

Mental Toughness: Trait or State? A Case of Female, NCAA Division I Soccer Players

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ABSTRACT

The importance of *mental toughness* (MT) in sport settings is well recognized. However, there is an ongoing debate on whether MT is a state or a trait. Recent findings supports the notion that, although there is considerable stability, MT levels could fluctuate over time. Undoubtedly, this has implications over the likelihood of developing MT and its conceptualization. **PURPOSE:** To examine whether MT levels fluctuate significantly or are relatively stable over time. **METHODS:** All 30 players of the same Atlantic 10 women's soccer team agreed to participate ($M_{age}= 20.3$, $SD=1.7$). The Mental Toughness Index (MTI) was used for data collection through Qualtrics. Seven assessments took place in pre-season and during the season on a bi-weekly basis. To compare the MTI ratings across time, a repeated measures ANOVA model was estimated along with a profile plot of average MTI scores across time in SPSS. **RESULTS:** On average, MTI scores were very stable across time in terms of their means and standard deviations. The average scores across the seven administrations were 46.6, 45.9, 47.2, 47.8, 47.7, 46.0, and 47.1, respectively. These differences were not significant ($F = 0.32$, $p = .93$). **CONCLUSION:** Although there was considerable attrition across time, the results indicate that MT scores did not fluctuate significantly in a period of three and a half months without a targeted MT intervention. Therefore, the concept appeared trait-like. Our findings are in agreement with Clough et al. (2002), Crust (2007), and Hardy et al. (2014), but not in consensus with Harmisson (2011) and Gucciardi et al. (2015; Study 4). MT practitioners may need to consider not only when changes on the levels of the construct should be anticipated, but also the possibility of targeted interventions be required. MT researchers may need to reflect on what these outcomes add on the current conceptualizations and on the temporal intervals between repeated measurements that avoid carryover effects, but are still able to capture intra-individual variations. Future studies should include longitudinal designs, targeted interventions, and modeling in a multi-level framework (e.g., growth model). Limitations may include small sample size, self-assessment, and high attrition.