1994 Athletic Trainer Employment and Salary Characteristics

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Arnold, B.L., VanLunen, B., Gansneder, B.M., Szczerba, J.E., Mattacola, C.G., & Perrin, D.H. (1996). 1994 Athletic trainer employment and salary characteristics. Journal of Athletic Training, 31:215-218.

*****Note: Figures may be missing for this format of the document**

Abstract:

Objective: The purpose of this study was to determine: 1) demographics and professional credentials of recently hired athletic trainers, 2) the association between these characteristics and the high school, clinical, and collegiate setting, and 3) which of these factors best predicted salary.

Design and Setting: A survey was sent to all prospective employers. Of the 472 surveys sent, 282 (60%) were returned.

Subjects: Prospective employers who were listed on the NATA job vacancy notices from January 1, 1994 to October 1, 1994.

Measurements: Employers selected a job description for their position opening and indicated the characteristics of the people they hired. The job descriptions were placed into three categories. A chi-square analysis was used to determine the degree of association between applicant characteristics and job descriptions. Employee characteristics were coded and a stepwise multiple regression analysis was performed to determined which of the characteristics best predicted salary. Analyses of variance were performed to determine differences among the three practice settings and as follow-up analyses to the multiple regression. An analysis of variance was also performed to compare salaries based on job description and teaching responsibilities.

Results: No association was found between the employment setting and gender, ethnicity, marital status, educational route, physical therapy, credential, or EMT certification. There was an association between the CPR instructor's credential and employment setting and between highest degree attained and employment setting.

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Conclusions: The results suggest that these factors were most closely associated with employment in the collegiate setting. With regard to salary, it was determined that a doctoral degree, a master's degree, and marital status were the best predictors of salary.

Article:

In recent years, Moss[2-4] has studied the entry-level salaries of athletic trainers (ATs). For the hiring period of June 1, 1990 to June 1, 1991, Moss[3] reported that the high school athletic trainer with a teaching position earned significantly more than athletic trainers hired for a clinic, college, or nonteaching high school position and that college ATs who also taught for their institution made significantly more than those who did not. Additionally, Moss reported that there were no differences between individuals with master's degrees and those with only bachelor's degrees and that athletic trainers in NATA districts 4 and 5 earned significantly less than ATs in districts 6, 7, 8, and 10. However, in a second study for entry-level positions posted in 1992, Moss[3] reported salary levels similar to those in 1991 but did not report any statistically significant differences.

In contrast, Lawton et al[1] reported higher salaries for collegiate athletic trainers. However, they did not limit their study to entry-level positions. They also reported that educational level, teaching responsibilities, professional certifications, and institutional sponsorship of football did not significantly affect the salary of head athletic trainers.

The above studies" provide salary information within various employment settings and factors that may or may not influence salary. Furthermore, they address specific factors which may affect hiring for collegiate and entry-level positions. The purpose of our study, which was part of a larger study, was to assess a greater number of factors (eg, certification route, academic degree, ethnicity, etc) associated with employment and to expand the research to include the three primary practice settings and nonentry-level positions. Additionally, we attempted to determine which of these factors or combination of these factors best predicted an athletic trainer's salary.

METHODS

A survey was sent to all prospective employers listed on the NATA job 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 select a job description for their position opening and to indicate certain characteristics of the person they hired.

Initially, the 15 job descriptors were collapsed into three categories: high school (including teacher/trainer), clinic (including clinic-based athletic trainers with high school or college responsibilities), and college (including faculty). A descriptive cross-tabulation of the collapsed job descriptions with highest degree earned, gender, ethnicity, marital status, route to certification, and the additional certifications of EMT, PT, and CPR instructor was performed with a chi-square analysis. The chi-square analysis was used to determine the degree of association between these applicant characteristics and the job description. Additionally, the employee characteristics were dummy-coded, and a stepwise multiple regression analysis was performed to determine which of the characteristics best predicted salary. ANOVAs were also performed to determine differences among the three practice settings and as follow-up analyses to the multiple regression. Finally, to make a direct comparison with the results of Moss,[3] an

ANOVA comparing salaries based on job description and teaching responsibilities was performed. The alpha level for all statistical analyses was set at $p = .05$.

RESULTS

The percentages of ATs with highest degree earned, gender, ethnicity, marital status, and route to certification in each of the practice settings are presented in Table 1. The chi-square analysis revealed a significant association between the highest degree attained and practice setting ($\times^2 = 56.3$). Additionally, the chi-square analysis was significant ($x^2 = 7.03$) for the association between practice setting and CPR instructor certification with 33 (25.4%), 40 (30.8%), and 57 (43.8%) of ATs in the high school, clinic, and college setting possessing the certification, respectively.

The stepwise multiple regression analysis identified three factors that predicted salary. The first was possession of a doctoral degree (R = .21); the second was possession of a master's degree (R change = .16); and the third was marital status (R change = .13). An ANOVA revealed that the high school salary was significantly less than either the clinic or college salaries and that there was no difference between clinic and college salaries, $F(2,242) = 6.62$, $p = .0016$. The mean salaries for each of the practice settings is presented in Table 2. A second ANOVA revealed significant salary differences, $F(2,222) = 9.99$, $p < .0005$ dependent upon the highest degree attained (Table 3) as well as marital status (Table 4), $F(1,222) = 5.84$, $p = .017$. There were no significant interactions. Tukey post hoc testing revealed that ATs with a doctorate earned more than ATs with a master's or bachelor's degree and that those individuals with a master's degree earned significantly more than those with a bachelor's degree. Finally, the comparison of salaries based on job description and teaching (Table 5) produced a significant interaction, $F(1,240) = 7.6$, $p = .006$. Tukey post hoc testing revealed that high school teacher-athletic trainers earned more than full-time high school athletic trainers and college athletic trainers who did not teach. However, there were no differences between clinical ATs, college ATs who taught, and high school teacher-athletic trainers.

DISCUSSION

One of the primary findings of our study was the association between highest degree attained and practice setting. Table 1 indicates that 64.9% of the high school ATs possessed a bachelor's degree. This suggests that a bachelor's degree is the primary requirement for employment in the high school setting. Conversely, the data suggest that a master's degree is preferred in collegiate settings with 80.9% of collegiate athletic trainers possessing master's degrees. This finding was expected. Typically, academic institutions require instructors to possess an advanced degree at least one level above the level at which they teach. For example, if instructors teach at the bachelor's level, they would be required to possess at least a master's degree. This is the most likely explanation for the large number of collegiate athletic trainers possessing master's degrees. In fact, examination of the raw data indicates that 44 (58%) of the 76 collegiate ATs with a master's degree teach at their institution.

Table 1. Characteristics of Athletic Trainers Hired in 1994 From the NATA Job Vacancy Notices

	High School		Clinic		College	
	No.	%	No.	%	No.	%
Degrees						
Bachelor's	37	64.9	47	43.5	10	10.6
Master's	19	33.3	61	56.5	76	80.9
Doctorate	1	1.8	0	0.0	8	8.5
Total	57		108		94	
Gender						
Females	23	38.3	35	32.4	48	48.5
Males	37	61.7	73	67.6	51	51.5
Total	60		108		99	
Ethnic group						
Black	1	1.7	3	2.8	4	4.0
Hispanic	4	6.8	0	0.0	2	2.0
Asian/Pacific islander	1	1.7	1	0.9	2	2.0
Native American	2	3.4	1	0.9	0	0.0
White (non-Hispanic)	51	86.4	102	95.3	92	92.0
Total	59		107		100	
Marital status						
Married	18	30.5	28	25.9	33	12.3
Not married	41	69.5	80	74.0	67	24.5
Total	59		108		100	
Educational route						
Internship	11	19.6	25	22.7	24	24.2
Undergraduate	28	50.0	56	50.9	47	47.5
Graduate	17	30.4	29	26.4	28	28.3
Total	56		110		99	

Table 2. Salaries for Each Practice Setting (Mean ± SD)

	Salary
High school*	$22,781 ± 8,182
Clinic	26,344 ± 3,876
College	25,835 ± 6,160

* High school < clinic and college ($p < .05$).

Table 3. Salaries for Highest Degree Attained (Mean ± SD)

	Salary
Bachelors*	$23,684 ± 6,282
Master's	25,868 ± 5,537
Doctorate	33,786 ± 2,857

* Bachelor's < master's < doctorate ($p < .05$).

Table 4. Salaries for Marital Status (Means ± SD)

	Salary
Married*	$27,061 ± 6,165
Single	24,706 ± 5,928

* Married > not married ($p < .05$).

Table 5. Salaries for Practice Setting and Teaching Responsibilities (Means ± SD)

	No Teaching	Teaching	Total
High school*	$19,547 ± 8651	27,191 ± 4890	22,781 ± 8182
Clinic	26,344 ± 3876	0	26,344 ± 3876
College	24,561 ± 6228	26,802 ± 5984	25,835 ± 6160
Total	24,705 ± 6095	26,914 ± 5660	25,390 ± 6039

* High school, no teaching < high school, teaching; clinic, no teaching; college, no teaching; and college teaching ($p < .05$). College, no teaching'< high school, teaching ($p < .05$).

In contrast to the collegiate and high school settings, there was a much narrower split between bachelor's degrees and master's degrees in the clinical setting. Specifically, 47 (43.5%) and 61 (56.5%) of the clinical athletic trainers possessed a bachelor's or master's degree, respectively. These percentages were very similar to the percentages for the total study population (ie, 36 and 60% for bachelor's and master's degrees, respectively). Thus, it is likely that these differences in the clinical setting represented the natural differences within the study population and not employer preferences.

In addition to academic degree, there was a significant association between being a CPR instructor and being located within the practice setting. A breakdown of the chi-square test as well as the raw data suggested that having CPR instructor's certification was associated with employment in the collegiate setting. As with the master's degree, this was probably due to many collegiate settings needing CPR instructors to train student athletic trainers.

In predicting salary levels, possession of a doctoral degree was the best predictor. As indicated in Table 3, individuals with a doctoral degree averaged approximately $8,000 more per year than individuals with a master's degree. This was not surprising considering these salaries most likely represent academic rather than clinical appointments. The second factor that predicted salary was possession of a master's degree. Based on the data presented in Tables 1 and 2, this result was not surprising. Table 1 indicates that the majority of individuals with a master's degree were in the clinical and collegiate environments [137 (53%)] which also had the highest salaries (Table 2). Finally, the last factor that predicted salary was marital status. Specifically, the analysis suggests that married individuals earned more than single individuals (Table 4). It was unclear as to whether the married employees negotiated for higher salaries, were offered more by the employer because they were married, or were offered more because they were older and had more work experience.

Our results are slightly different than those of Moss.[2,3] Moss reported that the high school teacher-athletic trainers earned more than any other athletic trainer and that the college teacher-athletic trainer earned more than their nonteaching counterparts. Our results (Table 5) suggest that individuals with teaching positions in the three settings had equivalent salaries and that these salaries did not differ from individuals working in the clinical setting. Additionally, Moss[3] reported that there were no salary differences between individuals with bachelor's and master's degrees. Our results indicated that athletic trainers with a master's degree earned approximately $2,200 more on average, than athletic trainers with a bachelor's degree (Table 3). One possible reason for these differences is that we did not limit our study to entry-level positions. This possibility was supported by Lawton et al' who produced results similar to ours using data not limited to entry-level positions. It should also be noted that, in his study of 1994 salaries, Moss[2] did report larger salaries for athletic trainers with a master's degree.

CONCLUSION

Our data suggest that athletic trainers interested in working in clinical or collegiate settings should possess a master's degree, and those interested in working in the collegiate setting should also possess the CPR instructor's certification. With respect to employee

characteristics, our results suggest that possession of a doctoral degree was the best predictor of salary. Finally, our data suggest that the higher salaried jobs were positions in the clinical setting and those positions which include teaching.

ACKNOWLEDGMENTS

We thank Julie Bernier, Assistant Professor at Plymouth State College; Thomas Kaminiski, Assistant Professor at the University of Florida; Kevin Guskiewicz, Assistant Professor at the University of North Carolina-Chapel Hill; and David E. Martin, Research Assistant Professor at the University of Virginia for their assistance on this project.

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