Journal of Sports Medicine and Allied Health Sciences: Official Journal of the Ohio Athletic Trainers Association

Volume 4
Issue 3 *JSMAHS Spring 2019 Issue*

Article 2

March 2019

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Recommended Citation

Pfeifer, Craig E.; Moore, Erin; Seiler, Brian; Thomason, Caroline; and Monsma, Eva V. (2019) "Perceptual and Contextual Sources of Athletic Training Confidence: The Transition to Professional Entry Level Master's Programs," *Journal of Sports Medicine and Allied Health Sciences: Official Journal of the Ohio Athletic Trainers Association*: Vol. 4 : Iss. 3 , Article 2.
DOI: https://doi.org/10.25035/jsmahs.04.03.02
Available at: https://scholarworks.bgsu.edu/jsmahs/vol4/iss3/2

Perceptual and Contextual Sources of Athletic Training Confidence: The Transition to Professional Entry Level Master's Programs

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Introduction: The shift of athletic training education from undergraduate degrees to professional master's degrees and the prominence of computer-based credentialing may impact the hands-on experiences beneficial for developing confidence in athletic training competency domains. Health care provider confidence is critical for clinical skill development, performance and enhancing patient care. **Purpose:** To examine domain specific efficacy, its sources, learning contexts (i.e., classroom, laboratory, clinical settings) and clinical characteristics by program types. **Method:** Descriptive, cross-sectional design where 178 Athletic Trainers (AT; age 24.25 + 3.76, n = 72 male, n = 106 female) participated in the study (Master's Program (MP) = 38; Undergraduate Program (UG) = 140). A questionnaire examining athletic training confidence was administered throughout multiple universities with accredited athletic training programs. Background characteristics, certification exam attempts, and programmatic characteristics were also ascertained. **Results:** Clinical settings were similar in both program types and there were few differences in domain- specific efficacy. Imaginal experiences, verbal persuasion and emotional states sources of efficacy differentiated master's from undergraduate students. **Conclusions:** Sources of efficacy (e.g. vicarious experiences) occur naturally in athletic training educational settings; however, these sources need to be utilized. Educators should be informed about efficacy sources and devise strategies targeting each source for implementation across evolving learning contexts. **Keywords:** confidence, self-efficacy, bandura

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INTRODUCTION

Athletic training education has undergone significant advancements directed at standardizing curricula, expanding knowledge breadth, and encouraging evidence-based practice. This includes reformatting the Board of Certification (BOC) credentialing exam to a computer-based assessment and advancing hands-on clinical settings to prepare confident, skilled clinicians for this exam. Nevertheless, the recent shift from Undergraduate (UG) programs to the Professional Master's (PM) program aligns athletic training education with other medical education models, elevating the academic preparation of students and enabling a refined focus on athletic training competencies.[1] Clinical skills are learned in the scope of professional practice and have been developed to meet the demands of the profession.[2] The ability to provide quality hands-on clinical education opportunities in the PM program is essential for promoting student confidence and developing clinical skills.[3-5] While the PM program format is shorter (2 years vs. 4 years), the curricular content remains similar. The initial attempts of the BOC exam for students completing PM programs show favorable outcomes; 91% of PM graduates pass the BOC exam on their first attempt.[1] However, the effect of an Athletic Trainer's (AT) confidence on attempting the BOC, and more importantly on performance of clinical skills remain unknown.

Confidence is integral to AT's due to the highly variable and potentially life-threatening situations to which they respond. Furthermore, confidence may buffer job related stress which is associated with a variable work environment and is known to increase burnout.[6] Confidence measured at a specific level is referred to as efficacy or self-efficacy; the perception of one's ability to perform a specific task successfully.[7] For

example, an Athletic Trainer may have high technical skill efficacy (e.g., taping an ankle), but low tactical efficacy (e.g., knowing when to spine board). Efficacy has been studied extensively in a variety of performance contexts indicating its importance to athletics, academics, performing arts, and allied health professions.[3-5,8,9] For example, based on the findings of a meta-analysis, academic self-efficacy is known to be the strongest predictor of collegiate grade point average and a moderate predictor of retention through college.[11] In addition to self-efficacy being related to knowledge, efficacy is also related to performance of health care clinical skills,[12] thus it is reasonable to assume that AT efficacy may be related to BOC exam success.[13]

According to Bandura's social cognitive theory,[7] competency development promotes self-efficacy growth through targeting six sources of efficacy: 1) *performance accomplishments, 2) vicarious experience, 3) verbal persuasion, 4) imaginal experiences*, *5) physiological states,* and *6) emotional states*. Under conditions of requisite skill and sufficient motivation, self-efficacy may alter an individual's performance on any given task and may reciprocally enhance efficacy. Applied to athletic training education, Bandura's sources of efficacy may be instrumental for domain-specific performance, persistence, and self-regulative behavior (Table 1).[14] Mechanistically, each of Bandura's sources represent cognitive processes involved in evaluating the degree of perceived success in a situation-specific task performance. These evaluations often occur in observational learning and simulation contexts, which are seminal features of medical education curricula. Early efficacy research on nursing highlights the importance of efficacy, stemming from interactions with preceptors, and the inter-relationship among sources of efficacy for enhancing patient care and communication.[15,16] Not only is patient simulation (i.e., practice laboratories) known to increase student self-efficacy, but it helps manage stress, enhance motivation for continued learning, and facilitate knowledge transfer from academic or clinical settings to the field.[13,14,17] Furthermore, observational learning and preceptor interactions during patient simulation have been shown to increase efficacy the more exposure an individual has to patient simulation.[13] Classroom lectures, practice laboratories, and clinical sites are typical educational settings

Source	Mode of Induction	Description	Athletic Training Example
Performance accomplishments	• Participant Modeling • Performance Desensitization • Performance Exposure • Self-Instructed Performance	Reflections on performance	Student performs a specific taping skill (i.e., closed basket weave) on a patient.
Vicarious experiences	• Live Modeling • Symbolic Modeling	Observation and modelling	Student watches AT perform a special test for the knee (i.e., Lachman's).
Verbal persuasion	• Suggestion • Exhortation • Self-Instruction • Interpretive Treatments	Feedback and encouragement	AT encourages the student during an evaluation by providing feedback on their history questions.
Imaginal experiences	• Suggestion • Performance Exposure • Self-Instructed Performance	Mental practice	Student imagines performing the hand placement for a joint mobilization technique.
Physiological States	• Relaxation • Biofeedback	Awareness of physiological responses	Student reflects upon their heart rate during an emergency situation.
Emotional states	• Attribution • Symbolic Desensitization • Symbolic Exposure	Awareness of emotional responses	Student reflects upon their feelings during an emergency situation.

Table 1. Bandura's Sources of Efficacy[14]

where athletic training students may develop domain-specific self-efficacy in athletic training. These educational settings introduce The relationship between medical skill level and efficacy is reciprocal, which is congruent with Bandura's theoretical model.[15] Along with health care education in other professions, athletic training success is predicated upon traditional academic measures (i.e., BOC exam scores) and clinical success (i.e., clinical integrated proficiency).[18] However, programmatic clinical experiences are highly variable, as reflected in a school's size, athletic division, number of sports, clinical sites (on- and off-campus), athletes, athletic training students, and preceptors. One way of streamlining athletic training student experiences amidst this variability is to survey domain specific efficacy and its sources relative to curricular and clinical differences. Assessments of efficacy typically involve individuals rating their degree of confidence performing a specific task on a 10- or 100-point Likert scale, with lower scores (i.e., 1) representing low efficacy and higher scores characterizing higher efficacy.

To date, no studies have systematically considered domain specific AT efficacy. By analyzing the magnitude and sources of efficacy across athletic training programs and educational settings, educators can pinpoint and rectify weaknesses, perhaps overcoming notable variability in clinical experiences. Therefore, the purpose of this study was to assess differences in program type by clinical characteristics, domain specific efficacy, its sources and perceptions of clinical learning contexts where efficacy was developed.

METHODS

After obtaining institutional review approval at the last author's university, researchers' emailed athletic training program directors at 11 institutions to recruit participants who met the inclusion criteria of graduating from a Commission on Accreditation of Athletic Training Education (CAATE) accredited athletic training program and passing the BOC and reinforce competencies needed for proficient skill acquisition, BOC exam success, and ultimately continued success in the field. exam within the last calendar year. Consenting directors completed the questionnaires and forwarded a solicitation email containing the survey link to athletic trainers. Participants reported demographics (e.g., age and ethnicity), program type (i.e., UG and PM) and clinical site characteristics (i.e., number of clinical sites, athletes, preceptors, and other athletic training students at the clinical site). Ratios of preceptor to student, athlete to student, and athlete to preceptor were derived. Participants included 178 recently certified ATs (i.e., certified within the last year) (age 24.25 $\pm$ 3.762, n = 72 male, n = 106 female), 38 from PM and 140 from UG programs. It was decided to use this population instead of a student population so that they could be fully reflective of their educational experiences. The ethnic composition was: 83.7% Caucasian (n = 149), 2.25% African American (n = 4), 6.74% Hispanic/Latino (n = 12), 3.37% Asian (n = 6), 0.56% Other (n = 1), and 3.37% (n = 6) who did not specify.

The Confidence in Athletic Training Education Questionnaire (CATEQ; Appendix A) is a 59-question survey developed for this study based on Bandura's microanalytic approach and the 2010 BOC Role Delineation Study.[13,19] Each task is nested in 1 of 5 athletic training domains: prevention, evaluation, emergency care, treatment and rehabilitation, and administration. CATEQ questions were developed in accordance with Bandura's recommendations which include using the phrase, 'how confident are you in your abilities to…', where specification of each ability inherently represents efficacy of that domain. For simplicity, the term *confidence* is used as a synonym for efficacy which is described in the questionnaire. This is consistent with previous research and Bandura's recommendations.[7,20,21] Each domain is represented by either three or four questions commensurate with the BOC

domains. To ensure logical validity the original questionnaire was pilot tested with a panel of five athletic training experts (program directors and AT's certified for at least 5 years, all who had accreditation site visitor experience) with the intention of providing feedback on the format and content of the CATEQ. Changes to the format and a more task specific questionnaire was garnered from the information gathered from the pilot study.

Similar to the work of Murdock and Neafsey and Short et al.,[22,23] completing each item on the CATEQ involved: 1) rating level of confidence on a scale of 0 to10 (0 = not confident in their ability to perform the skill correctly, 1 = a little confident, 5 = moderately confident, and 10 = very confident); 2) identifying the source of confidence based on Bandura's six sources of self-efficacy (i.e., performance accomplishments, vicarious experiences, verbal persuasion, imagined experiences, physiological states, and emotional states); and 3) specifying the source where confidence was developed for that task (i.e., classroom lectures, practice laboratories, or at clinical sites).[22,23] If participants did not have confidence in a task, they were instructed to omit the subsequent response step for the question. Internal consistency calculated on the items representing each domain were adequate: prevention α = 0.70, evaluation α = 0.83, emergency care α = 0.78, treatment and rehabilitation α = 0.75, and administration α = 0.75.

Statistical analysis was completed using the SPSS statistical package (version 24). Differences in BOC attempts, background variables and AT confidence domains by sex and program type were assessed using χ^2 analyses, z-tests for proportions and independent t-tests. Relationships between background variables were examined using correlations. Variation in background variables and AT efficacy by learning context and sources of efficacy were calculated with ANOVAs. Imputing of data was performed in less than 10% of individual questions, within each domain the following manner: mean of confidence level, mode of sources of confidence, and mode of where confidence as gained.

RESULTS

BOC Attempts

PM students' first attempt at passing the BOC was 100%, while UG first attempt at passing the BOC was 89.6% ($\chi^2 = 1.938$, $P = 0.164$) and their average number of trials was 1.2 (0.37) which was significantly different than 1.0 (t =

	Overall		Undergraduate		PM[a]		T
	Mean	SD	Mean	SD	Mean	SD	
BOC[b] exam attempts	1.06	0.19	1.12	0.37	1.00	0.00	2.64[d]
Age	25.04	3.33	23.42	2.58	26.66	4.08	-5.99[e]
Clinical Setting Characteristics							
Number of athletes	156.14	160.49	138.85	149.03	173.43	171.95	-1.23
Number of preceptors	1.54	0.89	1.63	1.07	1.45	0.72	1.22
Number of students	2.36	2.56	2.67	2.47	2.06	2.65	1.33
Clinical sites	6.44	2.79	6.44	2.63	6.43	2.96	0.02
Athlete: AT[c] ratio	115.08	125.89	96.20	107.13	133.97	144.66	-1.50
Student: preceptor ratio	0.93	0.81	0.83	0.90	1.02	0.71	-1.30
CATEQ Domain Specific Efficacy							
Prevention	7.75	1.72	7.78	1.25	7.60	1.71	0.61
Evaluation	8.21	1.54	8.15	1.28	8.24	1.39	-0.33
Emergency Care	7.99	1.57	7.98	1.25	7.98	1.47	-0.03
Treatment & Rehabilitation	7.13	2.19	7.18	1.38	6.97	1.45	0.81
Administration	6.20	2.55	6.24	1.75	6.03	1.94	0.62
[a]PM, Professional Master's; [b]BOC, Board of Certification; [c]AT, Athletic Trainer; [d]$P < 0.05$; [e]$P < 0.01$							

Table 2. Average Clinical Setting Characteristics and Domain-Specific Efficacy Scores by Program

2.64, P = 0.01). Passing rate comparisons by sex was not significant (P > .05). Descriptive statistics are presented in Table 2.

Background Characteristics

The independent t-test for students' age was significant indicating that PM program students were significantly older (t = -4.66, P < 0.001). There were no significant differences in clinical setting characteristics or CATEQ domain specific efficacy by program type (P > 0.05; Table 2).

Sources of Domain Efficacy by Program Type

Sources of efficacy were compared by program type for each domain (Table 3). Results from a z-test for proportions indicated for the emergency care domain, UG students used imaginal experiences more than PM program students (z = 2.072, P = 0.03). No other efficacy sources differed between UG and PM program students.

		Domain				
Efficacy Sources		1	2	3	4	5
Performance Accomplishment	UG[a]	0.25	0.43	0.27	0.39	0.30
	PM[b]	0.19	0.35	0.29	0.30	0.33
	z	1.37	1.52	-0.56	1.89	-0.48
Vicarious Experience	UG[a]	0.28	0.13	0.16	0.21	0.26
	PM[b]	0.26	0.18	0.19	0.25	0.22
	z	0.36	-1.40	-0.76	-1.06	0.82
Verbal Persuasion	UG[a]	0.13	0.11	0.14	0.14	0.21
	PM[b]	0.14	0.09	0.12	0.15	0.18
	z	-0.37	0.56	0.57	-0.35	0.75
Imaginal Experiences	UG[a]	0.03	0.01	0.11	0.05	0.09
	PM[b]	0.06	0.00	0.04	0.01	0.08
	z	-1.39	0.91	2.07[c]	1.70	0.90
Physiological States	UG[a]	0.21	0.24	0.19	0.13	0.08
	PM[b]	0.20	0.25	0.21	0.16	0.07
	z	0.23	-0.18	-0.63	-0.87	0.20
Emotional States	UG[a]	0.11	0.09	0.14	0.09	0.06
	PM[b]	0.15	0.13	0.14	0.12	0.12
	z	-1.36	-1.45	-0.04	-1.31	-1.95

1. Prevention; 2. Evaluation; 3. Emergency Care; 4. Treatment & Rehabilitation; 5. Administration
[a]UG, undergraduate program; [b]PM, professional master's program; [c]P < 0.05

Table 3. Proportion of Sources of Domain-Specific Efficacy by Program Type

Learning context of sources of efficacy by program type

In the classroom, PM students identified verbal persuasion to be the greatest source of efficacy compared to UG students (UG = 0.28, PM = 0.38, z = -2.01 $P < 0.05$), whereas, UG program students reported more verbal persuasion (UG = 0.15, PM = 0.07, z = 2.02, $P < 0.05$) and emotional states (UG = 0.08, PM = 0.17, z = -3.05, $P = 0.01$) to be the source of efficacy in the practice laboratory. Table 4 highlights the specific learning contexts by program type.

		Learning Context		
Efficacy Sources		CR	PL	CS
Performance Accomplishment	UG[a]	0.18	0.35	0.37
	PM[b]	0.19	0.28	0.33
	z	-0.24	1.32	1.43
Vicarious Experience	UG[a]	0.24	0.13	0.22
	PM[b]	0.17	0.19	0.25
	z	1.50	-1.52	-1.16
Verbal Persuasion	UG[a]	0.28	0.15	0.10
	PM[b]	0.38	0.08	0.07
	z	-2.01[c]	2.02[c]	1.41
Imaginal Experiences	UG[a]	0.16	0.08	0.01
	PM[b]	0.09	0.06	0.01
	z	1.71	0.46	0.37
Physiological States	UG[a]	0.08	0.21	0.19
	PM[b]	0.09	0.21	0.20
	z	-0.04	0.02	-0.73
Emotional States	UG[a]	0.07	0.08	0.12
	PM[b]	0.09	0.17	0.14
	z	-0.77	-3.05[d]	-1.12

[a]UG, undergraduate program; [b]PM, professional master's program; [c]$P < 0.05$; [d]$p=0.01$
CR = Classroom; PL = Practice Laboratory; CS = Clinical Site

Table 4. Proportion of Learning Context of Domain-Specific Efficacy by Program Type

Domain Specific Efficacy and Clinical Site Characteristics.

There was a positive correlation between the number of preceptors and other athletic training students at the same site ($r = 0.36$, $P < 0.05$; Table 5). There was a negative correlation between the number of athletes at a clinical site and the number of clinical sites a student visited ($r = -0.19$, $P < 0.01$). Inter-scale correlations among domain specific efficacy scores were positive and ranged from 0.33 to 0.64 ($p < 0.001$). None of the efficacy scores correlated with any of the clinical site variables.

DISCUSSION

Considering the current athletic training degree shift, this study provides preliminary evidence that the shift to PM programs yield better BOC success rates. The equality of BOC exam performance between males and females from both program types is encouraging and adds this depth of information where sex comparisons have not yet been made.[24] Students from PM programs were significantly older by approximately three years, reflecting perhaps a more focused academic and life stage maturity. Notably, the National Athletic Trainers' Association's (NATA) examination of the PM degree found that educating at the master's level allows individuals to first develop foundational scientific and health-related knowledge during their baccalaureate programs, aiding in their success in PM programs.[25] More investigation is needed to determine if PM students' prior educational experiences (e.g., degree type and shadowing experiences) provide them with more exposure to the preparatory information necessary for the success in a PM program, and ultimately on the BOC exam.

To control for clinical setting variability between programs, we examined clinical site characteristics that may have enriched student experiences. Notably, program types were similar in the number of clinical sites, athletes, and preceptors suggesting experiential consistency. However, the magnitude of variability, as noted by especially large standard deviations, warrants

further examination. Subsequent studies should examine variability in clinical setting

	1	2	3	4	5	6	7	8	9
1. Prevention	1.00	0.47[c]	0.64[c]	0.53[c]	0.48[c]	-0.00	-0.08	-0.01	-0.02
2. Evaluation		1.00	0.46[c]	0.47[c]	0.33[c]	0.08	-0.03	-0.08	-0.02
3. Emergency Care			1.00	0.56[c]	0.53[c]	-0.06	-0.00	-0.07	-0.00
4.Treatment & Rehabilitation				1.00	0.60[c]	-0.05	-0.11	-0.05	0.05
5. Administration					1.00	0.48	0.26	0.08	0.08
6. # of clinical sites						1.00	-0.19[b]	0.02	0.04
7. # of athletes							1.00	0.11	-0.06
8. # of preceptors								1.00	**0.36[c]**
9. # of other AT-S[a] at the same site									1.00
[a]AT-S, Athletic Training Students; [b]$P < 0.05$; [c]$P = 0.01$									

Table 5. Correlation Among Average Domain Efficacy and Clinical Site Characteristics

characteristics and resources across schools' athletic division (i.e., D1, DII, DIII), which may modify efficacy and performance relationships.

Extending Bandura's social cognitive theory to the athletic training context, this study mapped CATEQ domain-specific efficacy by considering the magnitude, sources, and learning contexts tied to each athletic training domain. Aligned with previous measurement approaches, competency specific item stems were associated with the task of rating one's efficacy on a scale of 1 to 10 (1 = low, 10 = high).[22,23] Moderate alpha coefficients for each efficacy domain evidenced internal consistency. Questions reflecting domain specific efficacy were aggregated and averaged on a scale of 1 to 10. Means ranged from 6 to 8.5, indicating room for improvement across domains for students from both program types, and that students were relatively efficacious across domains. Inter-scale correlations were moderate ranging 0.33 to 0.64, demonstrating construct validity as the scales measured separate but related constructs. Subsequent studies are encouraged to examine efficacy using this approach. Interestingly, domain-specific efficacy was not systematically related to clinical setting characteristics in this sample and warrants further investigation.

The magnitude of domain-specific efficacy showed minimal variability between program types which is somewhat encouraging because it illustrates consistency between program, despite indicating room improvement (i.e., means ranges from 6.2 to 8.2 out of 10). There was also minimal variability between program types in the sources of efficacy that were associated with the athletic training domains. Imaginal experiences associated with the emergency care domain were more utilized by UG students, which may be explained by the lack of hands on opportunities within this domain in the clinical setting. The prominence of imagery particularly related to emergency care is notable because it likely reflects the need to prepare for the stress and anxiety of such high-stakes situations. From a practical standpoint, educators should encourage students to image themselves not only successfully making correct decisions but also successfully handling the cognitive and physical arousal associated with the context, as a way of mental preparation targeting physiological and emotional states as sources of efficacy. Previous studies have shown that like athletes [9, 26] and ballet dancers,[8] athletic trainers imaging mastery experiences report higher level of confidence and lower levels of anxiety associated with performance.[27]

Professional master's students reported more efficacy related to emotional states evoked specifically in the practice lab, suggesting that experiences educators provide in this learning context can serve to develop mental preparedness including confidence related to handling the physiological stress and anxiety related to high stakes scenarios. The importance of verbal persuasion in the classroom is also notable because it indicates the important role educators play in reinforcing students' capabilities prior to hands on experiences in the lab, clinic, and field. These findings also corroborate previous findings of athletic training students' perceptions of their clinical instructors as seminal in facilitating knowledge, skill development, encouragement of professional perspectives and individualized learning.[28] Nevertheless, regardless of program type, there is room for efficacy improvement in each of the CATEQ domains as noted by the means in Table 1. Educators are encouraged to develop teaching relevant strategies for classroom, lab and clinical settings that capture Bandura's sources of efficacy.

These findings are within the context of limitations including the assessment of perceived self-efficacy in skills, which is not the same as assessing actual skill ability. An individual with high self-efficacy could be dangerous if incompetent. Subsequent studies should examine these variables relative to objective assessments of physical and decision-making skills. Alternatively, individuals with knowledge and high self-efficacy in their ability to do the skill tend to be successful in the health profession.[18] The ability to show a reciprocal relationship between self-efficacy and skill development may provide other outlets for instruction.[7] A second limitation of this study was the aggregation of domain-specific BOC scores which precluded domain-specific examination of efficacy and performance score congruence. Domain specific BOC scores should be sought in subsequent studies. The NATA should seek technological mechanisms to present domain specific scores to help educators and students pinpoint their areas of strengths and weaknesses.

An additional limitation was that study participants were certified athletic trainers that passed the BOC exam within the last calendar year. Participants' efficacy may be inflated because of the recency of passing the BOC exam. Subsequent studies should consider assessing efficacy levels of AT students in their last semester of their AT education program prior to taking BOC, then follow up with those students after exam completion. It would be interesting to see if students with lower efficacy prior to the exam failed, if their efficacy was lower in lower performance domains and how many trials were required to pass. Lastly, the findings must be taken in the context of relatively low sample sizes associated with a low response rate. Subsequent studies should aim to recruit more participants.

CONCLUSION

Despite the shift from undergraduate to master's level athletic training education, competencies and self-efficacy across domains are comparable. This study reveals the minimal differences in programmatic characteristics and the ability to develop self-efficacy. Based on the proportions of student reporting between program types, there appears to be no differences in the magnitude of efficacy across the athletic training domains, perhaps because they are not explicitly targeted across educational experiences. Imaginal experiences, verbal persuasion, and emotional state are sources of efficacy occurring naturally in athletic training educational settings and differentiate students by program type. It is suggested that educators be informed about the six sources of efficacy through workshops designed at enhancing teaching strategies across classroom, lab, and clinical contexts to increase the level of confidence in athletic training students as they learn and practice clinical skills. Further cohort research is

warranted regarding an athletic training student's confidence prior to and after taking the BOC exam.

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APPENDIX A

CONFIDENCE IN ATHLETIC TRAINING EDUCATION QUESTIONNAIRE (CATEQ)

This questionnaire is designed to assess your confidence in specific athletic training tasks. Using the 10-point scale, please rate your confidence in your ability to correctly perform the specified athletic training tasks adapted from the 2010 Board of Certification (BOC) Role Delineation Study. The scale ranges from 0 to 10 where 0 = not confident in your ability to perform the skill correctly, 1 = a little confident, 5 = moderately confident, and 10 = very confident in your ability to perform the skill correctly.

Then, for each skill, you will be asked to identify your source of confidence. Please choose only one source – the one that you feel applies the most to you and that specific task.

Lastly, for each skill, you will be asked to state where you developed your confidence level in that specific skill. Again, please choose only one area. If you do not have confidence in an area, please move to the next question.

There are no right or wrong answers so please answer as honestly as possible.

CONFIDENCE QUESTIONS:

1. How confident are you in your abilities to minimize risk of injury and illness involved in sport through awareness, education, and intervention.
   0 1 2 3 4 5 6 7 8 9 10

   Source of confidence for this skill:
   a. I did not gain confidence in this area.
   b. I practiced this skill on my own.
   c. I witnessed another individual practice this skill.
   d. I was verbally encouraged to perform this skill.
   e. I imagined performing this skill correctly.
   f. I was **physically** calm and collected when practicing this skill.
   g. I was <u>emotionally</u> calm and collected when practicing this skill.

   Where did you gain your confidence in your ability to perform this skill correctly?
   a. I did not gain confidence in this area.
   b. In a classroom lecture.
   c. In a practice laboratory for a class.
   d. At my clinical site.

2. How confident are you in your abilities to interpret pre-participation and other screening information in accordance with accepted guidelines to minimize the risk of injury and illness.
   0 1 2 3 4 5 6 7 8 9 10

   Source of confidence for this skill:
   a. I did not gain confidence in this area.
   b. I practiced this skill on my own.
   c. I witnessed another individual practice this skill.
   d. I was verbally encouraged to perform this skill.
   e. I imagined performing this skill correctly.

f. I was **physically** calm and collected when practicing this skill.
g. I was emotionally calm and collected when practicing this skill.

Where did you gain your confidence in your ability to perform this skill correctly?
a. I did not gain confidence in this skill.
b. In a classroom lecture.
c. In a practice laboratory for a class.
d. At my clinical site.

3. How confident are you in your abilities to identify the risk about the appropriate use of personal protective equipment (clothing, shoes, protective gear, and braces) by following accepted procedures and guidelines.
0 1 2 3 4 5 6 7 8 9 10

Source of confidence for this skill:
a. I did not gain confidence in this area.
b. I practiced this skill on my own.
c. I witnessed another individual practice this skill.
d. I was verbally encouraged to perform this skill.
e. I imagined performing this skill correctly.
f. I was **physically** calm and collected when practicing this skill.
g. I was emotionally calm and collected when practicing this skill.

Where did you gain your confidence in your ability to perform this skill correctly?
a. I did not gain confidence in this skill.
b. In a classroom lecture.
c. In a practice laboratory for a class.
d. At my clinical site.

4. How confident are you in your abilities to obtain an individual's history through observation, interview, and review of relevant records to assess injury, illness, or health-related condition.
0 1 2 3 4 5 6 7 8 9 10

Source of confidence for this skill:
a. I did not gain confidence in this area.
b. I practiced this skill on my own.
c. I witnessed another individual practice this skill.
d. I was verbally encouraged to perform this skill.
e. I imagined performing this skill correctly.
f. I was **physically** calm and collected when practicing this skill.
g. I was emotionally calm and collected when practicing this skill.

Where did you gain your confidence in your ability to perform this skill correctly?
a. I did not gain confidence in this area.
b. In a classroom lecture.
c. In a practice laboratory for a class.
d. At my clinical site.

5. How confident are you in your abilities to utilize appropriate visual and palpation techniques to determine the type and extent of the injury, illness, or health-related condition.
   0 1 2 3 4 5 6 7 8 9 10

   Source of confidence for this skill:
   a. I did not gain confidence in this area.
   b. I practiced this skill on my own.
   c. I witnessed another individual practice this skill.
   d. I was verbally encouraged to perform this skill.
   e. I imagined performing this skill correctly.
   f. I was **physically** calm and collected when practicing this skill.
   g. I was emotionally calm and collected when practicing this skill.

   Where did you gain your confidence in your ability to perform this skill correctly?
   a. I did not gain confidence in this area.
   b. In a classroom lecture.
   c. In a practice laboratory for a class.
   d. At my clinical site.

6. How confident are you in your abilities to utilize appropriate tests (ROM, special tests, neurological tests) to determine the type and extent of the injury, illness, or health-related condition.
   0 1 2 3 4 5 6 7 8 9 10

   Source of confidence for this skill:
   a. I did not gain confidence in this area.
   b. I practiced this skill on my own.
   c. I witnessed another individual practice this skill.
   d. I was verbally encouraged to perform this skill.
   e. I imagined performing this skill correctly.
   f. I was **physically** calm and collected when practicing this skill.
   g. I was emotionally calm and collected when practicing this skill.

   Where did you gain your confidence in your ability to perform this skill correctly?
   a. I did not gain confidence in this area.
   b. In a classroom lecture.
   c. In a practice laboratory for a class.
   d. At my clinical site.

7. How confident are you in your abilities to coordinate care of individuals through appropriate communication (verbal, written, demonstrative) of assessment findings.
   0 1 2 3 4 5 6 7 8 9 10

   Source of confidence for this skill:
   a. I did not gain confidence in this area.
   b. I practiced this skill on my own.
   c. I witnessed another individual practice this skill.
   d. I was verbally encouraged to perform this skill.

e. I imagined performing this skill correctly.
f. I was **physically** calm and collected when practicing this skill.
g. I was emotionally calm and collected when practicing this skill.

Where did you gain your confidence in your ability to perform this skill correctly?
a. I did not gain confidence in this skill.
b. In a classroom lecture.
c. In a practice laboratory for a class.
d. At my clinical site.

8. How confident are you in your abilities to apply appropriate immediate and emergency care procedures to reduce the risk factors for morbidity and mortality.
0 1 2 3 4 5 6 7 8 9 10

Source of confidence for this skill:
a. I did not gain confidence in this area.
b. I practiced this skill on my own.
c. I witnessed another individual practice this skill.
d. I was verbally encouraged to perform this skill.
e. I imagined performing this skill correctly.
f. I was **physically** calm and collected when practicing this skill.
g. I was emotionally calm and collected when practicing this skill.

Where did you gain your confidence in your ability to perform this skill correctly?
a. I did not gain confidence in this area.
b. In a classroom lecture.
c. In a practice laboratory for a class.
d. At my clinical site.

9. How confident are you in your abilities to demonstrate how to implement and direct immediate care strategies (first aid, Emergency Action Plan) using established communication and administrative practices to provide effective care.
0 1 2 3 4 5 6 7 8 9 10

Source of confidence for this skill:
a. I did not gain confidence in this area.
b. I practiced this skill on my own.
c. I witnessed another individual practice this skill.
d. I was verbally encouraged to perform this skill.
e. I imagined performing this skill correctly.
f. I was **physically** calm and collected when practicing this skill.
g. I was emotionally calm and collected when practicing this skill.

Where did you gain your confidence in your ability to perform this skill correctly?
a. I did not gain confidence in this area.
b. In a classroom lecture.
c. In a practice laboratory for a class.
d. At my clinical site.

10. How confident are you in your abilities to develop and administer progressive therapeutic and conditioning exercises using appropriate techniques and procedures to aid recovery and restoration of function.
    0 1 2 3 4 5 6 7 8 9 10

    Source of confidence for this skill:
    a. I did not gain confidence in this area.
    b. I practiced this skill on my own.
    c. I witnessed another individual practice this skill.
    d. I was verbally encouraged to perform this skill.
    e. I imagined performing this skill correctly.
    f. I was **physically** calm and collected when practicing this skill.
    g. I was emotionally calm and collected when practicing this skill.

    Where did you gain your confidence in your ability to perform this skill correctly?
    a. I did not gain confidence in this area.
    b. In a classroom lecture.
    c. In a practice laboratory for a class.
    d. At my clinical site.

11. How confident are you in your abilities to administer therapeutic modalities using appropriate techniques and procedures based on the individual's phase of recovery to restore functioning.
    0 1 2 3 4 5 6 7 8 9 10

    Source of confidence for this skill:
    a. I did not gain confidence in this area.
    b. I practiced this skill on my own.
    c. I witnessed another individual practice this skill.
    d. I was verbally encouraged to perform this skill.
    e. I imagined performing this skill correctly.
    f. I was **physically** calm and collected when practicing this skill.
    g. I was emotionally calm and collected when practicing this skill.

    Where did you gain your confidence in your ability to perform this skill correctly?
    a. I did not gain confidence in this area.
    b. In a classroom lecture.
    c. In a practice laboratory for a class.
    d. At my clinical site.

12. How confident are you in your abilities to administer treatment for injury, illness, or health-related conditions to facilitate injury protection, recovery, and optimal functioning for individuals.
    0 1 2 3 4 5 6 7 8 9 10

    Source of confidence for this skill:
    a. I did not gain confidence in this area.
    b. I practiced this skill on my own.
    c. I witnessed another individual practice this skill.

d. I was verbally encouraged to perform this skill.
e. I imagined performing this skill correctly.
f. I was **physically** calm and collected when practicing this skill.
g. I was emotionally calm and collected when practicing this skill.

Where did you gain your confidence in your ability to perform this skill correctly?
a. I did not gain confidence in this area.
b. In a classroom lecture.
c. In a practice laboratory for a class.
d. At my clinical site.

13. How confident are you in your abilities to apply basic internal business functions (business planning, financial operations, staffing) to support individual and organizational growth and development.
0 1 2 3 4 5 6 7 8 9 10

Source of confidence for this skill:
a. I did not gain confidence in this area.
b. I practiced this skill on my own.
c. I witnessed another individual practice this skill.
d. I was verbally encouraged to perform this skill.
e. I imagined performing this skill correctly.
f. I was **physically** calm and collected when practicing this skill.
g. I was emotionally calm and collected when practicing this skill.

Where did you gain your confidence in your ability to perform this skill correctly?
a. I did not gain confidence in this area.
b. In a classroom lecture.
c. In a practice laboratory for a class.
d. At my clinical site.

14. How confident are you in your abilities to apply basic external business functions (marketing and public relations) to support organizational sustainability, growth and development.
0 1 2 3 4 5 6 7 8 9 10

Source of confidence for this skill:
a. I did not gain confidence in this area.
b. I practiced this skill on my own.
c. I witnessed another individual practice this skill.
d. I was verbally encouraged to perform this skill.
e. I imagined performing this skill correctly.
f. I was **physically** calm and collected when practicing this skill.
g. I was emotionally calm and collected when practicing this skill.

Where did you gain your confidence in your ability to perform this skill correctly?
a. I did not gain confidence in this area.
b. In a classroom lecture.
c. In a practice laboratory for a class.
d. At my clinical site.

15. How confident are you in your abilities to maintain records and documentation that comply with organizational, association, and regulatory standards to provide quality of care and to enable internal surveillance for program validation and evidence-based interventions.
    0 1 2 3 4 5 6 7 8 9 10

    Source of confidence for this skill:
    a. I did not gain confidence in this area.
    b. I practiced this skill on my own.
    c. I witnessed another individual practice this skill.
    d. I was verbally encouraged to perform this skill.
    e. I imagined performing this skill correctly.
    f. I was **physically** calm and collected when practicing this skill.
    g. I was emotionally calm and collected when practicing this skill.

    Where did you gain your confidence in your ability to perform this skill correctly?
    a. I did not gain confidence in this area.
    b. In a classroom lecture.
    c. In a practice laboratory for a class.
    d. At my clinical site.

16. How confident are you in your abilities to demonstrate appropriate planning for coordination of resources (personnel, equipment, liability, scope of service) in event medical management and emergency action plans.
    0 1 2 3 4 5 6 7 8 9 10

    Source of confidence for this skill:
    a. I did not gain confidence in this area.
    b. I practiced this skill on my own.
    c. I witnessed another individual practice this skill.
    d. I was verbally encouraged to perform this skill.
    e. I imagined performing this skill correctly.
    f. I was **physically** calm and collected when practicing this skill.
    g. I was emotionally calm and collected when practicing this skill.

    Where did you gain your confidence in your ability to perform this skill correctly?
    a. I did not gain confidence in this area.
    b. In a classroom lecture.
    c. In a practice laboratory for a class.
    d. At my clinical site.

BACKGROUND INFORMATION:

1. Are you currently a certified athletic trainer who graduated from a CAATE-accredited athletic training education program (ATEP) and became certified within the last calendar year (2012)?
    a. YES
    b. NO

2. What type of ATEP were you enrolled in?
    a. Undergraduate Degree
    b. Entry-Level Masters Degree

3. How many clinical sites are you assigned throughout your entire ATEP experience?
    a. _____

4. How long are you assigned to each clinical site?
    a. One year
    b. One semester
    c. One quarter
    d. Two quarters
    e. Eight weeks
    f. Six weeks
    g. Other _____

5. At which clinical site do you feel you gained the most confidence?
    a. _____

6. Approximately how many athletes were cared for at that clinical site?
    a. _____

7. How many preceptors supervised you at that clinical site?
    a. _____

8. How many other athletic training students were assigned to that clinical site with you?
    a. _____

9. What is your age?
    a. _____

10. What is your sex?
    a. Male
    b. Female

11. What is your ethnicity?
    a. White
    b. African-American
    c. Hispanic/Latino
    d. Asian
    e. Native American
    f. Other