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Athletic Training Students' Perception of Significant Clinical Instructor Demographic Characteristics

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Context: Characteristics of a model clinical instructor (CI) continue to be defined. However, certain characteristics are still unknown.

Objective: To more fully define and describe quality clinical instruction by examining the impact of employment status, years of experience as a certified athletic trainer (AT), and employment setting on athletic training students' (ATS) perceptions of their CI.

Design: We used the Perception of Clinical Teaching Behavior questionnaire, previously validated by Laurent and Weidner.[6]

Setting: ATSs from athletic training education programs (ATEPs) accredited by the Commission on Accreditation of Athletic Training Education (CAATE) located in District Nine of the National Athletic Trainers' Association (NATA).

Patients or Other Participants: 371 ATSs from 16 professional ATEPs.

Main Outcome Measure(s): Multiple regression analyses were used to predict CI modeling of professionalism, attitude toward teaching, and humanistic orientation characteristics by employment status and years of experience. A multivariate analysis of variance (MANOVA) was used to examine differences in CI's characteristics across CI employment setting.

Results: Employment status and years of experience as an AT did not predict a statistically significant percentage of the variability in CIs' modeling of professionalism, attitude toward teaching, or humanistic orientation characteristic ($p > .05$). Modeling of professional behavior did not differ statistically across employment setting. CIs who were employed in secondary school settings were rated significantly higher on CI attitude toward teaching and humanistic orientation characteristics ($p < .01$) than CIs employed at colleges.

Conclusion: Athletic training students perceived CIs working in the secondary school setting to have a better attitude toward teaching and greater humanistic orientation. In order to improve our young professionals' education experience, CI demographics need further exploration as characteristics of the helpful CI continues to be established.

Key words: clinical education, modeling of professionalism, attitude toward teaching, humanistic orientation

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Athletic Training Students' Perception of Significant Clinical Instructor Demographic Characteristics

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Clinical education is an integral part of athletic training curriculums. In fact, 53% of an athletic training students' (ATS) professional development is completed in clinical education.[1] While in clinical education, ATSs are supervised by an athletic trainer (AT) identified as a "CI." Effective CIs are characterized by increased levels of: 1) organization and clarity, 2) enthusiasm and stimulation, 3) instructor knowledge, 4) group instructional skills, 5) clinical supervision abilities, 6) instructor clinical competence, and 7) modeling professional characteristics.[2] A helpful CI is further defined by the following characteristics: 1) legal and ethical behaviors, 2) communication skills, 3) interpersonal skills, 4) evaluation and assessment skills, 5) administrative skills, and 6) professional development activities.[3] According to Andersen et al[4] modeling professional behavior is the most influential CI characteristic. Curtis et al[5] expanded effective characteristics of CIs to include the CI's attitude toward teaching, being willing to mentor, having an instructional strategy, and possessing humanistic orientation characteristics.

With respect to teaching, Laurent and Weidner[6] narrowed the most helpful CI characteristics to three: 1) modeling of professional behaviors, 2) CI attitude toward teaching, and 3) humanistic orientation characteristics. Modeling was defined as demonstrating professional behavior and actively engaging students. The CI's attitude toward teaching included how the CI felt toward teaching and students.[7] A CI who is interested in a positive relationship with students provides a humanistic orientation. Modeling, attitude, and humanistic orientation are core characteristics of CIs that ATSs feel aid them in developing professionally.[2-6]

Research on CI background characteristics has produced variable findings. Instructional, interpersonal, evaluative, professional, and personal characteristics of CI behavior did not differ by years of experience according to Lauber.[8] In contrast, ATSs supervised by CIs with less than one year as an instructor (beginner), demonstrated less initiative than students supervised under intermediate (one to four years of clinical instructor experience) or advanced (five or more years of clinical instructor experience).[9] However, all three levels of CIs (beginner, intermediate, and advanced) were consistent in providing silent observation, use of screening and evaluation techniques, and providing skill feedback.[9]

Many authors have explored helpful CI characteristics.[1-6] However, the optimal clinical education experience in athletic training remains undefined. There is no literature regarding the effect of employment status (AT vs. graduate assistant athletic trainers) on ATSs' perception of CI characteristics. Additionally, no authors have examined the effect of employment setting (college, secondary school, clinic, and other) on ATSs' insight of CIs.

Understanding the effect of employment status, years of experience as a credentialed AT, and employment setting on clinical experience as ATSs will potentially aid the athletic training profession in providing quality teaching and allow for more productive recruiting of future instructors to provide another aspect in defining the optimal clinical education experience. Therefore, our purpose was to define and describe a helpful CI by examining the effects of CI demographics (employment status, years of experience as an AT, and employment setting) on their modeling of professionalism, attitude toward teaching, and humanistic orientation characteristics as perceived by their students.

METHODS

Participants

The participants were admitted ATSs of Commission on Accreditation of Athletic Training Education (CAATE) accredited professional athletic training education programs (ATEPs). Specifically, these ATEPs were located in District 9 of the National Athletic Trainers' Association (NATA). Inclusion criteria included only admitted ATSs (all levels of admitted students) who were over the age of 18 years, present on the day of the study, and who had been supervised by the same CI for the past eight weeks. The eight week guideline was established in order for ATSs to provide a typical depiction of their experience as this represents mid-semester of students' clinical rotation.

Instrumentation

The questionnaire utilized in this study was developed by Laurent and Weidner.[6] The primary investigators examined the instrument's reliability and the alpha level of .92 was established. The instrument, Perceptions of Clinical Teaching Behavior, has been validated by only including those subgroups that were defined as helpful in the literature.[6] The questionnaire consists of 42-items, with eight subgroups entitled student participation (4 items), CI attitude toward teaching (4 items), problem solving (5 items), instructional strategy (6 items), humanistic orientation (6 items), knowledge and research (6 items), modeling (7 items), and self perception (4 items). Originally, the ATSs and CIs were to rate how helpful the 42-items were toward facilitating student learning on a 10-point Likert scale with one being the least helpful and ten being the most helpful. At the end of the original questionnaire, participants were asked to list the 10 most helpful characteristics and the 10 least helpful characteristics.

After conducting a pilot study with 27 ATSs the following modifications were made to the questionnaire. The rating system used for this study was edited to a five-point Likert scale (1 = Strongly Disagree, 2 = Disagree, 3 = Neutral, 4 = Agree, 5 = Strongly Agree) because the ATSs in the pilot had difficulty

distinguishing the difference among the 10-points. To alleviate further confusion, the questionnaire instructions were restructured for ATSs to rate their current CI and not how helpful the characteristics were towards facilitating learning. In addition, the participants were not asked to list the 10 most helpful characteristics and the 10 least helpful characteristics as Laurent and Weidner's[6] study already defined these characteristics.

The following ATS demographic information were also collected: sex, ethnic background, year in college, estimated GPA, athletic association of the university, class level in the ATEP, number of weeks at their clinical assignment, and estimated total number of clinical hours. We also incorporated the following ATS's clinical instructor demographic data: education level and if he or she possessed an education degree, employment status (AT vs. graduate assistant-athletic trainer), employment setting, and number of years of experience as an AT. The ATEP director provided the missing demographic information for any missing CI demographic data. The ATSs chose the demographic data that most closely identified their current clinical environment for the past eight weeks.

Procedures

Institutional Review Board approval was obtained prior to data collection. Telephone calls were made to CAATE-accredited professional athletic training program directors in District Nine of the NATA (N = 22). During this contact, the program directors' participation was solicited and details regarding the purpose and procedures of the study were given. Each program director was asked how many ATSs were currently in his or her ATEP and if the students had been with their current CIs for a minimum of eight weeks. The eight week clinical placement minimum was selected to ensure that a typical depiction of the clinical experience would be collected. At the conclusion of the telephone call, e-mail and telephone numbers of the researcher were provided to the program director.

Program directors who agreed to have their students participate in the study were sent a participation packet that contained consent forms, directions for administering the survey, the Perceptions of Clinical Teaching Behavior questionnaires, a cover letter, and scan sheets. The consent form contained a confidentiality statement that affirmed the ATS's anonymity and allowed withdrawal from the study at any time without repercussions. A stamped envelope to return scan sheets and consent forms was also included.

The program directors were instructed to read the provided directions to various levels of ATSs (sophomore, junior, and senior) who met the inclusion criteria. The directions also provided specifics on how to administer the survey. Follow-up e-mails were sent to program directors throughout the process. The deadline for returning the participation packets was one month after they were mailed. Program directors who did not return the packets by the deadline were contacted by telephone to determine if they were still interested in participating.

Statistical Analyses

SPSS Version 11 (SPSS Inc., Chicago, IL) was used to analyze the data. Descriptive data included percentages, means, and standard deviations for ATSs' and their CIs' characteristics. Multiple regression was used to predict CI modeling of professionalism, attitude toward teaching, and humanistic orientation characteristics by employment status and years of experience. Modeling, attitude, and humanistic orientation were the only subgroups analyzed out of the eight subgroups due to these being identified by Laurent and Weidner[6] as the most reliable. A multivariate analysis of variance (MANOVA) was used to examine differences in CI modeling of professionalism, attitude toward teaching, and humanistic orientation characteristics across employment setting. For all statistical comparisons, the alpha level was set *a priori* to $P < .05$.

RESULTS

Of the 22-CAATE accredited professional ATEPs in District Nine of the NATA at the time of the study, 17 athletic training program directors agreed to participate (77%). Participation packets were returned by 16 of the program directors resulting in a 94% return rate. The 16 ATEPs had a total of 423 ATSs. However, three scan sheets were unusable and 49 ATSs had been with their CIs for fewer than eight weeks, resulting in a final sample of 371 ATSs.

Descriptive Data

The general participant was a Caucasian (76.0%) female (62.0%), who had a GPA of 2.6 to 3.4 (57.7%), and was a senior in college (50.4%). (Table 1) The typical ATS in this study attended a Division I school (65.0%), was in his or her first clinical placement (41.2%), and had between 101 to 400 clinical hours (41.2%).

Table 1. General Student Characteristics (N = 371)

Variable	n	%
Sex		
Male	141	38.0
Female	230	62.0
GPA		
2.5 and below	11	3.0
2.6 to 3.4	214	57.7
3.5 and above	146	39.3
Ethnic Background		
Caucasian	282	76.0
African-American	49	13.2
Asian	8	2.2
Hispanic	10	2.7
Native-American	2	0.5
Other	20	5.4
Year in School		
Freshman	12	3.2
Sophomore	16	4.3
Junior	156	42.1
Senior	187	50.4

Table 2. Athletic Training Student Characteristics (N = 371)

Variable	n	%
Athletic Association		
Division I	241	65.0
Division II	111	29.9
Division III	2	0.5
NAIA	17	4.6
Class Level in the ATEP		
Clinical I	153	41.2
Clinical II	13	3.5
Clinical III	147	39.6
Clinical IV	13	3.5
Clinical V or more	45	12.2
Current Clinical Hours		
Less than 100	18	4.9
101 – 400	153	41.2
401-800	96	25.9
More than 800	104	28.0

Table 3. Demographics of CIs (N = 371)

Variable	n	%
Employment Setting		
College	262	70.6
Secondary School	80	21.6
Clinic	28	7.5
Other	1	0.3
Education Level		
Bachelor's degree	155	41.8
Master's degree	200	53.9
Doctorate degree	16	4.3
Employment Status		
Athletic Trainers	272	73.3
GA Athletic Trainers	99	26.7
Education Degree		
No	247	66.6
Yes	124	33.4

(Table 2) Participants represented all three (I, II, III) National Collegiate Athletic Association (NCAA) Divisions and the National Association of Intercollegiate Athletics (NAIA). The average CI was employed at college or university with almost seven years of experience (mean [SD] = 6.93 [6.42]), held a Master's degree (53.9%) but had no formal background in education (66.6%). (Table 3)

Statistical Results

To predict CI characteristics based on employment status and years of experience, a multiple regression analysis was run (Table 4). Employment status and years of experience were not statistically significant predictors of CIs' modeling, attitude toward teaching, or humanistic orientation characteristics.

A MANOVA was used to compare the level of CI's modeling of professionalism, CI's attitude toward teaching, and CI's humanistic orientation of ATS employed in college, secondary school, clinic, and other settings. As only one ATS identified other employment setting, this variable was combined with the clinic employment setting (n = 29). There were statistically significant differences ($F_{(6,730)} = 2.90$, $P < .01$) across employment setting. Utilizing a univariate analysis, it was determined that CI's attitude toward teaching ($F_{(2, 368)} = 6.56$, $P < .01$) and humanistic orientation characteristics ($F_{(2, 368)} = 5.99$, $P < .01$) were statistically different (Table 5). Specifically, college CIs were rated lower on attitude toward teaching (mean [SD] = 3.48 [0.96]) and humanistic orientation (mean [SD] = 3.86 [0.85]) than CIs at secondary school and clinic or other employment settings.

DISCUSSION

The current study contributes to an understanding of factors used to define a helpful clinical instructor by utilizing the three most reliable characteristics defined by Laurent and Weidner[6] and determines how they vary according to CI's employment status, years of experience, and employment setting. Employment status and years of experience as a credentialed AT did not predict a significant portion of the variance in CI's modeling of professionalism, attitude toward teaching, or humanistic orientation characteristics. This finding supports previous research where no significant differences were found among years of experience as a CI and an instructor's evaluative, instructional, interpersonal, professional, and personal characteristics.[8] The number of years of experience that an individual has been a credentialed AT is not a strong predictor of the quality of clinical instruction the individual will provide according to Lauber,[8] and Stemmans and Gangstead.[9] In this study, ATs and graduate assistant-athletic trainers both provided modeling of professionalism, positive attitude toward teaching, and humanistic orientation characteristics for students.

The employment site of the CI did not increase or decrease ATS's perception of the instructors' modeling of professionalism. Typically, CIs who have a passion for what they do are strong role models, and students respond to this quality.[9] In spite of where a CI is employed, his or her behavior develops ATSs into professionals through mentoring, role modeling, and demonstrating student's responsibility in the field.[3]

Other aspects of being a helpful CI include having a positive attitude toward teaching and also possessing humanistic orientation characteristics.[5,6] In this study, these characteristics statistically varied across employment setting. Specifically, ATSs perceived secondary school CIs as having a better attitude toward teaching and a better humanistic orientation characteristic than college CIs. Although additional research is needed to fully elaborate on why ATSs prefer secondary school CIs, potential variables of interest include the education background of secondary school ATs, the age of the ATs, and the job responsibilities of secondary school employment. If secondary school-based ATs have an education background this may lead them to have a stronger understanding of how to provide an effective learning environment. Athletic trainers who do not possess an education background may only have learned how to be a CI through trial

Table 4. Regression Analysis of Modeling, Attitude, and Humanistic Orientation (N = 371) †

Variable	*B*	SEE	*ß*
Predicted variable: modeling*			
Constant	4.12	0.67	---
Employment status	0.10	0.09	0.07
Years of experience	0.10	0.01	0.10
Predicted Variable: CI Attitude Toward Teaching**			
Constant	3.94	0.10	---
Employment status	0.01	0.13	0.01
Years of experience	0.00	0.01	0.01
Predicted Variable: Humanistic Orientation***			
Constant	3.93	0.08	---
Employment status	0.10	0.11	0.06
Years of experience	-0.00	0.01	-0.01

* $R^2 = .008$; $\Delta R^2 = .003$ ($p = .22$)
** $R^2 = .000$; $\Delta R^2 = -.005$ ($p = .99$)
*** $R^2 = .003$; $\Delta R^2 = -.002$ ($p = .54$)

Table 5. Univariate Analysis of Employment Setting on Characteristics of CIs (N = 371)

Variable	df	F	Mean [SD]
Modeling	(2, 368)	2.17	
College			4.17 [0.65]
Secondary School			4.31 [0.60]
Clinic/ Other			4.34 [0.56]
CI Attitude Toward Teaching	(2, 368)	6.56*	
College			3.84 $[0.96]_a$
Secondary School			4.23 $[0.83]_a$
Clinic/ Other			4.20 [0.73]
Humanistic Orientation	(2, 368)	5.99*	
College			3.86 $[0.85]_a$
Secondary School			4.18 $[0.70]_a$
Clinic/ Other			4.17 [0.56]

*Means with the same subscripts differ significantly at $P < .01$ on the Tukey honestly significant difference comparison.

and error experiences or have learned from modeling previous mentors. Teaching effectiveness among ATEPs may be less variable due to the inclusion of approved CI workshops in recent years. The approved CI workshop was first proposed in 1996 by the Education Task Force[10] as a way to improve the teaching and evaluation skills of CIs.

In addition, ATs, and graduate assistant athletic trainers who work at secondary schools tend to be younger than those employed at colleges or clinics.[11] Newly certified athletic trainers may take their first job in a secondary school setting or receive a graduate assistantship working at a secondary school. For these ATs, the undergraduate experience is closer at hand and they may be able to better demonstrate their familiarity with this experience to students now under their supervision. For example, a newly certified AT has recently experienced the delicate balance needed to take classes, work, and fulfill clinical requirements at the same time. Together, being closer in age to the students and being able to empathize with the demands of being an ATS may have contributed to secondary school CIs receiving higher scores on attitude toward teaching and humanistic orientation characteristics.

The characteristics of the secondary school environment may also be linked to why ATSs scored secondary school CIs higher on attitude toward teaching and humanistic orientation characteristics. Secondary school CIs have different job responsibilities than college CIs. College CIs travel more, may make travel and meal plans, perform rehabilitation and care throughout the day, have administrative duties including working with insurance companies and physicians, and provide practice and game coverage.[12,13] Athletic trainers employed by a university with an accredited professional ATEP may also have extra commitments to academics in addition to caring for athletes throughout the day.[14,15] An AT employed at a secondary school as a teacher and athletic trainer is a teacher first then cares for the athletes in the afternoon or evening.[13] Perhaps, this individual is also more nurturing (from dealing with 13 to 18 year olds all day) and more empathetic which carries over to the duties as a CI. Moreover, ATs employed at clinics often care for their patients in the morning and then care for secondary school athletes in the afternoon.

Overall, CIs in this study demonstrated modeling behaviors by actively engaging students in their clinical experience. However, secondary school CIs were rated higher than CIs employed at colleges on attitude toward teaching and humanistic orientation characteristics.

Limitations

A limitation of the current study is that data on the teaching background of CIs was not gathered. Teaching experience may be an additional factor to help predict helpful CI characteristics.

Another limitation was the use of attendance at an approved CI workshop to determine the statistical insignificance of employment and years of experience which is only speculative as CIs and approved clinical instructors were grouped together. In the present study, CIs were not grouped into those who attended an approved CI workshop and those who did not. Future research is recommended to specifically evaluate the effectiveness of these workshops for increasing the teaching and supervising skills of attendees and also to evaluate if CIs who attend the workshop are perceived differently by ATSs.

CONCLUSIONS

Previous research has focused on characteristics associated with effective CIs.[1-6] The present study utilized three CI characteristics (modeling of professionalism, attitude toward teaching, and humanistic orientation characteristics) that were defined by past researchers as the most reliable and determined

which characteristics contribute to quality clinical instruction.[5] Regardless if the CI is employed as an AT or graduate assistant athletic trainer, ATSs felt they equally provided modeling professionalism, attitude towards teaching, and humanistic orientation characteristics. Athletic training students also felt the same about the number of years of experience as an athletic trainer. Modeling of professionalism was provided among all college, secondary school, and clinic/other CIs. However, ATSs felt secondary school CIs had a better attitude towards teaching and humanistic orientation characteristics. To further determine factors of quality instruction, it would be valuable to investigate how many ATSs a CI supervises and the class level of these students.

There are still many characteristics and combinations of characteristics of CIs that have yet to be studied including teaching background and experience of CIs, attendance at approved CI workshops, and ATSs' perception of clinical teaching, and ATSs' perception of CI's ethics. Continuing to identify these characteristics will cultivate the optimal clinical education learning environments and eventually define a master clinical instructor. By utilizing ATs who have these characteristics (graduate assistant or AT, any years of experience, and employed at a secondary school), clinical education should be more effective in producing better qualified professional ATs.

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