

Pathak Stoicism Paper

Technical Supplement

Scale items under each of the 5 domains along with response frequencies for the preliminary 24-item PW-SIS are shown in Table S1. The results of the assessment of redundancy and content validity (Step 1) are shown in Table S2. We dropped 2 items (Q1 and Q4) because they were highly correlated with other items. The entire Stoic Composure domain, with 4 questions, was dropped after consideration of content validity. At every level of response to the statement “I try to be a stoic,” from “never” to all “all the time,” responses to the 4 Stoic Composure items were highly pro-stoic. Furthermore, the overall response distributions for 3 of the 4 items (Q10, Q21, and Q22) were highly skewed, with only 7%, 4%, and 3% disagreeing with these statements (Table S1). There were no other items in the scale that resulted in such highly skewed response distributions. We concluded that this domain was referencing a strongly sanctioned social norm, and that while the items were not explicitly worded as aphorisms, they might be functioning in the same way. Some respondents may have been inhibited to admit that they did not believe that they should stay cool in an emergency, if they perceived that a strong socio-cultural norm existed. Interestingly, the only reverse-coded item under this domain, Q16: “I believe it’s okay to let myself get upset and distracted in a major crisis,” elicited a less skewed response, although the majority of respondents still disagreed with this statement. Given that there was only a single item which performed marginally well, we decided to drop the entire domain.

Confirmatory factor analysis of the reduced 18-item, 4-domain PW-SIS resulted in strong factor loadings for 16 of the 18 items (Table S2), and decent model fit statistics (Table S3). Both items which were dropped (Q23 and Q6) were reverse-code items. Removal of these 2 items resulted in slightly improved model fit statistics (Table S3) when the CFA was re-run on the remaining 16 items.

As shown in Table S2, the 16-item scale retained 6 items for Stoic Taciturnity, 4 items for Stoic Endurance, 3 items for Stoic Serenity, and 3 items for Stoic Death Indifference. In the interest of parsimony, we decided to remove an additional 4 items, so that the final scale would retain 3 items for each of the 4 domains. We dropped 3 items from Stoic Taciturnity (Q7, Q9, and Q19), and 1 item from Stoic Endurance (Q11) - all with the lowest

factor loadings, and all reverse-code items. Factor loadings for the remaining 12 items changed little in the final CFA model (Table S2), but model fit statistics improved so that the final RMSEA = 0.05 (95% CI 0.04-0.07), Goodness-of-Fit Index = 0.96, and Tucker-Lewis Index = 0.93.

Table S1. Preliminary Pathak-Wieten Stoicism Ideology Scale: Domains, Item Content, and Response Frequencies (n=390)

Original Item #	Core Meaning / Scale Items	Disagree (-2)	Somewhat Disagree (-1)	Not sure (0)	Somewhat Agree (+1)	Agree (+2)
Stoic Taciturnity: The belief that one should conceal one's problems and emotions from others (Modern)						
Q1	I prefer to keep my intense feelings to myself.	10%	17%	6%	40%	27%
Q3	I don't believe in talking about my personal problems.	23%	31%	14%	26%	6%
Q7	I believe it's fine if I cry openly in front of other people. <i>(reverse)</i>	31%	28%	12%	18%	11%
Q9	I believe in discussing my personal problems with family and friends. <i>(reverse)</i>	3%	12%	14%	37%	33%
Q13	I expect myself to hide my strong emotions from others.	13%	23%	19%	32%	13%
Q15	I expect myself to manage my own problems without help from anyone.	16%	24%	13%	34%	13%
Q19	If my emotions get very intense, I believe it's all right to just show them openly. <i>(reverse)</i>	16%	25%	23%	27%	8%
Stoic Endurance: The belief that one should endure physical suffering without complaining (Modern)						
Q2	I expect myself to hide my aches and pains from others.	8%	24%	12%	41%	15%
Q4	I don't believe in bothering people close to me with my aches and pains.	20%	27%	14%	27%	12%
Q5	I expect myself to manage my physical discomfort without complaining.	9%	18%	14%	44%	16%
Q11	If I am suffering, I believe in telling someone about my physical pain. <i>(reverse)</i>	5%	9%	16%	37%	33%
Q17	I believe my physical pain is best handled by just keeping quiet about it.	29%	29%	22%	15%	5%
Q23	I believe in letting myself complain about everyday aches and pains. <i>(reverse)</i>	39%	32%	16%	11%	3%
Stoic Composure: The belief that one should control one's emotions and behavior under stress (Modern)						
Q10	I expect myself to remain calm and decisive in an emergency.	2%	5%	11%	29%	54%
Q16	I believe it's okay to let myself get upset and distracted in a major crisis. <i>(reverse)</i>	29%	25%	19%	19%	7%
Q21	I believe I should be calm and level-headed.	2%	2%	5%	35%	56%
Q22	I believe I should stay cool and steady when the pressure is high and the situation is tense.	1%	2%	8%	36%	54%
Stoic Serenity: The belief that one should refrain from experiencing strong emotions (Classical)						
Q8	I believe I should experience strong emotions. <i>(reverse)</i>	4%	8%	21%	33%	34%
Q14	I would prefer to be unemotional.	37%	20%	17%	14%	11%
Q20	I expect myself to avoid feeling intense emotions.	25%	31%	19%	19%	5%
Stoic Death Indifference: The belief that one should not fear or avoid death (Classical)						
Q6	I believe it's okay if I worry about dying too soon. <i>(reverse)</i>	25%	16%	24%	19%	17%
Q12	When the time for my death comes, I believe I should accept it without fear.	8%	12%	20%	21%	39%
Q18	I would be very upset if I knew my death was coming soon. <i>(reverse)</i>	13%	6%	22%	21%	39%
Q24	I would not allow myself to be bothered by the fear of death.	14%	19%	26%	17%	24%

Table S2. Confirmatory Factor Analysis and Item Reduction (n=390)

Item	Core Meaning / Scale Items	Step 1: Assessment of Redundancy and Content Validity	Step 2: CFA of 4-Domain, 18-Item Scale	Step 3: CFA of 4-Domain, 16-Item Scale	Step 4: CFA of 4-Domain, 12-Item Final Scale
	Stoic Taciturnity		factor loadings	factor loadings	factor loadings
Q1	I prefer to keep my intense feelings to myself.	Redundant to Q13 (r = 0.54)			
Q3	I don't believe in talking about my personal problems.		0.66	0.67	0.67
Q7	I believe it's fine if I cry openly in front of other people. <i>(reverse)</i>		0.46	0.46 ^a	
Q9	I believe in discussing my personal problems with family and friends. <i>(reverse)</i>		0.55	0.55 ^a	
Q13	I expect myself to hide my strong emotions from others.		0.75	0.75	0.73
Q15	I expect myself to manage my own problems without help from anyone.		0.61	0.61	0.62
Q19	If my emotions get very intense, I believe it's all right to just show them openly. <i>(reverse)</i>		0.49	0.48 ^a	
	Stoic Endurance				
Q2	I expect myself to hide my aches and pains from others.		0.65	0.65	0.68
Q4	I don't believe in bothering people close to me with my aches and pains.	Redundant to Q3 (r = 0.57)			
Q5	I expect myself to manage my physical discomfort without complaining.		0.57	0.56	0.55
Q11	If I am suffering, I believe in telling someone about my physical pain. <i>(reverse)</i>		0.54	0.55 ^a	
Q17	I believe my physical pain is best handled by just keeping quiet about it.		0.62	0.62	0.61
Q23	I believe in letting myself complain about everyday aches and pains. <i>(reverse)</i>		0.26 ^b		
	Stoic Composure				
Q10	I expect myself to remain calm and decisive in an emergency.	Domain excluded ^c			
Q16	I believe it's okay to let myself get upset and distracted in a major crisis. <i>(reverse)</i>	Domain excluded ^c			
Q21	I believe I should be calm and level-headed.	Domain excluded ^c			
Q22	I believe I should stay cool and steady when the pressure is high and the situation is tense.	Domain excluded ^c			
	Stoic Serenity				
Q8	I believe I should experience strong emotions. <i>(reverse)</i>		0.51	0.51	0.48
Q14	I would prefer to be unemotional.		0.70	0.70	0.71
Q20	I expect myself to avoid feeling intense emotions.		0.62	0.62	0.63
	Stoic Death Indifference				
Q6	I believe it's okay if I worry about dying too soon. <i>(reverse)</i>		0.27 ^b		
Q12	When the time for my death comes, I believe I should accept it without fear.		0.61	0.62	0.63
Q18	I would be very upset if I knew my death was coming soon. <i>(reverse)</i>		0.57	0.57	0.57
Q24	I would not allow myself to be bothered by the fear of death.		0.78	0.76	0.76

Footnotes: ^a = Excluded for parsimony; ^b = Excluded for poor factor loading; ^c = Excluded for poor content validity and highly skewed response distribution.

Table S3. Model Fit Statistics for Confirmatory Factor Analysis of the PW-SIS

Model	Description	Chi square	df	RMSEA (90% CI)	Goodness-of-fit Index (GFI)	Adjusted GFI	Tucker-Lewis Index
	Step 2: After exclusion of 2 redundant items (q1 and q4) and 4 items from the Stoic Composure domain (q10, q16, q21, q22), confirmatory factor analysis (CFA) was performed on the 4-domain, 18-item PW-SIS.	318 p <.0001	129	0.06 (0.05 to 0.07)	0.91	0.89	0.86
	Step 3: After exclusion of 2 items with poor factor loading (q6 and q23), CFA was performed on the 4-domain, 16-item PW-SIS.	264 p <.0001	98	0.07 (0.06 to 0.08)	0.92	0.89	0.89
Final	Step 4: Factor loadings from Step 3 were examined, and for the purpose of parsimony, 4 additional items were excluded (q7, q9, q11, q19). Items with the strongest factor loadings in each domain were retained. The resulting 4-domain, 12-item PW-SIS has 3 items in each of the 4 domains.	103 p <.0001	48	0.05 (0.04 to 0.07)	0.96	0.93	0.93