



The recaptured scale technique applied to the multidimensional personality questionnaire constructs: A replication across item format and gender



Thomas J. Bouchard Jr ^{*}, Niels Waller

Psychology Department, University of Minnesota, Minneapolis, MN, United States

ARTICLE INFO

Article history:

Received 26 April 2016

Received in revised form 21 November 2016

Accepted 26 November 2016

Available online 4 January 2017

Keywords:

Exploratory scale construction technique

Recaptured scale technique

Multidimensional Personality Questionnaire

Personality

ABSTRACT

A previous study demonstrated that the Multidimensional Personality Questionnaire (MPQ) scales are highly robust and can be recaptured when the items (True/False format) are embedded in a large and diverse pool of individual difference items. We called this scale robustness test the “recaptured scale technique”. Those results strongly supported the exploratory scale construction technique used to create the MPQ. This study generalizes our earlier findings by demonstrating that the 11 MPQ constructs are also highly robust—as evaluated by the recaptured scale technique—and also can be recovered when they are measured by self-rated (5 point scale) adjectives or brief descriptors. Specifically, using data from a large sample of participants of the Minnesota Twin Registry ($N = 3968$), we factor analyzed the 63-item Minnesota Personality Self-Rating Scales and recovered 17 interpretable factors, 11 of which strongly resembled the 11 MPQ primary scales. The 11 recovered scales were scored on a new data set from the Minnesota Study of Twins Reared Apart (MISTRA) ($N = 310$) and shown to have high convergent and discriminant validity. These recovered scales were also shown to have a factor structure similar to that of the MPQ.

© 2016 Elsevier Ltd. All rights reserved.

1. Introduction

The Multidimensional Personality Questionnaire (MPQ) was developed using a time consuming methodology called the “exploratory scale construction technique” (Tellegen & Waller, 2008). We recently demonstrated, using the “recaptured scale technique”, that the MPQ scales are highly robust and can be recovered when the items that make up the scales are embedded in a much larger set of personality and psychopathology items (Waller, DeYoung, & Bouchard, 2016). That study strongly supported the use of exploratory scale construction as a method of developing robust personality scales. The purpose of this study is to carry out a constructive replication (Lykken, 1968) of our previous work by assessing the robustness of the MPQ constructs—and the exploratory scale construction method—by using a different response format: brief item stems written to assess the facets of the MPQ scales. If the MPQ constructs can be recovered using a different item format, such a finding, taken in conjunction with the findings from the recaptured scale technique cited above, would lend additional support to the hypothesis that the exploratory scale construction

method explicates important psychological traits that are robust to the item formats used to measure them.

The instrument used for the constructive replication in this study is the 63 item Minnesota Personality Self-Rating Scales (MPSRS). The MPSRS was created along with a number of other instruments as part of the Minnesota Twin Registry (MTR) (Lykken, Bouchard, McGue, & Tellegen, 1990) assessment battery. Some of the MPSRS items were conceptualized as brief summaries of the various facets of the MPQ using wording distinct from the MPQ items. Numerous additional facets of individual differences were also included in the MPSRS item set, such as self-ratings of Commons Sense, Intelligence, Memory, Creativity, Mental Energy, Empathy for Animals, and Personal Worth. It should be clear that the MPSRS was not created for the purpose of the analysis reported in this paper as only 16 items (25%) are not targeted at MPQ scales. The size of the item set that should be created for a risky test (Meehl, 1990) of the exploratory scale construction technique is unknown, but it should have many distractors. In order to deal with this issue (i.e., the limited item set) we added 140 additional items from the Minnesota Leisure Time Interest Test (MLTIT) (Lykken, Bouchard, McGue, & Tellegen, 1993) and in a secondary analysis attempted to recover the MPQ constructs from this enhanced item pool.

Because the MPQ and the MPSRS were administered to both the MTR and the MISTRA, we have a very large sample that can be used to factor the MPSRS and assess the convergent and divergent validity of

^{*} Corresponding author at: 280 Storm Peak Court, Steamboat Springs, Colorado 80487, United States.

E-mail address: bouch001@umn.edu (T.J. Bouchard).

Table 1

Pattern matrix for the sixty-three items of the Minnesota Self-Rating Personality Scales based on the Minnesota Twin Registry sample ($N = 3968$), Principal Axis Factoring, Oblimin rotation ($\gamma = 0.25$). Multidimensional Personality Questionnaire Scale names, factor loadings and defining items in bold. Factor loadings of the items from the analysis of the 63 Minnesota Self-Rating Personality Scales items plus the 120 Minnesota Leisure-Time Test items are shown in brackets. Loadings in the later instance have been reflected in a number of instances for the sake of consistency of presentation.

Self-rated items	Factors								
	Well Being	Reverse Harm Avoidance	Stress Reaction	Control	Absorption	Intellect	Achievement	Affability	Alienation
Cheerful	0.69 (0.52)		(−0.26)						
Contentment	0.69 (0.57)		(−0.25)						
Optimistic	0.68 (0.52)		(−0.22)						
Capacity for happiness	0.58 (0.56)								
Interested	0.41 (0.34)						−0.28 (−0.32)		
Thrill-seeking		0.82 (0.67)							
Adventurous		0.82 (0.73)							
Safety-conscious		−0.70 (−0.66)							
Irritability			0.62 (0.68)						
Rage			0.60 (0.60)						
Even-tempered			−0.49 (−0.60)						
Capacity for misery			0.44 (0.56)						
Tense			0.36 (0.57)						
Emotional control			−0.28 (−0.42)						
Freewheeling	(0.28)			−0.70 (−0.56)					
Planful				0.58 (0.62)					
Level-headed				0.34 (0.55)					
Absorbed					0.72 (0.71)				
Image-prone					0.71 (0.68)				
Responsive					0.52 (0.61)				
Mental Energy						−0.68 (−0.55)			
Abstract intelligence						−0.55 (−0.48)			
Concentration						−0.41 (−0.52)			
Ambitious							−0.87 (−0.69)		
Hard-driving							−0.71 (−0.73)		
Urgency							−0.50 (−0.75)		
Affability	(0.24)							−0.50	(−0.22)
Conciliatory			−0.24 (−0.36)		(0.21)			−0.29	
Nurturance								−0.28	
Treated poorly									−0.86 (−0.78)
Exploited									−0.83 (−0.77)
Unlucky	−0.23								−0.41 (−0.52)
Remote memory					(0.25)	(−0.42)			
Recent memory						−0.21 (−0.62)			
Empathy for people					(0.22)				
Empathy for Animals									
Sentimentality		(−0.22)			(0.29)				
Common sense	(0.30)			(0.30)		(−0.23)			
Dominance						(−0.22)			
Persuasive						(−0.22)			
Visible									
Shyness									(0.27)
Personal Worth	0.33 (0.37)								
Creativity					(0.24)	(−0.23)			
Social activism									
Truthfulness				(0.44)					
Morality	(0.25)			(0.36)					
Tough		(0.21)							(0.37)
Aggressive		0.23	0.24 (0.28)						(0.26)
Gregarious									
People-oriented									
Affectionate					(0.26)				
Team spirit									
Conventional Morality									
Endorsing strickness				(0.27)					
Valuing a good reputation				(0.28)					
Respecting parents									(−0.22)
Sensitive		(−0.21)	0.20 (0.46)		(0.21)				
Physical energy							(−0.46)		
Self-discipline				(0.23)		(−0.22)	(−0.34)		
Toughness							(−0.28)		
Neatness				0.22 (0.30)			(−0.35)		
Owls and larks							(−0.42)		
Scale Alpha (MTFR, MISTRA)									
0.79, 0.82 0.75, 0.71 0.71, 0.68 0.55, 0.38 0.69, 0.69 0.69, 0.69 0.72, 0.73 0.58, 0.54 0.69, 0.71									
Status of Factors for Each Gender									
Gender	Well Being	Reverse Harm	Stress	Control	Absorption	Intellect	Achievement	Affability	Alienation
Males	Males OK	Avoidance Males OK	Reaction Males OK	Males OK	Males OK	Males OK	Males OK	Males does not appear	Males OK
Females	Females OK	Females OK	Females OK	Females OK	Females OK	Females OK	Females OK	Females Doublet	Females OK

Note: only loadings above 0.19 are shown for purposes of clarity of interpretation. MTFR = Minnesota Twin Family Registry, MISTRA = Minnesota Study of Twins Reared Apart.

Download English Version:

<https://daneshyari.com/en/article/5036289>

Download Persian Version:

<https://daneshyari.com/article/5036289>

[Daneshyari.com](https://daneshyari.com)