Researches have reported a relationship between precompetitive state anxiety and performance (e.g., Gerson & Deshaies, 1977; Highlen & Bennett, 1979; Weinberg & Genuchi, 1980) and between skill level and precompetitive state anxiety (e.g., Meyers, Cooke, Cullen, & Liles, 1979). Performance may be a function of both psychological factors and ability (Henson, 1976, p. 41). If so, ability differences may confound interpretations of the anxiety performance relationships (Katahan, 1966). Research which does not directly account for ability may miss more complicated relationships such as an anxiety/ability interaction (Spielberger, 1962; Hodges & Durham, 1972), or may produce spurious correlations between anxiety and performance which may stem from ability rather than anxiety.

The present research, as well as attempting to replicate earlier findings regarding the relationship between precompetitive state anxiety and performance, sought to extend this work by focusing on the relationship between anxiety and performance for three different ability levels. It was hypothesized that golfers exhibiting lower levels of precompetitive state anxiety would perform better than golfers exhibiting higher levels of precompetitive state anxiety (Oxendine, 1979). It was further hypothesized that this relationship between state anxiety and performance would be similar at three different levels of golf ability.

Method

Subjects and Design

Male amateur golfers (N = 103), with established United States Golf Association (USGA) handicaps from 0-16 (M = 5.32, SD = 3.82), were studied in conjunction with a prestigious golf tournament.

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Measures and Procedures

A 10-question Competitive Short Form of the State Anxiety Inventory (CSAI) was used to measure state anxiety (Martens, 1977). Subjects also reported their current USGA handicap. The USGA handicap procedure is highly systematic and provides handicap scores based on the average score over par that an individual takes to complete an 18-hole round of golf. The handicap is used to assess progress, skill level, and to enable players of differing abilities to compete on an equal basis. Participants reported to the starter's table where the questionnaire was completed approximately 3-5 minutes prior to teeing off (Huddleston & Gill, 1981). At the completion of each day's round, performance scores (18 hole scores) were recorded from the official scoreboard.

Results and Discussion

Mean state anxiety scores and golf scores for each day of competition, for three handicap groups (low = 0-2, middle = 3-7, and high = 8-16), are presented in Table 1. These groupings represented approximately the lower 25%, the middle 50%, and the upper 25% on handicap scores. Two-way repeated measures ANOVA were performed separately on precompetitive CSAI scores and golf scores. For golf scores, there was a statistically significant main effect for handicap, $F(2,99) = 72.92, p < .0001$. Low handicappers performed better than middle handicappers, who performed better than high handicappers. The main effect of day was not statistically significant, but there was a statistically significant handicap by day interaction, $F(4,198) = 2.81, p < .05$. There was little change across the days in the average golf scores of middle and low handicappers, while high handicappers scored better on the first day than on the second and third days. Pearson correlations between handicap and golf scores were $r = +.60, p < .001$, for Day 1, $r = +.72, p < .001$, for Day 2 and $r = +.68, p < .001$, for Day 3.

For anxiety scores there was a statistically significant main effect for day, $F(3,198) = 12.47, p < .001$. State anxiety scores were lower on Day 3 than on Days 1 and 2. The main effect for handicap, $F(2,99) = 3.00, p < .10$ and the interactive effect of handicap and day, $F(4,198) = 1.96, p < .10$ approached conventional levels of statistical significance. The low handicap group had lower state anxiety than the middle and high handicap groups. The Pearson correlations between handicap and state anxiety were: $r = +.15$, n.s., for Day 1, $r = +.24, p < .02$, for Day 2, and $r = +.30, p < .01$, for Day 3. In other words, lower handicappers had lower state anxiety than higher handicappers on Day 2 and Day 3. While state anxiety tended to go down over the 3 days for the middle and low handicappers, it remained fairly constant for the high handicappers (see Table 1).

State anxiety and performance were not correlated on Day 1, $r = +.01$, but were positively correlated on Day 2, $r = +.21, p < .05$, and on Day 3, $r = +.23, p < .05$. On Day 2 and 3 better performance was associated with lower state anxiety. It appears that lower precompetitive state anxiety enhances golf performance. These results, including the decrease in state anxiety over the days of competition, replicate the findings of Weinberg and Gunuchi (1980). The decrease in state anxiety from the first to last day of the tournament may have resulted from shifts in the relative tournament standing of the golfers (Weinberg & Gunuchi, 1980). In other words, golfers