Facial Expressions and Performance: Testing the Effects during a Muscular Endurance Task

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INTRODUCTION: A number of emotional factors influence the outcome of everyday tasks. Mood states such as happy, sad, and angry, for instance, are thought to impact performance-based activities. Recent research (Brick, McElhinney, & Metcalfe 2017) also suggests that mood states mediated by facial expressions affect running economy and physiological variables such as: VO_2max, ratings of perceived exertion (RPE), and heart rate (HR). However, to date, there is a lack of literature concerning facial expressions' potential effects on muscular endurance tasks. **PURPOSE:** The purpose of this study was to test the role of facial expressions and consequent mood states on RPE and time on task during a handgrip squeezing task. **METHODS:** Forty participants (20 female, 20 male), ranging from age 18-25, took part in this study. Participants were randomly assigned into one of the following facial or control conditions: (1) sad, (2) happy, (3) angry, and (4) control (no facial expression). A baseline measure of maximal squeezing value was taken. Participants were instructed to squeeze the dynamometer at 30% of their maximal squeezing value up to volitional fatigue. Participants were also instructed to keep their assigned facial expression and reflect on a memory that provoked that expression in the course of their squeezing performance. Participants in the control group were not asked to hold any facial expressions or reflect on related memories. RPE and time on task were recorded at task completion. **RESULTS:** Preliminary results from one-way ANOVA analyses showed no significant differences in RPE, $F_{(3,36)} = 1.08$, $p=.37$ and time on task, $F_{(3,36)} = 1.4$, $p=.26$ between the conditions. **CONCLUSION:** Although the results were not significant, role of facial expressions and mood states should be further investigated within strength and endurance settings. From a practical standpoint, exploring the link between moods and performance can provide practitioners with tools to promote performance while accounting for individuals' general well-being and relevant mood states.