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Lindsey S. Griffes
Bowling Green State University, lsgriff@bgsu.edu

Matthew Kutz
Bowling Green State University, mkutz@bgsu.edu

Amanda Paule-Koba
Bowling Green State University, apaule@bgsu.edu

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Athletic Trainer's Self-Confidence and Experience Level in Managing Exertional Heat Related Illnesses

Lindsey S Griffes, M.Ed., ATC, Matthew Kutz, PhD., ATC, & Amanda Paule-Koba, PhD.

Bowling Green State University, School of Human Movement, Sport and Leisure Studies

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Objective: Explore the athletic trainer's level of self-confidence and experience in managing and treating exertional heat illness.

Design: Non-experimental, exploratory and descriptive research design.

Participants: 110 respondents, 46% male, 54% female, representing all 10 National Athletic Trainers' Association districts, highest representation from district four (N=50). Sixty-eight percent (68%) from high school outreach setting, 22% College or University settings, and 10% from clinic/hospital setting. Twety-one percent of respondents reported earning ≥55K annual salary. Sixty-seven percent hold Masters degrees while 43% have practiced ≥11 years.

Intervention: The Athletic Trainer's Self-Confidence Scale (ATSCS), (scale range, 1=strongly agree to 7=strongly disagree) was distributed to certified athletic trainers via Qualtrics survey.

Main Outcome Measures: One-way ANOVA followed by Tukey post-hoc analysis and independent-sample *t*-tests were used to measure differences between respondents and ATSCS items. Validity and reliability of the ATSCS were evaluated using Pearson *r* correlations and Cronbach coefficient alphas.

Results: ATSCS yielded satisfactory internal consistency and convergent validity (Pearson *r* correlations between scale items ranged from r=.19(p=.05) to r=.79 (p=.01); Cronbach coefficient alphas α=.82. Athletic trainers were *confident* (overall mean between all scale items was M=2.05±.95) in treating exertional heat illnesses. Athletic trainers were most confident (strongly agree to somewhat agree, M=1.50±.57) in their ability to "think of an emergency plan of action" if an athlete is experiencing an exertional heat illness. Athletic trainers were least confident (somewhat confident to somewhat not confident, M=3.39±1.94) in their ability to know the correct reading of the rectal thermometer to distinguish a heat illness emergency and the proper temperature for cold water immersion. Males were somewhat confident about knowing the correct reading of a rectal thermometer and proper temperature for cold water immersion compared to females who were undecided, M=2.86±1.85 to M=3.83±1.91, t(109) p=.009. Males were also somewhat confident in knowing the proper way to administer a rectal thermometer and cold water immersion compared to females who were undecided, M=2.76±1.67 to M=3.75±2.00, t(109) p=.007**.** ANOVA analysis (Tukey Post Hoc) indicated that athletic trainers earning more salary (≥55K) were more confident than athletic trainers at lower salaries (>25K) in solving difficult

problems with heat illness athletes, M=1.52±0.73 to M=2.43±0.94, F(4,108)=2.87, p=.004.

Conclusion: Athletic trainers are *somewhat confident* in their ability to handle exertional heat illness emergencies. The lowest levels of self-confidence are in their abilities to insert a rectal thermometer and execute cold water immersion and to know the correct readings of the rectal thermometer to distinguish different heat illnesses and the proper temperature for cold water immersion. Athletic training should engage in continuing education opportunities where they are instructed the proper way administer a rectal thermometer and cold water immersion, and know the correct readings. Entry-level educational programs should consider formal instruction and evaluation for care of exertional heat illnesses, and related clinical competencies.

Key words: exertional heat illnesses, athletic trainer, confidence