

Journal of Athletic Training

Home For Journal For Authors For Reviewers For Readers For Subscribers For Students Help

Home > [Journal of Athletic Training](#) > [March/April 2008](#) > Development of the Mental, Emotional, and Bodily Toughness Inventory i...

[Advanced Search](#)

National Athletic Trainers' Association Links

- [NATA Home](#)
- [Online Manuscript Submission and Review](#)
- [Advertising](#)
- [Facts & Figures](#)
- [Editor-in-Chief](#)
- [Journal Editors](#)
- [Editorial Board](#)
- [NATA Position Statements](#)
- [PubMed Central](#)
- [Search PubMed](#)
- [Contact Us](#)

[◀ Previous Article](#) [Volume 43, Issue 2 \(March/April 2008\)](#) [Next Article ▶](#)

 [Add to Favorites](#)  [Share Article](#)  [Export Citations](#)

 [Track Citations](#)  [Permissions](#)

[Full-text](#)

[PDF](#)

Article Citation:

Mick G. Mack, Brian G. Ragan (2008) Development of the Mental, Emotional, and Bodily Toughness Inventory in Collegiate Athletes and Nonathletes. *Journal of Athletic Training*; March/April 2008, Vol. 43, No. 2, pp. 125-132.

doi: 10.4085/1062-6050-43.2.125

Original Research

Development of the Mental, Emotional, and Bodily Toughness Inventory in Collegiate Athletes and Nonathletes

Mick G. Mack, PhD and Brian G. Ragan, PhD, ATC

University of Northern Iowa, Cedar Falls, IA

Abstract

Context: The assessment of an individual's mental toughness would assist clinicians in enhancing an individual's performance, improving compliance with the rehabilitation program, and improving the individual treatment program. However, no sound measure of mental toughness exists.

Objective: To develop a new measure of mental toughness, the Mental, Emotional, and Bodily Toughness Inventory (MeBTough).

Design: Participants were invited to complete a 45-item questionnaire.

Setting: University research laboratory.

Patients or Other Participants: A total of 261 undergraduate students were recruited to complete the questionnaire.

Main Outcome Measure(s): The Rasch-calibrated item difficulties, fit statistics, and persons' mental toughness ability estimates were examined for model-data fit of the MeBTough.

Results: Forty-three of the 45 items had good model-data fit with acceptable fit statistics. Results indicated that the distribution of items was fittingly targeted to the people and the collapsed rating scale functioned well. The item separation index (6.31) and separation reliability statistic (.98) provided evidence that the items had good variability with a high degree of confidence in replicating placement of the items from another sample.

Conclusions: Results provided support for using the new measure of mental, emotional, and bodily toughness.

Keywords: [Rasch model](#), [psychological skills](#)

Volume 43, Issue 2
(March/April 2008)

[◀ Previous](#) [Next ▶](#)

Journal of
Athletic Training



[Current Issue](#)
[Available Issues](#)

Journal Information

Print ISSN 1062-6050

eISSN 1938-162X

Frequency Bimonthly:

January/February
March/April
May/June
July/August
September/October
November/December

Register for a Profile

Not Yet [Registered?](#)

Benefits of Registration Include:

- A Unique User Profile that will allow you to manage your current subscriptions (including online access)
- The ability to create favorites lists down to the article level
- The ability to customize email alerts to receive specific notifications about the topics you care most about and special offers

[Register Now!](#)

Related Articles

Articles Citing this Article

[Google Scholar](#)

Search for Other Articles By Author

- Mick G. Mack
- Brian G. Ragan

Search in:

Mick G. Mack, PhD, contributed to conception and design; acquisition and analysis and interpretation of the data; and drafting, critical revision, and final approval of the article. Brian G. Ragan, PhD, ATC, contributed to analysis and interpretation of the data and drafting, critical revision, and final approval of the article.

Address correspondence to: Mick G Mack, PhD, School of Health, Physical Education, and Leisure Services, University of Northern Iowa, Cedar Falls, IA 50614-0241, e-mail: mickey.mack@uni.edu

[top](#) ▲

Copyright © 2010 **Journal of Athletic Training**. All Rights Reserved, Worldwid
Allen Press, Inc. assists in the online publication of the *Journal of Athletic Trainin*
Technology Partner - **Atypon Systems, Inc**