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Determinants of Exercise Enjoyment

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Introduction

- Positive relationship between enjoyment and positive affect following different types of exercise (Raedeke,2007).
- The form and intensity of aerobic exercise have no impact on the acute psychological responses, including enjoyment (Rendi et al. 2008).
- Anything goes?: What factors actually decides the level of enjoyment seems poorly understood.
- Importance: prevent drop-out, long lasting positive relationship towards physical activity

Aims of the study

1. Develop a Norwegian version of Raedeke`s (2007) Exercise enjoyment scale (EES)
2. Investigate how type of activity, social-psychological factors, sport specific factors and physical shape impact exercise enjoyment.

Participants

- N = 208 students taking part in an introductory course in Sport Science.
- The mean age was 21,4 years (SD=2,2)
- 54,9 % were male.

Activities

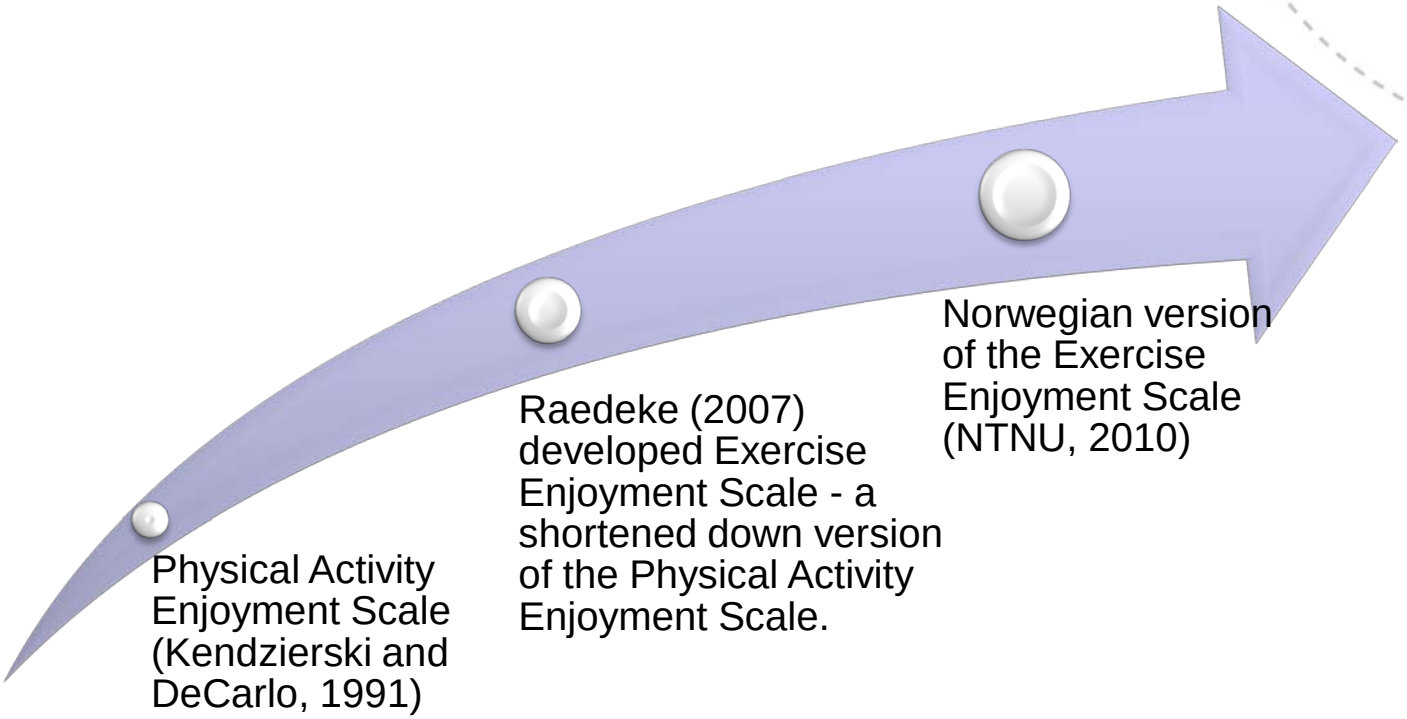
- Handball
  - Duration: 1.5 hour
  - Level: Introductory course
  - Description: Different kind of handball tasks (i.e. passing, shooting, drills), ending with playing a match.
- Aerobics
  - Duration: 1 hour
  - Level: Introductory course
  - Description: Basic hour with aerobics guided by an instructor.
- Testing of physical shape
  - Duration: 3 minutes
  - Level: High
  - Description: run around a volleyball court for 3 minutes. Passing the start the students had to put their hands to the floor. Total meters is a measure of physical shape

Measures

- Rating of percieved exertion: Borg's Scale
  - Scale: 6-20
- Learning*
  - "I learned something during this activity"
- Sport spesific skills*
  - "I have good skills in this activity"
- Sport spesific experience*
  - "I have a lot of experience with this activity"

*7 point likert-scale: totaly disagree → totaly agree

Development of Exercise enjoyment scale



Descriptive statistics

Table 1: Descriptive statistics: Handball and Aerobics

Variables	Handball			Aerobics	
	MEAN	SD.		MEAN	SD.
RPE	14.11	1.97		14.95	2.25
I have good skills in this activity	5.62	1.32		4.52	1.79
I learned something	3.96	1.54		3.29	1.88
I have a lot of experience in this activity	3.15	2.16		2.49	2.06
I enjoyed it	5.83	1.15		4.99	1.52
I felt interested	5.79	1.06		4.71	1.49
I liked it	5.77	1.20		4.82	1.59
I found it pleasurable	4.77	1.25		3.85	1.35
It was a lot of fun	5.94	1.08		4.95	1.72
It was very pleasant	5.58	1.14		4.72	1.50
I felt as though there was nothing else I`d rather be doing	3.87	1.72		2.96	1.69
I was very absorbed in the activity	4.94	1.53		4.26	1.79
ENJOYMENT (INDEX)	5.32	1.01		4.41	1.32

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Statistical testing of the Norwegian EES

Handball

Table 2: Factor loadings and Cronbach if item deleted of the EES

Variables	Factor loadings	Cronbach`s alpha if item deleted
I enjoyed it	0.886	0.890
I liked it	0.895	0.889
It was a lot of fun	0.877	0.891
It was very pleasant	0.792	0.898
I felt interested	0.775	0.901
I was very absorbed in the activity	0.763	0.901
I felt as though there was nothing else I`d rather be doing	0.709	0.912
I found it pleasurable	0.704	0.905

Initial eigenvalue: 5.136, 64.5 % of variance

Cronbachs`alpha: 0.910

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Statistical testing of the Norwegian EES

Aerobics

Table 3: Factor loadings and Cronbach if item deleted of the EES

Variables (Sorted, principal component analysis – from large to small)	Principal component analysis	Cronbach`s alpha if item deleted
I liked it	0.918	0.889
It was a lot of fun	0.918	0.891
I enjoyed it	0.900	0.890
It was very pleasant	0.849	0.898
I felt interested	0.817	0.901
I felt as though there was nothing else I`d rather be doing	0.800	0.912
I was very absorbed in the activity	0.800	0.901
I found it pleasurable	0.643	0.905

Initial eigenvalue: 5.575, 69.7 % of variance

Cronbachs`alpha: 0.936

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Determinants of exercise enjoyment I

Handball

Table 4: Linear regression analysis with EES as dependent variable (N=208)

	B	Std.Error	Beta	t	Sig.	Tolerance
Constant	4.013	.786		5.103	.000	
Gender (female =1, male=2)	.204	.102	.159	2.007	.047	.693
RPE	-.029	.033	-.060	-.884	.379	.956
Physical shape	-.002	.001	-.152	-1.934	.055	.711
Learning	.238	.050	.332	4.811	.000	.917
Sport specific skills	.201	.064	.326	3.157	.002	.410
Sport specific experience	.153	.047	.351	3.295	.001	.385

R Square: 44 % of variance.

F(6, 130)= 16.2, p<.001.

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Determinants of exercise enjoyment II

Aerobics

Table 5: Linear regression analysis with EES as dependent variable (N=184)

	B	Std.Error	Beta	t	Sig.	Tolerance
Constant	1.861	1.201		1.550	.124	
Gender (female=1, male=2)	-.418	.148	-.233	-2.829	.005	.681
RPE	5.184E-5	.001	.003	.037	.970	.675
Physical shape	.041	.042	.071	.988	.325	.889
Learning	.296	.054	.406	5.517	.000	.852
Sport specific skills	.292	.075	.408	3.896	.000	.420
Sport specific experience	.029	.071	.045	.411	.682	.391

R Square: 45 % of variance.

F(6, 126)= 15.8, p<.001.

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Results

- The regression model explained 43 % of the variance in exercise enjoyment in handball, and 44 % of the variance in aerobics. Both turned out statistically significant, respectively [$F(6, 130)= 16.2$, $p<.001$] in handball and [$F(6, 126)= 15.8$, $p<.001$] in aerobics.
- Gender, learning, sport specific skills and experience were statistically significant predictors ($p<.05$) in handball. While, gender, learning and sport specific skills were statistically significant predictors ($p<.05$) in aerobics (not sport specific experience).
- RPE and physical shape were not statistically significant, in handball or aerobics.

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Discussion I

- The Norwegian version of the scale measuring Exercise Enjoyment is a one-dimensional and internally reliable scale
- The scale is suitable for measuring exercise enjoyment in different sports in a naturalistic setting.

Discussion II

- Learning during the activity and having good skills (feeling mastery), are important predictors of enjoyment across different activities.
- Male participants scored higher on enjoyment in handball, whereas female participants scored higher in aerobics
- Physical shape of participants and the intensity of the activity are of little importance when promoting exercise enjoyment.

Conclusions

- Male and female participants enjoy different activities → form of activity is very important
- To achieve enjoyment in sports like handball and aerobics, the content must be adapted to the skill-level of the participants.
- Coaches and teachers are advised to include clear learning goals, and not rely on the activity of playing handball or dancing aerobics itself being sufficient to experience enjoyment.