

Professional Role Complexity and Job Satisfaction of Collegiate Certified Athletic Trainers

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Context: Whenever professionals have multiple role obligations in the workplace, they face potential professional role complexities.

Objective: To examine whether certified athletic trainers (ATs) employed at the collegiate level experienced professional role complexities, and if so, what effect those complexities had upon their job satisfaction and intent to leave a current position or the profession.

Design: Survey.

Setting: We used Internet survey methods to gather information from 1000 randomly selected collegiate ATs regarding the amount of stress they felt due to role complexities.

Patients or Other Participants: We obtained a random sample of e-mail addresses for 1000 collegiate ATs in the United States and contacted these individuals with an invitation to participate. A total of 348 usable responses were received, for a 36% response rate.

Main Outcome Measure(s): The role complexity aspect of the survey consisted of 45 questions addressing role ambiguity, role overload, role incongruity, role incompetence, and role

conflict. The job satisfaction portion consisted of global questions regarding overall job satisfaction and intent to leave the job or profession.

Results: A total of 38% of respondents experienced moderate to high stress levels from role overload, whereas 23% and 22% had moderate to high levels of stress from role ambiguity and role conflict, respectively. Clinicians and joint appointees who reported moderate to high levels of stress from role complexity issues had lower job satisfaction and more frequent thoughts of leaving than did their faculty counterparts.

Conclusions: The majority of collegiate ATs experienced low levels of professional role complexities and were relatively satisfied with their jobs. However, collegiate ATs began to experience less job satisfaction and more thoughts of leaving when moderate to high stress levels occurred due to role ambiguity, overload, incongruity, incompetence, and conflict. Lessening the stress due to role complexities is critical to positive employment experiences for ATs employed in higher education.

Key Words: role conflict, role ambiguity, role overload

Key Points

- Most collegiate athletic trainers experienced low levels of professional role complexities and were relatively satisfied with their jobs.
- As stress levels increased due to role ambiguity, overload, incongruity, incompetence, and conflict, job satisfaction decreased and athletic trainers thought more about leaving their jobs.
- Reducing the stress caused by role complexities is necessary to promote positive employment experiences for collegiate athletic trainers.

The administration and daily operation of collegiate athletic programs is multifaceted and complex. In order for an athletic department to be successful, administrators, coaches, athletes, athletic trainers, equipment managers, and other support staff all must engage in a high level of interpersonal and departmental interaction.¹ Today's increased competitiveness in collegiate athletics and the complexity of their operations have the potential to increase the stress levels found among athletic professionals.

Certified athletic trainers (ATs) play a key role in collegiate athletic programs. Athletic training is a service profession, and the job expectations for collegiate ATs are demanding, given their obligations to multiple teams, individual participants, teaching, clinical care, and the administrative tasks involved in providing appropriate medical coverage. The multiple roles of collegiate ATs often clash as they perform the responsibilities expected for clinical practice, faculty work, and joint appointments. As far back as 1987, ATs were warned about the escalating

expectations for faculty, staff, and students.² The competitive changes within collegiate athletics have increased the time commitment and workload assumed by practicing ATs in these settings. Expectations of administrators, coaches, and athletes regarding responsibilities, service, and availability of ATs have combined to create a unique performance challenge for ATs employed at institutions of higher education. In addition, the recent educational reforms in athletic training have amplified the ever-increasing demands on athletic training academic faculty. Failure to meet conflicting expectations from numerous sources is intensified by the prioritizing of the very same multiple responsibilities and obligations, putting patient care, professional credibility, and reputations in jeopardy.³ Role complexities found among the multiple expectations of patients, students, and the institution have been examined in other allied health care professions but not in athletic training.²⁻¹⁰ It is, therefore, important to understand the extent and sources of role complexities among collegiate ATs in an effort to control, manage, and

even alleviate them where possible. It is particularly important to understand differences in role complexities and their effects among the major role groups that make up the collegiate athletic training profession: clinicians, faculty, and joint appointees.

Numerous authors have examined professional role complexities and their contributions to workplace stress, anxiety, fatigue, aggression, low social support, illness, poor productivity, and decreasing mental and physical involvement at work.^{1,3-8,11-16} In examinations of the general workplace, stress decreased both individual satisfaction and role effectiveness.¹⁵

Role complexity is an all-inclusive term used to represent stress, negative beliefs, feelings, and behaviors of role occupants. The most common types of role complexity and the ones investigated in this study are as follows:

Role Ambiguity. Role ambiguity occurs when expectations for a particular position are vague, unclear, or ill defined; consist of contradictory role responsibilities; and are associated with poorly defined requirements, haphazard performance, and inconsistent discipline or evaluations.¹³

Role Overload. Role overload occurs when an employee finds it difficult to perform professional responsibilities that are excessive or cannot possibly be finished in the time available. Role overload also has been operationally defined as occurring when an individual is able to complete all obligations but not at the level of competence that would be achieved if other duties were not present.¹³

Role Incongruity. Role incongruity is found when role obligations and either personal skills or personal values are incompatible. It refers to workplace stress caused by situations in which the role occupant's competence, ability, morality, self-perception, self-concept, or work-responsibility preference might not align well with either role requirements or expectations of employers.^{13,14}

Role Incompetence. Role incompetence occurs when a person does not have the necessary skills or knowledge to successfully perform the individual or combined responsibilities inherent in a particular job.¹³

Role Conflict. Role conflict is the stress felt when an employee perceives role or job expectations as being contradictory or mutually exclusive.¹³ These conflicting role expectations may originate from different organizations or responsibilities, different constituents, and, in some cases, conflicting assignments from the same individual. These conflicts create stress for the role occupant due to the inability to complete the tasks or to complete them in a satisfactory manner.

With this previous research and these definitions as background information, we undertook our research to examine the implications of role complexities among health care professionals in general and in ATs specifically. Our research questions were as follows:

- a) Did collegiate ATs experience role complexities?
- b) If so, what effect did those complexities have on job satisfaction, intent to leave the current position, and intent to leave the profession?

METHODS

The Role Strain Scale was created by Mobily⁷ to examine role complexities in nursing. With the author's

permission, we modified the scale to reflect the job responsibilities and language common to athletic training in order to examine role complexities and job satisfaction.

From the National Athletic Trainers' Association, we obtained a random sample of e-mail addresses for 1000 collegiate ATs across the nation. As is standard practice for Internet-based surveys, the potential respondents were contacted via 3 mass mailings, inviting them to participate and encouraging the participation of those who had not yet volunteered.¹² After 29 responses were eliminated due to incomplete data sets and inappropriate employment settings caused by recent job changes, this procedure produced 348 usable responses, for a 36% response rate.

Given the random nature of the data collection procedure, it was important to evaluate the response set for any systematic bias in the demographics of the respondents. Demographic data of collegiate ATs were obtained from the National Athletic Trainers' Association and were compared with study data for institutional affiliation, institutional division, age, highest degree held, and primary position. Only the data from National Association of Intercollegiate Athletics respondents aged 23 to 30 years and National Collegiate Athletic Association Division I head ATs differed from the national data by more than 10%. Therefore, we determined that the sample was representative of the entire collegiate AT population and that no systematic response bias appeared to be present.

The role complexity aspect of the survey consisted of 45 questions that addressed the role complexity issues of role ambiguity, role overload, role incongruity, role incompetence, and role conflict. The respondents used a 5-point Likert scale (1 = *never*, 2 = *rarely*, 3 = *sometimes*, 4 = *often*, 5 = *nearly all the time*) to answer how often specific work-related situations created stress for them. Questions were grouped by question direction, content, and format in order to obtain a mean score for the different role complexity types. The α coefficients for all role complexity variables possessed internal consistency, as exhibited by the Cronbach values: role ambiguity = .866, role overload = .886, role incongruity = .816, role incompetence = .803, and role conflict = .901.

The job satisfaction portion consisted of global questions regarding overall job satisfaction and intent to leave the job or profession. Job satisfaction values were measured on a 6-point Likert scale (1 = *strongly disagree*, 2 = *disagree*, 3 = *slightly disagree*, 4 = *slightly agree*, 5 = *agree*, 6 = *strongly agree*). Values for intent to leave the current job and profession were characterized via a 4-point Likert scale (1 = *never*, 2 = *seldom*, 3 = *occasionally*, 4 = *frequently*). The higher the respondent's job satisfaction scores, the higher his or her job satisfaction. Elevated intent-to-leave scores, however, meant increasing frequency of thoughts about leaving the current position or the profession.

In order to answer the research questions that guided the study, the following statistical analyses were performed. Descriptive statistics of the sample were examined and were compared with the national population. A frequency examination of the responses to questions regarding primary role responsibility and role orientation was undertaken. Mean role complexity type values were examined. We calculated analyses of variance to detect

any differences in role complexity, job satisfaction, and intent to leave between the respondents' primary professional role responsibilities and the study population as a whole. Finally, we computed multiple regression analyses to examine the relationships between the independent variables of role complexity type and the dependent variables of job satisfaction, intent to leave the job, and intent to leave the profession.

RESULTS

For the purpose of our study, the various role responsibilities of collegiate ATs were categorized into faculty/academic, clinical, or joint appointments. Historically, role complexities in other health professions' literature have been examined this way, and these role groupings were applicable to athletic training because they were the 3 main employment situations for collegiate ATs.

The faculty/academic grouping included those individuals who stated that their main role responsibility was as faculty, clinical instructor, clinical coordinator, adjunct faculty, or athletic training program director. Those who answered that head or assistant/associate AT was their primary position were categorized as clinicians, whereas the joint appointee category included individuals who reported professional job responsibilities in 2 or more of the 3 job duty categories of academics, clinical practice, or administration/other. In the study sample of 348 respondents, 130 were clinicians, 62 were faculty, and 146 possessed a joint appointment. Ten respondents reported primary responsibility in administration or another area not defined as clinician, faculty, or joint appointment and, thus, were not included in the final statistical analysis.

Role Complexities

We analyzed role complexity–type scores to assess which possessed a mean value above 2.5. Based on our review of the previous literature, it would have been presumptuous to believe that respondents did not experience some level of difficulty with role complexity. Therefore, the test value was set at 2.5, which is the numeric midpoint between the Likert scale responses of *rarely* and *sometimes* feeling stress due to role complexity. Other categories were characterized as follows: minimal stress = 2.49 or below, low stress = 2.5 to 3.1, moderate stress = 3.11 to 3.8, high stress = 3.81 or above.

Each respondent's mean scores for the role complexity types were examined and were placed into one of the aforementioned stress level categories. Inclusion in the minimal or low stress level was deemed normal for the profession, with no concern for action to reduce such low levels of stress. However, moderate to high levels are cause for concern, and steps should be taken to amend contributing factors. The number and percentage of role respondents included in each stress level category are presented in Table 1.

Role overload issues produced moderate to high role stress levels for 38% of study respondents. Of the study respondents, 22% experienced significant stress due to role conflict, whereas 23% reported moderate to high levels of stress due to role ambiguity. (Role complexities were examined only for respondents who had the primary responsibility of clinician, faculty, or joint appointment

Table 1. Level of Role Complexity by Role Group, n (%)

	Clinician	Faculty	Joint Appointee	Study Population ^a
Overall role complexity				
Minimal	69 (53)	32 (52)	68 (47)	169 (50)
Low	34 (26)	21 (34)	48 (33)	103 (30)
Moderate	22 (17)	7 (11)	27 (18)	56 (17)
High	5 (4)	2 (3)	3 (2)	10 (3)
Role ambiguity				
Minimal	73 (56)	32 (52)	66 (45)	171 (51)
Low	25 (19)	23 (37)	41 (28)	89 (26)
Moderate	17 (13)	7 (11)	22 (15)	46 (14)
High	13 (10)	0 (0)	16 (11)	29 (9) ^b
Role overload				
Minimal	43 (33)	20 (32)	38 (26)	101 (30)
Low	41 (32)	19 (31)	49 (34)	109 (32)
Moderate	28 (22)	17 (27)	36 (25)	81 (24)
High	18 (14)	6 (10)	23 (16)	47 (14)
Role incongruity				
Minimal	75 (58)	37 (60)	75 (51)	187 (55)
Low	30 (23)	19 (31)	45 (31)	94 (24)
Moderate	16 (12)	5 (8)	22 (15)	43 (13)
High	8 (6)	1 (1)	4 (3)	13 (4) ^c
Role incompetence				
Minimal	88 (68)	52 (84)	110 (75)	250 (79)
Low	21 (16)	8 (13)	20 (14)	49 (15)
Moderate	6 (5)	2 (3)	6 (4)	14 (4)
High	3 (2)	0 (0)	1 (1)	1 (<1) ^d
Role conflict				
Minimal	63 (48)	26 (42)	64 (44)	153 (45)
Low	37 (28)	23 (37)	53 (36)	113 (33)
Moderate	26 (20)	10 (16)	24 (16)	60 (18)
High	4 (4)	3 (5)	5 (3)	12 (4)

^a Ten respondents did not report primary roles as clinicians, faculty, or joint appointees and, thus, were not included in this evaluation.

^b Three respondents did not answer these questions.

^c One respondent did not answer these questions.

^d Twenty-four respondents did not answer these questions.

with roles in teaching and patient care.) Even though moderate to high levels of role complexities existed for some, the extent of professional role complexities for these collegiate ATs was less than expected when compared with previous research in similar health care professions.^{4,5,7,8}

Job Satisfaction and Intent-to-Leave Values

Job satisfaction, intent to leave the job, and intent to leave the profession were examined for the sample as well as for each role group. Table 2 provides the mean values for the job satisfaction and intent-to-leave variables. Respondents were relatively satisfied with their jobs, as indicated by the mean value of 4.54, which corresponds with respondents' either slightly agreeing or agreeing with the statement, "I am satisfied with my job." Faculty respondents expressed a greater amount of job satisfaction than either clinicians or joint appointees did, although those differences were not statistically significant. Differences were found among the groups for intent to leave the current position ($P = .009$) and intent to leave the profession ($P = .032$). Follow-up Tukey honestly significant difference tests revealed that intent-to-leave-job values were different between faculty members and both clinical

Table 2. Descriptive Statistics for Job Satisfaction and Intent to Leave (Mean ± SD)

Variable	Clinicians (n = 130)	Faculty (n = 62)	Joint Appointees (n = 146)	Study Population (n = 348)
Job satisfaction	4.43 ± 1.32	4.82 ± 1.25	4.49 ± 1.30	4.54 ± 1.30
Intent to leave job	2.58 ± 1.01	2.16 ± 0.93	2.61 ± 1.03	2.51 ± 1.02
Intent to leave profession	2.08 ± 1.04	1.69 ± 0.82	2.00 ± 0.97	1.97 ± 0.98

and joint appointee respondents ($P = .021$ and $.010$, respectively). Faculty members were less likely to leave their jobs, whereas thoughts about leaving the profession were more frequent for clinicians ($P = .025$) compared with faculty but not different from joint appointees.

Influences on Job Satisfaction and Intent-to-Leave Values

We used multiple regression models to examine the influence of role complexity issues on job satisfaction and intent-to-leave values. In order to evaluate this influence, job satisfaction and intent to leave the current position or the profession were treated as dependent variables; role ambiguity, role overload, role incongruity, role incompetence, and role conflict values constituted the independent variables. These statistical models were evaluated for the entire study population and for the clinicians, faculty, and joint appointees (Tables 3 through 6).

Study Population

After evaluating the regression models, we determined that role incongruity was the only variable that predicted (negatively) job satisfaction ($P < .001$, $\beta = -.643$). The combination of role ambiguity and role incongruity values ($P < .001$ and $P = .006$, respectively) predicted the respondents' intent to leave the current job. Desire to leave the profession of athletic training was influenced by role overload and role incompetence values ($P < .001$ and $P = .010$, respectively).

Clinicians

Role incongruity issues seemed to affect the stress levels of clinicians ($P < .001$), because they predicted all 3 dependent variables. Job satisfaction, intent to leave the current job, and intent to leave the profession all were predicted by work environments in which clinicians experienced responsibilities that were incompatible with their personal skills or values.

Table 3. Multiple Regression Analysis for Study Population

Variable	Coefficient	SE	t	R ²	P Value
Job satisfaction	6.049	0.24	25.189	.132	< .001
Role incongruity	-0.643	0.097	-6.653		< .001
Intent to leave current position	1.094	0.182	6.01	.193	< .001
Role incongruity	0.273	0.099	2.759		.006
Role ambiguity	0.312	0.083	3.765		< .001
Intent to leave profession	0.792	0.217	3.646	.088	< .001
Role incompetence	0.189	0.073	2.588		.01
Role overload	0.282	0.071	3.992		< .001

Faculty

Faculty respondents were most likely to think about leaving their current jobs when role overload stress increased. This was the only role complexity issue that predicted the intent to leave a current position for this group ($P = .001$). No other role complexity issue predicted either job satisfaction or intent to leave the profession for respondents with faculty responsibilities.

Joint Appointees

As could be expected, role conflict issues seemed to negatively affect job satisfaction and increase the intent to leave for joint appointees. Stress due to role conflict predicted intent to leave the profession ($P = .001$), whereas role incompetence and role conflict values were related to job satisfaction ($P = .038$ and $P < .001$, respectively). Role occupants with joint appointments were influenced toward leaving the current job by increased stress due to role ambiguity ($P < .001$).

In summary, for collegiate ATs, several role complexity issues predicted overall job satisfaction, intent to leave the current job, and intent to leave the profession. As a whole, college ATs were affected in their current job situations by role incongruity and more often thought of leaving the profession when confronted by role overload and role incompetence issues. The job and career satisfaction of collegiate ATs working as clinicians were negatively affected by role incongruities in the employment setting, whereas faculty ATs were not tolerant of role overload in their jobs. Joint appointees were negatively affected by role complexity issues such as role ambiguity, incompetence, and conflict issues.

DISCUSSION

This examination of collegiate ATs' experiences of role complexities and how related workplace stress affected job satisfaction, intent to leave the job, and intent to leave the profession yielded a number of results that add to our understanding of the effect of role complexity issues on this population.

A total of 38% of study respondents in all role groupings experienced moderate to high stress levels from role

Table 4. Multiple Regression Analysis for Clinicians

Variable	Coefficient	SE	t	R ²	P Value
Job satisfaction	6.393	0.367	17.434	.27	< .001
Role incongruity	-0.836	0.144	-5.805		< .001
Intent to leave current position	1.218	0.282	4.322	.222	< .001
Role incongruity	0.565	0.111	5.101		< .001
Intent to leave profession	0.826	0.289	2.858	.199	.005
Role incongruity	0.54	0.114	4.761		< .001

Table 5. Significant Multiple Regression Analysis for Faculty

Variable	Coefficient	SE	t	R ²	P Value
Intent to leave current position					
Role overload	0.528	0.154	3.423	.166	.001

overload, with joint appointees experiencing the most (41%). Twenty-three percent of respondents experienced moderate to high levels of stress due to role ambiguity, whereas role incongruity and conflict elicited higher levels of stress in 17% and 22% of respondents, respectively.

Most study respondents (94%) did not feel significant stress due to role incompetence, boding well for the educational preparation and continuing education practices in the athletic training profession. However, elevated stress levels due to incompetence predicted job satisfaction in joint appointees and intent to leave the profession in all study respondents.

Overall, collegiate ATs were relatively satisfied with their jobs and seldom thought about leaving their jobs or the profession. However, satisfaction and job contentment were negatively affected by increased levels of role ambiguity and incongruity. Elevated role overload and incompetence values caused collegiate ATs to have more frequent thoughts of leaving the profession.

Grouping the respondents according to their professional roles provided insight into the tolerance or intolerance of role complexities by clinicians, faculty members, and joint appointees. Multiple regression analysis showed that role incongruity issues negatively affected the job satisfaction scores of clinicians and caused them to more frequently think of leaving both their jobs and the profession. Faculty respondents were more likely to think about changing jobs when role overload stress increased, but none of the role complexity types predicted their thoughts regarding job satisfaction or intent to leave the profession. Joint appointee job satisfaction decreased with elevated role incompetence and role conflict. Joint appointees thought more about leaving their jobs when role ambiguity issues increased and frequently thought about leaving the profession when confronted with higher levels of stress due to role conflict.

The field of athletic training produces role ambiguity, overload, incongruity, and conflict within the daily culture and responsibilities of ATs. The ambiguous nature of responding to emergency situations and the changing health care needs of athletes and patients are inherent in the position. However, this type of role ambiguity or overload is not where the problem lies. Rather, it is the ambiguity and overload due to poor job descriptions or evaluation procedures and contradictory and excessive expectations that create role stress for collegiate ATs.

Role overload issues for ATs are a common result of competitive escalation, increasing opportunities, and fiscal restrictions. Additional responsibilities for the AT in the form of game, practice, and workout coverage along with teaching, clinical, and administrative obligations can lead to role overload stress. Similarly, these additional responsibilities can create stress from role conflict issues, negatively affecting the work environment of the collegiate AT. Incompatibility between role responsibilities and personal skills or values leads to role incongruity, which especially affected the collegiate ATs employed in clinical roles. The data collected in this study did not allow us to

Table 6. Significant Multiple Regression Analysis for Joint Appointees

Variable	Coefficient	SE	t	R ²	P Value
Job satisfaction	5.514	0.433	12.74	.093	< .001
Role incompetence	0.333	0.159	2.094		< .001
Role conflict	-0.643	0.176	-3.649		.038
Intent to leave current position	1.351	0.239	5.657	.193	< .001
Role ambiguity	0.487	0.087	5.605		< .001
Intent to leave profession	0.962	0.309	3.114	.085	.002
Role conflict	0.406	0.117	3.468		.001

determine whether the source of this incompatibility was related to skills or values and is an important area for further study.

CONCLUSIONS

We are the first to examine professional role complexities and job satisfaction among collegiate ATs nationwide, beginning a line of research to evaluate workplace dynamics for ATs. Even though collegiate ATs reported relatively low role-stress levels, our findings suggest that job satisfaction decreased and intent to leave increased when higher levels of stress due to role complexities were experienced. The collegiate employment setting for ATs accounts for approximately 10% of all employment opportunities and, therefore, the direct results of this study are not applicable to all individuals in the profession. However, we feel that studying the professional role complexities of college ATs has implications for the entire profession, because certification and accreditation procedures require that all ATs must be educated and subsequently are socialized in these settings. Therefore, the negative effects of role complexity on the faculty and clinicians in these settings can affect each and every one of us, regardless of our current employment situation.

Administrators, supervisors, ATs, and athletic training students need to be aware of the sources and results of professional role complexity and must seek ways to assuage them. Although some complexity in the workplace may be beneficial and should be expected, the individual role occupant must be aware that negative workplace ramifications may occur when stress levels due to role complexities rise unchecked. Lessening the stress from role complexity issues is critical to providing positive employment experiences for collegiate ATs. Job responsibilities and performance expectations must be defined clearly by administrators and supervisors in an attempt to minimize the negative effect of role complexities. Clear expectations and nonconflicting demands for time commitment and obligations are paramount to the job satisfaction of collegiate ATs. Open and honest communication regarding role expectations and obligations should take place frequently between role occupants and their supervisors. Collegiate ATs, like other employees, must know what is expected of them and how their performance will be evaluated. Creation, modification, and review of job descriptions and responsibilities are essential for each AT in an attempt to control potential sources of individual role ambiguity overload, incongruity, and conflict. Only when expectations are known and potential difficulties discussed

can the role occupant begin the process of eliminating sources of role complexity. This needs to be done at the individual institutional level, because each workplace may possess unique sources of role stressors.

Additional questions are yet to be researched and answered, such as whether role complexities exist in other athletic training work settings, how nonprofessional obligations affect role complexities, and whether the amount of role complexity increases or decreases for role occupants as they gain experience. Another area that warrants further study is identifying sources of role incongruity experienced by clinical ATs employed in higher education. Determining whether the stress caused by role incongruity occurs as a result of incompatibility between role responsibilities and skill level or morals, beliefs, and values is an important question to answer.

Time and additional research will help us understand the answers to these and other questions. However, as a result of this study, we now have more information about professional role complexities for ATs employed at higher education institutions.

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