



Motives for Physical Activity Measure - Revised (MPAM-R)

Reliability and Validity of a German Translation

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The Motives for Physical Activity Measure - Revised (MPAM-R, Ryan et al. 1997) questionnaire assesses five motives to participate in physical activities / exercise behavior.

Purpose of the presented analyses was to test the reliability and validity of a German translation of the questionnaire.

Motive	Being physically active to ...
Fitness	be physically healthy / strong / energetic
Appearance	become more attractive / look better / control weight
Competence/Challenge	improve / aquire new skills / meet a challenge
Social	be with friends / meet new people
Enjoyment	have fun / activity is interesting / stimulating / enjoyable

Methods

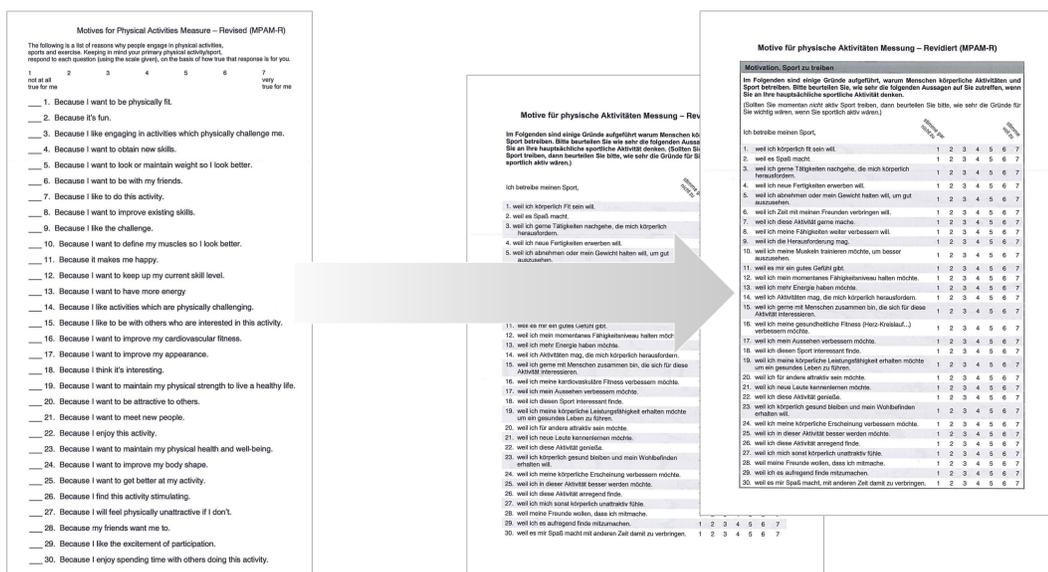
Translation: The original questionnaire was separately translated by two bilingual native German speakers. Divergent results were compared and a consensual translation generated.

Study 1:

A convenience sample of 340 participants (137 men, 203 women, age: $M = 27.6$, $SD = 11.0$) answered the questionnaire as well as additional questions on exercise behavior.

Study 2:

392 participants (316 men, 76 women, age: $M = 39.1$, $SD = 9.4$) answered the questionnaire as part of a health and fitness promotion program (Leyk et al. 2014) at an administrative unit of the Bundeswehr.



Results

Item Analysis

Item analyses indicated only one problematic item: fitness item 3, "Because I want to improve my cardiovascular fitness." ("weil ich meine kardiovaskuläre Fitness verbessern möchte.") showed a lower corrected item-total correlation (.39) and squared multiple correlation (.17). Also it was not answered by 7% of the original study 1 sample.

For study 2 the wording was changed to „weil ich meine gesundheitliche Fitness (Herz-Kreislauf...) verbessern möchte“. This item was answered by all participants. Analyses indicated no marked differences to the other fitness items in this sample.

Reliability: Cronbach's-Alphas

Individual scales show a good to excellent reliability in both studies.

Subscale	Study 1	Study 2
Fitness	.82	.81
Appearance	.88	.89
Competence / Challenge	.92	.86
Social	.82	.84
Enjoyment	.89	.87

Note: font color indicates study: black = study 1, gray = study 2.

Validity

Concurrent and prospective validity was assessed by correlation of the subscales with single items responses (5 point Likert like scales) to the question: What does / would motivate you to exercise?

Physical performance, weight reduction / weight control, health reasons, stress reduction / compensation, social experience, sports are fun.

Scales show consistent validities across studies and time.

Scales	MPAM-R			Fitness			Appearance			Competence / Challenge			Social			Enjoyment			
	S1	S2-t1	S2-t2	S1	S2-t1	S2-t2	S1	S2-t1	S2-t2	S1	S2-t1	S2-t2	S1	S2-t1	S2-t2	S1	S2-t1	S2-t2	
Single Questions																			
Physical performance	.35	.33	.33							.34	.31	.32				.24			
Weight reduction / weight control							.34	.29	.36			-.21							
Health reasons	.25	.27	.28																
Stress reduction / compensation	.18									.22	.24	.28				.18	.28	.32	
Social experience							.27			.22	.35	.33	.50	.57	.61	.28	.41	.42	
Sports are fun							-.20			.34	.44	.41	.30	.26	.29	.47	.58	.57	

Note: only significant results are shown ($p < .001$), highest values are set in bold, S1: study 1, S2-t1: study 2 concurrent data, S2-t2: single items were answered after 291 ($SD = 10$) days ($n = 165$).

Discussion

German translation of the MPAM-R showed good to excellent reliability.

Construct and external validities could be demonstrated: The pattern of correlations between MPAM-R scales and single item scores was consistent across studies and between concurrent and prospective data.

References

Ryan, R. M., Frederick, C. M., Lepes, D., Rubio, N., & Sheldon, K. M. (1997). Intrinsic motivation and exercise adherence. *International Journal of Sport Psychology*, 28, 335-354.

Leyk D., Rohde U., Hartmann N. D., Preuß P. A., Sievert A., & Witzki A. (2014). Results of a workplace health campaign - what can be achieved? *Deutsches Ärzteblatt International*, 111 (18), 320-327.