Goal Setting and Goal Achievement in Marathon and Half-Marathon Runners

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The Annual Mary Lou Fulton Mentored Research Conference showcases some of the best student research from the College of Family, Home, and Social Sciences. The mentored learning program encourages undergraduate students to participate in hands-on and practical research under the direction of a faculty member. Students create these posters as an aide in presenting the results of their research to the public, faculty, and their peers.
Goal-setting in sports provides multiple benefits. These include overcoming fear of failure (Wikman, Stelter, Melzer, Hauge, & Elbe, 2014), performing better in both training and competition (Filby, Maynard, & Graydon, 1999), and increasing motivation (Sullivan & Strode, 2010). Marathon runners and half-marathon runners are included among the beneficiaries of goal-setting.

In this study, runners in the Utah Valley Marathon filled out a pre-race survey, which included their expected time for the race and their goal time. We noted that there was often a difference between the two. We hypothesized that this difference, which we called goal specificity, would predict finish time and goal achievement.

We operationally defined goal achievement as the difference between runners’ goal time and actual time.

We also hypothesized that experience (number of previous marathons, training miles per week, and longest training run), confidence, motivation for running (competition and/or personal goal achievement) would predict goal specificity, finish time, and goal achievement.

### Measures

- **The Motivation of Marathoners Scale (MOMS):** 18 questions designed to determine the motives of participants and how intensely they are motivated by those motives (Ogles, 2016).
- **Performance Anxiety Scale (PAS):** 20 questions designed to assess cognitive anxiety, somatic anxiety, and confidence (Ogles, 2016).

### Procedure

- Runners in the Utah Valley Marathon were invited to participate in the study through an email from the race director containing a link to a pre-race web survey. The email was sent 11 days prior to the race.
- The pre-race questionnaire stated that there would be a follow-up survey after the race.
- At the conclusion of the race, runners were emailed again with a link to a short post-race web survey.
- Participants were incentivized with the opportunity to win one of 200 $10 Amazon gift cards.

### Analysis

We conducted 3 hierarchical regression analyses predicting goal specificity, goal achievement, and finish time for marathoners and half-marathoners, respectively.

To predict goal specificity, independent variables included the experience variables in Step 1, confidence in Step 2, and the motivation variables in Step 3.

We used the same independent variables to predict goal achievement and finish time, but also added goal specificity in Step 4.

### Results

- We found that goal specificity predicted finish time and goal achievement for both marathon and half-marathon runners, with one exception. It did not predict finish time for marathon runners, though it was close to predictive. None of the other variables predicted goal achievement.
- Experience predicted goal specificity in half-marathon runners.
- Experience and motivation for running predicted finish time in both marathon and half-marathon runners.

### Discussion

- Some of the results of the study were not surprising. We fully expected that experience and motivation for running would predict finish time. The fact that confidence did not add any significance was surprising.
- Also surprising was the finding that none of our variables predicted goal achievement except goal specificity.
- Another finding was that experience predicted goal specificity for half-marathon runners, but not for marathon runners. The reason for that could be because there is a wider variety of experience in the half-marathon group, both beginners and more experienced runners. In contrast, most marathoners are more experienced.
- The most relevant finding to us was that goal specificity predicted finish time for half-marathon runners. It was close enough to predictive of finish time for marathon runners that it deserves attention.
- Runners can apply this by setting a finish time goal that is close to what their expected finish time is. Setting a goal that is just a little faster or slower than the expected time could push them to run faster.

### References