Psyching-up and Track Athletes:
A Preliminary Investigation

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Although there is some evidence that cognitive factors may influence motor performance (e.g., Corbin, 1967; Mahoney & Avener, 1977; Richardson, 1967a, 1967b; Suinn, 1976, 1977) little literature exists on the role that specific cognitive strategies play in improving motor performance. Recently, however, Shelton and Mahoney (1978) conducted the first study specifically designed to investigate the content and effects of cognitive strategies on motor performance. Their results showed that psyching-up improved performance on a hand-dynamometer strength task and that subjects employed any number of different cognitive strategies (e.g., preparatory arousal, imagery, attentional focus, self-efficacy statements).

Weinberg, Gould, and Jackson (1980) have recently extended this research by examining the effects of psyching-up strategies on motor performance involving speed, strength, and balance. These studies indicated that the effects of psyching-up were task specific, with performance increments only being observed on the strength task. In addition, the subjects reported that three most frequent psych-up techniques were attentional focus, imagery, and preparatory arousal. However, the previous studies investigating the psyching-up/performance relationship were conducted in controlled laboratory settings. Recently, researchers in the area of sport psychology (e.g., Martens, 1979; Suinn, 1980) have expressed the need for more field research so that we can gain greater insight into the complex social milieu in which sport competition actually occurs. Thus, it was the purpose of the present investigation to extend the laboratory research concerning psyching-up strategies to a field setting using college sprinters and hurdlers.

Experiment 1

Method

Subjects. Subjects were eight male and eight female hurdlers and sprinters from the North Texas State University Track Team. Each subject performed alone in their respective event (100-yard dash, 60-yard hurdlers) under both psych-up and control

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instructions. Thus, a one-way design was employed with psych-up/control being a within-subject variable. To avoid effects of fatigue or learning, the order in which subjects performed under psych-up and control conditions was counterbalanced.

Procedure. Before starting the experiment, all subjects were asked to complete an “informed consent” which reminded them of their rights as subjects. Subjects were informed that the experiment was designed to determine different thoughts and feelings of male and female track athletes when performing their respective events. They were not, therefore, aware of the hypothesis of the study. In the psych-up condition, subjects were instructed to psych-up 1 min prior to their race. Subjects were told that psyching-up meant to mentally prepare themselves for maximum performance and that they should employ the technique with which they felt most comfortable. In the control condition the experimenter talked to subjects 1 min prior to their race. (One min is a common interval between the starters’ commands and the firing of the gun.) Subjects ran a total of six races alone (three under each condition) over a course of 2 weeks with no more than one race per day. The races were conducted during their regular track workouts, although no other runners were on the track at the time of each race. The means of the three trials under each condition were used as the dependent variable. After each race, subjects responded to an open-ended question which asked them to describe the psych-up technique they employed.

Results and Discussion

To test for any order effects a $2 \times 2$ (order $\times$ psych-up/control) analysis of variance was employed. No significant order effects were found. Therefore, a one factor ANOVA with repeated measures was used to analyze the performance data. Results indicated a significant psyching-up main effect, $F(1,15) = 82.37, p < .01$, with faster running times displayed in the psych-up condition ($M = 9.49$ sec) than in the control condition ($M = 9.88$ sec). The proportion of within-subject variation accounted for by the psych-up/control manipulation was .85. Finally, to determine if the psych-up effects were due to just a couple of athletes having large improvements, a nonparametric sign test was employed. Fifteen of 16 athletes decreased their time in the psych-up condition ($p < .01$) as compared to the control condition.

To determine the specific psych-up strategies employed by the sprinters and hurdlers, athletes answered an open-ended question which asked them to describe the content of the psych-up strategy they employed. Two independent raters were used to classify the psych-up techniques used and interrater agreement was assessed at .88. In accordance with Weinberg et al. (1980) and Shelton and Mahoney (1978), the following psych-up techniques were identified along with the percentage of subjects employing each technique: preparatory arousal (7%), imagery (16%), self-efficacy statements (25%), attentional focus (16%), and relaxation/distraction (25%). Interestingly, however, one additional psych-up strategy was employed in this field study. This strategy was termed “religious beliefs” (11%) and was characterized by statements such as “I prayed to God to give me the strength to do well.” This might reflect the ego-involvement of the athletes in their events and the importance they place on performing up to their capabilities. This is consistent with Gould, Weiss, and Weinberg’s (1981) field study on collegiate wrestlers, where athletes also reported employing religious beliefs as a mental preparation strategy. Finally, it should be noted that 50% of the subjects employed more than one psych-up technique.