

PSYCHOLOGICAL CORRELATES OF EXERCISE BEHAVIOR AMONG UNIVERSITY STUDENTS: A STUDY AT A MAJOR ACADEMIC TRANSITION

Filipe Roriz, José Fernando Cruz, Rui Gomes, & Fernando Parente
(University of Minho, Braga - PORTUGAL)

Introduction

Considerable research evidence for the psychological benefits of regular exercise has been documented in the literature. Affective changes in the mood and emotional states of individuals have also been reported and related with healthy exercise behaviors. Looking for a closer examination of the processes implicated in the behavioral intentions and involvement in regular exercise, a major goal of this investigation was to study the psychological correlates of exercise behavior among university students in the transition from high school to university studies.

Method

The cross-sectional analysis of data from a larger prospective longitudinal study at a Portuguese university ("Universidade do Minho") is reported. Participants were first year undergraduate students from 44 different courses (N=1549; 669 male, 880 female), aged 17 to 47 years (M=18.6). At the time of their first registration in the university, participants completed a theory guided questionnaire, containing self-report measures of exercise behaviors (past, typical, and actual), intentions to engage in regular exercise, attitudes toward exercise, perceived behavioral control, preparatory behaviors, mood states, perceived vulnerability, outcome expectations /evaluations (costs and benefits), subjective norms, as well as psychological instruments measuring mood states, life orientation (optimism, pessimism), and general life satisfaction (Figure 1).

Results

1. Overall, at the beginning of studies in the university, the majority of students were not involved in regular exercise behavior, only 47% were regular exercisers (n = 705), while 10,6% (n = 150) did not exercise anytime/per week in the preceding six months, with a similar pattern of exercise behaviors, per week, occurring in the preceding month (28.1% (n = 409) and in the last week (48,6% (n = 704).

2. Significant gender differences emerged in psychological and exercise variables (Figure 2). Separate discriminant analyses, for each gender, revealed that engagement in preparatory behaviors, perceived vulnerability, perceived behavioral control, and pessimism were the significant groups of variables discriminating male regular exercisers from non exercisers (69,8% correctly classified). For female students, only preparatory behaviors and perceived behavioral control were the discriminating variables between the two groups, with a similar percentage of cases correctly classified (69, 4%).

3. With the exception for "negative" mood states (depression, tension, anger, fatigue and depression/confusion), significant differences in psychological variables emerged between four distinct sub-groups of students not involved in regular exercise behaviors: "non exercisers at all" (10.6%); "ex-exercisers" (17.8%); "sporadic" exercisers (35.5%); and "intenders" of regular exercise behaviors (36.6%).

4. Intentions to exercise regularly were positively predicted by personal behavioral control, internal barriers to exercise, preparatory behaviors, psychological mood states (Vigor), perceived vulnerability and subjective norms (42,2 % of variance explained). In the regular exercise group of students, such intentions of engagement were positively predicted by measures of perceived behavioral control, preparatory behaviors, psychological vigor, life satisfaction and perceived vulnerability (34,2% of variance explained).

Figure 1. Exercise Behavior Measures and Psychological Instruments

BEHAVIOR AND ATTITUDES TOWARD EXERCISE QUESTIONNAIRE UNIVERSITY OF MINHO (BATEQ-UM; Cruz & Gomes, 2007) (*)

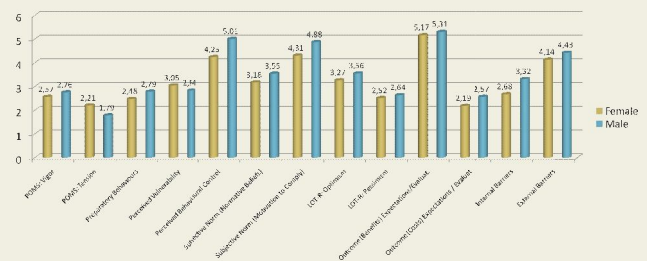
- Assessment of Past and Current Exercise Behaviors (PCEB)
- Preparatory Behaviours of Exercise (PBE)
- Attitudes Toward Exercise (ATE)
- Outcome Expectations (Costs and Benefits) of Exercise (OEE-CB)
- Barriers Toward Exercise (BTE)
- Perceived Behavioral Control (PBC)
- Perception of Vulnerability (PV)
- Subjective Norms (Normative Beliefs - Motivation to Comply) (SN-MC)
- Intention to Exercise Regularly (next 3 months) (IER)

PSYCHOLOGICAL INSTRUMENTS – MEASURES AND DIMENSIONS (Portuguese Versions; Cruz et al., 2008)

1. Life Orientation Test – Revised (LOT-R): Carver & Scheier (2001).
Optimism; Pessimism
2. Satisfaction With Life Scale (SWLS):
Diener, Emmons, Larsen & Griffin (1985).
3. Profile of Mood States – Short Form (POMS):
(McNair, Lorr & Droppleman (1981).
Depression; Anxiety-Tension; Fatigue;
Psychological Vigor; Confusion; Anger-Hostility.

(*) Assessment of psychological processes and constructs associated with exercise and physical activity practice, including measures of variables and dimensions theoretically guided by the main models of exercise behavior and prediction of behavioral change (e.g., Social-Cognitive Theory, Theories of Planned Behavior and Reasoned Action, Health Action Process Approach).

Figure 2 . Significant Gender Differences (Means - Total Sample)



Discussion / Conclusions

1. The present study corroborate previous research, highlighting the interrelationships between behavioral, cognitive and affective variables associated with the performance (and nonperformance) of regular exercise behaviors. Support for some of the main hypothesis derived from psychological social-cognitive models of exercise adherence and behavior change was found. But these preliminary results also challenge traditional intervention approaches to exercise and health promotion, focused on general and universal strategies targeted for all individuals.

Results also point to the implementation of differential strategies targeted for changing specific psychological mechanisms, namely perceived behavioral control and self-efficacy beliefs, as well as preparatory behaviors, in order to implement intentions and goals of performance and engagement in regular exercise behaviors. It is concluded that the first year at the university seems to be an ideal target point or platform for changing, promote and increase healthy sport and exercise behaviors.

