Importance of Selected Athletic Trainer Employment Characteristics in Collegiate, Sports Medicine Clinic, and High School Settings

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Abstract:

Objective: We examined employer importance ratings of 35 employee characteristics in the collegiate, sports medicine clinic, and high school settings and made comparisons among these settings.

Design and Setting: All prospective employers were sent a survey. Of the 472 surveys mailed, 282 (60%) were returned, with a sample error rate of 1.9%.

Subjects: All prospective employers listed on the NATA position vacancy notices from January 1, 1994 to October 1, 1994.

Measurements: Employers were asked to rate 35 employee characteristics as "not important," "minimally important," "important," or "very important." Additionally, employers chose 1 of 15 job descriptors that best identified their position vacancy. These 15 descriptors were then categorized into collegiate, sports medicine clinic, and high school settings. Discriminant analysis and analysis of variance procedures were used to determine if the 35 employee characteristics differed across the 3 settings.

Results: The discriminant analysis produced 2 significant discriminant functions ($P < .05$) with 23 of the original 35 characteristics remaining in the analysis. The first function discriminated between the collegiate setting and the other settings, with the collegiate setting scoring the highest. The second function discriminated among all 3 groups, with the sports medicine clinic and high school settings scoring the highest and lowest, respectively. Additionally, the analyses of variance (ANOVAs) revealed that 21 of the characteristics remaining in the discriminant analysis differed across the 3 settings.

Conclusions: Employers from all 3 settings rated educational program reputation, written recommendations, job interview performance, and NATA-BOC certification eligibility as important to very important. For the collegiate setting, 7 characteristics were rated above important and included such characteristics as possession of a master's degree and collegiate experience. For the sports medicine clinic, 8 characteristics were rated above important and included sports medicine clinic experience, high school experience, and sport-specific experience. Finally, for the high school setting, 5 characteristics were rated above important. These included NATA-BOC certification, a bachelor's degree, and high school experience.

Key Words: discriminant analysis, importance ratings, employer ratings

Article:

Our purpose was to examine employer importance ratings of 35 employment characteristics in the collegiate, sports medicine clinic, and high school settings and to make comparisons among the 3 settings. With the ever-competitive job market in athletic training, prospective employees must increasingly focus on those characteristics that are important in the employment process. We recently reported comparisons of the characteristics of athletic trainers who were hired in collegiate, sports medicine clinic, and high school settings.[1] Within each of the settings, we reported that 86% to 95% of the individuals employed were Caucasians and 70% were not married; 50% were from accredited undergraduate athletic training programs and the remainder were evenly split between internship and graduate programs. Additionally, we reported that for some characteristics there were differences among the 3 settings. For sex differences, the collegiate setting hired approximately 50% males and 50% females. In contrast, the high school and sports medicine clinic settings employed approximately 60% to 70% males. There were also differences in educational level preferences. In the high school setting, 65% of athletic trainers had only a bachelor's degree. In the collegiate setting, 81% of the employed athletic trainers had a master's degree, and in the sports medicine clinic, there was a 44% to 56% split between bachelor's and master's degrees, respectively. Finally, there was also a difference among the settings for the CPR instructor's credential. Only 25% of the high school athletic trainers had the credential, while 31% and 44% of the sports medicine clinic and collegiate athletic trainers, respectively, possessed the credential.

Our results differ from previous studies that rated the importance of employee characteristics. For the high school setting, Prentice and Mishler[2] reported that high school principals indicated no preference for either a bachelor's or master's degree but preferred 1 to 3 years of athletic training experience. In addition, previous studies[2,3] have reported that high school employers preferred teacher-athletic trainer combinations. In the sports medicine clinic setting, both a master's degree and a physical therapy credential[3,4] were rated as important by sports medicine clinic directors. Unfortunately, we were unable to find any studies that rated employee characteristics for the collegiate setting.

It should be emphasized that, in contrast to previous studies,[2-4] our recent study[1] did not examine employer importance ratings of the characteristics of newly employed athletic trainers. Instead, we examined actual employee characteristics within the employment setting. Additionally, none of the 3 employer ratings studies[2-4] examined all 3 practice settings (ie, college, sports medicine clinic, and high school) simultaneously. Thus, our goal was to examine the employer importance ratings of all 3 settings simultaneously and to make comparisons among the 3 settings. We also expanded the characteristics rated by previous studies to include the categories of education, interviews and recommendations, research and teaching experience, administration and clinical experience, NATA certification and certification examination performance, and other credentials.

METHODS

Survey

This study was part of a larger study of employer, employee, and employment characteristics. A survey was sent to all prospective employers listed on the NATA position vacancy notices from January 1, 1994 to October 1, 1994. Of the 472 surveys mailed, 282 (60%) were returned, with a sample error rate of 1.9%. For this portion of the study, employers were asked to rate 35 employee characteristics as "not important," "minimally important," "important," or "very important" on a 4-point Likert scale, with "not important" equaling 1. Additionally, employers chose 1 of 15 job descriptors that best identified their position vacancy.

Data Analysis

The data were initially analyzed using a discriminant analysis (DA). For the DA, the importance ratings of 35 characteristics were considered dependent measures, and the 15 job descriptors were collapsed into 3 categories: high school (including teacher-athletic trainer), sports medicine clinic (including clinic-based athletic trainers with high school or college responsibilities), and college (including faculty). After completion of the DA, an analysis of variance and Tukey post hoc testing were performed on each of the characteristics remaining in the DA to determine differences among the employers. The alpha level for all statistical tests was set at $P < .05$.

RESULTS

The discriminant analysis retained 23 (Table 1) of the original 35 characteristics to produce 2 significant discriminant functions. The first function (Wilks $\Lambda = 0.17$, $P < .05$) discriminated between the collegiate employers and the other employers, with the collegiate employers scoring the highest. Function 2 (Wilks $\Lambda = 0.48$, $P < .05$) discriminated among all 3 groups (college versus clinic, college versus high school, clinic versus high school), with the sports medicine clinic and high school employers scoring the highest and lowest, respectively.

Table 1. Average Importance Ratings* of Items in the Discriminant Analysis

Survey Item	College	Clinic	High School
1. Master's degree	3.5	2.6	2.3
2. Collegiate clinical experience	3.4	3.0	2.3
3. Equal opportunity/affirmative action	3.0	2.4‡	2.3‡
4. Undergraduate and graduate degrees from different institutions	2.0	1.6‡	1.4‡
5. Computer literacy	2.8	2.5	2.2
6. Research publications	1.9	1.6‡	1.5‡
7. Oral recommendations†	3.5	3.2	3.4
8. Experience in program administration	2.7	2.4‡	2.3‡
9. Research presentations	1.9	1.7‡	1.5‡
10. Doctoral degree	1.7	1.5‡	1.3‡
11. Athletic training supervisory experience	3.2‡	2.5	3.0‡
12. Bachelor's degree	3.6‡	3.3	3.7‡
13. CPR instructor's certification	2.8‡	2.4	2.9‡
14. Teaching experience	2.8‡	2.1	2.5‡
15. Teaching certification	1.8‡	1.6‡	2.6
16. NATA-BOC certification	3.9‡	3.9‡	3.6
17. High school experience	1.9	3.4‡	3.1‡
18. Professional sports experience	1.6	1.9‡	1.8‡
19. NATA-accredited entry-level education	2.7	3.0‡	2.9‡
20. Clinical setting experience	2.0‡	3.4	2.3‡
21. Sport-specific experience	2.9‡	3.3	2.9‡
22. Unaccredited (internship) entry-level education	2.4‡	2.6‡	2.6‡
23. Accredited graduate education	2.6‡	2.8‡	2.6‡

* 1 = not important, 2 = minimally important, 3 = important, 4 = very important.
† Clinic = High School, High School = College, College > Clinic.
‡ Settings are not significantly different from each other.

For those characteristics remaining in the DA (Table 1), 21 of the employment characteristics (items 1-21) differed significantly across settings. Nine of these characteristics (items 1-6 and 8-10) were rated higher in importance by the college employers than by the sports medicine clinic or high school employers. Oral recommendations (item 7) were rated higher by collegiate employers than by sports medicine clinic employers. Colleges and high schools rated 4 characteristics (items 11-14) higher than did sports medicine clinic employers.

High school experience, professional sports experience, and attending an NATA-accredited entry-level education program (items 17-19) were rated lower by college employers than by sports medicine clinic or high school employers. With the exception of the sports medicine clinic employers' ratings of high school experience, the average ratings were below 3.0. The sports medicine clinic employers rated high school experience between important and very important. Employers from the sports medicine clinics rated 2 characteristics (items 20-21) higher than did the college or high school employers. Both sports medicine clinic experience and sport-specific experience were rated between important and very important.

DISCUSSION

Examination of Tables 1 and 2 reveals that the importance ratings can be compared both within settings and across settings. Additionally, the items can be used to describe what is generally perceived as important by employers in each setting, as well as to describe how the settings are similar to each other.

Table 2. Average Importance Ratings* of Items Not in the Discriminant Analysis

Survey Item	College	Clinic	High School
1. Reputation of education program	3.2	3.0	3.0
2. Written recommendations	3.0	3.0	3.2
3. Performance on job interview	3.7	3.7	3.6
4. Undergraduate and graduate education from the same institution	1.4	1.4	1.3
5. Grade point average	2.5	2.4	2.5
6. Non-athletic training supervisory experience	2.0	2.0	2.0
7. Course work in research methods	1.8	1.7	1.8
8. Eligibility for athletic training certification	3.5	3.5	3.4
9. Passing athletic training certification exam on first attempt	2.4	2.7	2.5
10. Physical therapy licensure	1.5	1.6	1.6
11. Strength coach certification	1.7	1.9	1.9
12. Emergency medical technician certification	1.9	1.8	2.0

* 1 = not important, 2 = minimally important, 3 = important, 4 = very important.

Collegiate Setting

In the collegiate setting, 9 characteristics were rated more important than in the other 2 settings. From these 9 characteristics, it was possible to identify 3 major groupings. The first was advanced degrees and included possession of master's and doctoral degrees (Table 1, items 1, 10). The second was experience and included collegiate clinical experience, undergraduate and graduate degrees from different institutions, and program administration experience (items 2, 4,

8). Research publications and presentations (items 6, 9) produced the third grouping. In addition to these characteristics, equal opportunity/affirmative action, computer literacy, and oral recommendations (items 3, 5, 7) were given higher ratings of importance by collegiate employers.

Based on our knowledge of the collegiate employers and the results of our previous study,[1] these findings were not surprising. For those athletic trainers who teach in the classroom, a master's degree or higher is often a requirement. With regard to bachelor's- and master's-level courses, institutions generally require that an instructor's degree be at least 1 level higher than that of the course being taught. For example, if an instructor teaches at the bachelor's-degree level, then it is expected that he or she will have at least a master's degree. Since most research is performed in the university or college setting, it is also not surprising that research was rated higher by the collegiate employers. However, these ratings were relatively low compared with the ratings of other characteristics, such as a master's degree. It should be noted that the importance of research in the collegiate setting probably represents the increasing number of tenure-line faculty in the athletic training profession rather than an expectation placed on the clinical collegiate athletic trainer.

We were also not surprised that the collegiate employers rated collegiate experience and program administration experience more highly than employers in the other 2 settings. With the large number of athletic training graduates in the market, employers can be more selective about whom they employ. Thus, collegiate experience may be 1 of the key determining factors in hiring. With regard to program administration experience, we believe that many collegiate athletic trainers either have administrative responsibilities or at least coordinate responsibilities at their institutions. For example, at our institution, athletic trainers are not just responsible for athlete health care, but must also organize physicals and drug tests for their specific teams. Thus, it is not unexpected that collegiate employers would rate administrative skill more highly.

Finally, we found it interesting that receiving a bachelor's degree and master's degree from different institutions was rated more highly by the collegiate employers. This may suggest that the collegiate employers prefer individuals with broader educational experiences. However, it should be noted that this item was rated as only minimally important.

Sports Medicine Clinic Setting

The sports medicine clinic employers rated 2 characteristics more highly than the collegiate or high school employers. The first was sports medicine clinic experience (Table 1, item 20), and the second was sport-specific experience (item 21). The first of these 2 findings was expected, while the second was not. We were particularly surprised that the sports medicine clinic employers rated sport-specific experience higher than collegiate employers did. In our experience, collegiate employers usually employ athletic trainers to cover specific sports. Thus, we expected that sport-specific experience would be more important to the collegiate employer. These results may suggest that sports medicine clinics provide health care, not for a spectrum of athletes, but rather for specific populations. Unfortunately, data on the typical sports medicine patient were not available to us, nor are we aware of any such data.

High School Setting

Where high school employers rated 2 characteristics differently, the college and sports medicine clinic employers did not rate them differently. The first was a higher importance rating for teaching certification (Table 1, item 15). This higher rating is supported by Sexton et a1,[3] who reported that 82% of high school principals preferred to employ teacher-athletic trainers and that 62% of the principals surveyed would not employ an athletic trainer who was not teacher certified.

The second item, NATA-BOC certification (item 16), was found to be rated as less important by high school employers. While this rating is disturbing, it is not unexpected. According to Sexton et a1,[3] of the 108 schools in their survey that reported having athletic programs, 35% did not identify sports health care to be a critical need, and, of those schools that reported having an athletic trainer, 29% did not employ a certified athletic trainer. This suggests that high school employers may be more interested in filling the vacancy and less concerned about credentials. However, it should be noted that employers in all 3 settings rated NATA-BOC certification between important and very important.

The Collegiate and High School Settings: Common Characteristics

Both the high school and collegiate employers rated athletic training supervisory experience, CPR instructor's certification, and teaching experience (Table 1, items 11, 13, 14) as having higher importance. Both of these settings typically involve clinical teaching and student supervision. As indicated previously, this was supported by Sexton et a1,[3] who reported that high school principals preferred teacher-athletic trainers. Furthermore, 52% of athletic trainers surveyed by Foster and Leslie[5] taught clinical skills and knowledge in the clinical setting, and 63% supervised student athletic trainers in the clinical setting. Thus, we were not surprised that both employers rated these characteristics as having higher importance.

These 2 employers also rated the bachelor's degree as more important than did the sports medicine clinic employers. The meaning of this is not entirely clear. However, it should be noted that employers in all 3 settings rated a bachelor's degree as being important to very important. It is also interesting to note that none of the employers rated accredited graduate education as important. Thus, initially it appears that employers in these 2 settings are more concerned with entry-level education. However, the college employers rated a master's degree between important and very important. Unfortunately, we were unable to answer certain questions based on our survey: whether collegiate employers place no more value on accredited than on unaccredited graduate athletic training programs or on a master's degree in athletic training versus some other discipline.

The Sports Medicine Clinic and High School Settings: Common Characteristics

For the sports medicine clinic and high school settings, high school experience, professional sports experience, and accredited entry-level education (Table 1, items 17-19) were rated as more important. The higher importance rating for high school experience by these 2 employers was not unexpected. In a previous study,3 59% of the sports medicine clinics that identified athletic training as important also indicated that high schools need athletic trainers. Additionally, Prentice and Mishler2 reported that high school principals preferred individuals with 1 to 3 years of athletic training experience.

We are unable to explain why professional sport experience was rated as more important by the high schools and sports medicine clinics than by the colleges, but none of the employers rated this experience above minimally important. Finally, we found it very interesting that the sports medicine clinics and high schools rated the importance of accredited entry-level education higher than did the colleges. The explanation for this is unclear. However, these results are supported by previous research[6] reporting that entry-level salaries for high school athletic trainers and sports medicine clinic athletic trainers were higher than for college athletic trainers.

Characteristics Not Different Across The Settings

Originally, 35 characteristics were used in this analysis. However, the discriminant analysis determined that only 23 of these characteristics actually distinguished among the 3 clinical settings. In other words, the remaining 12 characteristics (Table 2) were not significantly different across the 3 settings. Included among these characteristics were physical therapy licensure, strength coach certification, and emergency medical technician certification (items 10-12). Not only did these characteristics not discriminate among the settings, they were rated below minimally important. Our impression has been that athletic trainers generally believe that additional credentials are desirable. This general impression is supported by the NATA Education Task Force report, which proposed the development of Certificates of Additional Qualifications.[7] However, our results suggest that additional credentials were not as important to the employers as were other factors, which is consistent with our previous finding that additional credentials were not factors in the actual hiring of athletic trainers.[1] In contrast, other investigators[3,4] have reported that sports medicine clinic directors rated physical therapy credentials as important. One possible explanation for this difference may be that we limited our study to employers who had current vacancies for athletic trainers, whereas the previous studies surveyed potential employers. Thus, potential employers may have had a broader perspective when responding.

It should also be noted that Table 2 includes performance at the job interview and athletic training certification eligibility (items 3, 8). Based on the ratings of these characteristics, it is clear that employers in all 3 settings believed they were important. Thus, these characteristics were not included in the DA.

In addition to the 12 characteristics in Table 2, unaccredited (internship) entry-level education and accredited graduate education were not significant across settings (Table 1, items 22-23). The reason these 2 characteristics were included in the DA is unclear. However, they probably acted as suppresser variables that enhanced the importance of the other variables in the DA. While it is interesting that these 2 variables did not differ across settings, it is probably more interesting that both characteristics were rated lower than accredited entry-level education.

CONCLUSIONS

Our findings suggest that, of the 35 characteristics, only 23 could be used to discriminate among the 3 settings. Furthermore, of these 23, only 21 differed significantly across the settings. Based on the ratings, it is clear that employers in all 3 settings rated educational program reputation, written recommendations, job interview performance, and NATA-BOC certification eligibility as important to very important. For the collegiate setting, employers rated 7 characteristics above important, including such characteristics as possession of a master's degree and collegiate

experience. For the sports medicine clinic, 8 characteristics were rated above important and included sports medicine clinic experience, high school experience, and sport-specific experience. Finally, the high school employers rated 5 characteristics above important. These included NATA-BOC certification, a bachelor's degree, and high school experience.

We believe our findings can be useful for athletic training educators and for prospective employees, ie, student athletic trainers. Academic advisors and students can use this information to select entry-level and graduate athletic training education programs that best meet their needs with regard to career goals. For example, if a student is interested in a career at the high school level, selection of an entry-level program that offers opportunities to simultaneously pursue a teaching credential would seem important. If employment in a sports medicine clinic is the goal, selection of an entry-level or graduate program that offers sports medicine clinic experiences would likely enhance the probability of securing employment in a sports medicine clinic. This information should assist in the identification of characteristics that are uniquely important to each of the employment settings, as well as those that are shared among the settings.

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