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Employer Perceptions of the Academic Preparation of Entry-Level Certified Athletic Trainers

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Objective: To determine employers' (clinic based ATs) perceived satisfaction of the academic preparation of entry-level ATs, and to identify perceived inadequacies of the (ATEP) curriculum.

Design and Setting: Athletic trainers employed in clinical setting completed an online survey instrument.

Subjects: One-hundred-four ATs serving in the NATA defined clinical employment setting who had supervised an entry-level employee.

Measurements: Participants completed an online survey evaluating their employee's didactic and clinical preparation for entry-level employment on a 4-point scale and 34 statements on a 5-point Likert scale to ascertain their satisfaction of the employee's academic preparation across the content areas comprising the BOC domains of knowledge and skills. Statistical analysis was conducted using a Cronbach's Alpha to evaluate internal consistency (.79-.88) of the scales.

Results: Only 104/1716 (6%) of employers responded to the survey. These employers rated the didactic and clinical preparation of their entry-level employees as adequate (75%, N=77), and there were no apparent deficiencies in employee preparation when comparing across content areas. Employers did report that interpersonal skills, as opposed to technical skills, were an area that could be expanded upon.

Conclusions: Employers perceived that ATEP's are adequately preparing students, both academically and clinically, for entry-level positions within the profession, although they should provide students more opportunities for interpersonal communications with coaches, parents, and the medical community.

Key Words: Program evaluation, curriculum reform, job performance, employer satisfaction

Over the past ten years, we have seen drastic reforms in athletic training education. These reforms have been driven in part by evidence of a higher rate of success for competency-based education than for internship education in scores on the Board of Certification (BOC) qualifying exam,[1,2] and also by high rates of perceived preparedness by entry-level certified athletic trainers who received competency-based education.[3,4] As a result, the Commission on Accreditation of Athletic Training Education (CAATE) has now implemented a strict competency based curriculum, coupled with a continued focus on supervised clinical experience that mirrors the qualifications of other allied health professions. The aim of this new curriculum was to improve both the technical knowledge and practical skills of athletic training students in hopes of producing high quality allied health professionals.[5]

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Throughout the evolution and implementation of athletic training education reforms, researchers have paid close attention to evaluating student's perceptions of both classroom and clinical education[1,6] as well as those perceptions and behaviors of athletic training educators.[7,8,9] However, questions have been asked whether a focus towards measuring the perceptions of students, former students, and athletic training educators is an adequate assessment of whether athletic training educational reforms are truly producing high quality entry-level professionals.[10] Anecdotally, one researcher has provided his sentiment that the educational reforms, while proving difficult to implement, have been effective, though it was acknowledged that no scientific assessment has been conducted to support this claim.[11]

In a recent article in the *Athletic Training Education Journal*, Weidner[10] advocated that researchers attempt to assess the effect of recent education reforms by studying the quality of entry-level certified athletic trainers from two perspectives; first, by conducting patient outcomes research, and second, by surveying employers with regards to their satisfaction with recent athletic training graduates' readiness and performance as allied health professionals. In this study, we assessed the latter of these two perspectives by assessing employer's observations and perceptions of ATs who had

recently graduated from an accredited institution, been licensed or certified and who were employed in the clinical setting.

Methods

A web-based survey of employer perceptions was emailed to 1716 ATs employed in the *clinical setting* in NATA Districts 2-5, and 7-10. The *clinical setting* was defined as a hospital based or outpatient sports medicine clinic with possible high school outreach responsibilities. Email addresses were obtained from the NATA membership database. The choice to restrict the scope of this study to this group of employers was based on reports that nearly 1/3 of all entry-level ATs listed the *clinical setting* as their place of employment.[12]

Measurement

The survey of employer perceptions of employee preparedness consisted of two sections. Section 1 included basic demographic questions concerning the specific job title of the respondent and recently hired, entry-level ATs. Also, a set of questions was included that aimed at assessing the employer's 'overall' perception of the entry-level employees' academic preparedness for employment in the clinical setting (e.g., Do you feel that your newly hired ATC was prepared by their athletic training education program for employment as a certified athletic trainer?).

Job title demographic data were obtained with pull-down menus with optional write-in capabilities.. Questions of employer 'overall' perceptions of employees were discrete 4-point scales with the following responses: Strongly prepared—a smooth transition into the workplace with no difficulties; Well prepared—a relatively easy transition to the workplace with minor difficulties; Prepared—met the minimum requirements of the position although some aspects of their athletic training education were lacking; Not prepared—unable to handle the requirements of the work position based on their athletic training education. Finally, an open ended question was included that asked employers if there were any aspects of the employment position that could only be learned once on the job site and, if so, to identify what those aspects were.

Section 2 of the survey included 34 statements focused more directly towards specific educational competencies and clinical skills of entry-level employees' academic preparation (e.g., The entry-level employee: Can measure the active and passive joint range of motion using commonly accepted techniques.). The presentation of questions in this section was randomized, with participants asked to rate their employees' preparation as either Excellent (1), Good (2), Average (3), Fair (4), or Poor (5). These questions were divided amongst the competency and Role Delineation domains of athletic training (Risk Management, Clinical Evaluation and Diagnosis, Immediate Care, Treatment and Rehabilitation, Organization and Administration, Professional Responsibility) as defined by the BOC. Finally, a set of six questions were incorporated to evaluate professional and communication skills of the entry-level employee.

Participants and Response Rate

Of the 1716 surveys dispatched, only 104 participants responded (6%). While this rate is extremely low, according to a CAATE[12] self-report survey, 302 entry-level certified athletic trainers reported that they were employed in the *clinical setting* during the year this survey was issued. Given this report and the targeted audience for the survey, one could argue that the true response rate was much higher (104 of 302; 34%). However, of the 104 respondents, only 35 completed Section 2 of the survey. Limitations of this low response rate are addressed in the Discussion.

Statistical Analysis

Section 1 of the survey was used to obtain descriptive information of employer perceptions of their entry-level employees. Therefore, no inferential statistics were performed on the data obtained from these measures. The open-ended question at the end of Section 1, aspects of employment that could only be learned on the job site, was examined for frequency.

It was our original intent to analyze Section 2 using principle component analysis to examine the underlying structure of the survey. However, this requires a minimum of 100 cases for a stable factor analytic solution;[13] but only 35 respondents' answered every question. Therefore, Cronbach's alpha (a measure of the internal consistency reliability) and structural equation modeling techniques (i.e., how well a set of variables measures a single construct) were employed. Based on power analysis results, sufficient sample size was available for these examinations.

Results

Respondent (i.e., employers) reports of self and entry-level employee job titles are depicted in Tables 1 and 2, respectively. From these data it is clear that the majority of respondents classified their own job titles (45%), and those of the entry-level employees (56%), as Clinic/HS outreach.

Approximately 90% of employers felt their entry-level employees were prepared academically and clinically (Table 3). In addition, a majority of employers (69%, 65/94) felt that there were aspects of employment for which employees were unprepared that could only be learned in the workplace. Common responses centered on site-specific procedures and patient/coach/parent interaction.

Responses to the 34 statements specifically aimed at evaluating entry-level employee's competencies in the educational domains of athletic training and interpersonal skills are depicted in Table 4. Descriptive results of these data show that employer's perception of entry-level employee's competencies were highest in the domains of Risk Management and Immediate Care (1.8±0.5 and 1.8±0.6 respectively), and lowest in Organization and Administration (2.3±0.8; Table 4). Overall (derived by collapsing across all domains) employers perceived entry-level ATs to be good (2.1±0.2).

Table 1. Respondent job title

Answer	Response	%
Head Athletic Trainer	12	12%
Assistant Athletic Trainer		0%
Curriculum Director		0%
Clinical Director	13	13%
Clinical Athletic Trainer	13	13%
Clinical/High School Outreach	47	45%
Other	19	18%
Total	104	100%

Table 2. Job title of entry-level employee

Answer	Response	%
Graduate Assistant	5	5%
Assistant Athletic Trainer	4	4%
Clinical Athletic Trainer	21	21%
Clinical/High School Outreach	55	56%
Other	14	14%
Total	99	100%

Table 3. Perceived academic and clinical preparation of the entry-level employee

Answer	Academic Preparation	%	Clinical Preparation	%
Very strongly prepared	11	12%	13	14%
Well prepared	46	51%	31	34%
Prepared	27	30%	38	41%
Not prepared	7	8%	10	11%
Total	91	100%	92	100%

All educational competency domains had good to excellent internal consistency (.79-.88 with .80 being desirable; Table 4). In addition, the item to total correlations indicated that the items had a fairly strong (>.45) and significant relationship with the total score for each scale ($p<.001$). Finally, all of the scales were significantly related to one another, with Risk Management and Immediate Care having the strongest relationship($r(54) = .82$, $p<.001$; Table 5).

Table 4. Item Descriptives and Cronbach Alphas

Question #	Domain[a]	Mean[b]	SD	Item to total[c]	Cronbach's Alpha
1.	IS	2.0	.9	.71	.83
8.	IS	2.1	1.1	.81	
21.	IS	2.0	1.1	.86	
28.	IS	2.0	.9	.67	
34.	IS	2.1	1.0	.79	
	Avg	2.0	.8		
2.	RM	2.0	.9	.66	.79
7.	RM	1.4	.6	.60	
13.	RM	1.6	.7	.61	
19.	RM	1.9	.9	.75	
25.	RM	1.8	.8	.74	
	Avg	1.8	.5		
3.	CED	2.2	1.0	.80	.88
9.	CED	2.0	.9	.83	
14.	CED	2.0	.8	.77	
20.	CED	2.0	.9	.83	
26.	CED	1.9	.7	.69	
31.	CED	2.5	1.1	.79	
	Avg	2.1	.7		
4.	IC	2.3	1.0	.85	.82
10.	IC	1.8	.7	.77	
15.	IC	2.0	.9	.79	
22.	IC	1.8	.7	.86	
27.	IC	1.5	.6	.55	
32.	IC	1.5	.7	.46	
	Avg	1.8	.6		
5.	RRR	2.1	1.1	.83	.87
11.	RRR	2.2	.9	.84	
16.	RRR	2.1	.9	.79	
23.	RRR	2.2	1.0	.86	
29.	RRR	2.2	.8	.76	
33.	RRR	2.1	.9	.78	
	Avg	2.2	.8		
6.	OA	2.2	.9	.79	.85
12.	OA	2.8	1.2	.77	
17.	OA	2.9	1.0	.84	
24.	OA	2.0	.7	.76	
30.	OA	2.2	.8	.82	
	Avg	2.3	.8		
18.	PR	2.5	1.0	N/A	N/A

[a]IS=Interpersonal Skills; RM=Risk Management; CED=Clinical Evaluation and Diagnosis; IC=Immediate Care; RRR=Rx, Rehab, and Reconditioning; OA=Organization and Administration; PR=Professional Responsibility.

[b]excellent preparation=1; Poor preparation=5

[c]Correlation of individual item to the total, Pearson<.001

Table 5. Correlations between Domains[a]

Domain[b]	IS	RM	IC	CED	RRR	OA
RM	.69					
IC	.74	.82				
CED	.62	.73	.79			
RRR	.68	.67	.76	.80		
OA	.67	.73	.71	.76	.68	
PR	.28[c]	.44	.58	.59	.64	.54

[a]Pearson correlations; all except IS:PR $p<.001$

[b]IS=Interpersonal Skills; RM=Risk Management; CED=Clinical Evaluation and Diagnosis; IC=Immediate Care; RRR=Rx, Rehab, and Reconditioning; OA=Organization and Administration; PR=Professional Responsibility.

[c]P<.01

Discussion

The general conclusion of this study is that employers are satisfied with entry-level ATs technical skills and knowledge, but wish ATs had better interpersonal skills. Our conclusions fit nicely with a broad-based survey[19] conducted by the US Bureau of Census with more than 5,400 employers sampled who reported that 41% of recent graduates were perceived as "more than adequately prepared" or "outstanding" while less than 4% were perceived as "barely acceptable" or "unacceptable." In the current study, entry-level ATs were perceived as "very well prepared," hinting that preparation of ATs may be above the national average.

In comparison to other technical vocations such as business, engineering, and medicine, employers perceptions on entry-level ATs seems strikingly consistent.[14,15,16,17] For example, a number of previous studies have found that while entry-level employees' basic knowledge, technical, and analytical skills are perceived as adequate, the ability to take initiative in a leadership role and communicate with others was underdeveloped.[14] Interestingly, in the current study employers perceived entry-level ATs technical skills in all domains of AT as 'good' to 'excellent,' but when asked explicitly about perceived deficiencies in entry-level ATs, common responses were most often directed at lack of interpersonal communication and procedural business skills.

Despite the consistency of this study with previous research in other vocations, there are two unique aspects of our study that deserve attention. First, while a majority of employers cited deficiencies common to other technical vocations, a general sentiment among employers of ATs was that these skills could only be developed with 'on the job' experience. Thus, it appears employers may not have expectations that ATEPs can bestow these skills upon their students. Second, when questioned about the interpersonal and organizational skills of ATs implicitly, employers rated entry-level ATs as 'good.' These ratings were higher than in the educational domain of 'Clinical Evaluation and Diagnosis,' a component of an ATs 'Clinical Preparation' that was explicitly perceived as 'well prepared' in 48% of employers. These differences may highlight a potential difference between employers explicit beliefs and their implicit perceptions about entry-level ATs professional abilities. Future research will be needed to fully explore this issue.

In the mean time, ATs must somehow deal with the negative impression shared by other professional vocations that schools overdevelop student's analytical abilities while ignoring the development of practical and personal communication skills.[15,19,20] In the field of business, many colleges and employers had dealt with this impression by requiring graduates to undergo some type of co-op or internship prior to entry-level job placement[19].

Fortunately, clinical experience is already a mandatory and essential part of AT educational experience. However, anecdotal observation and research[6] indicates that AT clinical education is quite variable, and some programs have had problems integrating educational reforms leading to a concern among some AT educators and employers that not all graduates are equipped with personal and practical skills necessary for high performance in the working world.[15]

Although our current investigation stands as the only study to directly examine employer satisfaction with entry-level employees, support for the belief that practical and personal skills are necessary for high performance can be found in studies focused at employer's hiring criteria for ATs.[21,22] In fact, in one study personal characteristics (e.g., communication skills, professional appearance, etc.) was rated as one of the most important hiring criteria across employers of ATs, [22] while another study indicated that the only consistent assessment of technical skills used as a hiring criterion by employers was BOC certification (which really only reflects the "minimally acceptable" standard of technical expertise for entry-level clinicians).[23] Together, these findings seem to re-emphasize the importance employers place on evaluating how well an employee interacts with business stakeholders and partners, as well as the employer's apparent satisfaction with AT certification standards. In light of this, the job interview, and conversely, the employees' interview performance, takes on new importance. Specifically, employees can expect that employers' interview tactics will likely include questions targeting the analytical, communication, and decision making ability of the job applicant in dealing with interpersonal, rather than technical dilemmas.

As AT education programs become more competency based, one might expect that employers will place more emphasis on technical skills when choosing to hire an AT, as it has in other professions (e.g., business, engineering, etc.) who have shifted their hiring criteria to focus on competencies as jobs become more specialized.[24] However, the most revealing research related to actual job performance has shown that employees who rate high on employer satisfaction surveys possess both the technical and interpersonal skills necessary to adapt to, and perform, entry-level jobs successfully.[25,26] Further support of this notion was provided by Reio and Sutton,[27] who examined the adaptability and perceived

performance of employees by employers of recently graduated engineers, a highly competency based profession like AT. They reported that competencies were a high predictor of workplace adaptation (defined as establishing relationships, job knowledge, and acculturation), but that the highest rate of adaptation was found with those workers who also ranked high in interpersonal skills.[27]

It must be noted that this study was limited by the low response rate. While every effort was made to increase the response to this survey, the return remained limited. A possible explanation could be that the surveys were received by several individuals at the same clinic but only a supervisor responded. Also, the survey was to be completed only by employers of newly-hired, entry-level AT's. If the employer did not have an employee who fit this description, they did not submit a response. Due to this limitation, we seek only to report the findings for this particular study group. Future research should begin with a question related to whether or not the respondent meets the criteria to respond, and the cover letter should ask all respondents to at least answer the first question so as to put the data in perspective.

Conclusions

- It appears that employers are satisfied with the competency-based education and skills of their entry-level employees, but less satisfied with entry-level employee's interpersonal and communication skills.
- Athletic training education programs might respond to these findings by striving to increase the athletic training students' interpersonal interactions with athletes, patients, and coaches during their clinical education .
- AT education programs must continually evaluate the efficacy of their programs to ensure they are consistently meeting the educational needs of their students and the profession.
- Further study should be conducted across a broader demographic of athletic training work settings in order to gain a greater data set.

References

1. Turocy PA, Comfort RE, Perrin DH, Gieck JH. Clinical experiences are not predictive of outcomes on the NATABOC examination. *J Athl Train.* 2000;35:70-75.
2. Starkey C, Henderson, J. Performance on the athletic training certification examination based on candidates' roles to eligibility. *J Athl Train.* 1995;30:59-62.
3. Weidner TG, Vincent WJ. Evaluation of professional preparation in athletic training by employed, entry-level athletic trainers. *J Athl Train.* 1992;27:304-310.
4. Massie JB. Athletic training education: are we adequately preparing our students to practice athletic training? *Int J Learn.* 2003;10: 38-49.
5. Peer KS, Rakich JS. Accreditation and continuous quality improvement in athletic training education. *J Athl Train.* 2000;35:188-193.
6. Curtis N, Helion JG, Domshon M. Student athletic trainer perceptions of clinical supervisor behaviors: a critical incident study. *J Athl Train.* 1998;33: 249-253.
7. Stilger VG, Meador R, Tsuchiya M. Job search and employment-related issues in athletic training education programs. *J Athl Train.* 1999;34:368-374.
8. Erickson MA, Martin M. Contributors to initial success on the NATA BOC examination as perceived by candidate sponsors: a Delphi study. *J Athl Train.* 2000;35:134-138.
9. Staurowsky E, Scriber K. An analysis of selected factors that affect the work lives of athletic trainers employed in accredited educational programs. *J Athl Train.* 1998;33:244-248.
10. Weidner TG. Reflections on athletic training education reform. *Athl Train Ed J.* 2006;1:6-7. Available at http://www.nataej.org/. Accessed August 23, 2006.
11. Ray RR. Change and athletic training. *Athl Train Ed J.* 2006;1:2-5. Available at http://www.nataej.org/. Accessed August 23, 2006.
12. Graman P. CAATE tracks graduates. *NATA News* 2007;10:22-23.
13. Guadagnoli E, Velicer W. (1988). Relation of sample size to the stability of component patterns. *Psych Bull.* 1988;103: 265-275.
14. Davidson LJ, Brown JM, Davison ML. Employer satisfaction of recent business graduates. *Hum Resources Dev Q.* 1993;4: 391-399.
15. Buckley MR, Peach EB, Weitzel W. Are collegiate business programs adequately preparing students for the business world? *J Ed for Bus.* 1989;65: 101-105.
16. Yorke M, Harvey L. Graduate attributes and their development. *New Dir Inst Res.* 2005;128:41-58.
17. Phillippi RH, Banta TW. Assessing employer satisfaction: a test of several survey techniques. *Assess Eval Higher Ed.* 1994;19:123-125.
18. Banta TW, Lund JP, Black KE, Oblander FW. *Assessment in Practice*. San Fransisco: Jossey-Bass; 1996.
19. NCPI. Toward clearer connections: understanding employers' perceptions of college graduates. *Change.* 1998;30: 47-50.
20. Mandt EJ. The failure of business education – and what to do about it. *Mgmt Rev.* 1982;71:47-52.
21. Arnold BL, Gansneder BM, Van Lunen BL, Szczerba JE, Mattacola CG, Perrin DH. Importance of selected athletic trainer employment characteristics in collegiate, sports medicine clinic, and high school settings. *J Athl Train.* 1998;33:254-258.
22. Kahanov L, Andrews L. A survey of athletic training employers' hiring criteria. *J Athl Train.* 2001;36: 408-412.
23. Board of Certification. Available at http://www.bocatc.org/index.php?option=com_content&task=view&id=45&Itemid=47. Accessed September 1, 2006.
24. Mathis RL, Jackson,JH. *Human Resource Management.* Minneapolis/St. Paul: West; 2004.
25. Ashfort BE, Saks AM, Lee RT. Socialization and newcomer adjustment: the role of organizational context. *Hum Rel. 1998;*51:897-926
26. Lee DMS. Social ties, task-related communication and first job performance of young engineers. *J Eng Technol Mgmt.* 1994;11: 203-228.
27. Reio TG, Sutton FC. Employer assessment of work-related competencies and workplace adaptation. *Hum Resource Q.* 2006;17:305-324