tucker-Lewis index; SCF = scaling correction factor; $\Delta\chi^2_{SB}$ = strictly positive Satorra-Bentler chi-square difference test; OD = organizational dehumanization. The final model is indicated in bold.

* $p < .05$. *** $p < .001$.

Section 12

Figure S1. Results of Study 4 with Employee-Spouse Dyads Only

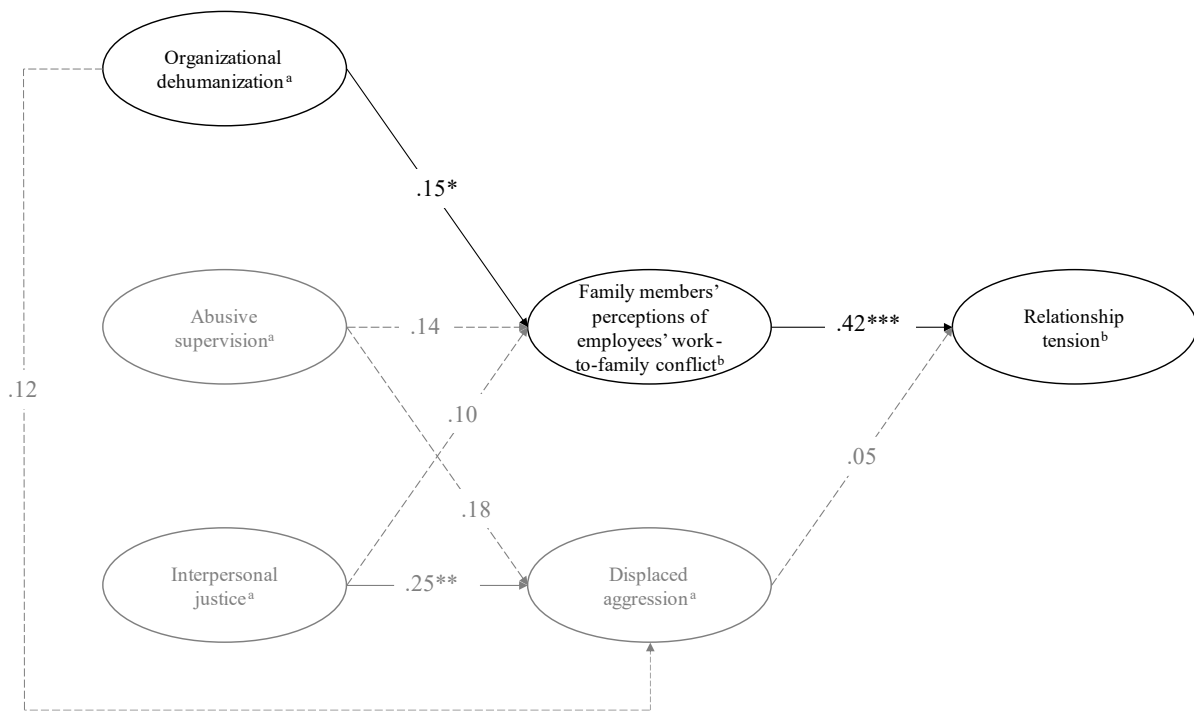


Note. $N = 205$. ^a = reported by the employee; ^b = reported by the partner. Dashed arrows represent non-significant paths.

* $p < .05$. *** $p < .001$.

Section 13

Figure S2. Results of Study 4 when Relation Type Is Controlled for



Note. $N = 323$. ^a = reported by the employee; ^b = reported by the family member. Dashed arrows represent non-significant paths.

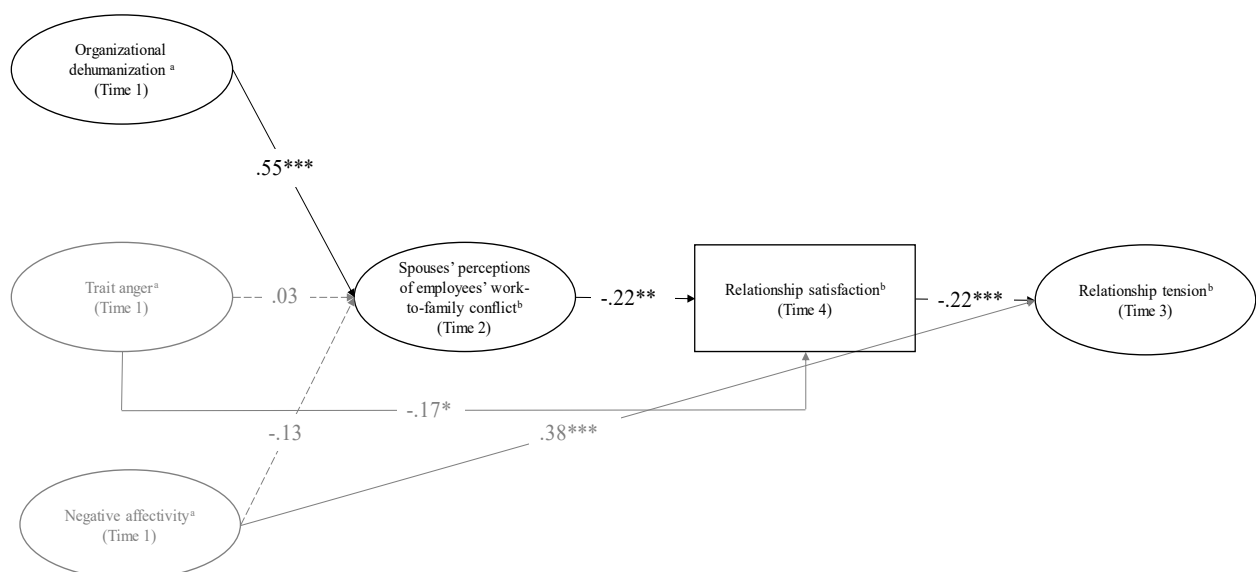
* $p < .05$. ** $p < .01$. *** $p < .001$.

Section 14

To strengthen the robustness of our findings, we compared our hypothesized model to two other alternative models. The first alternative model represented a serial mediation model, wherein organizational dehumanization was related to relationship tension through a sequential chain involving work-to-family conflict and relationship satisfaction ($\chi^2 (95) = 136.24$; SRMR = .08; CFI = .97; TLI = .97; see Figure S3 below). As our hypothesized model and the first alternative model are statistically indistinguishable (i.e., non-nested models), we cannot compare them by using a χ^2 difference test. We therefore need to rely on comparative fit indices such as the AIC and BIC. The AIC and BIC of our hypothesized model were 9794.61 and 9984.85, respectively; the AIC and BIC of the first alternative model were 9820.75 and 10010.99, respectively. As our hypothesized model has smaller values for both the AIC and BIC, this model has a better fit with the data compared to the first alternative model (Wang & Wang, 2020). In particular, the difference between the two BIC values is greater than 10, providing “very strong evidence” (Rafterty, 1996, p. 139) that the hypothesized model is the best-fitting one.

Figure S3

First Alternative Model



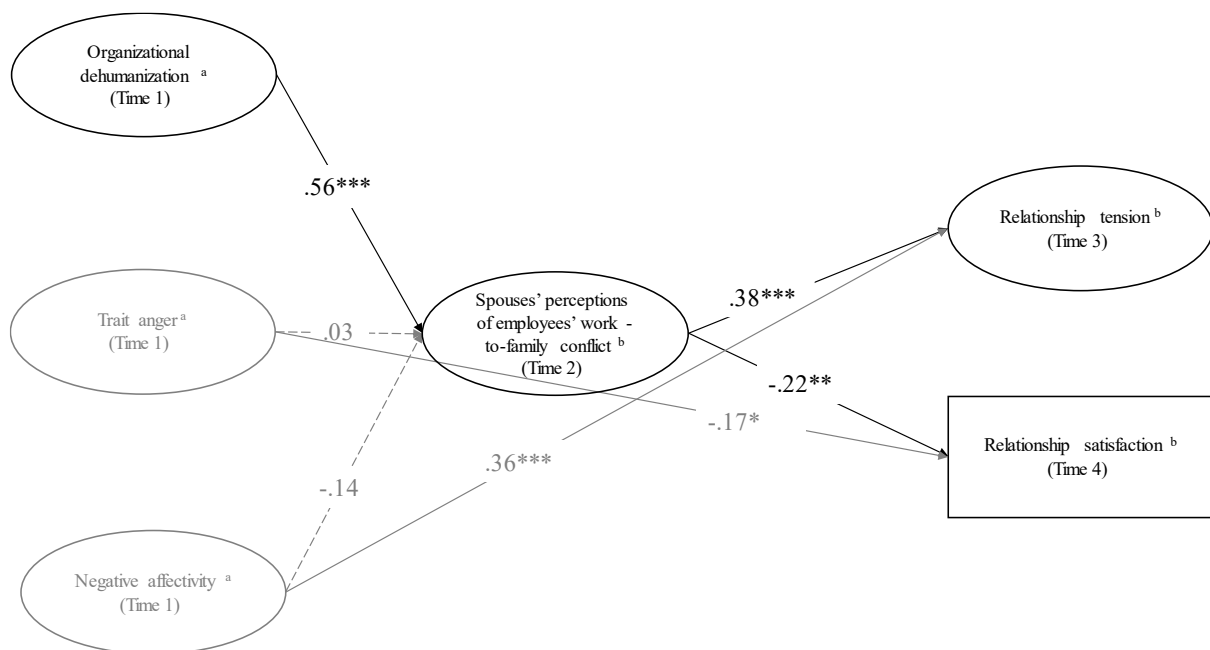
Note. $N = 323$. ^a = reported by the employee; ^b = reported by the family member. Dashed arrows represent non-significant paths.

* $p < .05$. ** $p < .01$. *** $p < .001$.

The second alternative model depicted a simple mediation model where organizational dehumanization was related to both relationship tension and relationship satisfaction through work-to-family conflict ($\chi^2 (94) = 110.61$; RMSEA = .03; SRMR = .04; CFI = .99; TLI = .99; see Figure S4 below). Results indicated that our hypothesized model fitted the data significantly better than did the second alternative model ($\Delta\chi^2 (1) = 0.10$, SBc = 0.20, $p = .653$) based on the Satorra-Bentler (SB) scaled χ^2 difference test (Satorra & Bentler, 2001).

Figure S4

Second Alternative Model



Note. $N = 323$. ^a = reported by the employee; ^b = reported by the family member. Dashed arrows represent non-significant paths.

* $p < .05$. ** $p < .01$. *** $p < .001$.

References

- Andrews, I., Stock, J. H., & Sun, L. (2019). Weak Instruments in Instrumental Variables Regression: Theory and Practice. *Annual Review of Economics*, *11*, 727-753.
<https://doi.org/10.1146/annurev-economics-080218-025643>
- Baum, C. F., & Lewbel, A. (2019). Advice on using heteroskedasticity-based identification. *The Stata Journal*, *19*(4), 757-767. <https://doi.org/10.1177/1536867X19893614>
- Breusch, T. S., & Pagan, A. R. (1979). A Simple Test for Heteroscedasticity and Random Coefficient Variation. *Econometrica: Journal of the Econometric Society*, *47*(5), 1287-1294. <https://doi.org/10.2307/1911963>
- Cortina, J. M., Sheng, Z., Keener, S. K., Keeler, K. R., Grubb, L. K., Schmitt, N., Tonidandel, S., Summerville, K. M., Heggstad, E. D., & Banks, G. C. (2020). From alpha to omega and beyond! A look at the past, present, and (possible) future of psychometric soundness in the Journal of Applied Psychology. *Journal of Applied Psychology*, *105*(12), 1351-1381.
<https://doi.org/10.1037/apl0000815>
- Heggstad, E. D., Scheaf, D. J., Banks, G. C., Monroe Hausfeld, M., Tonidandel, S., & Williams, E. B. (2019). Scale adaptation in organizational science research: A review and best-practice recommendations. *Journal of Management*, *45*(6), 2596-2627.
<https://doi.org/10.1177/0149206319850280>
- Krueger, P. M., Emons, W. H., & Sijtsma, K. (2013). On the shortcomings of shortened tests: A literature review. *International Journal of Testing*, *13*(3), 223-248.
<https://doi.org/10.1080/15305058.2012.703734>
- Lagios, C., Nguyen, N., Stinglhamber, F., & Caesens, G. (2022). Dysfunctional rules in organizations: The mediating role of organizational dehumanization in the relationship between red tape and employees' outcomes. *European Management Journal*. Advance online publication. <https://doi.org/10.1016/j.emj.2022.06.002>
- Lewbel, A. (2012). Using Heteroscedasticity to Identify and Estimate Mismeasured and

- Endogenous Regressor Models. *Journal of Business & Economic Statistics*, 30(1), 67-80.
<https://doi.org/10.1080/07350015.2012.643126>
- Moreira, M. J. (2003). A Conditional Likelihood Ratio Test for Structural Models.
Econometrica, 71(4), 1027-1048. <https://doi.org/10.1111/1468-0262.00438>
- Michel, J. S., Kotrba, L. M., Mitchelson, J. K., Clark, M. A., & Baltes, B. B. (2011).
Antecedents of work-family conflict: A meta-analytic review. *Journal of Organizational
Behavior*, 32(5), 689-725. <https://doi.org/10.1002/job.695>
- Mishra, V., & Smyth, R. (2015). Estimating returns to schooling in urban China using
conventional and heteroskedasticity-based instruments. *Economic Modelling*, 47, 166-
173. <https://doi.org/10.1016/j.econmod.2015.02.002>
- Pagan, A. R., & Hall, A. D. (1983). Diagnostic tests as residual analysis. *Econometric
Reviews*, 2(2), 159-218. <https://doi.org/10.1080/07311768308800039>
- Raftery, A. E. (1995). Bayesian model selection in social research. *Sociological Methodology*,
25, 111-163. <https://doi.org/10.2307/271063>
- Sargan, J. D. (1958). The Estimation of Economic Relationships using Instrumental
Variables. *Econometrica*, 26(3), 393-415. <https://doi.org/10.2307/1907619>
- Satorra, A., & Bentler, P. M. (2001). A scaled difference chi-square test statistic for moment
structure analysis. *Psychometrika*, 66(4), 507-514. <https://doi.org/10.1007/BF02296192>
- Smith, G. T., McCarthy, D. M., & Anderson, K. G. (2000). On the sins of short-form
development. *Psychological Assessment*, 12(1), 102-111. <https://doi.org/10.1037/1040-3590.12.1.102>
- Stanton, J. M., Sinar, E. F., Balzer, W. K., & Smith, P. C. (2002). Issues and strategies for
reducing the length of self-report scales. *Personnel Psychology*, 55(1), 167-194.
<https://doi.org/10.1111/j.1744-6570.2002.tb00108.x>
- Thompson, C. A., & Prottas, D. J. (2006). Relationships among organizational family support,

job autonomy, perceived control, and employee well-being. *Journal of Occupational Health Psychology*, 11(1), 100-118. <https://doi.org/10.1037/1076-8998.10.4.100>

Wang, J., & Wang, X. (2020). *Structural equation modeling: Applications using Mplus*. Hoboken, NJ: John Wiley & Sons.