

## THE INFLUENCE OF ANXIETY, HOSTILITY AND TYPE D PERSONALITY ON HEALTH BEHAVIORS OF HIGHER EDUCATION STUDENTS

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**Introduction:** Several studies demonstrate that type D personality and negative emotions are associated with health risk behaviors and determine the incidence and progression of cardiovascular disease in initially healthy individuals.

**Objectives:** The main goals of this study were to evaluate the incidence of anxiety, hostility and type D personality and its influence on health risk behaviors in a sample of Portuguese college students.

**Methods:** In this cross-sectional study, 151 participants (87.4% female) were recruited from the School of Allied Health Sciences - Porto Polytechnic. Every student aged over 18 attending any of the graduate classes was included in the sample. Participants completed a brief sociodemographic and clinical questionnaire, the Lifestyle Questionnaire in Higher Education, the visual analog scale RICH, two subscales from the Symptom Checklist-90-Revised (hostility and anxiety), and the Type D Personality Scale.

**Results:** A mild hostility and anxiety disturbance was obtained with the sample. Type D personality was present in a significant number of students. A higher prevalence of anxiety was observed mainly with women; positive associations between hostility and smoking, alcohol and coffee consumption as well as a negative association between hostility, anxiety and type D personality and lifestyle were obtained. Finally, alcohol consumption, coffee intake, physical activity and diet assumed statistical relevance in explaining health behaviors.

**Conclusions:** Given the associations found between lifestyle and hostility, anxiety and type D personality, and considering the predictors of health behaviors found in this study, we conclude that higher education students may benefit from a premature evaluation in prevention of future cardiovascular disease.

**Keywords:** Anxiety. Hostility. Type D personality. Students.

## THE RADBOUD FACES DATABASE: THE INFLUENCE OF THE SEX OF THE MODEL AND RESPONDENT IN THE FACIAL EXPRESSION RECOGNITION

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**Introduction:** The investigation of emotional phenomena using simple presentation slides containing drawings, words or images is affected by factors such as the low researchers' little control of the

emotion-inducing stimuli. The studies in the domain of emotion recognition may benefit from databases such as Langner et al (2010) Radboud Faces Database (RaFD) in which particular characteristics of the emotion-inducing stimuli, such as facial expression, ethnicity, age, sex and the models' gaze direction are controlled.

**Objectives:** To obtain Portuguese normative data, in a large community sample regarding the RaFD for the identification of seven facial emotional expressions (anger, sadness, fear, disgust, surprise, happiness, contempt) and a neutral expression; to study the influence of the sex of the model and the sex of the respondent in the performance of this task.

**Methods:** A convenience sample of 1246 male and female students from several university-level institutions participated in a task of facial expression recognition. Most were female (1054) and 192 were male. A total of 312 adult Caucasians emotional faces with frontal gaze were displayed. A mixed ANOVA, with "sex of the model" as the "within-subjects" factor and "sex of respondent" as the "between-subjects" factor, was conducted in SPSS 20.0.

**Results:** Similarly to the original study, our results show high recognition levels of the facial expressions presented. No differences in levels of recognition were observed regarding the sex of the model or the sex of the respondent, though some emotions were more easily recognized for one than for the other sex of the respondents.

**Conclusions:** The RaFD is adequate for the study of emotions in Portuguese studies. Moreover, its stimuli are gender-unbiased.

**Keywords:** RaFD. Emotions. Recognition facial expressions.

## IMMEDIATE EFFECTS OF FOUR MAT PILATES EXERCISES ON POSTURAL SWAY OF YOUNG ADULTS WITH LOW BACK PAIN

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**Introduction:** The long term effects of Pilates exercises have been well documented, nonetheless the immediate effects of mat Pilates exercises on postural sway of subjects with low back pain (LBP) has not yet been studied.

**Objective:** To determine the immediate effects of four mat Pilates exercises on postural sway of young adults with LBP.

**Methods:** 46 university students with LBP participated in a randomized controlled trial in June and July of 2014. Participants were randomized to a Pilates (n = 23, 10 males; age: 21.8 ± 3.2 yrs; weight: 64.5 ± 11.5 kg; height: 1.70 ± 0.1 m) and a control group (n = 23, 9 males; age: 22.8 ± 3.6 yrs; weight: 62.5 ± 9.9 kg; height: 1.68 ± 0.1 m). Postural sway was assessed with a force plate (AMTI MSA-6), before and after the intervention or rest period. To assess postural sway, participants stood quiet in the force plate for 90s, with eyes closed on an unstable surface. The intervention lasted 20 min and consisted on four Pilates exercises: single leg stretch (level 1), pelvic press (level 1), swimming (level 1) and kneeling opposite arm and leg reach.

**Results:** At baseline, no differences were found between groups in postural sway. The Pilates group improved in all the postural sway values (COPx: 5.7 ± 1.0 to 5.1 ± 0.7 cm, p = 0.005; COPy: 4.4 ± 1.0 to 3.8 ± 0.7 cm, p < 0.001; Total COP Oscillation: 255.2 ± 55.9 to 210.5 ± 42.7 cm, p < 0.001; Area of COP: 11.5 ± 3.4 to 9.7 ± 2.7 cm<sup>2</sup>, p = 0.02 and Velocity: 2.8 ± 0.6 to 2.3 ± 0.5 cm/s, p < 0.001). Control group only improved in velocity (2.8 ± 0.5 to 2.6 ± 0.5 cm/s, p = 0.009) and total COP oscillation (248.5 ± 45.3 to 237.3 ± 47.2 cm, p = 0.009). However, the improvements in the Pilates group were significantly greater than those of the control group.