





Exercise Motivation and Subjective Well-Being: A Study with Self-Determination Theory

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Psychological Well-Being and Exercise: *Feel-Good Factor*

- Exercise makes me feel good

Biddle & Mutrie, *Psychology of Physical Activity*, 2001





POMS pre and post exercise



Morgan, *Med Sci Sports Exerc*, 17: 94, 1985
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Promoting psychological well-being through exercise...

- Thus, can we say:
 - You should do exercise in order to... feel better...

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Subjective Well-Being and Exercise: Mechanisms

Exercise

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??

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Physiological
 •Beta-endorphin;
 •Serotonin;
 •Catecholamins...

Psychosocial
 •Time-out hypothesis
 •Social Support
 •Motivation
 ...

•Amotivation
 •External
 •Introjected
 •Identified
 •Integrated
 •Intrinsic

Subjective well-being

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Continuum of behaviour regulation

Amotivation

Perceived non-contingency
Low perceived competence
Non-relevance
Non-intentionality

Impersonal

REGULATORY STYLES:

External regulation

Introjection

Identification

Integration

ASSOCIATED PROCESSES:

Salience of extrinsic rewards or punishments
Compliance/Reactance

Ego Involvement
Focus on approval from self and others

Conscious valuing of activity
Self-endorsement of goals

Hierarchical synthesis of goals
Congruence

PERCEIVED LOCUS OF CAUSALITY:

External

Somewhat External

Somewhat Internal

Internal

Intrinsic motivation

Interest & Enjoyment
Inherent satisfaction

Internal


From: Ryan & Deci (2000)
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Basic Psychological Needs Underlying Optimal Motivation and Well Being

Autonomy

Competence

Relatedness



Optimal Motivation, Integration, Well-Being

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Purpose

- Analyze the association between motivational constructs from Self-Determination Theory and depression, anxiety and stress
- Hypothesis: Controlling for exercise level, more internal, self-determined forms of exercise motivation are associated with lower psychological distress.

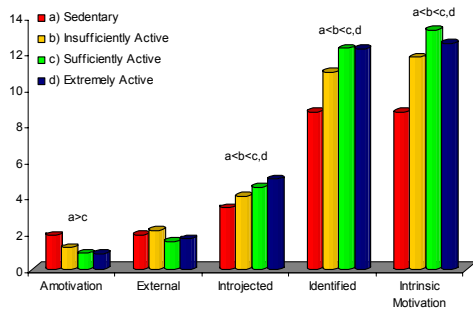
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Methods

- Participants
 - Convenient sample of 715 subjects (458 women, 27.3±9.0 years)
- Measures
 - Exercise weekly frequency (assessed with one single item)
 - Sedentary (19.5%), insufficiently active (34.2%, 1-2/w), sufficiently active (41.6%, 3-6/w) and extremely active (4.8%, >6/w).
 - Depression, Anxiety and Stress Scale (DASS: Lovibond & Lovibond, 1995)
 - Behavioural regulation for exercise questionnaire – 2 (BREQ-2: Markland & Tobin, 2004)
 - Internal consistency: .65< α <.88

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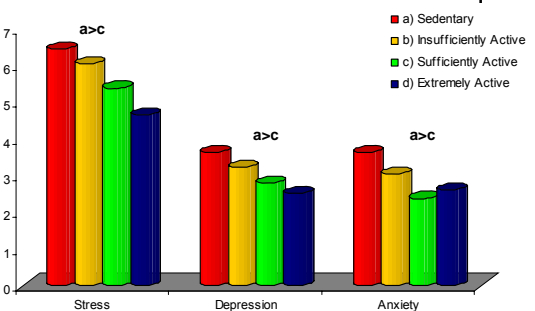
Group comparison: Exercise motivation



Note: The letters above columns represent Tukey's post-hoc

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Group comparison: Stress, Depression & Anxiety



Note: The letters above columns represent Tukey's post-hoc

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Intercorrelations

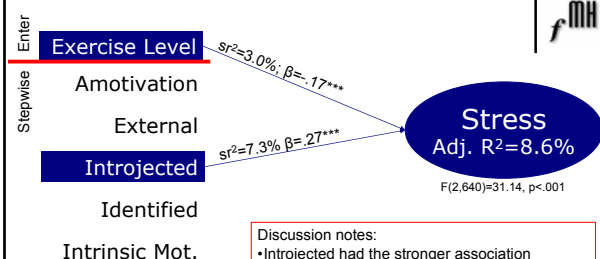
| | Stress | Depression | Anxiety |
|----------------------|---------|------------|---------|
| Amotivation | .12 ** | .27 *** | .27 *** |
| External | .16 *** | .26 *** | .29 *** |
| Introjected | .26 *** | .28 *** | .26 *** |
| Identified | .09 * | .02 | .01 |
| Intrinsic Motivation | -.02 | -.09 * | -.12 ** |

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

Simplex pattern, with higher values of stress, depression and anxiety associated with higher values of the more negative behavioural regulations. Conversely, stress, depression and anxiety were negatively associated with intrinsic motivation.

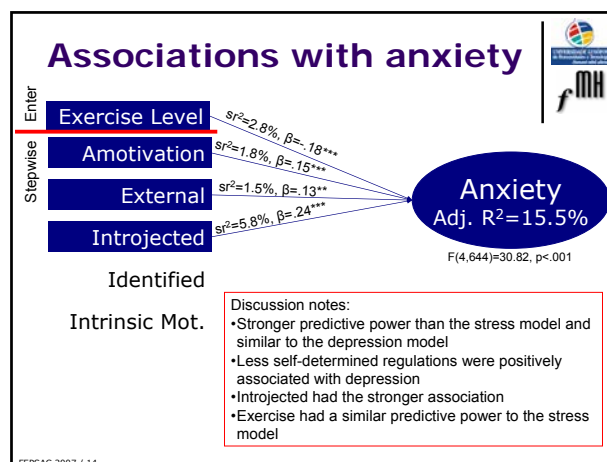
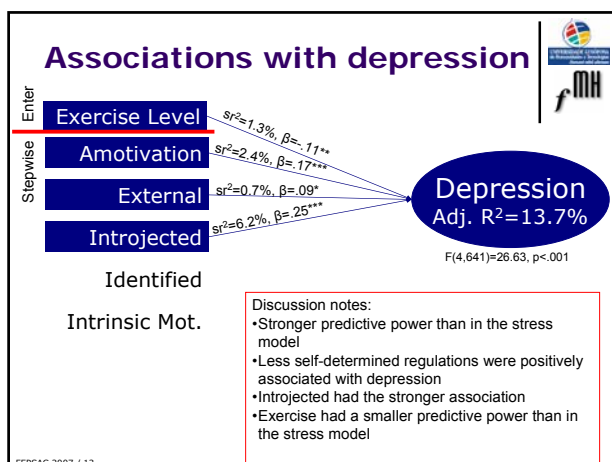
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Associations with Stress



Discussion notes:
 •Introjected had the stronger association
 •Exercise was negatively associated (sedentary was coded with 0 and extremely active with 3 in the data file)

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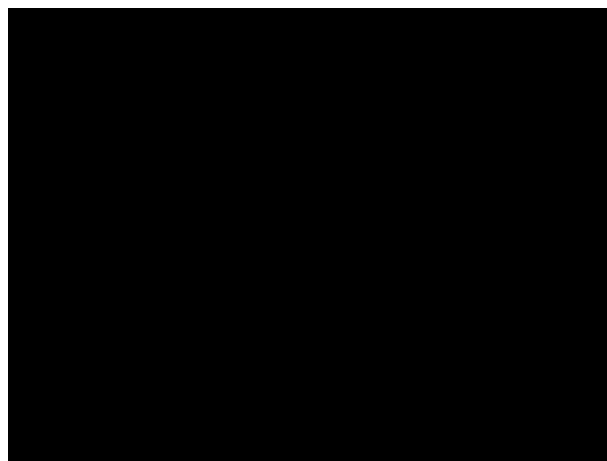
- ### Summary of results
- Exercise level is positively associated with psychological well-being and more self-determined behaviour regulations
 - Less self-regulated types of motivation were associated with higher psychological distress, even when controlling for exercise level
 - Introjected regulation was particularly predictive of depression, stress and anxiety
 - Intrinsic motivation did not contribute to subjective well-being beyond exercise level
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Promoting psychological well-being through exercise...

- Thus, can we say:
 - You should do exercise in order to... feel better...

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- ### Discussion
- Exercise does not always makes one feel better (note: limited measure of exercise)
 - In introjected regulation a person is motivated by internally imposed controls and self-esteem contingencies
 - Exercise is done by guilt; thwart its psychological benefits (Edmunds et al, 2007)
 - Not being able to exercise decreases well-being more intensely (Berger & Motl, 2001)
 - Exercise is being socially driven (McCabe & Ricciardelli, 2003)
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Limitations and Implications

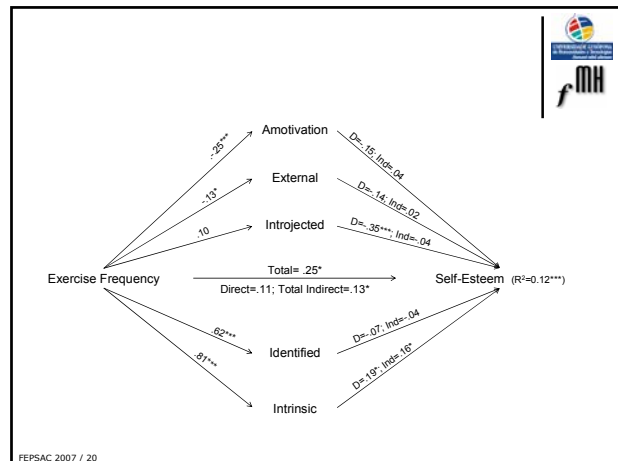
• Limitations

- Did not control for gender differences
- Only one measure of SDT constructs
- Psychological distress vs. well-being measures
- Exercise was assessed by self-report
- No mediation analysis

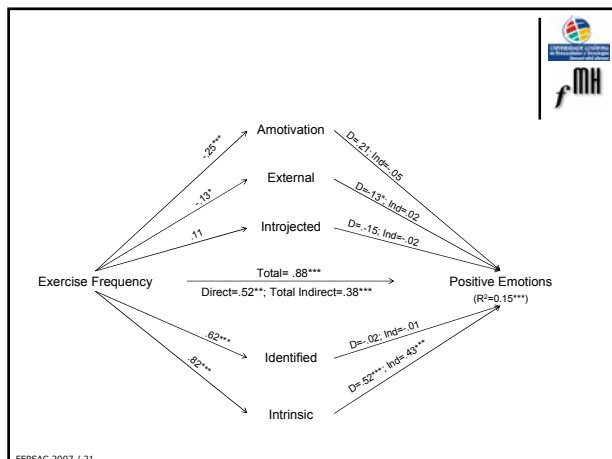
• Implications

- Assure that people take on exercise that they can self-regulate in a autonomous fashion, to promote the feel-good factor

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