THE EFFECT OF JOB CONGRUENCY AND DISCREPANCY WITH THE NATIONAL ATHLETIC TRAINERS ASSOCIATION ATHLETIC TRAINER ROLE DELINEATION ON THE JOB CHARACTERISTICS MODEL OF WORK REDESIGN IN SECONDARY SCHOOL ATHLETIC TRAINERS IN TEXAS

DISSERTATION

Presented to the Graduate Council of the

University of North Texas in Partial

Fulfillment of the Requirements

For the Degree of

DOCTOR OF EDUCATION

By

Stephen Churchill Bunt, B.S., M.S.

Denton, Texas

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Bunt, Stephen C. The Effect of Job Congruency and Discrepancy with the National Athletic Trainers Association Athletic Trainer Role Delineation on the Job Characteristics Model of Work Redesign in Secondary School Athletic Trainers in Texas. Doctor of Education (Educational Administration), August, 1997, 194 pp., 72 tables, references, 68 titles.

This study investigated person-situation relations of professional preparation and job classification of secondary school athletic training positions with core job dimensions and affective outcomes within Hackman and Oldham's 1980 Job Characteristics Model. Research focused on which relations show increased affective outcomes; relationships between core job dimensions and affective outcomes; and characteristics of the core job dimensions of task identification, task significance, and skill variety of athletic trainer tasks as defined by the National Athletic Trainers Association Board of Certification, Inc. 1995 Role Delineation Study.

A modified Job Diagnostic Survey was administered to 325 secondary school athletic trainers in Texas. Some global items were replaced with items specific to the Role Delineation Study. T-tests and two-way ANOVAs were conducted to determine differences between groups of athletic trainers based upon professional preparation and job classification of subject's athletic training position. Pearson product moment correlations and stepwise multiple linear regressions between job dimensions were also computed.

Results indicated that no person-situation relationship resulted in higher affective outcomes. The relationship between core job dimensions and affective outcomes generally followed the model. Feedback had the strongest relationship followed by autonomy and task identification. No group of positions demonstrated a need for re-design based upon discrepancy between group scores on any job characteristic and mean scores for all secondary school athletic trainers.

Results indicated that noncertified secondary school athletic trainers, especially those who are contracted from clinics, should become certified. Increased feedback is merited for all secondary school athletic trainers in Texas. Application of the model to further improve affective outcomes should examine specific relationships of each group. Recommendation for further research focused on examination of the relationship of increased affective outcomes of the model and athletic trainer effectiveness as measured by the National Athletic Trainers Association Outcomes Study.

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CHAPTER I

INTRODUCTION

Hackman and Oldham in 1980 proposed the Job Characteristics Model (JCM), a conceptual framework of job design, which provides that enriched or complex jobs offer increased affective outcomes of job satisfaction, internal work motivation, growth needs satisfaction, and work performance. The Job Diagnostic Survey(JDS), which also was developed by Hackman and Oldham, has been the principal research tool used to provide measures of dimensions within the Job Characteristic Model (Hackman and Oldham, 1975). Further research on the validity of the constructs underlying the Job Characteristics Model has been profuse as indicated in narratives and meta-analyses (Fried & Ferris, 1987; Kelly, 1992; Roberts & Glick, 1981; Taber & Taylor, 1990). These studies recommend further research into the comprehensiveness of the JCM, its causal model, nature of its component scales, overall dimensionality, and the comparison of job incumbent's perception of job with objective job characteristics measures (Evans & Fischer, 1992; Kelly, 1992; Taber and Taylor, 1990).

Within the Job Characteristics Model "core job dimensions," the measures of a job's complexity, show moderate to strong relationships with affective outcomes (Fried & Ferris, 1987). The purpose of this study was to examine person-situation relations which affect secondary school athletic training positions in Texas using two methods. First, two-

way ANOVA was used to determine differences in groups of secondary school athletic trainers due to person-situation relations. Second, a correlational method was used to examine relationships between job characteristics as perceived by groups of secondary school athletic trainers defined by the person-situation relations. Job characteristics which were considered in this study were: core job dimensions of task identification, task significance, skill variety, autonomy and feedback; and affective outcomes of internal work motivation, general job satisfaction, and growth need satisfaction (See Figure 1). Modification of the Job Diagnostic Survey replaced three global items which relate to core job dimensions of task identification, task significance, and skill variety with a seven point Likert-type scale which rated 34 specific items which relate to the role of the athletic trainer. The replacement items consisted of athletic trainer task statements from the 1995 Role Delineation Study developed by the National Athletic Trainers Association Board of Certification, Inc.(NATABOC, Inc.) (See Appendix A). The addition of the specific statements was intended to allow greater analysis of the relationship between core job dimensions and affective outcomes. Subjects were athletic trainers in the State of Texas who were employed in secondary school settings.

Two independent variables were identified in this study: professional preparation and classification of job duties. Athletic trainers possess varying educational and professional credentials which relate to their knowledge and skills. This study investigated the relationship between Texas secondary school athletic trainers' professional preparation as athletic trainers and dimensions of Job Characteristics Model. Classification of secondary school athletic training positions by job responsibilities and outside duties has

been established in the literature (Stopka & Kaiser, 1988). This study investigated the relationship between classification of secondary school athletic training positions in Texas and dimensions of Job Characteristics Model.

Work re-design is to be preceded by a systematic analysis of job factors (Champoux, 1992; Hackman & Oldham, 1980). To this end, each NATABOC, Inc. Task Domain and specific task statements within the NATABOC, Inc. Role Delineation were examined for task identification, task significance, and skill variety. Job factors were identified which were linked to enhanced secondary school athletic trainer positions in Texas under the Job Characteristics Model.

Research Objectives

The following research objectives were presented in this study:

1. What is the relationship between level of professional preparation and affective outcomes of internal work motivation, general job satisfaction, and growth need satisfaction in secondary school athletic trainer positions in Texas as determined by the modified JDS?

2. What is the relationship between job classification of secondary school athletic trainer positions in Texas and affective outcomes of internal work motivation, growth needs satisfaction, and general job satisfaction as determined by the modified JDS?

3. What are the relationships between core job dimensions of task identification, task significance, skill variety, autonomy and feedback; and affective outcomes of internal work motivation, general job satisfaction, and growth need satisfaction in secondary school athletic trainer positions in Texas as determined by the modified JDS?

4. What differences exist between groups of secondary school athletic trainers in Texas in the relationships between core job dimensions and affective outcomes as determined by the modified JDS?

5. What are differences in task identification, task significance, and skill variety for NATABOC, Inc. Task Domains in secondary school athletic training positions in Texas?

6. What is the relationship between core job dimensions of task identification, task significance, and skill variety of NATABOC, Inc. Task Domains and affective outcomes of internal work motivation, growth needs satisfaction, and general job satisfaction in secondary school athletic training positions in Texas?

7. What are differences in task identification, task significance, and skill variety of specific athletic training tasks performed by groups of secondary school athletic trainers in Texas?

Research Hypotheses

The following null hypotheses were tested in this study:

1. There are no significant differences between group means of scales scores of affective outcomes of internal work motivation, general job satisfaction, and growth need satisfaction as determined by the modified JDS for levels of professional preparation in secondary school athletic trainer positions in Texas.

2. There are no significant differences between group means of scale scores of affective outcomes of internal work motivation, general job satisfaction, and growth need satisfaction as determined by the modified JDS in secondary school athletic trainer positions in Texas.

3. There are no significant positive correlations between group scale scores for core job dimensions of task identification, task significance, skill variety, autonomy, and feedback; and affective outcomes of internal work motivation, general job satisfaction, and growth need satisfaction in secondary school athletic trainer positions in Texas as determined by the modified JDS.

4. There are no significant positive correlations between group mean scale scores for task identification, task significance, skill variety, and autonomy and affective outcomes of internal work motivation, general job satisfaction, and growth need satisfaction as determined by the modified JDS in secondary school athletic trainer positions in Texas.

5. There are no significant differences between group means of task identification, task significance, skill variety for NATABOC, Inc. Task Domains in secondary school athletic training positions in Texas as determined by the modified JDS.

6. There are no significant positive correlations between task identification, task significance, and skill variety of NATABOC, Inc. Task Domains and affective outcomes in secondary school athletic training positions in Texas as determined by the modified JDS.

7. There are no significant difference in task identification, task significance, or skill variety for specific tasks performed by groups of secondary school athletic trainers in Texas as determined by the modified JDS.

Significance of the Study

The Job Characteristics Model implies that jobs may be enhanced through

manipulation of factors in the core job dimensions (Kelly, 1992). Previous studies have examined core job characteristics by manipulating routine tasks, and often find interactions between other dimensions of the model such as growth needs (Champoux, 1992; Taber & Taylor, 1990). Studies of the Job Characteristics Model have been cross-sectional in nature within organizations, not defining different tasks in specific jobs or identifying job content in order to determine causality (Kelly, 1992). One study which examined teachers' jobs attempted to specifically identify core job dimensions by modifying existing statements within the JDS but inadequately addressed job content (Charters, 1984). Still, there exists evidence to support causal modeling for the concept that core job dimensions have direct and indirect impacts on personal and work outcomes in professional jobs (Renn and Vandenberg, 1995). This study of secondary school athletic training positions provided an application of the Job Characteristics Model in a profession where there exists externally defined job properties. It studied the person-situation relationship by linking independently assessed characteristics of jobs and individuals with characteristics of jobs(Roberts & Glick, 1981). It has been indicated that research of the Job Characteristics Model should utilize stringent multivariate analysis (Roberts & Glick, 1981; Champoux, 1991). Both correlational and multiple linear regression analysis were used to meet the specifications of the theory (Champoux, 1991).

In 1995, the athletic training profession developed objective job characteristics for athletic training positions through the role delineation study conducted by the National Athletic Trainers Association Board of Certification Inc. (National Athletic Trainers Association Board of Certification, Inc., 1995). In this study, secondary school athletic

trainers rated the characteristics of their job against this standard. Attention to job content was provided by reference to this standardized role delineation for athletic trainers. Secondary school athletic training positions have also been classified by duties and responsibilities. The classification of athletic trainers' duties and responsibilities in this study attempted to provide a more comprehensive application of the Job Characteristics Model in order to determine specific job characteristics which maximize affective outcomes.

The profession of athletic training through actions of the National Athletic Trainers Association(NATA) and its committees has been concerned with acceptance of the athletic trainer as an allied health professional and improvement of education and performance of athletic trainers (Mathies, Denegar, & Arnhold, 1995). Work design places emphasis on improvement of performance of workers through changes in job characteristics. Previous studies have been lacking in their ability to significantly delineate situations where job re-design has an association with job perceptions, intrinsic work motivation, or job satisfaction (Kelly, 1992). This study attempted to provide athletic trainers and educators with information necessary to place the athletic trainer role delineation into the Job Characteristics Model of work design. The examination of linkages between the role delineation and the Job Characteristics Model will prove beneficial by identifying areas for job re-design. Such improvement should result in better health care of secondary school student-athletes.

This study tried to identify relationships between professional preparation and secondary school athletic trainers' perception of their job under the Job Characteristics

Model. There exist two routes of professional preparation to NATABOC, Inc. Certification as Certified Athletic Trainer. One route is through completion of a NATABOC, Inc. Approved Curriculum program and the other route is through an internship program (National Athletic Trainers Association, 1996a). The graduates of approved curriculum programs demonstrate significantly higher scores and passing rates on all sections of the NATABOC, Inc. Certification Exam (National Athletic Trainers Association Board of Certification, Inc., 1996a; Starkey & Henderson, 1985). The NATABOC, Inc. conducts constant modification of these two routes to certification in an effort to improve the professional preparation of athletic trainers. This study attempted to discover if relationships exist between type of professional preparation and increased affective outcomes of the Job Characteristics Model to improve educational preparation of Certified Athletic Trainers.

Members of the athletic training profession are reported to be interested in job growth (Buxton, Lankford, & Gieck, 1992a). The Job Characteristics Model provides for analysis of growth needs and satisfaction through work design. Identification of specific athletic training job characteristics which provide for growth satisfaction should prove beneficial to the athletic training profession in designing job descriptions which provide for growth.

Definition of Terms

For the purposes of this study, certain terms were defined as follows.

1. Job Characteristics Model (JCM): The model of motivation derived from characteristics of the job itself (Hackman & Oldham, 1980).

2. Job Diagnostic Survey (JDS): The survey instrument developed by Hackman and Oldham to investigate the Job Characteristics Model.

3. Athletic Training: The art and science of prevention and management of injuries at all levels of athletic activity (National Athletic Trainers Association, 1996a).

4. National Athletic Trainers Association Board of Certification, Incorporated (NATABOC, Inc): The national certifying body for the athletic training profession.

5. Certified Athletic Trainer: A member of the athletic training profession who is certified by the NATABOC, Inc.

6. Associate Athletic Trainer: A member of the athletic training profession who is not certified by the NATABOC, Inc..

7. Noncertified Athletic Trainer: An athletic trainer in the survey who is licensed in the State of Texas as an athletic trainer, but who is not certified by the NATABOC, Inc.

8. Role Delineation: A comprehensive analysis of work performed by athletic trainers (National Athletic Trainers Board of Certification, 1995).

9. Motivating Potential Score: The product of the five core job characteristics of the JCM which is a measure of job complexity (Hackman and Oldham, 1980).

10. Job Scope: The sum of the five core job characteristics of the JCM which is a measure of job complexity (Champoux, 1992).

Limitations of the Study

The data for this study was collected by a survey instrument and was therefore subject to the limitations inherent in survey methodology. The survey technique may only tap respondents who are accessible and cooperative, produce artificial or slanted

responses by making subjects feel special or natural, arouse response sets, and be prone to over-rater and under-rater bias (Isaac & Michael, 1995). In spite of efforts to provide for anonymity and confidentiality, there is no assurance of the absolute truthfulness of questionnaire responses. It is also assumed that athletic trainers who participated in this study were sufficiently informed to respond to statements regarding task and skill factors. The population of this study was limited to active NATABOC Certified Athletic Trainers and NATA Associate Athletic Trainers in Texas who identified themselves as employed at the secondary school level in athletic training positions.

CHAPTER II

REVIEW OF RELATED LITERATURE

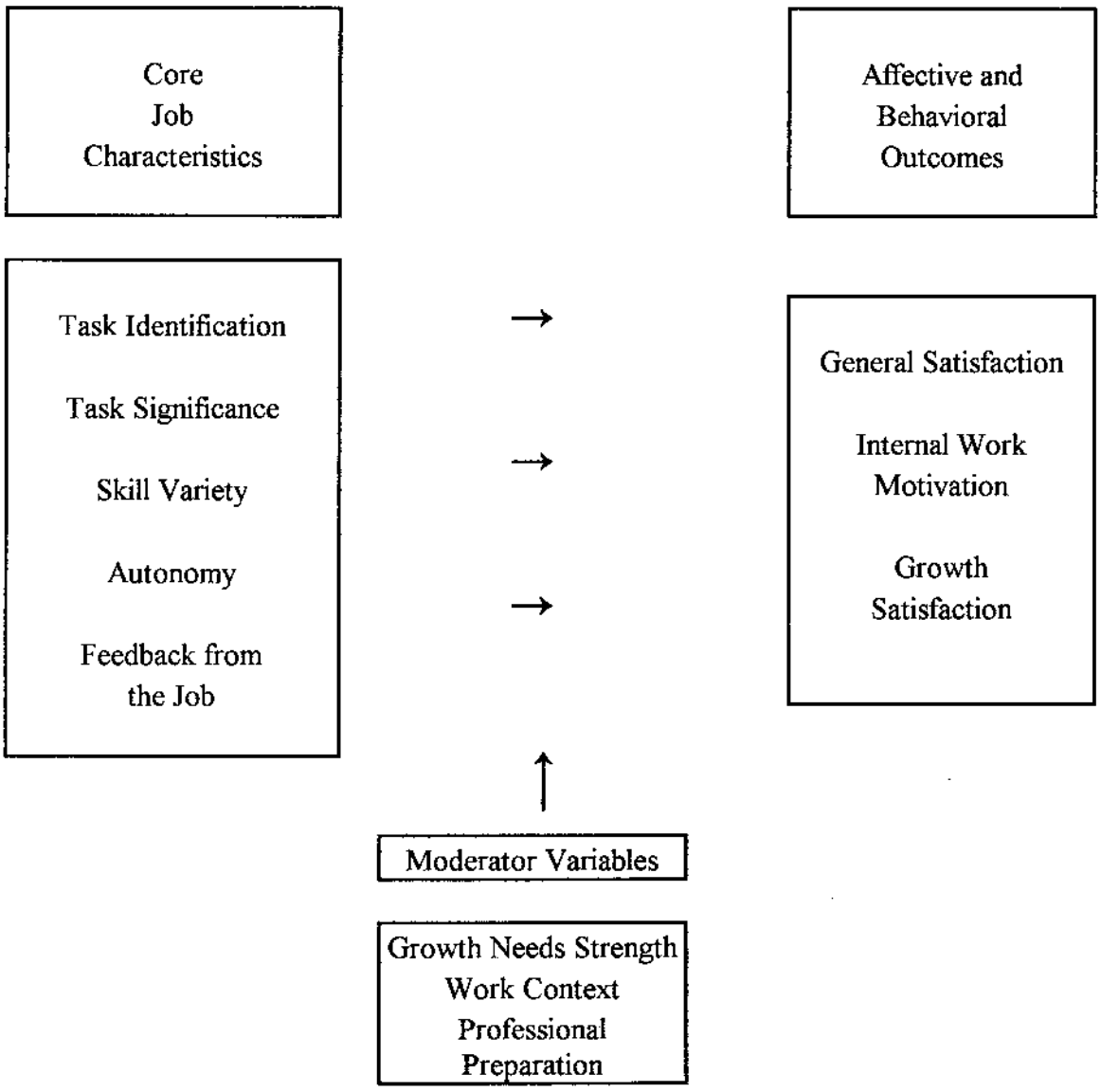
The review of related literature will first focus on the theoretical basis of this study, the Job Characteristics Model. This model was chosen for its emphasis on the relationship between the design of a job and its motivating potential. Included will be a description of the core job characteristics in the model, followed by an examination of the relationship between the core job dimensions and affective outcomes. Application of the model to specific jobs and use of the principal research tool, the Job Diagnostic Survey, will be included. The next area of focus will be the profession of athletic training, especially the secondary school setting. This information will establish the basis for the two independent variables, professional preparation and job classification. There will then be a summary of the NATABOC, Inc. Role Delineation Study for athletic training to define the standardized measurement of secondary school athletic training job characteristics. Finally, there will be a review of existing research in athletic trainer motivation and evaluation.

The Job Characteristics Model

The Job Characteristics Model developed by Hackman, Lawler, and Oldham is a popular approach to work design which first appeared in literature beginning in 1971(Hackman and Lawler, 1971; Hackman and Oldham, 1975, 1976, 1980). The model

is illustrated in Figure 1. The model is based on the interaction of objective job factors and

Figure I. Modified Multivariate Job Characteristics Model(Champoux, 1991)



individual characteristics. It further proposes that task characteristics-job response

relations are moderated by the job incumbent's needs (Roberts & Glick, 1981). The JCM posits that enriched or complex jobs are associated with increased job satisfaction, motivation, and work performance (Fried & Ferris, 1987). Initial correlational studies support the model but greater explanation is afforded by recent multi-variate and regressional studies (Champoux, 1991; Renn & Vandenberg, 1995).

The JCM is based upon perceptions. There is strong indication that a job incumbent's perceptions of job characteristics are valid in respect to affective criteria, resistant to social cues, and linked to objective job characteristics and the other parts of the model (Fried & Ferris, 1987). Four competing theories exist which attempt to explain the relationship between objective job properties, perceived job characteristics, affective states, and job-relevant behaviors. One theory is that perceptions of job characteristics produce job effect. A second theory is that affective states influence perceptions of job characteristics. A third theory is that perception and affect occur in a mutually-sustaining cycle. Finally, a fourth theory indicates that objective properties may be the key influence on subjective responses (Taber & Taylor, 1990). Narrative reviews of JCM studies show that job perceptions are largely unaffected by irrevelant cues such as income and attitude towards a profession and job satisfaction seems to occur after job perception in the causal order described by Hackman and Oldham (Fried & Ferris, 1987). This evidence refutes an alternative approach to job design, Social Information Processing, which places perceived job characteristics at the end of the causal chain (Taber & Taylor, 1990).

There exist five core job characteristics, as defined in the book, Work Redesign

(Hackman & Oldham, 1980), within the JCM: skill variety, task identification, task significance, feedback, and autonomy. These job characteristics may be formulated into a Motivating Potential Score (MPS) for any job, which is a measure of job complexity (Hackman & Lawler, 1971; Hackman & Oldham, 1975, 1976, 1980).

Skill variety is defined as "the degree to which a job requires a variety of different activities in carrying out the work, involving the use of different skills and talent of the person" (Hackman & Oldham, 1980, p 78). The model assumes that a higher number of skills, not necessarily content, provides greater meaning to a job.

Task identification is that characteristic of a job where "the job requires completion of a whole and identifiable piece of work, that is doing a job from beginning to end with a visible outcome" (Hackman & Oldham, 1980, p 79). The authors differentiate between a job that is one part of a whole with a job in which all the tasks needed to complete a job are performed by one worker.

Task significance is referred to in Work Redesign as any aspect of work that contributes toward the "substantial impact or psychological well-being of other people." It is defined as "the degree to which the job has a substantial impact on the lives of other people, whether those people are in the immediate organization or in the world at large" (Hackman and Oldham, 1980, p 79).

Feedback is the "degree to which carrying out the work activities provides the individual with direct and clear information about the effectiveness of his or her performance" (Hackman and Oldham, 1980, p 80). This is not feedback from other agents such as a co-worker or supervisor but knowledge derived from the work itself.

Autonomy is based in feelings of personal responsibility for work outcomes. It is described as "the degree to which a job provides substantial freedom, independence, and discretion to the individual in scheduling the work and in determining procedures to be used in carrying it out" (Hackman & Oldham, 1980 p 79). This may include having personal responsibility for success and failure.

Hackman and Oldham proposed a summative index of the job dimension, the Motivating Potential Score (MPS) (Hackman & Oldham, 1980). In other studies, the MPS has been replaced by job scope, the sum of the five core job characteristics, as a measure of a job's complexity due to a lack of support from factor analysis and methodological issues (Champoux, 1992). The relationship between the MPS or its alternative additive scale, job scope, and critical psychological states is stronger than that of any individual job dimension (Champoux, 1991). Job scope is more closely linked to critical psychological states and affective outcomes than the MPS (Fried & Ferris, 1987). The MPS is proposed to be modulated by the knowledge, skill, and growth needs of the job incumbent along with context satisfaction of pay, position, etc. in its relationship to affective outcomes (Hackman & Oldham, 1980). Evidence exists for this modulation of job scope (Champoux, 1992). Job scope also exhibits a curvilinear relationship to affective outcomes in that an overly broad scope may prove overstimulating to workers and decrease these outcomes (Champoux, 1981). Full time employees have reported that their jobs are more diversified in scope than part time employees (Levanoni & Sales, 1990).

Research has generally supported the existence of multiple core job dimensions

but questioned validity of the model's specific five dimensions (Fried & Ferris, 1987). The core job characteristics show moderately positive correlations among themselves in original normative data (Hackman & Oldham, 1975). Fried and Ferris suggested possible weaknesses of the Hackman and Oldham model. From their studies testing the model they concluded that task identification and feedback were distinct dimensions, but skill variety, task significance, and job autonomy may be part of one combined dimension (Fried & Ferris, 1987). Inconsistent factor solutions and variation induced by negatively worded items on the JDS may also contribute to questions of dimensionality (Fried & Ferris, 1986). Individual differences such as age, education, and position affect identification of the five core job dimensions of the model (Fried & Ferris, 1986). The chosen subjects, secondary school athletic trainers would appear to meet criteria for a five dimension model. Subjects who are young people, highly educated, and/or employed as management and staff support the five core job dimensions of the model (Fried & Ferris, 1986). Public sector professional employees identify the five predicted dimensions whereas public sector technical and maintenance workers identify fewer (Lee & Klein, 1982).

The model assumes that correlations among job dimensions, critical psychological states, and affective outcomes are positive (Hackman & Oldham, 1975;1980). Meta-aalysis of correlational studies support this positive correlation, however, these studies show that the relationship with performance is negligible for critical psychological states in comparison to that of core job characteristics (Fried & Ferris, 1987).

Existence of core job dimensions is also demonstrated by other methods besides correlational research. Objective manipulation of job characteristics has produced corresponding changes in perception of job characteristics by both incumbents and their peers, supervisors, and outside observers (Fried & Ferris, 1987; Long, 1993; Taber & Taylor, 1990). Multiple linear regression studies also support the proposed five core job dimensions and their relationships (Champoux, 1991; Champoux. 1992).

According to Hackman and Oldham there exist three intervening psychological states (Hackman & Oldham, 1980). These states are experienced meaningfulness of work, experienced responsibility for outcomes, and knowledge of results. They are felt to be the model's "causal core", linked to specific core job dimensions, and the maximum presence of all three has been considered necessary for enriched jobs (Hackman & Oldham, 1975, 1976, 1980). The JCM assumes that the correlations between specified core dimensions and their specified psychological states will be substantially higher than the correlations between core job dimensions and unspecified psychological states and that correlations between critical psychological states will be higher than those between core job dimensions and outcomes (Hackman & Oldham 1980).

Repeated correlational studies support the placement of the psychological states between the core job dimensions and affective outcomes but propose a possible reduction of the three states to two with integration of experienced meaningfulness and experienced responsibility into one dimension (Fried & Ferris, 1987). The core job dimensions show a main effect on all three critical psychological states (Champoux,

1991). Other studies show mixed relationships between core job dimensions and critical psychological states (Renn & Vandenberg, 1995). The relationship of specified core job dimensions to specified critical psychological states is only partially supported as task identification has not been linked to any critical psychological state (Arnold & House, 1980). Skill variety has also been proposed as independent of critical psychological states in its relationship to affective outcomes (Renn & Vandenberg, 1995). Kiggundu (1983) found significant relationships between autonomy and all three critical psychological states. The link between job feedback and knowledge of results has also been found to be similar to job feedback's relationship with the other two critical psychological states (Fried & Ferris, 1987). The relationship between the critical psychological states experienced meaningfulness and experienced responsibility and core job dimensions task identification and feedback appear to vary from the model also. High levels of all three critical psychological states were not found necessary to the model and experienced meaningfulness was found to act on both job satisfaction and internal work motivation (Johns, Xie, & Fong, 1992; Renn & Vandenberg, 1995). It was also determined in this study that the presence of any one critical psychological state could explain significant amounts of outcome variance beyond the core job dimensions in the sample, and that they acted as a partial, not complete mediators of the core job dimension-affective outcome relationship. Experienced meaningfulness and experienced responsibility have also shown to not completely mediate the relationship between skill variety and autonomy with work outcomes (Johns, Xie, & Fang, 1992).

Multi variate testing of the model by Champoux (1991) has shown some the

expected relationships. Here, the pattern of main effects for the five core job characteristics on the critical psychological states was close to predictions of the theory, but the content of interaction of these factors was not. Regressions of psychological states on affective outcomes was close to theory predictions. Experienced meaningfulness and experienced responsibility showed main effects on all three critical affective outcomes but patterns and size of the coefficients do not allow for clean interpretations (Champoux, 1991, p. 439).

In the JCM, specific moderators are proposed to act between core job characteristics, critical psychological states, and affective outcomes. These moderators are knowledge and skill, context satisfiers, and growth needs strength (Hackman and Oldham, 1980). Knowledge and skill as measured by educational level have not been shown to be moderator factors in one review of research (Roberts & Glick, 1981). Meta-analysis supports their role (Fried & Ferris, 1986). Career stage has also shown to be a moderator in the JCM based on job incumbent perceptions (Roberts & Glick, 1981). Context satisfiers often prove to not be significant in their effect on the model (Champoux, 1992; Cleave, 1993; Roberts & Glick, 1981). There may be a compensatory relationship between job complexity and quality of the work context (Champoux, 1992).

Hackman and Oldham define growth needs as a personal need for "personal accomplishment, learning, and for developing themselves beyond where they are now" (Hackman and Oldham, 1980, p 83). Meta analysis shows support for moderating effect of growth needs strength in the model (Loher, Noe, Moeller,& Fitzgerald, 1985). In

Fried and Ferris's analysis of previous research it was indicated that methodological problems exist in determining effect of growth needs strength as variance between high and low growth needs strength in subjects tends to be low with results appearing to be artifactual (Fried & Ferris, 1987). Growth needs strength has been shown to interact with the relationship between critical psychological states and affective outcomes (Renn & Vandenberg, 1995). Multi variate study shows growth need strength more clearly as it modifies relationships in the model in a curvilinear fashion but provides the weakest interaction with job scope and affective outcomes (Champoux, 1992). Empirical evidence does allow for comparisons to be made within the JCM components without the growth needs strength moderator (Renn & Vandenberg, 1995).

Hackman and Oldham (1976) also link work context with the motivating potential of a job. Work context consists of satisfaction with job security, compensation, coworkers, and supervision (Hackman and Oldham, 1980). Research has supported a positive relationship between context satisfaction and improved affective outcomes which is curvilinear in nature (Champoux, 1992).

Affective outcomes in the JCM are listed as internal work motivation, growth satisfaction, overall job satisfaction, and work effectiveness (Hackman & Oldham, 1980, p 90). Core job dimensions have been shown to be linked to these outcomes (Fried & Ferris, 1987). The core job dimensions are tied perceptively to affective outcomes and show weak but meaningful links to improved behavioral outcomes such as lower absenteeism (Fried & Ferris, 1987). Positive relationships between core job dimensions and affective outcomes are supported when incumbent's response biases are controlled

(Kiggundu, 1980). Task identification has been shown to be lowest in ability to predict affective outcomes (Champoux, 1991). Full time and part time employees have shown no significant difference in the overall job satisfaction (Levanoni & Sales, 1990). In a study of athletic directors, core job dimensions showed greatest correlation with growth satisfaction, followed by general satisfaction and internal work motivation (Cleave, 1993). Another recent study in business agreed with this in showing growth satisfaction and general satisfaction having a strong relationship with core job dimensions followed by internal work motivation (Renn and Vandenberg, 1995). The additive MPS or job scope demonstrates a stronger relationship with outcomes that any individual core job dimension (Fried & Ferris, 1987).

The practical application of the model is as a diagnostic tool to provide for the design of jobs to provide high motivation and higher affective outcomes (Frase & Sorenson, 1992). Contextual satisfaction is primary in importance in achieving the desired effects of job enrichment (Hackman & Oldham, 1980). In basic redesign of jobs, individual scores on core job dimensions of the JDS which are lower than two standard deviations from the mean for a job classification indicate that action to improve that job dimension might be appropriate (Hackman & Oldham, 1980, p 316). Moderating factors such as growth needs strength are important in work redesign (Hackman and Oldham, 1980). Low growth need individuals may require more attention in re-design of jobs that the simpler approach necessary to develop an enriched job for a high growth need individual (Champoux, 1991). A challenging job with a high MPS or job scope may prove frustrating for the low growth need individual, particularly if the work

context is negative(Champoux, 1992). The relationship between job scope, work context satisfactions, and affective outcomes has also been shown to be curvilinear in multi variate studies (Champoux 1992). Even with this, job redesign may not serve to motivate employees but to merely satisfy them (Kelly, 1992). Job redesign may require differing strategies of implementation based upon characteristics of employees and management (Fried & Ferris, 1987).

The Job Diagnostic Survey is the original tool developed to assess job characteristics under the JCM (Hackman & Oldham, 1975). Over two hundred studies of the JCM exist in many field with the Job Diagnostic Survey one of the most commonly cited instrument in the Social Sciences Citation Index for assessing worker perceptions of intrinsic job characteristics (Taber & Taylor, 1992).

The JDS has been tested for its applicability, reliability, and validity in many work settings (Hackman & Oldham 1975, 1980; Taber & Taylor, 1987). Internal consistency of job dimensions is acceptable. Median coefficients of internal consistency reliability (Chronbach's Alpha) and ranges of the coefficients for the five scales of the core job dimension from a number of studies are: task identification α= .69, (range .31-.90); task significance α= .67, (range .35-.90); skill variety α=.69, (range .20-.91); autonomy α=.69(range .35-.90); and feedback from the job α= .70(range= ..36-.90) (Fried &Ferris, 1987). Median coefficients of internal consistency reliability (Chronbach's Alpha) and ranges of the coefficients for affective outcomes are: internal motivation α= .73, (range .63-.88); growth needs satisfaction α= .86, (range .69-.95); and general job satisfaction α= .82 (range .65-.95) (Fried &Ferris, 1987).

Most recently in the area of athletics, a study of athletic administrators whose jobs carry a wide range of tasks showed internal consistency (α) estimates ranged from .61 to .93 and discriminant validity from .05 to .29. All of these were favorably compared to normative data with the exception of internal work motivation, which fell below the ranges (Cleave, 1993).Test-retest reliability of the JDS has been low and reported to be in a range from .69 for skill variety to .47 for significance (Taber & Taylor, 1987). Convergent validity was measured as acceptable by Aldag, Barr and Brief in 1981. Raters of a job other than the incumbent demonstrated convergent validity as regards task characteristics. Discriminant validity, that measure of the ability of the instrument to accurately measure each dimension by itself is open to question between some of the scales particularly autonomy and the task scales (Taber & Taylor, 1987). Short form versions of the JDS which omit questions regarding the critical psychological states and have shortened scales have been used successfully to study relationships between core job dimensions and affective outcomes (Champoux, 1981).

Original normative data from Hackman and Oldham in 1980 covered professional, technical, managerial, sales, service, and manufacturing jobs. Cleave (1993) studied application of the JCM to athletic administrators and found some parts of the model did not apply, specifically some relationships of growth satisfaction, autonomy, and individual differences.

Application of the JCM to secondary educational positions has met with mixed results. In a study in Oregon, after extensive modification of the JDS to meet an educationally suitable form, the conclusion of one study was that the JCM theory did not

apply to teaching positions (Charters, 1984). Here, the definition of the role of a teacher as a job under the JCM was found to be too vague and the job dimensions in the modified JDS instrument were not suitable or sensitive enough to discriminate between jobs in the teaching profession.

A later study of classroom teachers in Connecticut found that teacher motivation could be supported by job redesign of core job dimensions under the JCM model. Subjects who perceived a high degree of presence of the core job dimensions possessed higher internal work motivation than those who did not see this presence (Ellis, 1988). This was found to be particularly true with teachers who saw their jobs intrinsically motivating, fulfilling, and satisfying. Another study which applied the JCM to participatory management in public schools in California identified the core job dimension of feedback as critical to internal work motivation of teachers (Frase & Sorenson, 1992).

In a review of job redesign based upon quality of outcomes, limited support was found for the JCM (Kelly, 1992). Although some cases demonstrated the effects of the model, job re-design has failed to significantly lead to perceptions of improved job content, increased job satisfaction, or a job satisfaction and performance link. The model is based however on effectiveness, not quantity, in performance (Fried & Ferris, 1987; Hackman & Oldham, 1976; Roberts & Glick, 1981).

Research of the Job Characteristics Model has been profuse. The basic tenets of the model have been supported but it appears that the model is more complex than originally conceived. It is agreed that the dimensions exist, but their number and exact

nature are not exact. The psychological states are not strongly supported and are an area of controversy. There is difficulty in linking affective outcomes to behavioral outcomes but their relationship to core job dimensions is clear in a multi-variate form of the model.

Athletic Training

Health care of athletes has been an important issue to address at all levels of competitive athletics for many centuries (Arnheim, 1989). The certified athletic trainer is a highly educated and skilled allied health professional specializing in health care for athletes (National Athletic Trainers Association, 1996a). In 1987 it was estimated that of the 5.6 million student athletes in the nation's schools, one in six would sustain an injury serious enough to be classified as a time-loss injury (Powell, 1987). School districts are bound to protect the health and safety of secondary school age student athletes by providing appropriate medical treatment for these students (Mitten, 1993). Athletic trainers are an answer to the coaches' lack of preparation and knowledge on injury care. They are a means to provide medical support for athletics (Weidner, 1989). The certified athletic trainer has been shown to be the most knowledgeable professional on the school campus regarding athletic injuries (Carey & Shute, 1992). Although there was a dramatic increase of high school athletic trainers from 1985 to 1989 school district budget constraints limit additional increase. Of the estimated 20,000 high schools in the United States , only 11 to 12 percent currently employ full-time, on-staff Certified Athletic Trainers (Galik, 1994).

The profession of athletic training is governed by two entities. The National

Athletic Trainers Association(NATA) came into being in 1950 following several failed attempts to organize the profession. The NATA increased its role in developing the profession over the years by publishing a journal, providing professional development, and establishing standards of professional preparation and certification (O'Shea, 1980). In the summer of 1995 the American Medical Association recognized the Certified Athletic Trainer as an allied health professional and assumed governance of athletic training educational programs at the national level (Mathies, Denegar, & Arnhold, 1995).

The practice of athletic training is also governed at the state level. By fall of 1995 a total of 30 states had passed laws regarding athletic training which established state agencies which regulate the practice of athletic training in their state (National Athletic Trainers Association Board of Certification, Inc., 1996b, Spring). Statutes vary greatly and cover definition of the role and practice of the athletic trainer, regulation of the profession, governing of each state board for athletic trainers, and outline measures for censure or revocation of license with only seventeen requiring a comprehensive level of care by a Certified Athletic Trainer (Morin, 1992; Rello, 1996). State licensure, certification, and regulation of athletic training was first enacted the state of Texas in 1971 and athletic trainers in Texas operate under the advice and consent of their team physicians (Tx. C.S. § 4512d., 1971).

Certification as an athletic trainer today requires a minimal academic background of a bachelor's degree which is usually in athletic training, health, physical education, or exercise science. Athletic trainers are required to study human anatomy, human

physiology, biomechanics, exercise physiology, athletic training, nutrition, and psychology/counseling. They must accumulate extensive clock-hours of practicum with athletes in a sports medicine setting. Athletic trainers who have prepared themselves adequately then take the NATABOC, Inc, Certification Exam over all competencies of athletic training in written, oral, and simulation sections. Successful completion of these procedures enable the athletic trainer to be certified (National Athletic Trainers Association, 1996b). Athletic trainers may apply for membership in the NATA without seeking certification and be accepted as associate members of the organization.

There exist two routes to certification as an athletic trainer in terms of the type of blend of academic, clinical, and practical experiences which the athletic trainer is exposed. The NATA Approved Curriculum route requires intensive classroom preparation and practicum in an NATABOC, Inc. approved curriculum program at a university. The curriculum route requires 800 clock hours supervised clinical work of which 200 hours must be with a high-risk sport. Hours may not be obtained in allied settings and 400 hours must be at the host institution (National Athletic Trainers Association, 1996a). The internship route involves accumulation of 1500 contact hours with athletes of which 375 are to be with high-risk sports and 500 may be obtained in allied settings (National Athletic Trainers Association, 1996a). It is the candidate's responsibility to prepare adequately for certification through eight required courses (National Athletic Trainers Association, 1996a). Some controversy exists over the preferred route of preparation, curriculum or internship, based on professionalism and performance on the NATABOC, Inc. certification exam (Dolan, 1996). This

controversy is perhaps fueled by higher passing rates on all sections of the NATABOC, Inc. Certification exam by candidates who follow the NATABOC, Inc. approved curriculum route to certification (National Athletic Trainers Association Board of Certification, Inc., 1996a, Spring). Average scores obtained in domains of athletic training also show a wide disparity between curriculum and internship routes (Starkey, & Henderson, 1995).

The route to Texas state licensure as an athletic trainer is similar to that of internship for NATABOC, Inc. Certification in terms of the academic background required but with an increased clinical requirement. Minimum clinical experience for state licensure is set at 600 hours per year over a three year period for a total of 1800 clock hours. Texas also has its own licensure exam (Morin, 1992).

In response to the need for athletic trainers in secondary schools, eight basic athletic training job descriptions have been established (Stopka & Kaiser, 1988). Athletic training services may be provided to secondary school students by a full time athletic trainer at single school, a school district-wide athletic trainer, a permanent substitute/athletic trainer, an assistant athletic director/athletic trainer, a part time athletic trainer, a contracted athletic trainer from a sports medicine clinic, a teacher/athletic trainer, or a graduate assistant athletic trainer, (National Athletic Trainer's Association, 1987). All of these job descriptions entail varying levels of duties in addition to those contained in the NATABOC, Inc. role delineation.

Filling the needs of the district's student-athletes by creating a position for a full time athletic trainer is the first means defined (Stopka & Kaiser, 1988). Providing a

full-time athletic trainer at each secondary school with solely athletic training duties is the reported to be the best option to provide full-time medical coverage for athletes (Campbell & Winterstein, 1991). A district-wide athletic trainer is another means to provide athletic training services. Here, the athletic trainer serves a number of the schools in the district in a cost-sharing arrangement between the schools. This method saves money but is reported to be inadequate in providing practice and competition coverage by the athletic trainer as he/she can only be one school at a time (Stopka & Kaiser, 1988).

Three of the job descriptions combine the position of an athletic trainer with additional duties outside a regular athletic training setting. The first description involves the permanent substitute teacher/athletic trainer means of providing medical coverage and combines the athletic trainer with a position which fills any opening at a school or in a district created by temporary absence of a classroom teacher on a daily basis. This position has the drawback of lack of continuity in time scheduling related to the varying teaching responsibility (Stopka & Kaiser, 1988).

There is the position of athletic trainer/administrator where athletic training duties are combined with specific athletic administrator duties. The quality of care provided by the assistant athletic director/trainer method is dependent on the load of the job responsibilities not related to training (Stopka & Kaiser, 1988).

School districts may also opt for a part time athletic trainer. The position of part time athletic trainer is possibly frustrating for the athletic trainers involved. Part-time athletic trainers report that they feel extremely limited in their ability to provide adequate

services to the athletes under their care (Dunnavant, 1988). Coaching staffs may still be responsible to provide initial injury screening, first aid, and referral to the contract athletic trainer or physician (Campbell & Winterstein, 1991). The athletic trainer who is part time or contract may also not be able to be as involved in the tasks of prevention and rehabilitation of injuries as described by the NATA (Campbell & Winterstein, 1991).

School districts may also contract for coverage from outside sources (Stopka & Kaiser, 1988). These sources are usually free-standing sports medicine clinics or hospitals. The actual job description is written by the clinic under the contract with the school and the employee who is the athletic trainer and may be very different from a description written by an educational institution. Coverage is contracted for game-day services of an athletic trainer for specified athletic events or high risk sports. Clinics may also provide an athletic trainer for certain hours each day in the high school's athletic training room. The contract athletic trainer usually provides injury evaluation, taping, treatment, and some rehabilitation. Education of the coaching staff may be part of a package negotiated by a school and clinic. The athletic trainer and the clinic assume responsibility and most liability for injuries (Galik, 1994). There is a question of who is in authority over the athletic trainer in determining standard duties, the clinic which provides the trainer or the contracting school (Stopka & Kaiser, 1988).

The teacher/trainer job description combines the role of the athletic trainer with that of full time educator. Economic considerations make the teacher/trainer option most feasible one for many districts. In many states, existing teachers in a district can pursue certification by assisting the certified athletic trainers on their campus. The

minimal dollar outlay to hire an athletic trainer is outweighed by the medical, legal, and educational benefits provided (Stopka & Kaiser, 1988). Often, a stipend in addition to regular teachers salary is all that is necessary to provide an athletic trainer for a school (Campbell & Winterstein, 1991).

The position of athletic trainer may also be filled by a part-time employee who is a graduate assistant athletic trainer from a local university (Stopka & Kaiser, 1988). In Texas, the University Interscholastic League requires that coaches and sponsors must be full-time employees of a school district (University Interscholastic League, 1994). Athletic trainers who are not full time employees may not have a supervisory duty over athletes or students.

Role Delineation

Acceptable standards of care for professionals and basic job descriptions may be developed by professional organizations. Standard of care developed within a profession has been described as "the degree of knowledge, skill and care that is required and used by similar professionals in the same field of practice" (Rabinoff, M., 1993, p. 179). Such standards of care can function as the basis of evaluation and delineation of the role of job incumbents (McMahon, 1987) as they are required tasks to be performed. Such delineations are the basis of job descriptions and job characteristics and must be based on a clearly defined need and be methodologically sound (Block, 1982).

A set of professional standards which established the degree of knowledge, skill and care that is required and used by similar professionals in the same field of practice as

relates to athletic trainers was the 1982 National Athletic Trainers Association sponsored Role Delineation Study. The study was based on clearly defined needs and was methodologically sound. This study outlined seven tasks that athletic trainers are expected to perform. These tasks identified are job related and have specific skills in cognitive, affective, and psychomotor domains. The seven tasks at the time were: prevention of athletic injuries and illnesses, evaluation and recognition of athletic injuries and illnesses and medical referral, first aid and emergency care, rehabilitation and conditioning, organization and administration, counseling and guidance, and education (National Athletic Trainers Association, 1982).

The NATA conducted a second role delineation study in 1990. This study reduced the major performance domains to six: Recognition and Evaluation; Management/ Treatment and Disposition; Rehabilitation; Prevention; Organization and Administration; and Education and Counseling (Columbia Assessment Services, 1990). The study de-emphasized tasks related to conditioning of athletes and eliminated responsibilities for teaching sports skills and techniques.

In 1995 the NATABOC, Inc. had assumed responsibility for development of certification programs and conducted a third role delineation study to better align the certification exam to changes in the professional role of the athletic trainer. The 1995 NATABOC, Inc. study consisted of four stages:

A. The NATABOC, Inc. role delineation panel's development of the major content areas (domains)essential to the performance of an entry-level athletic trainer.

B. The panel's development of tasks, knowledge, and skills inherent in the

domains previously defined.

C. The development of a pilot study to gather consensus on the panel's role delineation work.

D. An independent review and validation of the panel's domains, tasks, knowledge, and skills by a national sample of NATABOC, Inc. Certified Athletic Trainers (National Athletic Trainers Association Board of Certification, Inc., 1995, p 1). The tasks, knowledge, and skills identified by the study are meant to apply to clinical, industrial, and "traditional athletic training settings" such as high schools and colleges (National Athletic Trainers Association Board of Certification, Inc.,1995, p 3).

Columbia Assessment Services developed a initial pilot survey of the athletic trainer's role for the NATABOC, Inc. and distributed it to 200 experts in the field of athletic training. These questionnaires were collected and analyzed. The updated survey was mailed to 2,000 additional experts in the field of athletic training. These surveys were used to validate the domains of athletic training reported in the role delineation study (National Athletic Trainers Association Board of Certification, Inc., 1995, p 5).

The 1995 role delineation study further reduced the domains of athletic training to five: Prevention of Athletic Injuries; Recognition, Evaluation, and Immediate Care of Athletic Injuries; Rehabilitation and Reconditioning of Athletic Injuries; Health Care Administration; and Professional Development and Responsibility to adequately reflect the changed role of the athletic trainer (National Athletic Trainers Association Board of Certification, Inc., 1995). These domains contain specific tasks to be performed by the

certified athletic trainer (see Appendix B). In secondary schools, athletic trainers not only provide these services but also serve as a link between the coach, physician, parent, and athlete (Campbell & Winterstein, 1991). This particular link may be expanded through the increased role of the athletic trainer as a counselor and adjunct resource for a school's health education department.

The rating of each domain in the 1995 NATABOC, Inc. Role Delineation was based upon scales of importance and criticality. Importance is defined as "how important each performance domain is to the performance of the entry level certified athletic trainer" (National Athletic Trainers Association Board of Certification, Inc., 1995, p 58). Domains were rated for their importance as: Prevention of Athletic Injuries- 4.33; Recognition, Evaluation, and Immediate Care of Athletic Injuries-4.85; Rehabilitation and Reconditioning of Athletic Injuries- 4.35; Health Care Administration- 3.32; and Professional Development and Responsibility- 3.72 (National Athletic Trainers Association Board of Certification, Inc., 1995, p. 12). Criticality is "the degree to which inability to perform tasks in each performance domain would be seen as causing harm to an athlete or physically active individual, an athletic trainer, a clinic, the public, etc. Harm may be physical, emotional, or financial" (National Athletic Trainers Association Board of Certification, Inc., 1995, p 58). Domains were rated for their criticality as: Prevention of Athletic Injuries- 3.97; Recognition, Evaluation, and Immediate Care of Athletic Injuries-4.88; Rehabilitation and Reconditioning of Athletic Injuries- 4.12; Health Care Administration- 2.90; and Professional Development and Responsibility- 3.02 (National Athletic Trainers Association Board of Certification, Inc., 1995, .p. 12).

The NATABOC, Inc. examined frequency as the percentage of time spent by entry-level certified athletic trainers in performing duties associated with the domains and tasks. Domains were rated for their frequency as: Prevention of Athletic Injuries-21%; Recognition, Evaluation, and Immediate Care of Athletic Injuries-30%; Rehabilitation and Reconditioning of Athletic Injuries- 28%; Health Care Administration- 12%; and Professional Development and Responsibility- 9% (National Athletic Trainers Association Board of Certification, Inc., 1995, p. 13).

The role delineation is intended to apply to entry-level athletic trainers (National Athletic Trainers Association Board of Certification, Inc.,1995). Entry-level athletic trainers report that they predominantly work in situations where they are the only athletic trainer on staff and do not possess advanced degrees (Weidner & Vincent, 1991). Athletic training positions in secondary schools are representative of entry-level positions as the positions generally do not require advanced degrees and usually are filled by persons with one to three years previous experience as an athletic trainer (Prentice & Mishler, 1986).

Motivation and Evaluation of Athletic Trainers

There are a few studies concerning motivation, evaluation, and improvement of athletic trainers. Three studies in particular attempt address motivation of athletic trainers in terms of work-related factors. Job-related factors reported as those which caused athletic trainers to leave the profession do not correspond to those found as aspects of a job which were least enjoyable. Working with athletes, professional activities, independence/responsibility, and challenge/diversity are aspects of their jobs

which are reported to be most enjoyable and motivating to athletic trainers (Capel,1990).

Another study found certified athletic trainers to be fairly consistent in identifying what factors motivate them to perform on the job. Factors which were highly ranked by athletic trainers in this study which relate to the JCM were importance of work, job growth, good benefits and wages, achieving work-related goals, and role in decision making. Lower rankings were given to freedom on the job, being appreciated, and feedback (Buxton, Lankford, and Geick, 1992a). A companion study of compared motivational congruency and discrepancy between certified athletic trainers and non-certified student athletic trainers. A motivational discrepancy exists between these two groups on freedom on the job, job growth, and feedback (Buxton, Lankford, and Geick, 1992b). These two studies utilized the Neal-Priest Inventory for Motivational Congruency or Discrepancy developed from Herzberg's two-factor motivation/hygiene theory. These two studies and the one by Capel reported that athletic trainers are motivated by intrinsic factors of their jobs, but none addressed specific task related factors as defined by the JCM.

Evaluation of in-place athletic trainers has not received great notice. Fewer than half of Division I athletic trainers have indicated that they were formally evaluated at least once per year and 35 % of athletic trainers in professional sports have similar evaluations (Ray, 1991). The practice of biased, trait-oriented evaluation methods fails to adequately address professional development of the athletic trainer and does not provide for improvement of service to injured athletes under the athletic trainer's care

(Parks, 1977). The twenty-one performance evaluation standards identified by the Joint Committee for Improvement for Educational Evaluation have been offered as a means to establish and improve performance evaluation systems for athletic training (Ray, 1991).

Performance evaluation and analysis of job-related factors for motivation have a basis for athletic trainers through the role delineation study and associated competencies (National Athletic Trainers Association Board of Certification, Inc., 1995). The direction of research on evaluation of athletic trainers has moved towards functional outcomes-based measures (Ray, 1991). Functional outcomes provide data to assess treatment outcomes. Health care delivery is evolving in a direction which requires greater justification in order to maintain third-party reimbursement (Keskula, Duncan, Davis, and Finley, 1996). The NATA Reimbursement Advisory Group is currently conducting an Outcomes Study which is investigating four areas: reimbursement, professional self-assessment, bench marking, and costing. Outcomes are related to the ability of injured athletes to return to the next contest following treatment by an athletic trainer. In the area of professional self-assessment, outcomes will be used to examine utilization of treatment and rehabilitation services, increase efficiency and productivity and evaluate curriculum programs (Webster, 1996). Improvement of athletic trainers has its main thrust through increased professional preparedness in certification procedures as the NATABOC, Inc. routinely assesses professional preparedness provided by the certification process and has generally found it to be adequate (Geick, Lephart, & Salbia, 1986).

Summary

The Job Characteristics Model was chosen for its emphasis on the relationship between the design of a job and its motivating potential. The model's goal is the enhancement of performance and effectiveness of workers through the re-design of work. Application of the model to the specific job of the secondary school athletic trainer is timely as the profession of athletic training attempts to define its role as an allied health profession and provide for improvement of performance of athletic trainers.

CHAPTER III

METHODS AND PROCEDURES

This study examined responses of secondary school athletic trainers in the State of Texas on a modified Job Diagnostic Survey. The modified instrument utilized task statements from the NATABOC, Inc. Role Delineation Study to establish the core job dimensions of task identification, task significance, and skill variety. Original JDS items were used to establish the core job dimensions of autonomy and feedback and affective outcomes of internal work motivation, growth needs satisfaction, and general job satisfaction of the JCM. This study identified core job dimensions, task domains, and specific tasks of athletic trainers that correlate with increased affective outcomes.

Design

A survey method was used to collect data from secondary school athletic trainers in Texas. Subjects were asked to complete a modified survey instrument which was based on Hackman and Oldham's (1980) Job Diagnostic Survey. The modification of the survey occurred those sections which determined core job dimensions of task identification, task significance, and skill variety. In the original JDS, subjects are asked to rate a single global job statement and answer two other questions regarding each core job dimension. In the modified survey, 34 task statements from the 1995 NATABOC, Inc. Role Delineation Study replaced the single global statement for these dimensions.

The items added to the survey were rated with the seven point Likert-type scale found in the JDS. The two separate questions were omitted. Shortened versions of the JDS allow omission of questions which define critical psychological states (Hackman & Oldham, 1980). Subjects were mailed the survey at their place of residence. Three weeks after the initial mailing, reminder postcards were mailed to those athletic trainers identified as non-respondents in the sample by the coded business reply envelopes.

Subjects

The population to be studied consisted of 518 individuals who were secondary school athletic trainers in the State of Texas. The sample was developed from the NATA Membership List for 1996 and included athletic trainers who indicated in NATA membership information that they were either employed in a secondary school or were clinical athletic trainers who also worked in the secondary school setting. These individuals all were: NATABOC, Inc. Certified Athletic Trainers who are graduates of NATABOC, Inc. Approved Curriculum Programs of education; NATABOC, Inc. Certified Athletic Trainers who are graduates of internship programs of education or were certified by the grandfather clause; and Athletic Trainers who are not NATABOC, Inc. Certified Athletic Trainers. Secondary school athletic trainers in the sample who indicated that they were not NATABOC, Inc. Certified Athletic Trainers are referred to in the study as Noncertified Athletic Trainers. The subjects were all graduates of accredited institutions and also were licensed as athletic trainers by the State of Texas.

Procedures for the Protection of Human Subjects

Subjects were mailed a letter of informed consent with the survey instrument

(See Appendix B). The letter informed them of the nature and benefits of the study. It advised them that individual survey results would not be reported, only group data. Subjects were further assured of their anominity and privacy. Data was not coded to identify subjects. Return envelopes and signed consent forms were the only link to subjects. A record of those subjects who returned surveys was kept to allow for a reminder postcard to be mailed to subjects who did not return completed surveys after three weeks. These records, computer data, and completed surveys were kept in a secure, locked file at the home of the principal investigator. Records indicating which subjects returned surveys were destroyed following completion of the research. A copy of the consent form is located in Appendix C. These procedures were approved by the University of North Texas Committee for the Protection of Human Subjects.

Dependent Variables

The dependent variables in this study were subjects' responses to the modified Job Diagnostic Survey which form dimensions of the Job Characteristic Model.

Tool

The tool used in this study was a mail-out survey, titled the Secondary School Athletic Trainer Job Diagnostic Survey. It was based upon Hackman and Oldham's Job Diagnostic Survey (Hackman & Oldham, 1980)(See Appendix C). Permission to use the JDS was not necessary as it is not under copyright. The JDS users guide was to interpret the instrument.

The first portion of the survey subjects was used to determine levels of independent variables of professional preparation and classification of types secondary

school athletic training position. Subjects indicated their professional preparation as: NATABOC, Inc. Certified Athletic Trainer who is a graduate of a NATABOC, Inc. Curriculum Program; NATABOC, Inc. Certified Athletic Trainer who is a graduate of an internship program or was certified by the grandfather clause; or Licensed Athletic Trainer who is not certified by the NATABOC, Inc. (Noncertified Athletic Trainer).

General classifications of type of secondary school athletic trainer position for this study was drawn from literature (Stopka & Kaiser, 1988). These classifications had been submitted to an expert panel of secondary school athletic trainers in Texas who are knowledgeable in the field of athletic training. The panel was asked to identify which athletic training positions are represented in secondary schools in Texas. The expert panel identified the following classifications to be used in the study:

1. Full Time Athletic Trainer (FTAT)

2. Teacher Athletic Trainer (TTR).

3. Athletic Trainer who has school-related responsibilities in athletic administration, school health services, or other area outside athletic training referred to as an Athletic Trainer with Other Duties(ATOD).

4. Athletic trainer working in a school who is contracted from a sports medicine clinic, hospital, or other medical facility referred to in this study as a Clinical Athletic Trainer (ATCLIN).

5. Part time or volunteer athletic trainer at a secondary school (PTAT).

6. Other.

Secondary school athletic trainers who indicated "other" as their job

classification were asked to define this classification for narrative purposes. The next five sections of the survey presented questions from the original JDS. Questions were those used in the original and short-form JDS (Hackman & Oldham, 1980) to determine core job dimensions of autonomy and feedback and the three affective outcomes of internal work motivation, growth satisfaction, and general satisfaction.

Following these sections were three sections which contained items regarding task identification, task significance, and skill variety. In each section there was an explanation of the core job dimension from the original JDS followed by a list of the NATABOC, Inc. 1995 Role Delineation task statements. The NATABOC, Inc. gave permission to use these task statements in this study. The subjects were asked to rate each task on a 7 point Likert-Type scale for each dimension. They were asked to provide ratings not for how well they themselves perform the tasks but what is required of them to perform the tasks at their school. Incomplete data from the survey was recorded as the mean for each statement.

Validity of this portion of the instrument was established by two means. First, the athletic trainer task statements themselves underwent exhaustive development and review in the role delineation study (NATABOC, Inc., 1995). Second, this portion of the instrument was submitted to an expert panel of athletic trainers who are knowledgeable in the field, including members of the NATABOC, Inc. After a brief explanation of the JCM and the purpose of this study, they were asked to review the survey items. Members of the panel indicated that the items had content and construct validity in determining job factors of the secondary school athletic trainer. Reliability of

the modified portion of the survey was also established. A pilot questionnaire which covered the modified portions of the JDS was given to the expert panel to complete. Internal consistency reliabilities of the three modified sections of the pilot questionnaire compared well to original JDS reliabilities: skill variety (α=.82); task identification (α= .83); and task significance (α= .86).

Data Analysis

Data was compiled by microcomputer at the University of North Texas Computer Lab using SPSS. Data was entered into a ASCII file for analysis and storage. Demographic data was used to develop groups of athletic trainers by independent variables of professional preparation and position types for further analysis. Reliability of the instrument was established by testing subjects' responses the survey for internal consistency (Chronbach's α).

Means and standard deviations of scale score for core job characteristics of task identification, task significance, and skill variety were determined by computing the average of scores from the subjects' rating of the 34 NATABOC, Inc. Task Statements. Computation of means and standard deviations of scale scores for the core job dimensions of autonomy and feedback and the affective outcomes of internal work motivation, growth satisfaction, and general satisfaction followed that of the original JDS (See Appendix D).

Means and standard deviations were computed for core job characteristic and affective outcome for each gender. These scores were subjected to t-tests to determine if significant differences existed between genders at the $p<.05$ level.

Fixed effects two-way ANOVAs were used to determine the presence of significant differences between group means of scale scores for core job dimensions and affective outcomes. Research objectives one, two, five, and seven were addressed by these ANOVAs. The fixed independent variables of the two-way ANOVA were: (1). Levels of professional preparation and (2). Classification of type secondary school athletic trainer position. Three groups of secondary school athletic trainers in the sample comprised three levels of the first variable. The groups were: Certified Athletic trainers who are graduates of NATABOC, Inc. Approved Curriculum programs(Curriculum Certified Athletic Trainers); Certified Athletic Trainers who are graduates of internship programs or certified by grandfather clause (Internship Certified Athletic Trainers); and Licensed Athletic Trainers who are not certified by the NATABOC, Inc. (Noncertified Athletic Trainer). Levels of the second fixed independent variable were the six classifications of secondary school athletic trainer positions used in the survey. Significant main effects and interactions were reported at the $p<.05$ level. As there were unequal sizes of groups in the sample, the Tukey/Kramer method was used as a post-hoc test determine which groups of athletic trainers and positions differed significantly in core job characteristics and affective outcomes at the $p<.05$ level.

Relationships between core job dimensions and affective outcomes was determined by Pearson product moment correlations. Research objectives three, four, and six were addressed here. Correlation matrixes were completed for the total sample, each gender, and each of the twelve groups of secondary school athletic trainers. Size

of of correlation coefficients used for interpretation in this study were:

.90 to 1.00(-.90 to -1.00)- Very high positive (negative) correlation

.70 to .90(-.70 to -.90)- High positive (negative) correlation

.50 to .70(-.50 to -.70)- Moderate positive (negative) correlation

.30 to .50(-.30 to -.50)- Low positive (negative) correlation

.00 to .30(-.00 to -.30)- Little, if any correlation (Hinkle, Wiersma, & Jurs, 1994, p119).

Acceptable levels of intercorrelations were taken from previous research. Intercorrelations for the total sample between sample mean scale scores of the five core job dimensions should be low to moderate (Hackman & Oldham, 1976). Relationships between sample mean scale scores of the five core job dimensions and three affective outcomes should show moderate to strong positive correlations (Fried & Ferris, 1987). Intercorrelations of sample mean scale scores of each affective outcomes should also be low to moderately positive (Hackman & Oldham, 1976). Following computation of above correlations, scatter grams were created to determine if non-linear relationships existed in the sample. Acceptable level of significance of all correlations was set at $p<.05$ for this study.

Scores for core job dimensions of task identification, task significance, and skill variety of the NATABOC, Inc. Task Domains (See Appendix) were computed by averaging answers to task statements within each domain. These average NATABOC, Inc Task Domain scores were subjected to t-tests to determine if significant differences existed between genders for the domains. Scores were also subjected to the same fixed

effects two-way ANOVA procedures used on core job dimensions and affective outcomes. The relationship between the core job dimensions of task identification, task significance, and skill variety; and affective outcomes of the total sample, each gender, and secondary school athletic trainer groups was then determined by Pearson product moment correlations. Stepwise multiple linear regressions were also computed for total sample, genders, and groups when possible to determine the degree of relationship between core dimensions and affective outcomes.

Individual athletic trainer task statements were then tested for significant differences. Two-way ANOVA and the Tukey/Kramer method were again used to determine if significant differences in means of rating task statements exist at the $p<.05$ level.

Timing

This survey was conducted beginning the third week of November, 1996 through the second week of January, 1997.

CHAPTER IV

RESULTS

Demographic Results

A total of 518 surveys were mailed out to the sample population of secondary school athletic trainers. A total of 339 surveys were returned resulting in a return rate of 65%. Fourteen of the returned surveys are not part of the sample. Individuals who returned two of these surveys indicated that they were no longer employed in the secondary school setting. Five other individuals returned surveys but declined to participate for personal reasons. Seven surveys were returned but were mis-marked or had omitted portions of the survey. There are 325 secondary school athletic trainers who comprised the sample population.

Returned surveys were classified into fifteen groups based upon the independent variables professional preparation and job classification. These groups were: Curriculum Certified Full Time Athletic Trainer; Curriculum Certified Teacher Athletic Trainer; Curriculum Certified Athletic Trainer with Other Duties; Curriculum Certified Clinical Athletic Trainer; Curriculum Certified Part-Time Athletic Trainer; Internship Certified Full Time Athletic Trainer; Internship Certified Teacher Athletic Trainer; Internship Certified Athletic Trainer with Other Duties; Internship Certified Clinical Athletic Trainer; Internship Certified Part-Time Athletic Trainer; Noncertified Full Time

Athletic Trainer; Noncertified Teacher Athletic Trainer; Noncertified Athletic Trainer with Other Duties; Noncertified Clinical Athletic Trainer; and Noncertified Part-Time Athletic Trainer. Breakdown of the returned surveys by these groups is shown in Table 1. Only six part-time or volunteer athletic trainers responded to the survey, a number insufficient to compute means, standard deviations, and correlations between core job dimensions and affective outcomes for their groups. Part-time athletic trainers' responses are contained in the total sample means, standard deviations, and correlations.

Table 1

Sample Population of Texas Secondary School Athletic Trainers Classified by Professional Preparation and Job Classification

	Professional Preparation			
Job Class	Curriculum	Intern	Noncertified	Total
Full Time Trainer	21	45	40	106
Teacher-Trainer	31	32	66	129
Trainer-Other Duties	8	14	18	40
Clinical Trainer	12	21	11	44
Part Time Trainer	1	1	4	6
Total	73	113	139	325

As it was possible to classify all respondents into one of the twelve listed groups based upon their professional preparation and job classification, the athletic training job

category "other" was not required in this study. Classification of athletic trainers in the planned groups by gender is shown in Table 2. There were 266 male and 59 female athletic trainers in the sample. Female athletic trainers were not represented in three groups. There were no Curriculum Certified female athletic trainers whose job classification was Athletic trainer with Other Duties or Clinical Athletic Trainer. There were no Internship Certified female athletic trainers whose job classification was Athletic Trainer with Other Duties. Only one Noncertified female athletic trainer indicated a job classification as Athletic Trainer with Other Duties. All other groups maintained varying ratios of female to male athletic trainers. No group had more female than male athletic trainers. Female athletic trainers made up eighteen percent of the sample.

Table 2

Sample Population of Texas Secondary School Athletic Trainers Classified by Gender

	Professional Preparation			
Job Class	Curriculum	Internship	Noncertified	Total
	Male/Female	Male/Female	Male/Female	Male/Female
Full Time Trainer	16/5	38/7	31/9	85/21
Teacher-Trainer	23/8	29/3	52/14	104/25
Trainer-Other Duties	8/0	14/0	17/1	39/1
Clinical Trainer	7/5	16/5	10/1	33/11
Part Time Trainer	1/0	1/0	3/1	5/1
Total	55/18	98/15	113/26	266/59

Reliability coefficients were computed for the survey. Internal consistency reliabilities (Chronbach's Alpha) of the five scales of the core job dimension were: task identification (α= .95); task significance (α= .95); skill variety (α=.96); autonomy (α=.65); and feedback from the job (α= .67). Internal consistency of the three affective outcomes of the survey were: internal work motivation (α=.71); growth needs satisfaction (α=.51); and general satisfaction (α=.47).

Analysis of Core Job Dimensions and Affective Outcomes

To determine significant differences between groups of athletic trainers, scale scores for each subject was computed using the scoring key in Appendix D. Means and standard deviations for the five core job dimensions and three affective outcomes for the total sample were computed and are listed in Table 3.

Table 3

Means and Standard Deviations for Core Job Dimensions and Affective Outcomes

	Male		Female		Total Population	
Variable	M	SD	M	SD	M	SD
Task Identification	5.36	0.91	5.41	0.77	5.37	0.88
Task Significance	5.87	0.72	6.05	0.67	5.90	0.72
Skill Variety	4.61	1.10	4.39	1.12	4.57	1.10
Autonomy	5.84	0.95	5.73	0.94	5.82	0.95
Feedback	4.98	1.09	5.07	0.93	4.99	1.07
Internal Work Motivation	5.67	0.65	5.88	0.51	5.70	0.64

Growth Needs Satisfaction	5.06	0.77	4.93	0.70	5.03	0.76
General Satisfaction	5.43	0.95	5.60	0.86	5.46	0.94

T-tests were performed to determine if there were significant differences in the means for job dimensions in the total sample based upon sex. Variance of the job dimensions were checked for homogeneity and appropriate formulas of calculation of pooled variance were used. The t-tests indicated that there were no significant differences between male and female subjects in any of the core job dimensions and for the two affective outcomes of growth needs satisfaction and general satisfaction ($p<.05$).

A significant difference was found to exist between male and female secondary school athletic trainers in the affective outcome of internal work motivation through a t-test ($t= -2.72$) at the $p<.01$ level. The group mean for the affective outcome of internal work motivation for male secondary school athletic trainers was 5.67, significantly lower than the group mean of 5.88 for female athletic trainers.

Group means and standard deviations were computed for the twelve groups of secondary school athletic trainers in the sample. A two-way ANOVA was conducted for each job dimension to determine if there was a relationship between independent variables of professional preparation and job classification and that dimension to investigate Research Questions One and Two. Group means, standard deviations, and significant differences between groups are reported in Tables 4 through 12.

Data for the core job dimension of task identification is presented in Table 4.

No significant main effect at the $p < .05$ level was evident for independent variables of professional preparation ($p = .39$)or job classification ($p = .07$) in the two-way ANOVA. There was no interaction between variables ($p = .12$). There were no significant differences between groups of athletic trainers for dependent variable task identification.

Table 4

Group Means and Standard Deviations for Task Identification

	Professional Preparation					
	Curriculum		Internship		Noncertified	
Job Classification	M	SD	M	SD	M	SD
Full Time Trainer	5.18	0.30	5.30	0.95	5.54	0.80
Teacher-Trainer	5.32	0.93	5.47	0.78	5.47	0.75
Trainer-Other Duties	5.79	0.83	5.61	0.97	5.35	0.73
Clinical Trainer	5.39	0.70	5.13	0.92	4.57	1.10

Data for task significance is presented in Table 5. In the two-way ANOVA, no significant main effect at the $p < .05$ level was evident for the independent variables professional preparation ($p = .10$) or job classification ($p = .66$). There was no significant interaction present ($p = .35$). There were no significant differences between groups of athletic trainers for dependent variable task significance.

Table 5

Group Means and Standard Deviations for Task Significance

	Professional Preparation

	Curriculum		Internship		Noncertified	
Job Classification	M	SD	M	SD	M	SD
Full Time Trainer	6.05	0.47	5.83	0.69	5.91	0.56
Teacher-Trainer	5.82	0.93	6.01	0.77	5.90	0.66
Trainer-Other Duties	6.18	0.73	6.24	0.44	5.67	0.84
Clinical Trainer	5.89	0.39	5.88	0.80	5.70	0.77

Data for skill variety is presented in Table 6. No significant main effect at the $p<.05$ level in the two-way ANOVA was evident for either professional preparation ($p=.98$) or job classification ($p=.94$). There was no significant interaction between independent variables ($p=.70$). There were no significant differences between groups of athletic trainers for the dependent variable skill variety.

Table 6

Group Means and Standard Deviations for Skill Variety

	Professional Preparation					
	Curriculum		Internship		Noncertified	
Job Classification	M	SD	M	SD	M	SD
Full Time Trainer	4.78	0.95	4.52	1.04	4.50	1.10
Teacher-Trainer	4.26	1.36	4.53	1.01	4.77	1.22
Trainer-Other Duties	4.49	1.04	4.71	0.88	4.36	1.15
Clinical Trainer	4.68	0.76	4.54	0.96	4.55	0.90

Data for the core job dimension autonomy is presented in Table 7.

Table 7

Group Means and Standard Deviations for Autonomy

	Professional Preparation					
	Curriculum		Internship		Noncertified	
Job Classification	M	SD	M	SD	M	SD
Full Time Trainer	5.84	1.28	5.99	0.87	5.75	0.76
Teacher-Trainer	6.02	1.06	5.81	0.71	5.48	0.96
Trainer-Other Duties	6.21	1.13	6.57	0.43	6.17	0.74
Clinical Trainer	5.92	0.82	5.79	0.79	5.21	1.09

The data from the two-way ANOVA for autonomy by professional preparation and job classification is presented in Table 8.

Table 8

Two Way ANOVA for Autonomy

Source	df	MS	F
Main Effects	5	3.06	3.89**
Professional Preparation	2	5.18	5.05**
Job Classification	3	3.96	4.04**
Two-Way Interactions	6	0.81	1.04
Explained	11	2.52	3.21

Residual	307	0.79
Total	318	0.85

*p <.05.** p<.01.

There was a main effect present for both professional preparation (p=.007) and job classification (p=.008). There was no interaction between independent variables (p=.40). Tukey/Kramer tests for significant differences between individual groups for the main effect of professional preparation are shown in Table 9. These post hoc tests indicated that the mean for autonomy of Noncertified Athletic Trainers (5.63) was significantly lower than that of Curriculum Certified (6.04) or Internship Certified Athletic Trainers (5.96).

Table 9 also shows the results of Tukey/Kramer tests for the main effect of job classification of secondary school athletic trainers. Athletic trainers who were classified Athletic Trainer with Other Duties indicated a greater degree of autonomy (6.32) in their jobs than did the other three job classifications of athletic trainers (p <.01). There was no significant difference between the other job classifications of athletic trainers.

Table 9

Tukey/Kramer Tests of Main Effects for Autonomy

Comparison by Professional Preparation	Q(CV=3.31)
Curriculum x Internship	0.74
Curriculum x Noncertified	4.32**
Internship x Noncertified	4.05*

Comparison by Job Classification	Q(CV=3.63)
Full Time Athletic Trainer x Teacher Trainer	1.51
Full Time Athletic Trainer x Other Duties	-3.85*
Full Time Athletic Trainer x Clinical	1.53
Teacher Trainer x Other Duties	-5.04**
Teacher Trainer x Clinical	0.44
Other Duties x Clinical	4.53**

*p <.05. **p <.01.

Additional Tukey/Kramer tests of simple effects revealed differences between individual groups of secondary school athletic trainers for autonomy. These tests are reported in Table 10.

Table 10

Tukey/Kramer Tests of Simple Effects for Autonomy

Contrast	Q(CV=4.62)
Curriculum Certified Teacher Athletic Trainer x Noncertified Teacher Athletic Trainer	4.94*
Internship Certified Athletic Trainer with Other Duties x Noncertified Teacher Athletic Trainer	5.78**
Internship Certified Athletic Trainer with Other Duties x Noncertified Clinical Athletic Trainer	5.29**

*p<.05. **p<.01.

The contrasts indicate that the mean for autonomy for Noncertified Teacher Athletic Trainers (5.48) is significantly lower than the means for either Curriculum Certified Teacher Athletic Trainers (6.02) or Internship Certified Athletic Trainer with Other Duties (6.57). Internship Certified Athletic Trainer with Other Duties also show a significantly higher group mean than Noncertified Clinical Athletic Trainers (5.21).

Group means and standard deviations for feedback are presented in Table 11. No significant mean effect at the p <.05 level was evident for either professional preparation (p =.29) or job classification (p =.48). There was no significant interaction between variables (p =.83). There were no significant differences between groups of secondary school athletic trainers for the dependent variable of feedback.

Table 11

Group Means and Standard Deviations for Feedback

	Professional Preparation					
	Curriculum		Internship		Noncertified	
Job Classification	M	SD	M	SD	M	SD
Full Time Trainer	5.10	1.30	4.93	1.16	4.91	0.89
Teacher-Trainer	5.08	1.07	4.99	0.88	4.79	1.12
Trainer-Other Duties	5.00	1.31	5.60	0.79	5.20	1.04
Clinical Trainer	5.25	0.88	5.17	1.13	4.79	0.69

Group means and standard deviations for the affective outcome internal work

motivation are presented in Table 12. No significant main effect was present at the $p<.05$ level for either professional preparation ($p=.44$) or job classification ($p=.80$). There was no significant interaction between independent variables ($p=80$). There were no significant differences between groups of athletic trainers for the variable of internal work motivation.

Table 12

Group Means and Standard Deviations for Internal Work Motivation

	Professional Preparation					
	Curriculum		Internship		Noncertified	
Job Classification	M	SD	M	SD	M	SD
Full Time Trainer	5.65	0.59	5.60	0.66	5.75	0.53
Teacher-Trainer	5.77	0.74	5.58	0.67	5.76	0.60
Trainer-Other Duties	5.54	0.69	5.87	0.48	5.93	0.52
Clinical Trainer	5.71	0.63	5.72	0.82	5.73	0.50

Group means and standard deviations for the affective outcome growth needs satisfaction are presented in Table 13. No significant main effects were present at the $p<.05$ level for either professional preparation ($p=.30$) or job classification ($p=.82$). There was no interaction between independent variables ($p=.50$). There were no significant differences between groups of athletic trainers for the variable growth needs satisfaction.

Table 13

Group Means and Standard Deviations for Growth Needs Satisfaction

	Professional Preparation					
	Curriculum		Internship		Noncertified	
Job Classification	M	SD	M	SD	M	SD
Full Time Trainer	5.05	0.66	5.10	0.79	5.08	0.79
Teacher-Trainer	4.88	0.81	5.20	0.65	4.97	0.76
Trainer-Other Duties	4.56	0.78	5.21	0.65	5.04	0.78
Clinical Trainer	5.13	0.56	4.98	0.75	5.07	0.92

Group means and standard deviations for the affective outcome general satisfaction are presented in Table 14. No significant main effect was present at the $p<.05$ level for either professional preparation ($p=.40$) or job classification ($p=.70$). There was a significant level of disordinal interaction between the independent variables ($p=.03$). There were no significant differences between groups of athletic trainers for the affective outcome of general satisfaction.

Table 14

Group Means and Standard Deviations for General Satisfaction

	Professional Preparation					
	Curriculum		Internship		Noncertified	
Job Classification	M	SD	M	SD	M	SD
Full Time Trainer	5.16	1.31	5.46	0.85	5.63	0.64

Teacher-Trainer	5.75	0.92	5.45	0.98	5.17	0.97
Trainer-Other Duties	5.18	1.50	5.83	0.45	5.59	0.78
Clinical Trainer	5.58	0.99	5.72	0.78	5.53	0.59

Intercorrelations of Job Dimensions

To address Research Objectives Three and Four, Pearson product moment correlations between core job dimensions and affective outcomes were computed for total sample of secondary school athletic trainers, subgroups of male and female secondary school athletic trainers, and subgoups based upon classification by the independent variables of the two-way ANOVA. Stepwise multiple linear regressions were then computed for all groups when possible, with the five core job dimensions as independent variables and affective outcomes as single dependent variables in each regression. Results of these calculations are reported in Table 15 through Table 38.

Intercorrelations of all job dimensions for the total sample population of secondary school athletic trainers are reported in Table 15. Pearson product moment correlations indicated that significant relationships existed between core job dimensions and affective outcomes in the total sample population. The direction of all correlations between core job dimensions and affective outcomes in the total sample was positive. A moderately positive correlation (r= .59) existed between task identification and task significance. Low positive correlations existed between skill variety and both task identification (r= .31) and task significance (r= .33). A low positive correlation existed between autonomy and feedback (r= .38). Low positive correlations existed between

Table 15

Intercorrelations of Job Dimensions for All Athletic Trainers

Subscale	1	2	3	4	5	6	7	8
1. Task Identification	--	.59**	.31**	.22**	.05	.25**	.12*	.16**
2. Task Significance	--	--	.33**	.18**	.24**	.21**	.11*	.13*
3. Skill Variety	--	--	--	.05	.16**	.14*	.08*	.07*
4. Autonomy	--	--	--	--	.38**	.32**	.19**	.52**
5. Feedback	--	--	--	--	--	.35**	.23**	.44**
6. Internal Motivation	--	--	--	--	--	--	.31**	.43**
7. GNS	--	--	--	--	--	--	--	.33**
8. General Satisfaction	--	--	--	--	--	--	--	--

Note . N= 325 GNS= Growth Needs Satisfaction

*p< .05. **p<.01.

several core job dimensions and affective outcomes: autonomy with internal work motivation (r= .32); and feedback with internal work motivation (r= .35). There were moderate positive correlations between autonomy and growth needs satisfaction (r= .52) and feedback and growth needs satisfaction (r= .44). Low positive correlations also existed between all three affective outcomes: internal work motivation with growth needs satisfaction(r= .31); internal work motivation with general satisfaction (r= .43); and growth needs satisfaction with general satisfaction (r= .33).

The results of stepwise multiple linear regressions for the three affective

outcomes are in Table 16. Only the core job dimensions of autonomy and feedback are in all three final regression formulas. Task identification is entered into the final formula for growth needs satisfaction only. Regression formulas have a multiple R of .43 for internal motivation, .25 for growth needs satisfaction and .58 for general satisfaction at the $p<.05$ level of significance.

Table 16

Multiple Linear Regressions for Affective Outcomes for All Athletic Trainers

Dependent Variable	Core Job Dimension	B	SE	β	R	R^2
Internal Work Motivation					.43	.19
	Task Identification	.12	.04	.16		
	Autonomy	.13	.38	.18		
	Feedback	.14	.03	.25		
	(Constant)	3.58	.26			
Growth Needs Satisfaction					.25	.06
	Autonomy	.10	.05	.12		
	Feedback	.13	.04	.19		
	(Constant)	3.81	.28			
General Satisfaction					.58	.34
	Autonomy	.41	.05	.41		
	Feedback	.25	.04	.29		
	(Constant)	1.80	.29			

$p<.05$.

Pearson product moment correlations for male and female secondary school athletic trainers within the sample were also computed. These correlations are presented in Table 17. For male secondary school athletic trainers the correlations between job dimensions and affective outcomes were also positive in direction. The correlation between task identification and task significance was moderately positive ($r= .57$). Low positive correlations were indicated between the following core job dimensions: task identification and skill variety ($r= .35$); task significance and skill variety ($r= .36$); and autonomy and feedback ($r= .43$). Four of the relationships between core job dimensions and affective outcomes were low positive in nature: autonomy and internal motivation ($r= .31$); autonomy and general satisfaction ($r= .50$); feedback and internal motivation ($r= .40$); and feedback and growth needs satisfaction ($r= .46$). Affective outcomes showed positive intercorrelations as with the total sample: internal work motivation with growth needs satisfaction ($r= .35$); internal work motivation with general satisfaction ($r= .43$); and growth needs satisfaction with general satisfaction ($r= .41$). The correlation between task identification and task significance was moderately positive ($r= .57$).

Correlations between job dimensions for female secondary school athletic trainers are also found in Table 17. Unlike male secondary school athletic trainers, there were fewer positive significant correlations. One significant negative correlation, skill variety with general satisfaction ($r= -.28$) was evident. Female secondary school

Table 17

Intercorrelations of Job Dimensions by Gender

Subscale	1	2	3	4	5	6	7	8
				Male Athletic Trainers n= 267				
1. Task Identification	--	.57**	.35**	.23**	.07	.26**	.14*	.20**
2. Task Significance	--	--	.36**	.22**	.27**	.23**	.09	.18**
3. Skill Variety	--	--	--	.07	.22**	.19**	.09*	.14*
4. Autonomy	--	--	--	--	.43**	.31**	.22**	.50**
5. Feedback	--	--	--	--	--	.40**	.28**	.46**
6. Internal Motivation	--	--	--	--	--	--	.35**	.43**
7. GNS	--	--	--	--	--	--	--	.41**
8. General Satisfaction	--	--	--	--	--	--	--	--
				Female Athletic Trainers n= 59				
Subscale	1	2	3	4	5	6	7	8
1. Task Identification	--	.66**	.16	.15	-.08	.18	.05	-.04
2. Task Significance	--	--	.26*	-.02	.06	.02	.21	-.16
3. Skill Variety	--	--	--	-.09	-.16	-.04	.01	-.28*
4. Autonomy	--	--	--	--	.13	.43**	.00	.61**
5. Feedback	--	--	--	--	--	.03	-.03	.30*
6. Internal Motivation	--	--	--	--	--	--	.01	.35**
7. GNS	--	--	--	--	--	--	--	-.07

8. General Satisfaction -- -- -- -- -- -- -- --

Note GNS= Growth Needs Satisfaction

*p< .05. **p<.01.

athletic trainers showed a moderately positive correlation between task identification and task significance (r= .66). No other correlations between core job dimensions indicated low or strong relationships to exist. Two of the relationships between core job dimensions and affective outcomes were low positive in nature: autonomy and internal motivation (r= .43); and feedback and general satisfaction (r= .30). One relationship was moderately positive, that of autonomy and general satisfaction (r= .61). Of the correlations between affective outcomes, only that between internal motivation and general satisfaction was of a low positive nature (r= .35). The results of stepwise multiple linear regressions for the three affective outcomes for male and female secondary school athletic trainers are in Table 18. Male secondary school athletic trainers produced multiple linear regressions for two affective outcomes, internal work motivation (R= .45) which contains feedback, autonomy, and task identification; and general satisfaction (R= .57) which contains feedback and autonomy only (p< .05). The regression formula for growth needs satisfaction contains only feedback (R= .28). Female secondary school athletic trainers failed to produce multiple linear regression formulas for internal work motivation or growth needs satisfaction. A regression formula for internal work motivation was produced with autonomy as the only variable (R= .43). The multiple linear regression formula for female athletic trainers for general

satisfaction contains autonomy and feedback as variables with an R of .65 at the $p<.05$ level of significance.

Table 18

Multiple Linear Regressions for Affective Outcomes by Gender

Male Secondary School Athletic Trainers n= 266						
Dependent Variable	Core Job Dimension	B	SE	β	R	R^2
Internal Work Motivation					.45	.21
	Feedback	.18	.37	.30		
	Task Identification	.11	.04	.16		
	Autonomy	.10	.04	.14		
	(Constant)	3.57	.28			
Growth Needs Satisfaction (No Multiple Linear Regression)					.28	.08
	Feedback	.19	.04	.28		
	(Constant)	4.08	.21			
General Satisfaction					.57	.33
	Autonomy	.39	.06	.37		
	Feedback	.26	.05	.30		
	(Constant)	1.88	.32			
Female Secondary School Athletic Trainers n= 59						
Dependent Variable	Core Job Dimension	B	SE	β	R	R^2
Internal Work Motivation (No Multiple Linear Regression)					.43	.19

	Autonomy	.24	.07	.43		
	(Constant)	4.53	.29			
Growth Needs Satisfaction- No Multiple Linear Regression						
General Satisfaction					.65	.42
	Autonomy	.53	.09	.58		
	Feedback	.21	.10	.23		
	(Constant)	1.47	.68			

$p<.05$.

Pearson product moment correlations for job dimensions of Curriculum Certified Full Time Athletic Trainers are in Table 19. Not all correlations were positive or significant. Moderately positive correlations existed between: task identification and task significance (r= .66); autonomy and internal work motivation (r= .43); autonomy and general satisfaction (r= .30); feedback and general satisfaction (r= .35); and internal work motivation (r= .35). This data did not produced any stepwise multiple linear regressions. A single regression for general satisfaction (R= .49) was produced for the variable autonomy.

Table 19

Intercorrelations of Job Dimensions for Curriculum Certified Full Time Athletic Trainers

Subscale	1	2	3	4	5	6	7	8
1. Task Identification	--	.52**	.28	.16	.24	-.20	-.31	-.08
2. Task Significance	--	--	.46*	.14	.16	.11	-.07	.31

3. Skill Variety	--	--	--	.31	-.12	-.23	-.07	.20
4. Autonomy	--	--	--	--	.09	.36*	.21	.49*
5. Feedback	--	--	--	--	--	.39*	.34	.39*
6. Internal Motivation	--	--	--	--	--	--	.53**	.46*
7. GNS	--	--	--	--	--	--	--	.46*
8. General Satisfaction	--	--	--	--	--	--	--	--

Note. n= 45 GNS= Growth Needs Satisfaction

*p< .05. **p<.01.

Results of Pearson product moment correlations for Curriculum Certified Teacher Athletic Trainers in the sample are in Table 20. All correlations are positive. Moderately positive correlations exist between the core job dimensions of task identification and task significance (r= .60). Low positive correlations exist between skill variety and task significance(r= .28) and autonomy and feedback (r= .49). Several low positive correlations exist between core job dimensions and affective outcomes: task identification and internal work motivation (r= .39) and growth needs satisfaction (r= .54); task significance and growth needs satisfaction (r= .34); skill variety and both growth needs satisfaction (r= .44) and general satisfaction (r= .35); and feedback and both growth needs satisfaction (r= .37) and general satisfaction (r= .47). Autonomy has a low positive correlation with all three affective outcomes; internal work motivation (r= .54); growth needs satisfaction (r= .50); and general satisfaction (r= .51). Affective outcomes also show low positive intercorrelations.

Table 20

Intercorrelations of Job Dimensions for Curriculum Certified Teacher Athletic Trainers

Subscale	1	2	3	4	5	6	7	8
1. Task Identification	--	.60**	.23	.28*	.14	.39*	.54**	.24
2. Task Significance	--	--	.36*	.12	.12	.21	.34*	.13
3. Skill Variety	--	--	--	.15	.28*	.18	.44*	.35*
4. Autonomy	--	--	--	--	.49**	.54**	.50**	.51**
5. Feedback	--	--	--	--	--	.29*	.37*	.47*
6. Internal Motivation	--	--	--	--	--	--	.44**	.55**
7. GNS	--	--	--	--	--	--	--	.57**
8. General Satisfaction	--	--	--	--	--	--	--	--

Note. n= 31 GNS= Growth Needs Satisfaction

*p< .05. **p<.01.

Only one multiple linear regression resulted from the data for Curriculum Certified Teacher Athletic Trainers. Table 21 shows the regressions. Growth needs satisfaction had an R of .65 with two variables, task identification and autonomy present in the formula.

Table 21

Multiple Linear Regressions for Affective Outcomes for Curriculum Certified Teacher Athletic Trainers

Dependent Variable	Core Job Dimension	B	SE	β	R	R^2

Internal Work Motivation					.54	.30
	Task Identification	.47	.14	.54		
	(Constant)	2.36	.73			
Growth Needs Satisfaction					.71	.51
	Task Identification	.32	.12	.37		
	Skill Variety	.18	.08	.30		
	Autonomy	.39	.16	.35		
	(Constant)	-.04	1.03			
General Satisfaction					.51	.26
	Autonomy	.66	.21	.51		
	(Constant)	1.67	1.30			

$p<.05$.

Pearson product moment correlations for Curriculum Certified Athletic Trainers with Other Duties are located in Table 22. There were only a few significant correlations. A very high correlation existed between core job dimensions of task identification and task significance (r= .97). Significant moderately positive correlations existed between core job dimensions and affective outcomes: task identification and internal work motivation (r= .78); task significance and internal work motivation (r= .84); and feedback and growth needs satisfaction (r= .70). A strong positive correlation existed between autonomy and general satisfaction (r= .90). There were no significant positive correlations between affective outcomes.

Table 22

Intercorrelations of Job Dimensions for Curriculum Certified Athletic Trainers with Other Duties

Subscale	1	2	3	4	5	6	7	8
1. Task Identification	--	.97**	.28	-.20	.65	.78**	.27	.13
2. Task Significance	--	--	.31	-.39	.66	.84**	.28	-.02
3. Skill Variety	--	--	--	.14	.66	.25	.63	.38
4. Autonomy	--	--	--	--	.23	.24	.35	.90**
5. Feedback	--	--	--	--	--	.66	.70*	.57
6. Internal Motivation	--	--	--	--	--	--	.52	.04
7. GNS	--	--	--	--	--	--	--	.47
8. General Satisfaction	--	--	--	--	--	--	--	--

Note. n= 8 GNS= Growth Needs Satisfaction

*p< .05. **p<.01.

The results of calculations of multiple linear regressions for affective outcomes for Curriculum Certified Athletic Trainers with Other Duties are in Table 23. There is only a single variable, task significance in the regression formula for internal work motivation (R= .84). Data did not produce a regression formula for growth needs satisfaction. The multiple regression formula for general satisfaction contained autonomy and feedback as variables with a R= .98.

Table 23

Multiple Linear Regressions for Affective Outcomes for Curriculum Certified Athletic

Trainers with Other Duties

Dependent Variable	Core Job Dimension	B	SE	β	R	R^2
Internal Work Motivation					.84	.71
	Task Significance	.80	.21	.84		
	(Constant)	.63	1.30			
Growth Needs Satisfaction		No regression formula				
General Satisfaction					.98	.97
	Autonomy	1.09	.11	.82		
	Feedback	.44	.09	.39		
	(Constant)	1.67	1.30			

$p<.05$.

Pearson product moment correlations of job dimensions for Curriculum Certified Clinical Athletic Trainers is located in Table 24. There were no significant intercorrelations between core job dimensions. There were no significant correlations between core job dimensions and affective outcomes. There was one significant intercorrelation between affective outcomes, internal work motivation and general satisfaction ($r= .56$). The data from Curriculum Certified Clinical Athletic Trainers produced no multiple linear regressions for affective outcomes.

Table 24

Intercorrelations of Job Dimensions for Curriculum Certified Clinical Athletic Trainers

Subscale	1	2	3	4	5	6	7	8

1. Task Identification	--	-.22	.34	.34	-.45	-.08	.08	.00
2. Task Significance	--	--	.11	-.22	.07	-.14	-.33	-.19
3. Skill Variety	--	--	--	.39*	-.05	-.12	.24	-.44
4. Autonomy	--	--	--	--	-.07	.23	.53	.18
5. Feedback	--	--	--	--	--	.05	.03	-.02
6. Internal Motivation	--	--	--	--	--	--	.08	.56**
7. GNS	--	--	--	--	--	--	--	.29
8. General Satisfaction	--	--	--	--	--	--	--	--

Note. n= 19 GNS= Growth Needs Satisfaction

*p< .05. **p<.01.

Pearson product moment correlations of job dimensions for Internship Certified Full Time Athletic Trainers are reported in Table 25. A significant highly positive intercorrelation existed between the core job dimensions of task identification and task significance (r= .76). A moderately positive significant intercorrelation existed between task significance and autonomy (r= .51). A low positive intercorrelation was found between autonomy and feedback (r= .45). Low positive correlations between core job dimensions and affective outcomes were found between: task identification and growth needs satisfaction (r= .40); task significance and growth needs satisfaction (r= .35); autonomy and internal work motivation (r= .32); autonomy and growth needs satisfaction (r= .32); and autonomy and general satisfaction (r= .56). Low positive correlations also existed between feedback and internal work motivation (r= .45),

growth needs satisfaction (r= .40), and general satisfaction (r= .40). Affective outcomes showed low positive intercorrelations.

Table 25

Intercorrelations of Job Dimensions for Internship Certified Full Time Athletic Trainers

Subscale	1	2	3	4	5	6	7	8
1. Task Identification	--	.76**	.26	.41**	-.12	.25	.40**	.28
2. Task Significance	--	--	.32*	.51**	.12	.26	.35*	.27
3. Skill Variety	--	--	--	-.01	.18	.44**	.24	.01
4. Autonomy	--	--	--	--	.45**	.32*	.31*	.56**
5. Feedback	--	--	--	--	--	.45**	.40**	.40**
6. Internal Motivation	--	--	--	--	--	--	.38**	.34*
7. GNS	--	--	--	--	--	--	--	.46**
8. General Satisfaction	--	--	--	--	--	--	--	--

Note. n= 45 GNS= Growth Needs Satisfaction

*p< .05. **p<.01.

Multiple linear regressions for affective outcomes of Internship Certified Full Time Athletic Trainers are found in Table 26. The formula for internal work motivation includes skill variety and feedback as variables (R=.58) and the formula for growth needs satisfaction includes task identification and feedback (R=.54). There was no multiple regression formula for general satisfaction.

Table 26

Multiple Linear Regressions for Affective Outcomes for Internship Certified Full Time Athletic Trainers

Dependent Variable	Core Job Dimension	B	SE	β	R	R^2
Internal Work Motivation					.57	.33
	Skill Variety	.23	.08	.37		
	Feedback	.21	.07	.38		
	(Constant)	3.49	.47			
Growth Needs Satisfaction					.53	.29
	Task Identification	.30	.11	.36		
	Feedback	.24	.09	.36		
	(Constant)	2.34	.69			
General Satisfaction (No Multiple Regression)					.56	.31
	Autonomy	.54	.12	.56		
	(Constant)	2.26	.73			

$p<.05$

Job dimension Pearson product moment intercorrelations for Internship Certified Teacher Athletic Trainers are located in Table 27. Significant low positive intercorrelations existed between the core job dimensions of task identification and task significance (r= .47); task identification and feedback (r= .43); task significance and feedback (r= .55); and autonomy and feedback (r= .45). Significant low positive correlations were found between these core job dimensions and affective outcomes: autonomy and internal work motivation (r= .40); and autonomy and general satisfaction

(r= .47); and feedback and internal work motivation (r= .38). One low positive intercorrelation existed for affective outcomes: internal work motivation and general satisfaction (r= .71).

Table 27

Intercorrelations of Job Dimensions for Internship Certified Teacher Athletic Trainers

Subscale	1	2	3	4	5	6	7	8
1. Task Identification	--	.47**	.27	.20	.43*	-.09	-.15	.00
2. Task Significance	--	--	.13	.18	.54**	-.12	.00	-.13
3. Skill Variety	--	--	--	.05	.08	-.06	-.23	.05
4. Autonomy	--	--	--	--	.38*	.40**	.18	.47**
5. Feedback	--	--	--	--	--	.38*	.14	.32
6. Internal Motivation	--	--	--	--	--	--	.24	.70**
7. GNS	--	--	--	--	--	--	--	.07
8. General Satisfaction	--	--	--	--	--	--	--	--

Note . n= 32 GNS= Growth Needs Satisfaction

*p< .05. **p<.01.

No multiple linear regression formulas for affective outcomes resulted from data from Internship Certified Teacher Athletic Trainers. The regression formulas for single variables are reported in Table 28. The formula for internal work motivation (R= .40) has autonomy as a variable. No regression formula could be computed for growth needs satisfaction. The regression formula for general satisfaction included autonomy as a

variable (.47).

Table 28

Multiple Linear Regressions for Affective Outcomes for Internship Certified Teacher Athletic Trainers

Dependent Variable	Core Job Dimension	B	SE	β	R	R^2
Internal Work Motivation (No Multiple Regression Formula)					.40	.16
	Autonomy	.38	.16	.40		
	(Constant)	3.34	.93			
Growth Needs Satisfaction- No Regression Formula						
General Satisfaction (No Multiple Regression Formula)					.47	.22
	Autonomy	.67	.22	.47		
	(Constant)	1.68	1.31			

$p<.05$.

Job dimension intercorrelations for Internship Certified Athletic Trainers with Other Duties are shown in Table 29. Only four significant positive Pearson product moment correlations were evident for these athletic trainers. Task identification showed a high positive correlation with task significance (r= .74). Moderate positive correlations were found between both task significance and internal motivation (r= .62) and autonomy and internal motivation (r= .51).

Table 29

Intercorrelations of Job Dimensions for Internship Certified Athletic Trainers with Other Duties

Subscale	1	2	3	4	5	6	7	8
1. Task Identification	--	.74**	.33	.39	.36	.41	-.08	.44
2. Task Significance	--	--	.37	.37	.42	.62*	-.15	.55*
3. Skill Variety	--	--	--	.19	.44	.25	.13	.25
4. Autonomy	--	--	--	--	.33	.51*	-.06	.11
5. Feedback	--	--	--	--	--	-.12	.07	.44
6. Internal Motivation	--	--	--	--	--	--	-.21	.34
7. GNS	--	--	--	--	--	--	--	.13
8. General Satisfaction	--	--	--	--	--	--	--	--

Note. n= 14 GNS= Growth Needs Satisfaction

*p<.05. ** p<.01.

No multiple linear regression formulas for affective outcomes resulted from data from Internship Certified Trainers with Other Duties. Regression formulas for single variables are reported in Table 30. The formula for internal work motivation (R= .62) has task significance as a variable. No regression formula could be computed for growth needs satisfaction. The regression formula for general satisfaction also included task significance as a variable (R= .55).

Table 30

Multiple Linear Regressions for Affective Outcomes for Internship Certified Athletic Trainers with Other Duties

Dependent Variable	Core Job Dimension	B	SE	β	R	R^2

Internal Work Motivation (No Multiple Regression Formula)				.62	.39
	Task Significance	.62	.25	.62	
	(Constant)	1.62	1.53		
Growth Needs Satisfaction- No Regression Formula					
General Satisfaction (No Multiple Regression Formula)				.55	.30
	Task Significance	.57	.25	.55	
	(Constant)	2.27	1.56		

$p<.05$.

Job dimension intercorrelations for Internship Certified Clinical Athletic Trainers are reported in Table 31. Task identification showed moderate positive correlations with task significance (r= .52) and skill variety (r= .62). Low positive correlations were found between task identification and internal work motivation (r= .51) and task identification and growth needs satisfaction (r= .44). Low positive correlations were also found between both autonomy and growth needs satisfaction (r= .47) and autonomy and general satisfaction (r= .47). A significant moderate positive relationship existed between feedback and internal work motivation (r= .62). Intercorrelations between affective outcomes were all positive and significant.

Table 31

Intercorrelations for Job Dimensions for Internship Certified Clinical Athletic Trainers

Subscale	1	2	3	4	5	6	7	8

1. Task Identification	--	.52*	.62**	.12	.40	.51*	.43*	.32
2. Task Significance	--	--	.41	.08	-.07	-.12	.05	-.02
3. Skill Variety	--	--	--	-.07	.25	.40	.12	-.07
4. Autonomy	--	--	--	--	-.12	.28	.47*	.47*
5. Feedback	--	--	--	--	--	.62*	.22	.35
6. Internal Motivation	--	--	--	--	--	--	.73**	.69**
7. GNS	--	--	--	--	--	--	--	.70**
8. General Satisfaction	--	--	--	--	--	--	--	--

Note. n = 21 GNS= Growth Needs Satisfaction

*p< .05. **p<.01.

Two of the affective outcomes had multiple linear regression formulas from data from Internship Certified Clinical Athletic Trainers. All formulas are reported in Table 32. The multiple linear regression formula for internal work motivation (R= .71) has autonomy and feedback as variables. The multiple linear regression formula for general satisfaction also included autonomy and feedback as variables (R= .63). Growth needs satisfaction did not provide a multiple linear regression formula.

Table 32

Multiple Linear Regressions for Affective Outcomes for Internship Certified Clinical Athletic Trainers

Dependent Variable	Core Job Dimension	B	SE	β	R	R^2
Internal Work Motivation					.71	.51
	Autonomy	.37	.17	.36		

	Feedback	.48	.12	.66		
	(Constant)	1.10	1.24			
Growth Needs Satisfaction (No multiple regression formula)					.47	.22
	Autonomy	.45	.19	.47		
	(Constant)	2.33	1.14			
General Satisfaction					.63	.40
	Autonomy	.51	.18	.52		
	Feedback	.29	.13	.42		
	(Constant)	1.26	1.30			

$p<.05$

Job dimension intercorrelations for Noncertified Full Time Athletic Trainers are reported in Table 33. A significant moderate core job dimension intercorrelation was found between task identification and task significance (r= .67). Significant low intercorrelations for core job dimensions were found between both and task identification and skill variety (r= .40); and autonomy and feedback (r= .31). Significant correlations between core job dimensions and affective outcomes were low positive in nature: autonomy and general satisfaction (r= .46); feedback and growth needs satisfaction (r= .31); and feedback and general satisfaction(r= .39). Significant positive intercorrelations between affective outcomes were internal work motivation and growth needs satisfaction (r=.38) and internal work motivation and general satisfaction (r= .47).

Table 33

Intercorrelations of Job Dimensions for Noncertified Full Time Athletic Trainers

Subscale	1	2	3	4	5	6	7	8
1. Task Identification	--	.67**	.40**	.11	.13	.11	.11	.21
2. Task Significance	--	--	.21	-.07	.15	.22	.12	.15
3. Skill Variety	--	--	--	.04	-.11	-.22	.04	.04
4. Autonomy	--	--	--	--	.31*	.13	-.05	.46**
5. Feedback	--	--	--	--	--	.27	.31*	.39*
6. Internal Motivation	--	--	--	--	--	--	.38*	.47**
7. GNS	--	--	--	--	--	--	--	.13
8. General Satisfaction	--	--	--	--	--	--	--	--

Note. n = 40 GNS= Growth Needs Satisfaction

*p< .05. **p<.01.

There were no multiple linear regression formulas resulting from the data from Noncertified Full Time Athletic Trainers. Two affective outcomes did have single variable regression formulas. These formulas are reported in Table 34. There was no regression formula resulting from the data for internal work motivation. The multiple linear regression for growth needs satisfaction (R= .31) has feedback as a variable. The multiple linear regression formula for general satisfaction included autonomy as a variable (R= .47).

Table 34

Multiple Linear Regressions for Affective Outcomes for Noncertified Full Time Athletic Trainers

Dependent Variable	Core Job Dimension	B	SE	β	R	R^2
Internal Work Motivation	No regression formula					
Growth Needs Satisfaction	(No multiple regression formula)				.31	.10
	Feedback	.28	.14	.31		
	(Constant)	3.70	.69			
General Satisfaction	(No multiple regression formula)				.47	.22
	Autonomy	.39	.12	.47		
	(Constant)	3.37	.69			

$p<.05$

Job dimension intercorrelations for Noncertified Teacher Athletic Trainers are reported in Table 35. Significant moderate core job dimension intercorrelations were found between task identification and task significance (r= .65); and autonomy and feedback (r=.56). Significant low intercorrelations for core job dimensions were found between task identification and skill variety (r= .44); task significance and skill variety (r= .48); and task significance and feedback (r= 30). Two significant correlations between core job dimensions and affective outcomes were low positive in nature: task identification and internal work motivation (r= .45); and task significance and internal work motivation (r=.41). Moderately positive significant correlations were found between both autonomy and internal work motivation (r= .50) and autonomy and

general satisfaction (r= .58). A significant high positive correlation was found between feedback and general satisfaction (r= .61). Significant positive intercorrelations between affective outcomes were internal work motivation and growth needs satisfaction (r=.32) and internal work motivation and general satisfaction (r= .31).

Table 35

Intercorrelations of Job Dimensions for Noncertified Teacher Athletic Trainers

Subscale	1	2	3	4	5	6	7	8
1. Task Identification	--	.65**	.44**	.16	.27*	.45**	-.02	.29*
2. Task Significance	--	--	.48**	.26*	.30*	.41**	-.02	.28*
3. Skill Variety	--	--	--	.09	.27*	.16	-.16	.09
4. Autonomy	--	--	--	--	.56**	.50**	.13	.58**
5. Feedback	--	--	--	--	--	.27*	.19	.61**
6. Internal Motivation	--	--	--	--	--	--	.15	.32**
7. GNS	--	--	--	--	--	--	--	.31**
8. General Satisfaction	--	--	--	--	--	--	--	--

Note. n = 66 GNS= Growth Needs Satisfaction

*p< .05. **p<.01.

Two of the affective outcomes had multiple linear regression formulas from data from Noncertified Full Time Athletic Trainers. All formulas are reported in Table 36. The multiple linear regression formula for internal work motivation (R= .62) has task identification and autonomy as variables. The multiple linear regression formula

for general satisfaction included autonomy and feedback as variables (R= .61). Growth needs satisfaction did not provide a multiple linear regression formula.

Table 36

Multiple Linear Regressions for Affective Outcomes for Noncertified Teacher Athletic Trainers

Dependent Variable	Core Job Dimension	B	SE	β	R	R^2
Internal Work Motivation					.62	.39
	Task Identification	.30	.08	.38		
	Autonomy	.27	.06	.44		
	(Constant)	2.62	.51			
Growth Needs Satisfaction- No multiple regression formula						
General Satisfaction					.67	.45
	Autonomy	.35	.11	.35		
	Feedback	.36	.10	.41		
	(Constant)	1.53	.54			

$p<.05$.

Job dimension intercorrelations for Noncertified Athletic Trainers with Other Duties are reported in Table 37. A significant highly positive core job dimension intercorrelation was found between task identification and task significance (r= .76). One significant moderately positive correlation between core job dimensions and affective outcomes was evident: task identification and internal work motivation (r=

.55). Moderately positive significant correlations between core job dimensions and affective outcomes existed: task identification and general satisfaction (r= .32); task significance and internal work motivation (r= .48); skill variety and internal work motivation (r= .30); autonomy and general satisfaction (r= .37); feedback and internal work motivation (r= .48); and feedback and general satisfaction (r= .36). A significant moderately positive intercorrelation existed between the affective outcome of internal work motivation and general satisfaction (r= .54).

Table 37

Intercorrelations of Job Dimensions for Noncertified Athletic Trainers with Other Duties

Subscale	1	2	3	4	5	6	7	8
1. Task Identification	--	.76**	.27	.29	.37	.54*	.03	.32
2. Task Significance	--	--	.15	.23	.43	.48*	.08	.11
3. Skill Variety	--	--	--	-.18	.09	.30	.10	.08
4. Autonomy	--	--	--	--	.44	.19	-.29	.37
5. Feedback	--	--	--	--	--	.48*	-.16	.36
6. Internal Motivation	--	--	--	--	--	--	.25	.54*
7. GNS	--	--	--	--	--	--	--	.12
8. General Satisfaction	--	--	--	--	--	--	--	--

Note. n = 18 GNS= Growth Needs Satisfaction

*p< .05. **p<.01.

None of the data from Noncertified Athletic Trainers with Other Duties resulted

in multiple linear regression formulas for affective outcomes. A single variable regression formula was computed for internal work motivation with task identification as the only variable (R= .55).

Job dimension intercorrelations for Noncertified Clinical Athletic Trainers are reported in Table 38. One significant correlation was moderately significant, that between core job dimensions task significance and feedback (r=.66). No multiple linear regressions for affective outcomes resulted from the data for Noncertified Clinical Athletic Trainer.

Table 38

Intercorrelations of Job Dimensions for Noncertified Clinical Athletic Trainers

Subscale	1	2	3	4	5	6	7	8
1. Task Identification	--	.09	-.39	.42	.02	.08	-.30	-.06
2. Task Significance	--	--	.41	.34	.66*	.49	-.08	.14
3. Skill Variety	--	--	--	-.13	.22	.37	-.13	-.49
4. Autonomy	--	--	--	--	.55	.09	.09	.17
5. Feedback	--	--	--	--	--	.51	-.24	.20
6. Internal Motivation	--	--	--	--	--	--	-.42	-.42
7. GNS	--	--	--	--	--	--	--	.54
8. General Satisfaction	--	--	--	--	--	--	--	--

Note. n = 11 GNS= Growth Needs Satisfaction

*p< .05. **p<.01.

Scattergrams were created to determine if the relationship between any core job dimensions and affective outcome was curvilinear for total sample, gender, and group. There were no curvilinear relationships detected in these scattergrams.

Analysis of NATABOC, Inc. Task Domains

The next area of analysis was the task identification, task significance, and skill variety ratings for NATABOC, Inc. Task Domains. This analysis was performed to address Research Objective Five.

Subjects rated NATABOC, Inc. Task Statements for task identification, task significance, and skill variety. These ratings were combined and mean and standard deviation for each NATABOC, Inc. Task Domain was determined. The mean and standard deviation by gender was also computed. Means and standard deviations for these ratings by the total sample population for NATABOC, Inc. Task Domains along with ratings by gender are reported in Table 39.

Table 39

Task Identification, Task Significance, and Skill Variety Means and Standard Deviations for NATABOC Task Domains by Gender and Total Sample

	Male		Female		Total Sample	
	M	SD	M	SD	M	SD
		Task Identification				
Task Domain 1	4.39	1.10	4.33	1.05	4.36	1.10
Task Domain 2	6.08	0.95	6.13	0.82	6.09	0.93
Task Domain 3	5.71	1.00	5.96	0.91	5.76	0.99
Task Domain 4	5.21	1.24	5.37	1.12	5.29	1.22
Task Domain 5	5.45	1.24	5.42	1.03	5.45	1.20
		Task Significance				
Task Domain 1	5.48	0.86	5.79	0.78	5.53	0.86
Task Domain 2	6.39	0.75	6.47	0.70	6.41	0.74
Task Domain 3	5.97	0.87	6.27	0.71	6.01	0.85
Task Domain 4	5.63	1.06	5.79	0.89	5.64	1.04
Task Domain 5	5.77	0.97	5.87	0.82	5.79	0.94
		Skill Variety				
Task Domain 1	4.38	1.05	4.22	1.02	4.35	1.04
Task Domain 2	4.88	1.47	4.53	1.49	4.81	1.49
Task Domain 3	5.23	1.08	5.08	1.13	5.21	1.08

Task Domain 4	3.97	1.55	3.66	1.55	3.91	1.56
Task Domain 5	4.70	1.29	4.61	1.16	4.68	1.27

T-tests of the means of ratings of NATABOC, Inc. Task Domains for task identification, task significance, and skill variety revealed that two domains differ significantly by gender at the $p<.05$ level. Task Domain One differs significantly by gender for task significance ($t= -2.77$). Male secondary school athletic trainers rated the task significance of task Domain One lower (5.48) than female secondary school athletic trainers (5.79). Male secondary school athletic trainers also rated the task significance of NATABOC, Inc. Task Domain 3 to be lower in task significance (5.96) than female secondary school athletic trainers (6.27)($t=-2.87$).

Tables 40-42 contain means and standard deviations for task identification, task significance, and skill variety for NATABOC Inc. Task Domains for groups of secondary school athletic trainers. Grouping is based upon the independent variables of professional preparation and job classification.

Table 40

Means and Standard Deviations of NATABOC, Inc. Task Domains Ratings for Task Identification When Grouped by Professional Preparation and Job Classification

	Domain 1		Domain 2		Domain 3		Domain 4		Domain 5	
Group	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
					Curriculum Certified					
Full Time AT	4.01	1.10	5,89	1.34	5.58	1.17	5.34	1.22	5.23	1.37
Teacher AT	4.05	1.17	6.15	0.84	5.67	1.13	5.35	1.23	5.57	1.23
AT Other Duties	4.77	1.03	6.42	0.70	6.13	0.87	5.84	1.07	5.95	0.90
Clinical AT	4.20	1.28	6.34	0.64	6.22	0.50	5.10	0.91	5.22	1.34
					Internship Certified					
Full Time AT	4.44	1.11	5.92	1.12	5.75	1.06	5.14	1.21	5.35	1/37
Teacher AT	4.55	1.13	6.17	0.81	5.83	0.82	5.43	0.99	5.44	1.09
AT Other Duties	4.65	1.07	6.38	0.96	5.99	0.89	5.45	1.32	5.71	1.29
Clinical AT	4.67	1.19	5.73	0.92	5.76	1.16	4.85	1.28	5.04	1.18
					Noncertified					
Full Time AT	4.67	1.06	6.18	0.84	5.87	0.81	5.49	1.04	5.59	1.00
Teacher AT	4.36	0.88	6.17	0.79	5.80	0.83	5.56	1.05	5.58	1.13
AT Other Duties	4.56	0.79	6.18	0.61	5.54	0.91	5.21	1.10	5.23	1.23
Clinical AT	3.66	1.10	5.64	0.85	4.91	1.42	3.81	1.32	5.05	1.02

Table 41

Means and Standard Deviations of NATABOC, Inc. Task Domains Ratings for Task Significance When Grouped by Professional Preparation and Job Classification

	Domain 1		Domain 2		Domain 3		Domain 4		Domain 5	
Group	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
				Curriculum Certified						
Full Time AT	5.52	0.86	6.61	0.47	6.32	0.45	5.86	0.63	5.90	0.64
Teacher AT	5.45	1.07	6.27	1.08	5.97	1.02	5.52	1.25	5.85	1.04
AT Other Duties	5.98	0.76	6.48	0.73	6.18	0.84	6.15	0.77	6.04	0.75
Clinical	5.38	0.64	6.57	0.44	6.32	0.41	5.24	0.63	5.86	0.63
				Internship Certified						
Full Time AT	5.53	0.90	6.30	0.75	5.96	0.77	5.64	0.99	5.6	1.02
Teacher AT	5.64	0.92	6.39	0.94	6.09	0.95	5.92	0.90	5.94	0.93
AT Other Duties	5.99	0.75	6.86	0.21	6.23	0.58	5.96	0.70	6.12	0.63
Clinical AT	5.58	0.98	6.38	0.68	6.11	0.89	5.55	1.03	5.67	1.04
				Noncertified						
Full Time AT	5.52	0.67	6.43	0.66	6.01	0.76	5,72	0.88	5.81	0.75
Teacher AT	5.49	0.80	6.42	0.58	6.02	0.69	5.69	1.06	5.77	0.98
AT Other Duties	5.39	0.73	6.20	0.77	5.62	1.13	5.36	1.20	5.63	1.15
Clinical AT	5.48	0.80	6.36	0.72	5.60	1.24	5.12	1.33	5.71	0.65

Table 42

Means and Standard Deviations of NATABOC, Inc. Task Domains Ratings for Skill Variety When Grouped by Professional Preparation and Job Classification

	Domain 1		Domain 2		Domain 3		Domain 4		Domain 5	
Group	Mean	SD	Mean	SD	Mean	SD	Mean	SD	Mean	SD
					Curriculum Certified					
Full Time AT	4.36	1.02	4.90	1.25	5.52	0.81	4.18	1.36	5.24	1.07
Teacher AT	4.04	1.30	4.25	1.76	4.78	1.32	3.65	1.81	4.85	1.54
AT Other Duties	4.56	1.07	4.59	1.67	4.94	0.99	3.38	1.70	5.20	0.94
Clinical	4.39	0.91	5.19	0.91	5.50	0.69	3.82	1.18	4.58	0.81
					Internship Certified					
Full Time AT	4.25	1.07	4.84	1.35	5.31	0.99	3.85	1.36	4.43	1.36
Teacher AT	4.19	1.10	4.94	1.38	5.21	0.96	3.71	1.39	4.73	1.11
AT Other Duties	4.45	1.00	5.05	1.26	5.38	0.86	4.09	1.16	4.66	1.02
Clinical AT	4.39	0.95	4.84	1.38	5.44	1.02	3.67	1.48	4.45	1.05
					Noncertified					
Full Time AT	4.36	0.93	4.58	1.55	5.15	1.04	3.86	1.59	4.72	1.18
Teacher AT	4.52	1.02	5.05	1.57	5.27	1.16	4.34	1.65	4.74	1.39
AT Other Duties	4.42	0.95	4.49	1.61	4.94	1.13	3.71	1.75	4.27	1.32
Clinical AT	4.45	0.77	4.95	1.04	5.05	1.33	3.79	1.45	4.38	0.93

Two-way ANOVAs were conducted on data for main effects on task identification, task significance, and skill variety for the NATABOC, Inc. Task Domains using professional preparation and job classification as independent variables. Significant levels of main effects for these variables were not found in responses of secondary school athletic trainers in rating their jobs in all but one of the NATABOC, Inc. Task Domains. Secondary school athletic trainers reported no significant differences between groups for level of task identification of: Task Domain 1., Prevention of Athletic Injuries; Task Domain 2., Recognition, Evaluation, and Immediate Care of Injuries; Task Domain 3., Rehabilitation and Conditioning of Athletic Injuries; and Task Domain 5., Professional Development and Responsibility. Secondary school athletic trainers did report a significant difference between groups for task identification of Task Domain 4., Health Care Administration. Secondary school athletic trainers reported no significant difference in task significance or skill variety in any of the Task Domains.

Table 43 shows the two-way ANOVA for task identification for Task Domain 4 with professional preparation and job classification as independent variables. A main effect for the independent variable job classification was indicated by the significant F ratio of 5.99 ($p<.01$). Interaction between independent variables was not significant.

Table 43

Two-way ANOVA for Task Identification of Task Domain 4

Source	df	MS	F

Main Effects	5	5.54	4.02**
Professional Preparation	2	2.46	1.79
Job Classification	3	8.26	5.99**
Two-Way Interactions	6	2.67	1.93
Explained	11	3.61	2.61
Residual	307	1.39	
Total	318	0.85	

*p<.05. **p<.01.

Tukey post-hoc tests for significant differences for main effects of task identification in Task Domain 4 are shown in Table 44. These post hoc tests indicated

Table 44

Tukey-Kramer Tests for Main Effect of Job Classification for Task Identification of Task Domain 4

Comparison by Job Classification	Q(CV=3.63)
Full Time Athletic Trainer x Teacher Trainer	-1.62
Full Time Athletic Trainer x Other Duties	-0.60
Full Time Athletic Trainer x Clinical	4.37*
Teacher Trainer x Other Duties	0.56
Teacher Trainer x Clinical	5.71**
Other Duties x Clinical	4.10*

*p<.05. **p<.01.

that group mean for task identification of Clinical Athletic Trainers (4.66) was lower than that of Full Time Athletic Trainers (5.00), Teacher Athletic Trainers (5.49), and Atheltic Trainers with Other Duties (5.40). There were no other Task Domains which showed significant main effects or interaction in two-way ANOVAS.

Analysis of Correlation of Task Domains with Affective Outcomes

In order to address Research Objective Six, Pearson product moment correlations were computed between the job dimensions of task identification, task significance, and skill variety for the mean scores of NATABOC, Inc. Task Domains and the affective outcomes of internal work motivation, growth needs satisfaction, and general satisfaction. Results of these correlations are for total sample are found in Table 45. No correlations were above .30, the established limit for significant relationships between variables. No stepwise multiple linear regressions resulted from the data.

Table 45

Significant Correlations of NATABOC, Inc. Task Domains Ratings for Task Identification, Task Significance, Skill Variety with Affective Outcomes for Total Sample

Core Characteristic	IM	GNS	GS
TI-Task Domain 1.	.18**	.13*	.19**
TI-Task Domain 2.	.18**	.08	.04
TI-Task Domain 3.	.29**	.09	.16**

TI-Task Domain 4.	.23**	.12*	.12*
TI-Task Domain 5.	.15**	.08	.17**
TS-Task Domain 1.	.17**	.15**	.16**
TS-Task Domain 2.	.14*	.10	.02
TS-Task Domain 3.	.17**	.07	.10
TS-Task Domain 4.	.25**	.11	.16**
TS-Task Domain 5.	.18**	.09	.15**
SV-Task Domain 1.	.16**	.08	.12*
SV-Task Domain 2.	.10	.09	.03
SV-Task Domain 3.	.18*	.06	.07
SV-Task Domain 4.	.07	.00	.02
SV-Task Domain 5.	-.06	.11*	-.02

Note. TI= Task Identification; TS= Task Significance; SV= Skill Variety; IM=Internal Work Motivation; GNS = Growth needs Satisfaction; GS=General Satisfaction.

*$p<.05$ ** $p<.01$

Correlations between task domains and affective outcomes also were computed along with stepwise multiple linear regressions dividing the sample by gender for task identification, task significance, and skill variety. The significant correlations which resulted for male secondary school athletic trainers are reported in Table 46. No

stepwise multiple linear regressions resulted from this data. There were no significant correlations evident for female secondary school athletic trainers.

Table 46

Significant Correlations of NATABOC, Inc. Task Domains Ratings for Task Identification with Affective Outcomes for Male Athletic Trainers

Core Characteristic	IM	GNS	GS
	Male Athletic Trainers		
TI-Task Domain 4.	.31**	--	.50**
TI-Task Domain 5.	.40**	--	.46**

Note. Dashes indicate no significant positive correlation was present. TI= Task Identification; IM=Internal Work Motivation; GNS = Growth needs Satisfaction; GS=General Satisfaction.

** $p<.01$

Pearson product moment correlations between core job dimensions of task identification, task significance, and skill variety of task domains; and affective outcomes of internal work motivation, growth needs satisfaction, and general satisfaction were computed for groups of secondary school athletic trainers in the study. Stepwise multiple linear regressions were also computed for these factors.

Curriculum Certified Full Time Athletic Trainers not show any significant correlations between core job dimensions for any task domain and affective outcomes. No stepwise multiple linear regressions using these factors for task domains were

produced for this group.

Curriculum Certified Teacher Athletic Trainers produced several positive significant correlations between core job dimensions of task domains and affective outcomes. This information is in Table 47.

Table 47

Significant Correlations of NATABOC, Inc. Task Domains Ratings for Task Identification, Task Significance, Skill Variety with Affective Outcomes for Curriculum Certified Teacher Athletic Trainers

Core Characteristic	IM	GNS	GS
TI- Task Domain 1.	.39*	.48**	.39*
TI-Task Domain 2.	--	.35*	--
TI-Task Domain 3.	.40*	.47**	--
TI-Task Domain 4.	--	.59**	--
TS-Task Domain 1.	--	.40*	.45**
TS-Task Domain 4.	.41*	.50**	.43*
TS-Task Domain 5.	--	.34*	--
SV-Task Domain 1.	--	.46**	.47**
SV-Task Domain 4.	--	.37*	--

Note. Dashes indicate no significant positive correlation was present. TI= Task

Identification; TS= Task Significance; SV= Skill Variety; IM=Internal Work Motivation; GNS = Growth needs Satisfaction; GS=General Satisfaction.

*p<.05. ** p<.01.

One stepwise multiple linear regression was produced for the affective outcome growth needs satisfaction as the dependent variable with task identification, skill variety of the NATABOC Inc. Task Domains as predictor variables for this group of secondary school athletic trainers. The multiple regression formulas is given in Table 48.

Table 48

Multiple Linear Regression for Skill Variety of Task Domains with Growth Needs Satisfaction for Curriculum Certified Teacher Athletic Trainers

Dependent Variable	Core Job Dimension	B	SE	β	R	R^2
Growth Needs Satisfaction					.61	.38
	SV-Task Domain 1	.29	.09	.47		
	SV-Task Domain 3	1.09	.40	.40		
	(Constant)	3.38	.41			

Note. (SV=Skill Variety)

p <.05.

Data from Curriculum Certified Athletic Trainers with Other Duties indicated that several significant positive correlations existed between core job dimensions of task domains of their jobs and affective outcomes. These are reported in Table 49.

Table 49

Significant Correlations of NATABOC, Inc. Task Domains Ratings for Task Identification, Task Significance, Skill Variety with Affective Outcomes for Curriculum Certified Athletic Trainers with Other Duties

Core Characteristic	IM	GNS	GS
TI-Task Domain 2.	.86**	--	--
TI-Task Domain 3.	.70*	--	--
TI-Task Domain 4.	.84**	--	--
TI-Task Domain 5.	.74**	--	--
TS-Task Domain 1.	.81**	--	--
TS-Task Domain 2.	.94**	--	--
TS-Task Domain 3.	.88**	--	--
TS-Task Domain 4.	.68*	--	--
TS-Task Domain 5.	.69*	--	--
SV-Task Domain 3.	--	.68**	--
SV-Task Domain 5.	--	.52**	--

Note. Dashes indicate no significant positive correlation was present. TI= Task Identification; TS= Task Significance; SV= Skill Variety; IM=Internal Work Motivation; GNS = Growth needs Satisfaction; GS=General Satisfaction.

*p<.05. ** p<.01.

Stepwise multiple linear regressions were computed for affective outcomes as dependent variables with task identification, task significance, and skill variety of the NATABOC Inc. Task Domains as predictor variables for this group. One multiple regression formula using skill variety as predictors resulted from this calculation. The multiple regression formula is given in Table 50.

Table 50

Multiple Linear Correlations for Curriculum Certified Athletic Trainers with Other Duties

Dependent Variable	Core Job Dimension	B	SE	β	R	R^2
General Satisfaction					.96	.92
	SV-Task Domain 1	-.97	.23	-.69		
	SV- Task Domain 3	1.93	.25	1.27		
	(Constant)	.08	.98			

p<.05.

Certified Clinical Athletic Trainers did not show any significant correlations between any core job dimensions for task domains and any affective outcome. No multiple linear regressions were produced.

Significant positive correlations also resulted from the data for Internship Certified Full Time Athletic Trainers. The significant correlations are given in Table 51. No multiple linear regressions were produced.

Table 51

Significant Correlations of NATABOC, Inc. Task Domains Ratings for Task Identification, Task Significance, Skill Variety with Affective Outcomes for Internship Full Time Certified Athletic Trainers

Core Characteristic	IM	GNS	GS
TI- Task Domain 1.	--	.32*	.30*
TI-Task Domain 2.	--	.35*	--
TI-Task Domain 3.	.35*	.40**	.31*
TI-Task Domain 4.	.39**	--	--
TI-Task Domain 5.	.40**	.34*	.34*
TS-Task Domain 1.	--	.37**	--
TS-Task Domain 4.	.30*	--	--
TS-Task Domain 5.	--	.32*	.31*
SV-Task Domain 1.	--	--	--
SV-Task Domain 2.	.43**	.33*	--
SV-Task Domain 3.	.46**	--	--
SV-Task Domain 4.	.39**	--	--
SV-Task Domain 5.	.40**	--	--

Note. Dashes indicate no significant positive correlation was present. TI= Task

Identification; TS= Task Significance; SV= Skill Variety; IM=Internal WorkMotivation; GNS = Growth needs Satisfaction; GS=General Satisfaction. *p<.05. ** p<.01.

Internship Certified Teacher Athletic Trainers did not show any significant correlations between core job dimensions for any task domain and affective outcomes. There were also no multiple linear regressions produced for this group.

Correlations for the Internship Certified Athletic Trainers with Other Duties between core job dimensions of task domains and affective outcomes are few. These are found on Table 52. No multiple linear regressions were produced from the data for this group.

Table 52

Significant Correlations of NATABOC, Inc. Task Domains Ratings for Task Identification and Task Significance with Affective Outcomes for Internship Certified Athletic Trainers with Other Duties

Core Characteristic	IM	GNS	GS
TI- Task Domain 1.	--	--	.63**
TS-Task Domain 1.	--	--	.69**
TS-Task Domain 2.	.56*	--	--
TS-Task Domain 3.	.50*	--	--
TS-Task Domain 4.	.77**	--	--

Note. Dashes indicate no significant positive correlation was present. TI= Task Identification; TS= Task Significance; IM=Internal Work Motivation; GNS = Growth needs Satisfaction; GS=General Satisfaction.

*p<.05. ** p<.01.

Internship Certified Clinical Athletic Trainers indicated a number of positive correlations between the core job dimensions of task identification and skill variety for task domains and affective outcomes. This information is located in Table 53. No multiple linear regressions were produced from data for this group.

Table 53

Significant Correlations of NATABOC, Inc. Task Domains Ratings for Task Identification and Skill Variety with Affective Outcomes for Internship Certified Clinical Athletic Trainers

Core Characteristic	IM	GNS	GS
TI-Task Domain 2.	.55**	.44**	--
TI-Task Domain 3.	.68**	.58**	.51
TI-Task Domain 4.	.55*	.44**	--
SV-Task Domain 2.	.67**	.42*	--
SV-Task Domain 3.	.54**	.68**	--

Note. Dashes indicate that no significant positive correlation was present. TI = Task Identification; SV= Skill Variety; IM=Internal Work Motivation; GNS = Growth needs

Satisfaction; GS=General Satisfaction.

*p<.05. ** p<.01.

Noncertified Full Time Athletic Trainers indicated only two positive correlations between the core job dimensions of task identification and skill variety for task domains and affective outcomes. Task Domain 1 showed a positive correlation of .34 of task identification with general satisfaction and Task Domain 5 showed a .32 correlation between task significance and internal motivation (p<.05).

Noncertified Teacher Athletic Trainers indicated several positive correlations between the core job dimensions of task identification and task significance for task domains and affective outcomes. These are found in Table 54.

Table 54

Significant Correlations of NATABOC, Inc. Task Domains Ratings for Task Identification and Task Significance with Affective Outcomes for Noncertified Teacher Athletic Trainers

Core Characteristic	IM	GNS	GS
TI- Task Domain 1.	.42**	--	.32*
TI-Task Domain 2.	.40**	--	--
TI-Task Domain 3.	.50**	--	--
TI-Task Domain 4.	.33*	--	--
TS-Task Domain 1.	.37**	--	--

TS-Task Domain 2.	--	--	--
TS-Task Domain 3.	.38**	--	--
TS-Task Domain 4.	.37**	--	.31*
TS-Task Domain 5.	.69*	--	.32**

Note. Dashes indicate that no significant positive correlation was present.TI= Task Identification; TS= Task Significance; IM=Internal Work Motivation; GNS = Growth needs Satisfaction; GS=General Satisfaction..

*p<.05 ** p<.01

Stepwise multiple linear regressions were computed for affective outcomes as dependent variables with task identification, task significance, and skill variety of the NATABOC Inc. Task Domains as variables for this group of secondary school athletic trainers. One multiple regression formula resulted from this calculation. The multiple regression formula is given in Table 55.

Table 55

Multiple Linear Regressions for Task Identification of Task Domains with Affective Outcomes for Noncertified Teacher Athletic Trainers

Dependent Variable	Core Job Dimension	B	SE	β	R	R^2
Internal Work Motivation					.54	.30
	TI-Task Domain 1	.17	.08	.25		
	TI-Task Domain 3	.28	.08	.39		
	(Constant)	3.40	.46			

$p<.05$.

Correlations for the Noncertified Athletic Trainers with Other Duties between core job dimensions of task identification and task significance for task domains and affective outcomes are found on Table 56. No multiple linear regression formulas resulted from this data.

Table 56

Significant Correlations of NATABOC, Inc. Task Domains Ratings for Task Identification and Task Significance with Affective Outcomes for Noncertified Athletic Trainers with Other Duties

Core Characteristic	IM	GNS	GS
TI- Task Domain 1.	.60**	--	.44*
TI-Task Domain 4.	.47*	--	--
TI-Task Domain 5.	.60**	--	--
TS-Task Domain 1.	.64**	--	--
TS-Task Domain 4.	.46*	--	--
TS-Task Domain 5.	.51*	--	--

Note. Dashes indicate that no significant positive correlation was present. TI= Task Identification; TS= Task Significance; IM=Internal Work Motivation; GNS = Growth needs Satisfaction; GS=General Satisfaction.

*$p<.05$. ** $p<.01$.

Computation of Pearson product moment correlations for the group Noncertified Clinical Athletic Trainers indicated only two significant positive correlations between the core job dimensions of task identification and task significance for task domains and affective outcomes. Task Domain 2 showed a positive correlation of .85 ($p<.01$) of task identification with general satisfaction and Task Domain 3 showed a .57 ($p<.05$) correlation between task significance and internal motivation. No multiple linear regression formulas resulted from data for this group.

Analysis of NATABOC, Inc. Task Statements

Tests for significant differences in responses for task identification, task significance, and skill variety for individual NATABOC, Inc. Task Statements were conducted to investigate Research Objective Seven. Tests of significance consisted of t-tests to determine differences between means of responses by gender and two-way ANOVAs for differences determined by the two independent variables, professional preparation and job classification.

When determining differences due to gender, a test for homogeneity of variance was conducted and the appropriate formula used to calculate each t value. Differences between genders were determined to exist for core job dimensions on some NATABOC, Inc. Task Statements.

Two-way ANOVAS were conducted with professional preparation and job classification as independent variables. If a significant difference was determined to exist for the main or simple effects, additional Tukey/Kramer post hoc tests were

conducted to determine which groups differed. Tukey/Kramer post-hoc tests were also conducted if a significant interaction was found to be present. The NATABOC, Inc. Task Statements follow and any significant difference in task identification, task significance, and skill variety due to gender or independent variables is reported.

Domain 1.- Statement 1.

"Identify physical conditions predisposing the athlete or physically active person to increased risk of injury/illness in athletic activity by following accepted pre-participation examination guidelines to ensure safe participation."

A significant difference existed for task significance between groups by gender (t=-3.23). Male athletic trainers indicated a lower level of task significance (5.59) than did female athletic trainers (6.15). No significant differences existed between genders for task identification (t=.29) and skill variety (t= .75).

There were no significant main effects or interactions in the two-way ANOVAs for task identification, task significance, and skill variety for the independent variables professional preparation and job classification. There was no significant difference between groups of secondary school athletic trainers for this task statement.

Domain 1.- Statement 2.

"Supervise conditioning programs and testing for athletes or physically active individuals using mechanical and/or other techniques in order to ensure readiness for safe participation in physical activity."

A significant difference existed for task significance for this statement between

groups by gender (t=-2.00). Male athletic trainers indicated a lower level of task significance (4.71) than did female athletic trainers (5.12). No significant differences existed between genders for task identification (t= .00) and skill variety (t=.82).

There were no significant main effects or interactions in the two-way ANOVAs for task identification, task significance, and skill variety for the independent variables professional preparation and job classification. There was no significant difference between groups of secondary school athletic trainers for this task statement.

Domain 1.- Statement 3.

"Monitor environmental conditions(e.g., temperature, humidity, lightening) of playing or practice areas by following accepted guidelines in order to make recommendations regarding safe participation."

A significant difference existed for task significance between groups by gender (t=-2.35). Male athletic trainers indicated a lower level of task significance (5.43) than did female athletic trainers (5.92). No significant differences existed between genders for task identification (t= .1.10) and skill variety (t=.49).

There were no significant main effects or interactions in the two-way ANOVAs for task identification, task significance, and skill variety for the independent variables professional preparation and job classification. There was no significant difference between groups of secondary school athletic trainers for this task statement.

Domain 1.- Statement 4

"Assess athletic apparatuses and athletic activity areas (e.g., playing surfaces,

gyms, locker and athletic training room facilities) by periodic inspection and review of maintenance records to ensure a safe environment."

No significant differences were present for any core job characteristic for this task statement between group by gender. Results of t-tests were: task identification (t= .06) ; task significance (t= 1.63); and skill variety (t= 1.13).

There were no significant main effects or interactions in the two-way ANOVAs for task identification, task significance, and skill variety for the independent variables professional preparation and job classification. There was no significant difference between groups of secondary school athletic trainers for this task statement.

Domain 1.- Statement 5

"Construct custom protective devices by fabricating and fitting with appropriate materials in order to protect specific parts of the body from injury during athletic activity."

No significant differences were present for any core job characteristic for this task statement between group by gender. Results of t-tests were for task identificatio (t= .00) ; task significance (t= -1.23); and skill variety (t= -13).

There were no significant main effects or interactions in the two-way ANOVAs for task identification, task significance, and skill variety for the independent variables professional preparation and job classification. There was no significant difference between groups of secondary school athletic trainers for this task statement.

Domain 1 - Statement 6.

"Apply specific and appropriate taping, wrapping, or prophylactic devices to the athlete or physically active individual by adhering to principles of biomechanics and injury mechanism in order to prevent injury or re-injury."

No significant differences were present for any core job characteristic for this task statement between group by gender. Results of t-tests were: task identification (t=.72) ; task significance (t= .08); and skill variety (t= -.74).

There was a significant difference between groups of secondary school athletic trainers for task identification for this task statement. Results of the two-way ANOVA are in Table 57. There was a significant main effect for the independent variable job classification (p<.01).

Table 57

Two-Way ANOVA for Task Identification of Domain 1 Statement 6

Source	df	MS	F
Main Effects	5	4.32	3.04*
Professional Preparation	2	.58	.41
Job Classification	3	6.61	4.66**
Two-Way Interactions	6	.98	.70
Explained	11	2.60	1.83
Residual	307	1.42	
Total	318	1.46	

*p<.05. **p<.01.

Tukey post-hoc tests for significant differences due to main effects of job classification indicated that athletic trainers who were classified Clinical Athletic Trainer indicated a lower degree of task identification (5.55) in their jobs for this task statement than job classifications Teacher Athletic Trainer (6.21) and Athletic Trainer with Other Duties (6.43)(p<.01). There were no significant main effects or interactions in the two-way ANOVAs for task significance and skill variety for the independent variables professional preparation and job classification.

Domain 1.- Statement 7.

"Evaluate the use and maintenance of protective devices and athletic equipment (e.g., helmets, shoulder pads, shin guards) by inspecting and assessing the equipment in order to ensure optimal protection of the athlete or physically active individual."

No significant differences were present for any core job characteristic for this task statement between group by gender. Results of t-tests were: task identification (t= .21); task significance (t= -1.92); and skill variety (t= 1.64).

In the two-way ANOVA for task identification for this task statement a significant interaction was present between independent variables of professional preparation and job classification (F=6.811, *df*=6/307, p<.05). The interaction is disordinal. Tukey/Kramer post hoc tests revealed the differences between groups of athletic trainers due to this interaction. These differences ate reported in Table 58. The mean for task identification for Internship Certified Teacher Trainer (4.27),

Noncertified Full Time Athletic Trainer (4.70), and Noncertified Teacher Trainer (3.94) were all significantly higher than Noncertified Clinical Athletic Trainers (2.55).

Table 58

Tukey/Kramer Tests for Significant Differences Between Groups for Task Identification of Task Statement 7 Due to Interaction

Contrast		Q(CV=4.62)
Internship Certified Teacher Athletic Trainer x		
	Noncertified Clinical Athletic Trainer	5.53**
Noncertified Full Time Athletic Trainer x		
	Noncertified Clinical Athletic Trainer	5.11*
Noncertified Teacher Athletic Trainer x		
	Noncertified Clinical Athletic Trainer	5.13*

$p<.05$. $p<.01$.

There were no significant main effects or interactions in the two-way ANOVAs for task significance or skill variety for the independent variables professional preparation and job classification.

Domain 1.- Statement 8.

"Educate parents, staff, coaches, athletes, etc., about the risks associated with participation and unsafe practices using direct communication in order to provide an opportunity for them to make an informed decision concerning physical activity."

No significant differences were present for any core job characteristic for this task statement between groups classified by gender. Results of t-tests were: task identification (t= 1.55) ; task significance (t= -.53); and skill variety (t= 1.16).

There were no significant main effects or interactions in the two-way ANOVAs for task identification, task significance, and skill variety for the independent variables professional preparation and job classification. There was no significant difference between groups of secondary school athletic trainers for this task statement.

Domain 2.- Statement 1.

"Obtain a history from the athlete or physically active individual or witnesses through observation and interviews in order to determine the pathology and extent of injury/illness."

No significant differences were present for any core job characteristic for this task statement between group by gender. Results of t-tests were for task identification (t= -.73) ; task significance (t=-.83); and skill variety (t= .80).

In the two-way ANOVA for task identification for this task statement a significant interaction was present between the independent variables of professional preparation and job classification (F=4.125, *df*=6/307, p<.05). The interaction is disordinal. No significant difference was found between groups of athletic trainers due to this interaction. No main effects were determined for task identification in this two-way ANOVA. There were no significant main effects or interactions in the two-way ANOVAs for task significance and skill variety for the independent variables

professional preparation and job classification.

Domain 2.- Statement 2.

"Inspect the involved area using bilateral comparison, if appropriate, in order to determine the extent of the injury/illness."

No significant differences were present for any core job characteristic for this task statement between group by gender. Results of t-tests were: task identification (t= -.25) ; task significance (t= .07); and skill variety (t= 1.57).

In the two-way ANOVA for task significance for this task statement a significant interaction between independent variables of professional preparation and job classification was present (F= 2.471, *df*=6/307, p<.05). The interaction is disordinal. No significant difference was found between groups of athletic trainers. No main effects were determined to exist in the two way ANOVA for task significance. There were no significant main effects or interactions in the two-way ANOVAs for task identification and skill variety for the independent variables professional preparation and job classification.

Domain 2.- Statement 3.

"Palpate the involved area using knowledge of human anatomy in order to determine the extent of the injury/illness."

No significant differences were present for any core job characteristic for this task statement between group by gender. Results of t-tests were: task identification (t= -.61) ; task significance (t= .00); and skill variety (t= .83).

There were no significant main effects or interactions in the two-way ANOVA for task identification, task significance, and skill variety for the independent variables professional preparation and job classification. There was no significant difference between groups of secondary school athletic trainers for this task statement.

Domain 2.- Statement 4.

"Perform specific tests on the involved area drawing on knowledge of anatomy, physiology, biomechanics, etc, in order to determine the extent of the injury/illness."

No significant differences were present for any core job characteristic for this task statement between group by gender. Results of t-tests were: task identification (t=-.67) ; task significance (t= -1.38); and skill variety (t= 1.15).

There were no significant main effects or interactions present in the two-way ANOVAs for task identification, task significance, and skill variety for the independent variables professional preparation and job classification. There was no significant difference between groups of secondary school athletic trainers for this task statement.

Domain 2.- Statement 5.

"Determine the appropriate course of action by interpreting the signs and symptoms of the injury/illness in order to provide the necessary immediate care."

No significant difference between genders was present for task identification (t= -.17) and task significance (t= -.92). A significance difference between genders was present for skill variety (t= 2.00) with male athletic trainers rating this task statement higher (5.43) than female athletic trainers (4.98).

There were no significant main effects or interactions in the two-way ANOVAs for task identification, task significance, and skill variety for the independent variables professional preparation and job classification. There was no significant difference between groups of secondary school athletic trainers for this task statement.

Domain 2.- Statement. 6.

"Administer first aid using standard, approved techniques and activate the emergency plan if appropriate, in order to provide necessary medical care."

No significant differences were present for any core job characteristic for this task statement between group by gender. Results of t-tests were: task identification (t=.28) ; task significance (t= -1.19); and skill variety (t= .96).

There was a significant main effect for independent variable job classification on task identification for this task statement. The summary of the two-way ANOVA is in Table 59. Tukey/Kramer post-hoc tests for significant differences between groups for Table 59

Two-Way ANOVA for Task Identification of Domain 2 Statement 6

Source	df	MS	F
Main Effects	5	2.20	2.22*
Professional Preparation	2	1.40	.24
Job Classification	3	2.50	2.53*
Two-Way Interactions	6	.95	.45
Explained	11	1.67	.07

Residual	307	.99
Total	318	1.01

*p<.05. **p<.01.

the main effect job classification indicated that athletic trainers who are classified Teacher Athletic Trainer(6.42) indicated a higher degree of task identification (Q= 4.34) in their jobs for this task statement than Clinical Athletic Trainer (5.89)(p<.01). There were no significant main effects or interactions present in the two-way ANOVA for task significance and skill variety between groups for the independent variables professional preparation and job classification.

Domain 2.- Statement 7.

"Select and apply emergency equipment following standard, approved techniques in order to facilitate the athlete or physically active individual's safe, proper, and efficient transportation."

No significant differences were present for any core job characteristic for this task statement between group by gender. Results of t-tests were: task identification (t= .06) ; task significance (t= -1.63); and skill variety (t= 1.37).

The two-way ANOVA for task identification revealed a significant main effect of job classification to be present. Table 60 shows the two-way ANOVA for task identification for this statement.

Tukey/Kramer post-hoc tests for significant differences between groups for the main effect of job classification indicated that athletic trainers who were classified

Clinical Athletic Trainer (5.20) indicated a lower degree of task identification in their jobs for this task statement than Full Time Athletic Trainers (5.92) Teacher Athletic Trainers (5.90), and Athletic Trainers with Other Duties (6.10)(p<.05).

Table 60

Two-Way ANOVA for Task Identification for Domain 2 Task 7

Source	df	MS	F
Main Effects	5	4.05	.04*
Professional Preparation	2	0.20	.89
Job Classification	3	6.09	3.53*
Two-Way Interactions	6	0.17	1.04
Explained	11	2.07	1.20
Residual	307	1.72	
Total	318	1.73	

*p<.05.

There were no significant main effects or interaction present in the two-way ANOVAs for task significance for this task statement. In the two-way ANOVA for skill variety there were no significant main effects, but there was a significant disordinal interaction present (F= 2.242, df=6/307, p<.05). No significant differences resulted from this interaction.

Domain 2.- Statement 8.

"Refer the athlete or physically active individual to the appropriate medical

personnel and/or facility using standard procedures to continue proper medical care."

No significant difference between genders was present for task identification (t= .13) or task significance (t= .40). A significance difference between genders was present for skill variety (t= 2.08) with male athletic trainers rating this task statement higher (4.47) than female athletic trainers (3.95).

There were no significant main effects or interactions in the two-way ANOVAs for task identification, task significance, and skill variety for the independent variables professional preparation and job classification. There was no significant difference between groups of secondary school athletic trainers for this task statement.

Domain 3.- Statement 1.

"Identify injury/illness status by using standard techniques for evaluation and reassessment in order to determine appropriate rehabilitation programs."

No significant differences were present for any core job characteristic for this task statement between groups by gender. Results of t-tests were: task identification (t=-.66) ; task significance (t= -.80); and skill variety (t= .89).

The two-way ANOVA for task identification for this task statement revealed no main effects to be present but that a significant disordinal interaction existed between independent variables (F=2.88, df= 6/307, p<.01). Tukey/Kramer post hoc tests indicated a significant difference to exist between three individual groups of athletic trainers. Internship Certified Teacher Athletic Trainers indicated a higher level of task identification for this task statement in their job (5.97) than did Noncertified Clinical

Athletic Trainers (5.00)($p<.05$). Noncertified Full Time Athletic Trainers also showed a higher level of task identification for this task statement (6.18) than did Noncertified Clinical Athletic Trainers ($p<.01$).

The two-way ANOVA for task significance revealed that there were no significant main effects or interaction present for professional preparation and job classification. The two-way ANOVA for skill variety found no main effects but did show a significant interaction between independent variables ($F=2.26$, $df= 6/318$, $p<.05$). This interaction is disordinal and does not result in any differences between groups.

Domain 3.- Statement 2.

"Construct rehabilitation/reconditioning programs for the injured/ill athlete or physically active individual using standard procedures for therapeutic exercise and modalities in order to restore functional status."

No significant difference between genders was present for task identification ($t= -1.34$) and skill variety ($t= .51$). A significance difference between genders was present for task significance ($t= 2.00$) with male athletic trainers rating this task statement lower (6.08) than female athletic trainers (6.39).

There were no significant main effects or interactions evident in the two-way ANOVAs for task identification, task significance, and skill variety for the independent variables professional preparation and job classification. There was no significant difference between groups of secondary school athletic trainers for this task statement.

Domain 3.- Statement 3.

"Select appropriate rehabilitation equipment, manual techniques, and therapeutic modalities by evaluating the theory and use as defined by accepted standards of care in order to enhance recovery."

No significant difference between genders was present for skill variety (t= -.30). A significance difference between genders was present for task identification (t= -2.82) with male athletic trainers rating this task statement lower (5.56) than female athletic trainers (5.97). A significant difference was also present for task significance (t=-3.18) for this task with male athletic trainers score being lower (5.87) than their female counterparts (6.27).

The two-way ANOVA for task identification found no main effects were present but that there was a significant interaction present between independent variables (F=2.43, df= 6/307, p<.05). This interaction is disordinal and did not result in any differences between groups. There were no significant main effects or interactions present in the two-way ANOVAs for task significance and skill variety for the independent variables professional preparation and job classification.

Domain 3.- Statement 4.

"Administer rehabilitation techniques and procedures to the injured/ill athlete or physically active individual by applying accepted standards of care and protocols in order to enhance recovery."

No significant difference between genders was present for skill variety (t= .26).

A significance difference between genders was present for task identification (t= -2.62) with male athletic trainers rating this task statement lower (5.76) than female athletic trainers (6.14). A significant difference was also present for task significance (t=-2.37) for this task with male athletic trainers score being lower (6.06) than their female counterparts (6.36).

There were no significant main effects or interactions present in the two-way ANOVAs for task identification, task significance, and skill variety for the independent variables professional preparation and job classification. There was no significant difference between groups of secondary school athletic trainers for this task statement.

Domain 3.- Statement 5.

"Evaluate the readiness of the injured/ill athlete or physically active individual by assessing functional status in order to ensure a safe return to participation."

No significant difference between genders was present for task identification (t= -.61). A significance difference between genders was present for task significance (t= -2.11) with male athletic trainers rating this task statement lower (6.30) than female athletic trainers (6.53). A significant difference was also present for skill variety (t=2.46) for this task with male athletic trainers score being higher (5.34) than their female counterparts (4.83).

There were no significant main effects present in the two-way ANOVA for task identification for the independent variables professional preparation and job classification. Significant interaction between the independent variables did occur for

task identification for this task statement (F= 2.70, *df* = 6/307, p<.05). The interaction was disordinal and resulted in some differences between groups of athletic trainers. Significant differences as determined by Tukey/Kramer post hoc tests are found in Table 61.

Table 61

Tukey/Kramer Tests for Differences Between Groups for Task Identification of Task Domain 3 Statement 5 Due to Interaction

Contrast		Q(CV=4.62)
Internship Certified Teacher Athletic Trainer x		
	Noncertified Clinical Athletic Trainer	6.90**
Internship Certified Athletic Trainer with other Duties x		
	Noncertified Clinical Athletic Trainer	4.90*
Internship Certified Clinical Athletic Trainer x		
	Noncertified Clinical Athletic Trainer	4.71*
Noncertified Full Time Athletic Trainer x		
	Noncertified Clinical Athletic Trainer	4.76*
Noncertified Teacher Athletic Trainer x		
	Noncertified Clinical Athletic Trainer	5.64**

*p<.05.** p<.01.

The mean for task identification for this task statement for Noncertified Clinical Athletic Trainers (4.73)was significantly lower than that of Internship Certified

Athletic Trainers (6.19), Internship Certified Athletic Trainers with Other Duties (6.21), Internship Certified Clinical Athletic Trainers (6.05), Noncertified Full Time Athletic Trainers (5.95), and Noncertified Teacher Athletic Trainers (6.03). There were no significant main effects or interactions in the two-way ANOVAs for task significance or skill variety for the independent variables professional preparation and job classification.

Domain 3.- Statement 6.

"Educate parents, staff, coaches, athletes, physically active individuals, etc., about the rehabilitation process using direct communication in order to enhance rehabilitation."

No significant differences were present for any core job characteristic for this task statement between group by gender. Results of t-tests were: task identification (t= -1.02); task significance (t= -1.83); and skill variety (t= .61).

There were no significant main effects or interactions in the two-way ANOVAs for task identification, task significance, and skill variety for the independent variables professional preparation and job classification. There was no significant difference between groups of secondary school athletic trainers for this task statement.

Domain 4.- Statement 1.

"Maintain the health care records of athletes or physically active individuals using a recognized, comprehensive recording process in order to document procedures/services rendered by health care professionals."

No significant differences were present for any core job characteristic for this task statement between group by gender. Results of t-tests were: task identification (t= -.76); task significance (t= -1.73); and skill variety (t= .92).

There were significant main effects, simple effects, and disordinal interactions present in the two-way ANOVA for this statement for task identification. Results from the two-way ANOVA for task identification is found in Table 62.

Table 62

Two-Way ANOVA for Task Identification for Domain 4 Statement 1

Source	df	MS	F
Main Effects	5	8.90	4.28**
Professional Preparation	2	7.55	3.62*
Job Classification	3	10.05	4.83**
Two-Way Interactions	6	7.89	3.79**
Explained	11	7.94	3.82**
Residual	307	2.08	
Total	318	2.28	

*p<.05. **p<.01.

Tukey/Kramer post hoc tests for main effect of professional preparation are in Table 63. The mean of task identification for this statement for Curriculum Certified Athletic Trainers (5.97) was significantly higher for task identification for this task statement than that of Internship Certified Athletic Trainers (5.41).

Table 63

Tukey/Kramer Tests for Main Effect of Professional Preparation for Task Identification of Task Domain 4 Statement 1

Contrast	Q(CV= 3.31)
Curriculum Certified AthleticTrainer x Internship Certified AthleticTrainer	3.50*
Curriculum Certified Athletic Trainer x Noncertified Athletic Trainer	1.54
Internship Certified Athletic Trainer x Noncertified Athletic Trainer	-2.38

* p<.01.

Tukey/Kramer post hoc tests for the main effect of job classification are in Table 64. The mean of Teacher Athletic Trainers (5.93) is significantly higher for task identification for this task statement than that of Clinical Athletic Trainers (5.00).

Table 64

Tukey/Kramer Tests of Main Effect of Job Classification for Task Identification of Task Domain 4 Statement 1

Contrast	Q(CV=3.63)
Full Time Athletic Trainer x Teacher Athletic Trainer	-2.17
Full Time Athletic Trainer x	

	Athletic Trainer with Other Duties	-0.35
Full Time Athletic Trainer x		
	Clinical Athletic Trainer	3.36
Teacher Athletic Trainer x		
	Athletic Trainer with Other Duties	1.21
Teacher Athletic Trainer x		
	Clinical Athletic Trainer	5.07**
Athletic Trainer with Other Duties x		
	Clinical Athletic Trainer	3.05

*p<.05.

Tukey/Kramer post hoc tests for simple effects revealed that Noncertified Clinical Athletic Trainers rated this task lower in task identification than did several other groups. Their mean score (3.64) was lower than Curriculum Certified Full Time Athletic Trainers (5.76), Curriculum Certified Teacher Athletic Trainers (6.10), Internship Certified Teacher Athletic Trainers (6.19), Internship Certified Athletic Trainers with Other Duties (6.21), Noncertified Full Time Athletic Trainers (6.13), and Noncertified Teacher Athletic Trainers (5.91). Table 65 gives the significant contrasts between these groups.

Table 65

Tukey/Kramer Tests for Differences between Groups for Task Identification of Task Domain 4 Statement 1 Due to Simple Effects and Interaction

Contrast		Q(CV=4.62)
Curriculum Certified Full Time Athletic Trainer x		
	Noncertified Clinical Athletic Trainer	4.70*
Curriculum Certified Teacher Athletic Trainer x		
	Noncertified Clinical Athletic Trainer	6.64**
Internship Certified Teacher Athletic Trainer x		
	Noncertified Clinical Athletic Trainer	7.34**
Internship Certified Athletic Trainer with other Duties x		
	Noncertified Clinical Athletic Trainer	5.22*
Noncertified Full Time Athletic Trainer x		
	Noncertified Clinical Athletic Trainer	6.90**
Noncertified Teacher Athletic Trainer x		
	Noncertified Clinical Athletic Trainer	5.42**

*$p<.05$. **$p<.01$.

There were no significant main effects or interactions in the two-way ANOVAs for task significance and skill variety for the independent variables professional preparation and job classification.

Domain 4.- Statement 2.

"Comply with safety and sanitation standards by maintaining facilities and equipment in order to ensure a safe environment."

No significant differences were present for any core job characteristic for this

task statement between group by gender. Results of t-tests were: task identification (t= -1.42) ; task significance (t= -1.01); and skill variety (t= 1.00).

There were no significant main effects in the two-way ANOVA for task identification for the independent variables professional preparation and job classification. A significant disordinal interaction was present for task identification for this task statement (F=2.17, *df*=6/307, p<.05). Tukey/Kramer post hoc tests showed that the means for Internship Certified Teacher Athletic Trainers (5.72) and Noncertified Full Time Athletic Trainers (5.75) were significantly higher than that of Noncertified Clinical Athletic Trainers (4.00). Table 66 gives significant contrasts in Tukey/Kramer tests.

Table 66

Tukey/Kramer Tests for Differences Between Groups for Task Identification of Task Domain 4 Statement 2 Due to Interaction

Contrast	Q(CV=4.62)
Internship Certified Teacher Athletic Trainer x Noncertified Clinical Athletic Trainer	5.74**
Noncertified Full Time Athletic Trainer x Noncertified Clinical Athletic Trainer	4.82*

*p<.05. **p<.01.

There were no significant main effects or interactions in the two-way ANOVAs for task significance and skill variety for the independent variables professional

preparation and job classification. There was no significant difference in task significance or skill variety between groups of secondary school athletic trainers for this task statement.

Domain 4.- Statement 3.

"Manage daily operations by implementing and maintaining standards for all personnel in order to ensure quality of service."

No significant difference between genders was present for task identification (t= -.11) and task significance (t= -.41). A significant difference was present for skill variety (t=2.01) for this task with male athletic trainers score being higher (4.05) than their female counterparts (3.53).

There were significant main effect of job classification in a two-way ANOVA for this statement for task identification. Data from this two-way ANOVA is presented in Table 67.

Table 67

Two-Way ANOVA for Task Identification of Domain 4 Task 3

Source	df	MS	F
Main Effects	5	7.87	3.08**
Professional Preparation	2	5.39	2.11
Job Classification	3	9.75	3.82**
Two-Way Interactions	6	2.93	.37
Explained	11	4.74	1.86*

Residual	307	2.55
Total	318	2.63

*p<.05. **p<.01.

Tukey/Kramer post hoc tests for main effect of job classification are in Table 68. The means of Teacher Athletic Trainers (5.30) and Athletic Trainers with Other Duties (5.35) are significantly higher for task identification for this task statement than the mean of Clinical Athletic Trainers (4.43).

Table 68

Tukey/Kramer Tests for Main Effect of Job Classification for Task Identification of Task

Domain 4, Statement 3

Contrast		Q(CV=3.63)
Full Time Athletic Trainer x	Teacher Athletic Trainer	-1.47
Full Time Athletic Trainer x	Athletic Trainer with Other Duties	-1.26
Full Time Athletic Trainer x	Clinical Athletic Trainer	3.22
Teacher Athletic Trainer x	Athletic Trainer with Other Duties	-0.23
Teacher Athletic Trainer x		

	Clinical Athletic Trainer	4.41*
Athletic Trainer with Other Duties x		
	Clinical Athletic Trainer	3.71*

*$p<.05$.

There were no significant main effects or interactions in the two-way ANOVAs for task significance and skill variety for the independent variables professional preparation and job classification. There was no significant difference in task significance or skill variety between groups of secondary school athletic trainers for this task statement.

Domain 4.- Statement 4.

"Establish written guidelines for injury/illness management by standardizing operating procedures in order to provide a consistent quality of care."

No significant differences were present for any core job characteristic for this task statement between group by gender. Results of t-tests were task identification ($t= -.02$); task significance ($t= -1.46$); and skill variety ($t= 1.27$).

There were no significant main effects in the two-way ANOVA for task identification. A disordinal interaction was present for task identification ($F= 2.35$, $df= 6/307$, $p<.05$). Tukey/Kramer post hoc tests revealed no significant differences between groups for this interaction however.

There were no significant main effects or interactions in the two-way ANOVAs for task significance and skill variety for the independent variables professional

preparation and job classification. There was no significant difference in task significance or skill variety between groups of secondary school athletic trainers for this task statement.

Domain 4.- Statement 5.

"Obtain equipment and supplies by evaluating reliable product information in order to provide athletic training services to athletes and physically active individuals."

No significant differences were present for any core job characteristic for this task statement between group by gender. Results of t-tests were: task identification (t= .72); task significance (t= .01); and skill variety (t= 1.01).

For task identification, there was a significant main effect of job classification present in the two-way ANOVA for this statement. Data from this two-way ANOVA is presented in Table 69.

Table 69

Two-Way ANOVA for Task Identification of Domain 4 Statement 5

Source	df	MS	F
Main Effects	5	18.96	7.80**
Professional Preparation	2	.97	.34
Job Classification	3	31.55	12.98**
Two-Way Interactions	6	1.16	.48
Explained	11	9.76	4.01**
Residual	307	2.43	

Total	318	2.69

*p<.05. ** p<.01.

Tukey/Kramer post hoc tests for main effect of job classification are in Table 70. The means of Full Time Athletic Trainers (5.36), Teacher Athletic Trainers (5.53), and Athletic Trainers with Other Duties (5.43) are significantly higher for task identification for this task statement than the mean of Clinical Athletic Trainers (3.84).

Table 70

Tukey/Kramer Tests for Main Effect of Job Classification for Task Identification of Task Domain 4 Statement 5

Contrast		Q(CV=3.63)
Full Time Athletic Trainer x	Teacher Athletic Trainer	-1.18
Full Time Athletic Trainer x	Athletic Trainer with Other Duties	-0.33
Full Time Athletic Trainer x	Clinical Athletic Trainer	7.75**
Teacher Athletic Trainer x	Athletic Trainer with Other Duties	0.52
Teacher Athletic Trainer x	Clinical Athletic Trainer	8.84**
Athletic Trainer with Other Duties x		

	Clinical Athletic Trainer	6.64**

*p<.05.

There were no significant main effects or interactions in the two-way ANOVAs for task significance and skill variety for the independent variables professional preparation and job classification. There was no significant difference in task significance or skill variety between groups of secondary school athletic trainers for this task statement.

Domain 4.- Statement 6.

"Create a plan which includes emergency, management, and referral systems specific to the setting by involving appropriate health care professionals in order to facilitate proper care."

No significant differences were present for any core job characteristic for this task statement between group by gender. Results of t-tests were: task identification (t= .32) ; task significance (t= -.78); and skill variety (t= .80).

There were no significant main effects or interactions in the two-way ANOVAs for task identification, task significance, and skill variety for the independent variables professional preparation and job classification. There was no significant difference in task identification, task significance or skill variety between groups of secondary school athletic trainers for this task statement.

Domain 4.- Statement 7.

"Reduce the risk of exposure to infectious agents by following universal

precautions in order to prevent the transmission of infectious diseases."

No significant difference between genders was present for task identification (t= -.90) and skill variety (t= .93) A significance difference between genders was present for task significance (t= -2.92) with male athletic trainers rating this task statement lower (6.18) than female athletic trainers (6.53).

There were no significant main effects or interactions in the two-way ANOVAs for task identification, task significance, and skill variety for the independent variables professional preparation and job classification. There was no significant difference in task identification, task significance, or skill variety between groups of secondary school athletic trainers for this task statement.

Domain 5.- Statement 1.

Maintain knowledge of contemporary sports medicine issues by participating in continuing education activities in order to provide an appropriate standard of care."

No significant differences were present for any core job characteristic for this task statement between group by gender. Results of t-tests were: task identification (t= .12); task significance (t= -.16); and skill variety (t= -.99).

There were no significant main effects or interactions present in the two-way ANOVAs for task identification and task significance for the independent variables professional preparation and job classification. There was no significant difference in task significance and task significance between groups of secondary school athletic trainers for this task statement.

There was a significant main effect of professional preparation on the skill variety of jobs held by secondary school athletic trainers. The results of the two-way ANOVA are found in Table 71.

Table 71

Two-Way ANOVA for Skill Variety of Domain 5 Statement 1

Source	df	MS	F
Main Effects	5	5.71	2.68*
Professional Preparation	2	12.26	5.75**
Job Classification	3	1.42	.66
Two-Way Interactions	6	4.38	2.05
Explained	11	4.52	2.12*
Residual	307	2.13	
Total	318	2.22	

*p<.05. ** p<.01.

Results of Tukey/Kramer post hoc tests for main effect of professional preparation are in Table 72. The mean of Curriculum Certified Athletic Trainers (5.38) is significantly higher than that of Noncertified Athletic Trainers.

Table 72

Tukey/Kramer Tests for Main Effect of Professional Preparation for Task Identification of Task Domain 5 Statement 1

Contrast	Q(CV=3.31)

Curriculum Certified Athletic Trainer x		
	Internship Certified Athletic Trainer	3.11
Curriculum Certified Athletic Trainer x		
	Noncertified Athletic Trainer	3.58*
Internship Certified Athletic Trainer x		
	Noncertified Athletic Trainer	0.41

*$p<.05$.

Domain 5.- Statement 2.

"Develop interpersonal communication skills by interacting with others(e.g., parents, coaches, colleagues, athletes, physically active individuals) in order to enhance proficiency and professionalism."

No significant differences were present for any core job characteristic for this task statement between group by gender. Results of t-tests were: task identification (t= -.55); task significance (t= -.99); and skill variety (t= -.16).

There were no significant main effects or interactions present in the two-way ANOVAs for task identification, task significance, and skill variety for the independent variables professional preparation and job classification. There was no significant difference in task identification, task significance, or skill variety between groups of secondary school athletic trainers for this task statement.

Domain 5.- Statement 3.

"Adhere to ethical and legal parameters by following established guidelines

which define the proper role of the certified athletic trainer in order to protect athletes, physically active individuals, and the public."

No significant differences were present for any core job characteristic for this task statement between group by gender. Results of t-tests were: task identification (t= -.88); task significance (t=-1.44); and skill variety (t=.97).

There were no significant main effects or interactions present in the two-way ANOVAs for task identification, task significance, and skill variety for the independent variables professional preparation and job classification. There was no significant difference in task identification, task significance, or skill variety between groups of secondary school athletic trainers for this task statement.

Domain 5.- Statement 4.

"Assimilate appropriate sports medicine research by using available resources in order to enhance professional growth."

No significant differences were present for any core job characteristic for this task statement between group by gender. Results of t-tests were: task identification (t=.66) ; task significance (t=.93); and skill variety (t= .96).

There were no significant main effects or interactions present in the two-way ANOVAs for task identification, task significance, and skill variety for the independent variables professional preparation and job classification. There was no significant difference in task identification, task significance, or skill variety between groups of secondary school athletic trainers for this task statement.

Domain 5.- Statement 5.

"Educate the public by serving as a resource in order to enhance awareness of the roles and responsibilities of the certified athletic trainer."

No significant differences were present for any core job characteristic for this task statement between group by gender. Results of t-tests were: task identification (t= 1.35); task significance (t=.48); and skill variety (t=.86).

There were no significant main effects or interactions detected by the two-way ANOVAs for task identification, task significance, and skill variety for the independent variables professional preparation and job classification. There was no significant difference in task identification, task significance, or skill variety between groups of secondary school athletic trainers for this task statement.

CHAPTER V

CONCLUSIONS AND RECOMMENDATIONS

The purpose of this study was to examine person-situation relations which affect secondary school athletic training positions in Texas using two methods. First, two-way ANOVAs were used to determine differences in groups of secondary school athletic trainers due to person-situation relations. Second, a correlational method was used to examine relationships between job characteristics as perceived by groups of secondary school athletic trainers defined by the person-situation relations. Job characteristics which were considered in this study were: core job dimensions of task identification, task significance, skill variety, autonomy and feedback; and affective outcomes of internal work motivation, general job satisfaction, and growth need satisfaction. The practical application of the model used in this study is to redesign secondary school athletic training positions for improved effectiveness and performance.

Modified Survey

The rate of return of surveys from the sample population provided a sufficient number of subjects to represent planned levels of both independent variables with the exception of Part-Time Athletic Trainer. Given the return of only six surveys from this group, this classification of secondary athletic trainer position is not widely found in

Texas. The lack of Part-Time Athletic Trainers indicates that when providing for athletic health care, school districts in Texas choose primarily full-time employment of athletic trainers in the schools.

There were unequal numbers of subjects in each group of secondary school athletic trainer in this study. The sample population did not provide enough subjects (n=30) to ensure detection of low positive correlations for all groups, although in many cases, significant correlations were detected.

Female athletic trainers were not represented in every classification of person-situation relationship in this study. The percentage of female athletic trainers in the sample (18%) was lower than the 40% of all NATA members who are women (National Athletic Trainers Association, 1996a). Female athletic trainers are not as well represented at the secondary school level in Texas. These higher scores agreed with Cleave's findings with female athletic administrators (Cleave, 1993).

Male and female secondary school athletic trainers also showed different relationships between the core job dimensions and affective outcomes. Male athletic trainers followed the pattern of the total sample for both correlations and multiple linear regressions. Female athletic trainers did not follow the same pattern. The five core job dimensions failed to show a significant positive relationship with affective outcomes for female athletic trainers. Female athletic trainers also demonstrated higher task identification scores on some NATABOC, Inc. Task Statements. Female athletic trainers in this study were the only group which indicated a higher affective outcome, internal work motivation, in their jobs although its correlations to core job dimensions

other than autonomy were not significant. Only one multiple linear regression resulted from the data for female athletic trainers, that of general satisfaction. The linkage between job dimensions and affective outcomes for female secondary school athletic trainers is weak in this sample. Since 1990, over one-half of the athletic trainers who have become certified by the NATABOC, Inc. are female (NATA, 1996). If more female athletic trainers take jobs at the secondary school level in Texas, their increased internal work motivation may affect the overall person-situation relations examined in this study.

Internal consistencies (Chronbach's alpha) for the five core job dimensions and internal work motivation on the modified JDS all fell within or above the ranges of internal consistency from other studies (Fried & Ferris, 1987). The internal consistency of the modified portions of the JDS were all higher (.95-.96). Increasing the number of items on the modified survey and adding specificity to the role of the athletic trainer for these dimensions appeared to increase their reliablity.

Internal consistency for the affective outcomes of growth needs satisfaction and general satisfaction although within range of other studies were low, prompting caution in determining results relating to these variables (Cleave, 1993, Fried & Ferris, 1987). Emphasis on these two affective outcomes is suspect in any case as the model must move from satisfaction to motivation for performance (Kelly, 1992). Re-definition of items or addition of more scale items should be investigated.

Research Objectives

Results indicated the following conclusions regarding the research objectives of this study. Of the seven research objectives, three had their null hypotheses rejected.

Research Objective One

What is the relationship between level of professional preparation and affective outcomes of internal work motivation, general job satisfaction, and growth need satisfaction in secondary school athletic trainer positions in Texas as determined by the modified JDS?

The null hypothesis is retained. Secondary school athletic trainers in Texas indicated that there was no significant difference in the affective outcomes of internal work motivation, general job satisfaction, and growth need satisfaction of their jobs related to the level of their professional preparation. This finding disagrees with the basic model of the JCM as proposed in 1980 by Hackman and Oldham and contrasts with later analysis of studies of the JCM (Fried & Ferris, 1986). Although the passing rate of candidates who prepare for certification as athletic trainers through NATABOC, Inc. Approved Curriculum Program is higher than that of those preparing through the internship route, this increased level of preparation does not seem to relate to increased affective outcomes of the model. Texas state licensure requirements may provide similar professional preparation to those of the NATABOC, Inc. requirements for certification to not affect the model.

Research Objective Two

What is the relationship between job classification of secondary school athletic

trainer positions in Texas and affective outcomes of internal work motivation, growth needs satisfaction, and general job satisfaction as determined by the modified JDS?

The null hypothesis is retained. Secondary school athletic trainers in Texas indicated that there was no significant difference in the affective outcomes of internal work motivation, general job satisfaction, and growth need satisfaction of their jobs related to the classification of their position. Regardless of presence of any problems reported in time scheduling, additional responsibilities, or ambiguity of authority in their job classification (Stopka & Kaiser, 1988), secondary school athletic trainers have similar levels of affective outcomes. Part time/volunteer athletic trainers were not a part of the study, therefore no conclusions can be drawn regarding this job classification.

Research Objective Three

What are the relationships between core job dimensions of task identification, task significance, skill variety, autonomy and feedback; and affective outcomes of internal work motivation, general job satisfaction, and growth need satisfaction in secondary school athletic trainer positions in Texas as determined by the modified JDS?

The null hypothesis of no significant positive correlations was rejected. Significant positive relationships did exist in patterns predicted by both Hackman and Oldham and meta-analysis (Hackman & Oldham, 1975,1976, 1980; Fried & Ferris, 1987). Secondary school athletic trainers provided the five-factor solution that the model predicts for management and staff who are well educated (Fried & Ferris, 1986). In the total sample of secondary school athletic trainers, the correlations between task

identification and affective outcomes were higher and the correlations between core job dimensions of task significance, and skill variety and affective outcomes were lower than other JCM correlational studies (Fried & Ferris, 1987). Not all groups of athletic trainers within the sample showed this relationship however. Secondary school athletic trainers previously indicated that importance of their work, enhanced role in decision making, independence, feedback from the job, and challenge were not strongly linked to their motivation. These results came in small non-correlational studies (Capel, 1990;Buxton, Lankford, and Geick, 1992a). The high ranking of the role of decision making and independence, both similar to autonomy, and feedback from the job are supported in this study which utilized more stringent, parametric statistics. The curvilinear relationships between core job dimensions and affective outcomes as reported by Champoux (1992) were not apparent in this sample of secondary school athletic trainers.

Stepwise multiple linear regressions between core job dimensions and affective outcomes exclude task significance and skill variety from the multiple regression formulas. The formula for growth needs satisfaction failed to indicate a significant positive relationship. Task identification, autonomy, and feedback are included in the formula for internal work motivation. Autonomy and feedback are the only dimensions included for general satisfaction. This formula provided prediction of the greatest amount of variance of any affective outcome. This agrees with a conclusion of the study by Kelly where job factors in the model of work redesign were seen to satisfy but not motivate employees to improved work (Kelly, 1992).

Research Objective Four

What differences exist between groups of secondary school athletic trainers in Texas in the relationships between core job dimensions and affective outcomes as determined by the modified JDS?

The null hypothesis is rejected. Although some groups showed negative or non-significant correlations in some relationships, most groups of secondary school athletic trainers demonstrated positive correlations between core job dimensions and affective outcomes. The JCM is based upon the linkage between core job dimensions and affective outcomes in the re-design of jobs. This study shows that redesign of some facets of the job of a secondary school athletic trainer within the model may prove more useful than others. This application of the modified JDS proved its worth in the first step of the re-design of jobs, job factor analysis (Hackman and Oldham, 1980). Previously, the JCM was unable to discriminate between jobs in the same general classification (Charters, 1984). In the present study the model was able to discriminate between different classifications of athletic training jobs through use of the modified JDS.

Curriculum Certified Full Time Athletic Trainers, Curriculum Certified Clinical Athletic Trainers, and Noncertified Clinical Athletic Trainers all showed at least one significant negative correlation between a job dimension and affective outcome. These groups also did not produce any significant multiple linear regressions for affective outcomes. The model of relationships between job dimensions and affective outcomes is not exhibited in persons in these athletic training position and redesign of these

positions under the JCM may prove fruitless.

The secondary school athletic training position in this sample which demonstrated a person-situation relationship having the strongest relationship between core job dimensions and affective outcomes for internal work motivation is that of Internship Certified Clinical Athletic Trainers (R=.71). The strongest positive link for growth needs satisfaction in this sample was demonstrated by Curriculum Certified Teacher Athletic Trainers (R=.71). The strongest link for general satisfaction in this sample was found in jobs classified as Curriculum Certified Athletic Trainer with Other Duties (R=.98). In both significant positive Pearson product moment correlations and multiple linear regressions which resulted from the data, autonomy and feedback proved to be the core job dimensions demonstrating the strongest relationship to affective outcomes in secondary school athletic trainer positions. Increasing level of specific core job dimensions to redesign work would be applicable in these positions.

Research Objective Five

What are differences in task identification, task significance, and skill variety for NATABOC, Inc.Task Domains in secondary school athletic training positions in Texas?

The null hypothesis of no significant differences between groups of athletic trainers is rejected. Not all groups of secondary school athletic trainers rated the domains the same. There were significant differences due to gender and the independent variables of professional preparation for at least one Task Domain. Male secondary school athletic trainers rated Task Domains One and Three lower in task

significance than did their female counterparts.

Clinical Athletic Trainers ranked Task Domain Four lower than did other job classifications of secondary school athletic trainers. This follows the proposed job description for this classification of athletic trainer which does not include tasks in health care administration (Stropka & Kaiser, 1988). It also demonstrates the increased level of discrimination in the modified survey, unlike previous unsuccessful modifications in education (Charters, 1984).

The results of this study show a similar pattern as that of the NATABOC, Inc. 1995 Role Delineation in rating of task identification, and task significance. All three dimensions of the role delineation rated Domain Two the highest (NATABOC, Inc. 1995). Secondary school athletic trainers in this study also ranked this domain the highest in task identification and task significance in their jobs. This underlines the importance of this domain for athletic trainers in all settings. The role delineation rated the domains by the percentage of time spent, a measure quite dissimilar from that of the present study, therefore no comparisons can be made. The implication of these pattern for improvement of athletic trainer preparation is that the 1995 NATABOC, Inc. Role Delineation applicability to the secondary setting is additionally supported by the JCM.

Research Objective Six

What is the relationship between core job dimensions of task identification, task significance, and skill variety of NATABOC, Inc. Task Domains and affective outcomes of internal work motivation, growth needs satisfaction, and general job satisfaction in athletic training positions in Texas?

The null hypothesis of no significant positive correlations is retained. For the total sample of secondary school athletic trainers there were no significant correlations exceeding .30 between core job dimensions and affective outcomes. Likewise, no significant multiple linear regressions resulted from the data either. Some groups of athletic trainers did show significant positive correlations and multiple linear regressions, but no pattern of positive relationships between core job dimensions of task identification, task significance, and skill variety of any NATABOC, Inc. Task Domain and affective outcomes was found. This follows findings which indicated that a much larger sample of subjects would be required to discriminate job factors at this level (Taber & Taylor, 1990).

Research Objective Seven

What are differences in task identification, task significance, and skill variety of specific athletic training tasks performed by groups of secondary school athletic trainers in Texas?

The null hypothesis of no significant difference in task identification, task significance, and skill variety for specific tasks performed by groups of secondary school athletic trainers in Texas is rejected. Differences do exist due to gender, professional preparation, and job classification. The model once again discriminates between jobs of similar classification. Task identification is higher for female athletic trainers for two task statements. These higher scores agree with Cleave's findings with female athletic administrators (Cleave, 1993). Females rate eight task statements higher in significance than males. Males rate four task statements higher for skill

variety. The bulk of task statements do show similar dimensions for male and female athletic trainers however.

Differences due to the independent variables are only present for task identification of the task statements. The most common main effect is that of job classification. Clinical Athletic Trainers perceive lower levels of task identification in these task statements in their jobs. Level of professional preparation is present as a main effect on only one task statement. Limited disordinal interaction between independent variables did occur. In general, when a significant difference between groups of athletic trainers for a task statement occurred, Noncertified Clinical Athletic Trainers had lower levels of task identification in their jobs than did other secondary school athletic trainers.

Related Findings

Some related findings concerning the core job dimension autonomy were a result of the analysis of the JCM in secondary school athletic trainers. Secondary school athletic trainers in Texas indicated that a significant relationship existed between their professional preparation and the core job dimension of autonomy. Both Curriculum and Internship Certified Athletic Trainers perceived greater autonomy in their job than did Noncertified Athletic Trainers. Increased autonomy was the one job dimension which followed the higher level of knowledge and skills possessed by Certified Athletic Trainers.

Secondary school athletic trainers in Texas who were classified as Athletic Trainers with Other Duties also indicated a higher level of autonomy in their job. The

difference in autonomy was greatest with Teacher Athletic Trainers and Clinical Athletic Trainers. These differences may be a product of the tension between authority of school administration, athletic administration, and in the case of Clinical Athletic Trainers, clinic administration over these groups athletic trainers as indicated by Stopka and Kaiser (1988).

Implications for Practice

To summarize, there were limited differences in job characteristics due to the person-independent variables of professional preparation and job classification in secondary school athletic training jobs in Texas. Two-way ANOVAs did not indicate any athletic training position which was higher in affective outcomes. There were differences in the relationships between core job dimensions and affective outcomes with feedback having the strongest relationship in both Pearson product moment correlations and stepwise multiple linear regressions.

The lack of difference in affective outcomes is of benefit to student-athletes served by the athletic trainers in the sample. No group of athletic training positions indicated a need for re-design based upon discrepancy between group scores on any job characteristic and the mean score for all secondary school athletic trainers. All core job dimensions and affective outcomes are within the limits set for normative data for professional and technical jobs (Hackman & Oldham, 1980). It would appear that under the assumptions of the JCM, differences in professional preparation and job classification do not affect secondary school athletic trainers in Texas consistency in their jobs.

Use of the NATABOC, Inc. 1995 Role Delineation to improve the measurement

of specific core job dimensions did allow for greater discrimination of differences in the relationships these dimensions had with affective outcomes than in previous studies which attempted to discriminate between similar jobs (Fried & Ferris, 1987). Task identification had a greater importance in predicting affective outcomes than in previous studies (Fried & Ferris, 1987; Taber & Taylor, 1990). Inspection of formal job descriptions of athletic trainers whose jobs are in groups which showed either a significant positive correlation and/or multiple linear regression which included task identification as a predictor to increase its level would be of merit.

Autonomy and feedback show the greatest promise as areas for improvement in secondary athletic training jobs in Texas under the JCM. Both show the strongest link to affective outcomes under the JCM as they were included in the multiple linear regressions for all three affective outcomes for the total sample and in many of the multiple linear regressions of groups of secondary school athletic trainers.

Autonomy of secondary school athletic training jobs may be increased in several ways. NATABOC, Inc Certification appears to be linked to increased autonomy. Educational preparation of athletic trainers for secondary school positions should emphasize the importance of NATABOC, Inc. Certification. Noncertified secondary school athletic trainers should attempt to become NATABOC, Inc. Certified. School administration should move towards hiring of NATABOC, Inc. Certified Athletic Trainers in secondary schools. Job definitions of secondary school athletic trainers should reflect autonomy as an important factor.

Feedback can be increased by use of the materials developed by the NATA

Reimbursement Advisory Group Outcomes Study. Although primarily designed for use in the clinical setting with its emphasis on reimbursement, bench marking, and costing, this study also addressed professional self-assessment. These materials could provide additional input to secondary school athletic trainers on the efficacy of treatment and rehabilitation they provide to student-athletes along with patient response to the athletic trainer.

Areas for Further Study

Three areas for further study are suggested by the findings. The first area is development of additional means to increase specificity of the JDS. Lengthening of the scales of task identification, task significance, and skill variety was successful as this study demonstrated increased reliability. Use of specific task statements endemic to a particular job allowed for greater discrimination.

Second, additional research should attempt to include adequate number of subjects in the categories which were low in number in this study in order to detect all significant low positive or negative relationships. In applying the results of this study to secondary school athletic trainers nationwide, the category of Non-Certified Athletic Trainer may need to be eliminated. Nationally, it will include athletic trainers who may be quite different than those in Texas due to different state licensure regulation.

The third area involves use of objective outcome measures specific to a job. Additional studies of the JCM in athletic training could possibly examine the relationship of affective outcomes of the model and athletic trainer effectiveness as measured by the NATA Reimbursement Advisory Group Outcomes Study.

APPENDIX A

1995 NATABOC, INC. ATHLETIC TRAINER ROLE DELINEATION

1995 NATABOC, INC. ATHLETIC TRAINER ROLE DELINEATION

DOMAIN ONE- Prevention of Athletic Injuries

1. Identify physical conditions predisposing the athlete or physically active person to increased risk of injury/illness in athletic activity by following accepted pre-participation examination guidelines to ensure safe participation.
2. Supervise conditioning programs and testing for athletes or physically active individuals using mechanical and/or other techniques in order to ensure readiness or safe participation in physical activity.
3. Monitor environmental conditions(e.g., temperature, humidity, lightening) of playing or practice areas by following accepted guidelines in order to make recommendations regarding safe participation.
4. Assess athletic apparatuses and athletic activity areas(e.g., playing surfaces, gyms, locker and athletic training room facilities) by periodic inspection and review of maintenance records to ensure a safe environment.
5. Construct custom protective devices by fabricating and fitting with appropriate materials in order to protect specific parts of the body from injury during athletic activity.
6. Apply specific and appropriate taping, wrapping, or prophylactic devises to the athlete or physically active individual by adhering to principles of biomechanics and injury mechanism in order to prevent injury or re-injury.
7. Evaluate the use and maintenance of protective devices and athletic equipment (e.g., helmets, shoulder pads, shin guards) by inspecting and assessing the equipment in

order to ensure optimal protection of the athlete or physically active individual.

8. Educate parents, staff, coaches, athletes, etc., about the risks associated with participation and unsafe practices using direct communication in order to provide an opportunity for them to make an informed decision concerning physical activity.

DOMAIN TWO- Recognition, Evaluation, and Immediate Care of Injuries

1. Obtain a history from the athlete or physically active individual or witnesses through observation and interviews in order to determine the pathology and extent of injury/illness.
2. Inspect the involved area using bilateral comparison, if appropriate, in order to determine the extent of the injury/illness.
3. Palpate the involved area using knowledge of human anatomy in order to determine the extent of the injury/illness.
4. Perform specific tests on the involved area drawing on knowledge of anatomy, physiology, biomechanics, etc, in order to determine the extent of the injury/illness.
5. Determine the appropriate course of action by interpreting the signs and symptoms of the injury/illness in order to provide the necessary immediate care.
6. Administer first aid using standard, approved techniques and activate the emergency plan, if appropriate, in order to provide necessary medical care.
7. Select and apply emergency equipment following standard, approved techniques in order to facilitate the athlete or physically active individual's safe, proper, and efficient transportation.

8. Refer the athlete or physically active individual to the appropriate medical personnel and/or facility using standard procedures to continue proper medical care.

DOMAIN THREE- Rehabilitation and Reconditioning of Athletic Injuries

1. Identify injury/illness status by using standard techniques for evaluation and reassessment in order to determine appropriate rehabilitation programs.
2. Construct rehabilitation/reconditioning programs for the injured/ill athlete or physically active individual using standard procedures for therapeutic exercise and modalities in order to restore functional status.
3. Select appropriate rehabilitation equipment, manual techniques, and therapeutic modalities by evaluating the theory and use as defined by accepted standards of care in order to enhance recovery.
4. Administer rehabilitation techniques and procedures to the injured/ill athlete or physically active individual by applying accepted standards of care and protocols in order to enhance recovery.
5. Evaluate the readiness of the injured/ill athlete or physically active individual by assessing functional status in order to ensure a safe return to participation.
6. Educate parents, staff, coaches, athletes, physically active individuals, etc., about the rehabilitation process using direct communication in order to enhance rehabilitation.

DOMAIN FOUR- Health Care Administration

1. Maintain the health care records of athletes or physically active individuals using a recognized, comprehensive recording process in order to document

procedures/services rendered by health care professionals.

2. Comply with safety and sanitation standards by maintaining facilities and equipment in order to ensure a safe environment.
3. Manage daily operations by implementing and maintaining standards for all personnel in order to ensure quality of service.
4. Establish written guidelines for injury/illness management by standardizing operating procedures in order to provide a consistent quality of care.
5. Obtain equipment and supplies by evaluating reliable product information in order to provide athletic training services to athletes and physically active individuals.
6. Create a plan which includes emergency, management, and referral systems specific to the setting by involving appropriate health care professionals in order to facilitate proper care.
7. Reduce the risk of exposure to infectious agents by following universal precautions in order to prevent the transmission of infectious diseases.

DOMAIN FIVE- Professional Development and Responsibility

1. Maintain knowledge of contemporary sports medicine issues by participating in continuing education activities in order to provide an appropriate standard of care.
2. Develop interpersonal communication skills by interacting with others(e.g., parents, coaches, colleagues, athletes, physically active individuals) in order to enhance proficiency and professionalism.
3. Adhere to ethical and legal parameters by following established guidelines which define the proper role of the certified athletic trainer in order to protect athletes,

physically active individuals, and the public.

4. Assimilate appropriate sports medicine research by using available resources in order to enhance professional growth.
5. Educate the public by serving as a resource in order to enhance awareness of the roles and responsibilities of the certified athletic trainer.

APPENDIX B

COVER LETTER

November xx,1996

«First name» «Last name»
«Address»
«City», «State»
«Zip code»

Dear «First name»:

I am writing you to ask your help with my doctoral dissertation at the University of North Texas. The purpose of the study is to examine perceived motivational factors within the job of the secondary school athletic trainer based upon task statements identified in the NATABOC, Inc. Role Delineation Study. It is hoped that the results of this survey will provide information which will lead to the improvement of secondary school athletic training positions. Enclosed you will find a survey which asks questions about your athletic trainer certification, professional preparation, and job description. It will also ask you to rate various factors of your job as a secondary school athletic trainer relates to the NATABOC, Inc. Role Delinetion. I would appreciate it if you would answer the questionnaire and mail it back to me in the enclosed stamped envelope. Your responses will not be coded or recorded in any way whereby you can be personally identified. The reply envelope will be coded in order to contact non-respondents to the initial mailing to remind them of the importance of their inclusion in the study. The codes used to contact non-respondents will be destroyed at the conclusion of the study. Information from this research may be published or used in furthering the profession of athletic training. Please respond quickly to this survey. I would appreciate the return of the survey within three weeks so that I may analyze the data and proceed with the study. I thank you for your prompt attention to this matter.

Yours truly,

Stephen C. Bunt ATC, LAT, MS
4108 Compton Ct.
Irving, TX
75061
Home 972-986-4240
Office 972-254-5329

APPENDIX C

SECONDARY SCHOOL ATHLETIC TRAINER JOB DIAGNOSTIC SURVEY

Secondary School Athletic Training Job Diagnostic Survey

This questionnaire is designed to study secondary school athletic training jobs and how athletic trainers react to them. The questionnaire will gather information in order to help determine how athletic training jobs can be better designed.

On the following pages you will find several different kinds of questions about your job as a secondary school athletic trainer. Specific instructions are given at the start of each section. Please read them carefully.

The questions are designed to obtain your perceptions of your job and your reactions to it. You are only being asked to rate your current position as a secondary school athletic trainer, not your abilities or performance. If an individual item does not relate to your current job, it should be marked as the lowest score for that question.

There are no trick questions. Your answers will be kept completely confidential. Please answer each item as honestly and frankly as possible.

Thank you for your cooperation.

Please circle the number next to the choice which completes each statement below:

1. You are:

1. A National Athletic Trainer Association Board of Certification Inc. Certified Athletic Trainer who
   is a graduate of a NATABOC, Inc. Approved Curriculum Program.

2. A National Athletic Trainer Association Board of Certification Inc. Certified Athletic Trainer who
   is a graduate of a internship program or was certified by the grandfather clause.

3. A Licensed Athletic Trainer who is not NATABOC, Inc. Certified.

2. The following best describes your position as a secondary school athletic trainer:

1. Full Time Athletic Trainer.

2. Teacher/Athletic Trainer.

3. Athletic Trainer who has school-related responsibilities in athletic administration, school health services, or other area outside athletic training.

4. Athletic Trainer working in a school who is contracted from a sports medicine clinic, hospital or
   other medical facility.

5. Part Time or Volunteer Athletic Trainer.

6. Other.

SECTION ONE

This part of the questionnaire asks you to describe your job, as objectively as you can.

Please do not use this part of the questionnaire to show how much you like or dislike your job. Questions about that will come later. Instead try to make your descriptions as accurate and as objective as you possibly can.

Please circle the number which is the most accurate description of your job.

1. How much *autonomy* is there in your job? That is to what extent does your job permit you to decide on your own how to go about doing the work?

1----------2----------3----------4----------5----------6----------7

Very little: the job gives me almost no personal say about how and when the work is done.	Moderate autonomy: many things are standardized and not under my control, but I can make some decisions about the work.	Very much; the job gives me almost complete responsibility for deciding how and when the work is done.

2. To what extent *does the job itself* provide you with information about your work performance? That is does the actual work itself provide clues about how well you are doing- aside from "feedback' from any co-workers or supervisors may provide?

1----------2----------3----------4----------5----------6----------7

Very little; the job itself is set up so I could work forever without finding out how well I am doing.	Moderately; sometimes doing this job provides "feedback" to me; sometimes it does not.	Very much; the job is set up so that I get almost constant "feedback' as I work about how well I am doing.

SECTION TWO

Listed below are statements which could be used to describe a job. You are to indicate whether each statement is an accurate or an inaccurate description of your job. Once again, please try to be as objective as you can in deciding how accurately each statement describes your job- regardless of whether you like or dislike your job.

Write a number in the blank beside each statement, based on the following scale:

How accurate is the statement in describing your job?

1	2	3	4	5	6	7
Very Inaccurate	Mostly Inaccurate	Slightly Inaccurate	Uncertain	Slightly Accurate	Mostly Accurate	Very Accurate

____ 1. Just doing the work required by the job provides many chances for me to figure out how well I am doing.

____ 2. The job denies me any chance of using my personal initiative or judgement in carrying out the work.

____ 3. The job itself provides very few clues about whether or not I am performing well.

____ 4. The job gives me considerable opportunity for independence and freedom in how I do the work.

SECTION THREE

Now please indicate how you personally feel about your job. Each of the statements below is something that a person might say about his or her job. You are to indicate your own personal *feelings* about your job by marking how much you agree with each of the statements.

Write a number in the blank for each statement based on this scale:

How much do you agree with the statement?

1	2	3	4	5	6	7
Disagree Strongly	Disagree	Disagree Slightly	Neutral	Agree Slightly	Agree	Agree Strongly

_____ 1. My opinion of myself goes up when I do this job well.

_____ 2. Generally speaking, I am very satisfied with this job.

_____ 3. I feel a great sense of personal satisfaction when I do this job well.

_____ 4. I frequently think of quitting this job

_____ 5. I feel bad and unhappy when I discovered that I have performed poorly on this job.

_____ 6. I am generally satisfied with the kind of work I do in this job.

_____ 7. My own feelings generally are not affected much one way or the other by how well I do on this job.

SECTION FOUR

Now please indicate how satisfied you are with each aspect of your job listed below. Once again, write the appropriate number in the blank beside each statement.

How satisfied are you with this aspect of your job?

1	2	3	4	5	6	7
Extremely Dissatisfied	Dissatisfied	Slightly Dissatisfied	Neutral	Slightly Satisfied	Satisfied	Extremely Satisfied

____ 1. The amount of personal growth and development I get in doing my job.

____ 2. The feeling of worthwhile accomplishment I get from my boss.

____ 3. The amount of independent thought and action I can exercise in my job.

____ 4. The amount of challenge in my job.

SECTION FIVE

Now think of the other people who hold the same job as you do. If no one has exactly the same job as you, think of the job which is most similar to yours. Please think about how accurately each of the statements describes the feelings of those people about the job. It is quite alright if your answers here are different from when you described your own reactions to this job. Often different people will feel quite differently about the same job.

Once again, write a number in the blank for each statement, based on this scale:

How much do you agree with the statement?

1	2	3	4	5	6	7
Disagree Strongly	Disagree	Disagree Slightly	Neutral	Agree Slightly	Agree	Agree Strongly

_____ 1. Most people on this job feel a great sense of personal satisfaction when they do the job well

_____ 2. Most people on this job are satisfied with the job.

_____ 3. People on this job often think of quitting.

_____ 4. Most people on this job feel bad or unhappy when they find that they have performed the work poorly.

SECTION SIX

This part of the questionnaire asks you to rate the tasks you perform as part of your job as an athletic trainer for task identification. These are tasks identified by the NATABOC as specific to the performance of the job of the athletic trainer. You are not to rate how well you do the tasks, but what is required of you to perform the tasks in your job.

Task identification means to what extent does each task involve doing a *"whole" and identifiable piece of work.* That is, is the task a complete piece of work that has an obvious beginning and end? Or is it only a small part of the overall piece of work, which is finished by other people or by automatic machines?

Write a number from 1 to 7 in the blank beside each task statement rating the task for Task Identification:

1----------2----------3----------4----------5----------6----------7

This task is only a tiny part of the overall piece of work; the results of the task cannot be seen in the final product or service.	This task is a moderate sized "chunk" of the overall piece of work; Its contribution can be seen in the final outcome.	This task involves doing the whole piece of work, from start to finish; the results are easily seen in the final product or service.

____ 1. Identify physical conditions predisposing the athlete or physically active person to increased risk of injury/illness in athletic activity by following accepted pre-participation examination guidelines to ensure safe participation.

____ 2. Supervise conditioning programs and testing for athletes or physically active individuals using mechanical and/or other techniques in order to ensure readiness for safe participation in physical
activity.

____ 3. Monitor environmental conditions(e.g., temperature, humidity, lightening) of playing or practice
areas by following accepted guidelines in order to make recommendations regarding safe participation.

____ 4. Assess athletic apparatuses and athletic activity areas(e.g., playing surfaces, gyms, locker and athletic training room facilities) by periodic inspection and review of maintenance records to ensure a safe environment.

____ 5. Construct custom protective devices by fabricating and fitting with appropriate materials in order
to protect specific parts of the body from injury during athletic activity.

____ 6. Apply specific and appropriate taping, wrapping, or prophylactic devises to the athlete or physically active individual by adhering to principles of biomechanics and injury mechanism in order to prevent injury or re-injury.

____ 7. Evaluate the use and maintenance of protective devices and athletic equipment (e.g., helmets, shoulder pads, shin guards) by inspecting and assessing the equipment in order to ensure optimal protection of the athlete or physically active individual.

____ 8. Educate parents, staff, coaches, athletes, etc., about the risks associated with participation and unsafe practices using direct communication in order to provide an opportunity for them to make an informed decision concerning physical activity.

____ 9. Obtain a history from the athlete or physically active individual or witnesses through observation and interviews in order to determine the pathology and extent of injury/illness.

____ 10. Inspect the involved area using bilateral comparison, if appropriate, in order to determine the extent of the injury/illness

____ 11. Palpate the involved area using knowledge of human anatomy in order to determine the extent of the injury/illness.

____ 12. Perform specific tests on the involved area drawing on knowledge of anatomy, physiology, biomechanics, etc, in order to determine the extent of the injury/illness.

____ 13. Determine the appropriate course of action by interpreting the signs and symptoms of the injury/illness in order to provide the necessary immediate care.

____ 14. Administer first aid using standard, approved techniques and activate the emergency plan, if appropriate, in order to provide necessary medical care.

____ 15. Select and apply emergency equipment following standard, approved techniques in order to facilitate the athlete or physically active individual's safe, proper, and efficient transportation.

____ 16. Refer the athlete or physically active individual to the appropriate medical personnel and/or facility using standard procedures to continue proper medical care.

____ 17. Identify injury/illness status by using standard techniques for evaluation and reassessment in order to determine appropriate rehabilitation programs.

____ 18. Construct rehabilitation/reconditioning programs for the injured/ill athlete or physically active
individual using standard procedures for therapeutic exercise and modalities in order to restore functional status.

____ 19. Select appropriate rehabilitation equipment, manual techniques, and therapeutic modalities by evaluating the theory and use as defined by accepted standards of care in order to enhance recovery.

____ 20. Administer rehabilitation techniques and procedures to the injured/ill athlete or physically active individual by applying accepted standards of care and protocols in order to enhance recovery.

____ 21. Evaluate the readiness of the injured/ill athlete or physically active individual by assessing functional status in order to ensure a safe return to participation.

____ 22. Educate parents, staff, coaches, athletes, physically active individuals, etc., about the rehabilitation process using direct communication in order to enhance rehabilitation.

____ 23. Maintain the health care records of athletes or physically active individuals using a recognized, comprehensive recording process in order to document procedures/services rendered by health care professionals.

____ 24. Comply with safety and sanitation standards by maintaining facilities and equipment in order to ensure a safe environment.

____ 25. Manage daily operations by implementing and maintaining standards for all personnel in order to ensure quality of service.

____ 26. Establish written guidelines for injury/illness management by standardizing operating procedures in order to provide a consistent quality of care.

____ 27. Obtain equipment and supplies by evaluating reliable product information in order to provide athletic training services to athletes and physically active individuals.

____ 28. Create a plan which includes emergency, management, and referral systems specific to the setting by involving appropriate health care professionals in order to facilitate proper care.

____ 29. Reduce the risk of exposure to infectious agents by following universal precautions in order to prevent the transmission of infectious diseases.

____ 30. Maintain knowledge of contemporary sports medicine issues by participating in continuing education activities in order to provide an appropriate standard of care.

____ 31. Develop interpersonal communication skills by interacting with others(e.g., parents, coaches, colleagues, athletes, physically active individuals) in order to enhance proficiency and professionalism.

____ 32. Adhere to ethical and legal parameters by following established guidelines which define the proper role of the certified athletic trainer in order to protect athletes, physically active individuals, and the public.

____ 33. Assimilate appropriate sports medicine research by using available resources in order to enhance professional growth.

____ 34. Educate the public by serving as a resource in order to enhance awareness of the roles and responsibilities of the certified athletic trainer.

SECTION SEVEN

This part of the questionnaire asks you to rate the tasks you perform as part of your job as an athletic trainer for task significance. These are tasks identified by the NATABOC as specific to the performance of the job of the athletic trainer. You are not to rate how well you do the tasks, but what is required of you to perform the tasks in your job.

Task significance relates to in general, how *significant or important* is each task. That is are the results of the task likely to significantly affect the lives or well-being of other people?

Write a number from 1 to 7 in the blank beside each task statement rating the task for Task Significance:

1----------2----------3----------4----------5----------6----------7

Not very significant; the outcomes of the task are not likely to have important effects on other people.	Moderately significant.	Highly significant; the outcomes of the task can affect other people in very important ways.

____ 1. Identify physical conditions predisposing the athlete or physically active person to increased risk of injury/illness in athletic activity by following accepted pre-participation examination guidelines to ensure safe participation.

____ 2. Supervise conditioning programs and testing for athletes or physically active individuals using mechanical and/or other techniques in order to ensure readiness for safe participation in physical activity.

____ 3. Monitor environmental conditions(e.g., temperature, humidity, lightening) of playing or practice areas by following accepted guidelines in order to make recommendations regarding safe participation.

____ 4. Assess athletic apparatuses and athletic activity areas(e.g., playing surfaces, gyms, locker and athletic training room facilities) by periodic inspection and review of maintenance records to ensure a safe environment.

____ 5. Construct custom protective devices by fabricating and fitting with appropriate materials in order to protect specific parts of the body from injury during athletic activity.

____ 6. Apply specific and appropriate taping, wrapping, or prophylactic devises to the athlete or physically active individual by adhering to principles of biomechanics and injury mechanism in order to prevent injury or re-injury.

____ 7. Evaluate the use and maintenance of protective devices and athletic equipment (e.g., helmets, shoulder pads, shin guards) by inspecting and assessing the equipment in order to ensure optimal protection of the athlete or physically active individual.

____ 8. Educate parents, staff, coaches, athletes, etc., about the risks associated with participation and unsafe practices using direct communication in order to provide an opportunity for them to

make an informed decision concerning physical activity.

____ 9. Obtain a history from the athlete or physically active individual or witnesses through observation and interviews in order to determine the pathology and extent of injury/illness.

____ 10. Inspect the involved area using bilateral comparison, if appropriate, in order to determine the extent of the injury/illness

____ 11. Palpate the involved area using knowledge of human anatomy in order to determine the extent of the injury/illness.

____ 12. Perform specific tests on the involved area drawing on knowledge of anatomy, physiology, biomechanics, etc, in order to determine the extent of the injury/illness.

____ 13. Determine the appropriate course of action by interpreting the signs and symptoms of the injury/illness in order to provide the necessary immediate care.

____ 14. Administer first aid using standard, approved techniques and activate the emergency plan, if appropriate, in order to provide necessary medical care.

____ 15. Select and apply emergency equipment following standard, approved techniques in order to facilitate the athlete or physically active individual's safe, proper, and efficient transportation.

____ 16. Refer the athlete or physically active individual to the appropriate medical personnel and/or facility using standard procedures to continue proper medical care.

____ 17. Identify injury/illness status by using standard techniques for evaluation and reassessment in order to determine appropriate rehabilitation programs.

____ 18. Construct rehabilitation/reconditioning programs for the injured/ill athlete or physically active individual using standard procedures for therapeutic exercise and modalities in order to restore functional status.

____ 19. Select appropriate rehabilitation equipment, manual techniques, and therapeutic modalities by evaluating the theory and use as defined by accepted standards of care in order to enhance recovery.

____ 20. Administer rehabilitation techniques and procedures to the injured/ill athlete or physically active individual by applying accepted standards of care and protocols in order to enhance recovery.

____ 21. Evaluate the readiness of the injured/ill athlete or physically active individual by assessing functional status in order to ensure a safe return to participation.

____ 22. Educate parents, staff, coaches, athletes, physically active individuals, etc., about the rehabilitation process using direct communication in order to enhance rehabilitation.

____ 23. Maintain the health care records of athletes or physically active individuals using a recognized, comprehensive recording process in order to document procedures/services rendered by health care professionals.

____ 24. Comply with safety and sanitation standards by maintaining facilities and equipment in order to ensure a safe environment.

____ 25. Manage daily operations by implementing and maintaining standards for all personnel in order to ensure quality of service.

____ 26. Establish written guidelines for injury/illness management by standardizing operating procedures in order to provide a consistent quality of care.

____ 27. Obtain equipment and supplies by evaluating reliable product information in order to provide athletic training services to athletes and physically active individuals.

____ 28. Create a plan which includes emergency, management, and referral systems specific to the setting by involving appropriate health care professionals in order to facilitate proper care.

____ 29. Reduce the risk of exposure to infectious agents by following universal precautions in order to prevent the transmission of infectious diseases.

____ 30. Maintain knowledge of contemporary sports medicine issues by participating in continuing education activities in order to provide an appropriate standard of care.

____ 31. Develop interpersonal communication skills by interacting with others(e.g., parents, coaches, colleagues, athletes, physically active individuals) in order to enhance proficiency and professionalism.

____ 32. Adhere to ethical and legal parameters by following established guidelines which define the proper role of the certified athletic trainer in order to protect athletes, physically active individuals, and the public.

____ 33. Assimilate appropriate sports medicine research by using available resources in order to enhance professional growth.

____ 34. Educate the public by serving as a resource in order to enhance awareness of the roles and responsibilities of the certified athletic trainer.

SECTION EIGHT

This part of the questionnaire asks you to rate the tasks you perform as part of your job as an athletic trainer for skill variety. These are tasks identified by the NATABOC as specific to the performance of the job of the athletic trainer. You are not to rate how well you do the tasks, but what is required of you to perform the tasks in your job.

Skill variety relates to how much *variety* there is in the skills used to perform the task. That is, to what extent does the task require you to do many different things at work, using a variety of your skills and talents?

Write a number from 1 to 7 in the blank beside each task statement rating the task for Skill Variety:

1----------2----------3----------4----------5----------6----------7

Very little; the task requires me to do the same routine things over and over again.	Moderate variety.	Very much; the task requires me to do many different things, using a number of different skills and talents..

____ 1. Identify physical conditions predisposing the athlete or physically active person to increased risk of injury/illness in athletic activity by following accepted pre-participation examination guidelines to ensure safe participation.

____ 2. Supervise conditioning programs and testing for athletes or physically active individuals using
mechanical and/or other techniques in order to ensure readiness for safe participation in physical activity.

____ 3. Monitor environmental conditions(e.g., temperature, humidity, lightening) of playing or practice areas by following accepted guidelines in order to make recommendations regarding safe participation.

____ 4. Assess athletic apparatuses and athletic activity areas(e.g., playing surfaces, gyms, locker and athletic training room facilities) by periodic inspection and review of maintenance records to ensure a safe environment.

____ 5. Construct custom protective devices by fabricating and fitting with appropriate materials in order to protect specific parts of the body from injury during athletic activity.

____ 6. Apply specific and appropriate taping, wrapping, or prophylactic devises to the athlete or physically active individual by adhering to principles of biomechanics and injury mechanism in order to prevent injury or re-injury.

____ 7. Evaluate the use and maintenance of protective devices and athletic equipment (e.g., helmets, shoulder pads, shin guards) by inspecting and assessing the equipment in order to ensure optimal protection of the athlete or physically active individual.

____ 8. Educate parents, staff, coaches, athletes, etc., about the risks associated with participation and unsafe practices using direct communication in order to provide an opportunity for them to make an informed decision concerning physical activity.

____ 9. Obtain a history from the athlete or physically active individual or witnesses through observation and interviews in order to determine the pathology and extent of injury/illness.

____ 10. Inspect the involved area using bilateral comparison, if appropriate, in order to determine the extent of the injury/illness

____ 11. Palpate the involved area using knowledge of human anatomy in order to determine the extent of the injury/illness.

____ 12. Perform specific tests on the involved area drawing on knowledge of anatomy, physiology, biomechanics, etc, in order to determine the extent of the injury/illness.

____ 13.
Determine the appropriate course of action by interpreting the signs and symptoms of the injury/illness in order to provide the necessary immediate care.

____ 14. Administer first aid using standard, approved techniques and activate the emergency plan, if appropriate, in \order to provide necessary medical care.

____ 15. Select and apply emergency equipment following standard, approved techniques in order to facilitate the athlete or physically active individual's safe, proper, and efficient transportation.

____ 16. Refer the athlete or physically active individual to the appropriate medical personnel and/or facility using standard procedures to continue proper medical care.

____ 17. Identify injury/illness status by using standard techniques for evaluation and reassessment in order to determine appropriate rehabilitation programs.

____ 18. Construct rehabilitation/reconditioning programs for the injured/ill athlete or physically active individual using standard procedures for therapeutic exercise and modalities in order to restore functional status.

____ 19. Select appropriate rehabilitation equipment, manual techniques, and therapeutic modalities by evaluating the theory and use as defined by accepted standards of care in order to enhance recovery.

____ 20. Administer rehabilitation techniques and procedures to the injured/ill athlete or physically active individual by applying accepted standards of care and protocols in order to enhance recovery.

____ 21. Evaluate the readiness of the injured/ill athlete or physically active individual by assessing functional status in order to ensure a safe return to participation.

____ 22. Educate parents, staff, coaches, athletes, physically active individuals, etc., about the rehabilitation process using direct communication in order to enhance rehabilitation.

____ 23. Maintain the health care records of athletes or physically active individuals using a

recognized, comprehensive recording process in order to document procedures/services rendered by health care professionals.

____ 24. Comply with safety and sanitation standards by maintaining facilities and equipment in order to ensure a safe environment.

____ 25. Manage daily operations by implementing and maintaining standards for all personnel in order to ensure quality of service.

____ 26. Establish written guidelines for injury/illness management by standardizing operating procedures in order to provide a consistent quality of care.

____ 27. Obtain equipment and supplies by evaluating reliable product information in order to provide athletic training services to athletes and physically active individuals.

____ 28. Create a plan which includes emergency, management, and referral systems specific to the setting by involving appropriate health care professionals in order to facilitate proper care.

____ 29. Reduce the risk of exposure to infectious agents by following universal precautions in order to prevent the transmission of infectious diseases.

____ 30. Maintain knowledge of contemporary sports medicine issues by participating in continuing education activities in order to provide an appropriate standard of care.

____ 31. Develop interpersonal communication skills by interacting with others(e.g., parents, coaches, colleagues, athletes, physically active individuals) in order to enhance proficiency and professionalism.

____ 32. Adhere to ethical and legal parameters by following established guidelines which define the proper role of the certified athletic trainer in order to protect athletes, physically active individuals and the public.

____ 33. Assimilate appropriate sports medicine research by using available resources in order to enhance professional growth.

____ 34. Educate the public by serving as a resource in order to enhance awareness of the roles and responsibilities of the certified athletic trainer.

Statement of Informed Consent

I, _____, agree to participate in this study of secondary school athletic trainers in the State of Texas. The purpose of the study is to determine job factors which may provide motivation for job incumbents. Information from this study will be used to develop improved athletic trainer job descriptions.

As a participant, I understand that I will be asked to complete a survey instrument which asks questions about my athletic trainer certification, professional preparation, and job description. This survey will also ask for me to rate various factors of my job. For my responses to be included in the study, I will need to return the survey within four weeks.

The business reply envelope which is provided with the survey will be coded for the express purpose of contacting non-respondents to the initial mailing. I have been informed that actual information obtained in this study will not be coded or recorded in any way whereby I can be personally identified. The codes which will be used to contact non-respondents will be destroyed at the conclusion of the study. Under these conditions, I agree that any information from this research may be used in any way thought best for publication or education.

I understand that there is no personal risk involved with this research and that I am free to withdraw my consent at any time. If I have any questions or problems that arise in connection with my participation in this study, I should contact Stephen C. Bunt, the investigator at 972-254-5329(Work) or 972-986-4240(Home).

_____ Date _____
(Participant)

_____ Date _____
(Investigator)

This project has been reviewed and approved by the University of North Texas Committee for the Protection of Human Subjects (817) 565-3940.

APPENDIX D

SCORING KEY FOR SECONDARY SCHOOL ATHLETIC TRAINER JOB DIAGNOSTIC SURVEY

Scoring Key for Secondary School Athletic Trainer Job Diagnostic Survey

All scores are marked as 1-7. Reverse scoring is accomplished by subtracting the number entered by the respondent from 8.

1. Job Characteristics

A. Task Identification- Average the following items:

Section Six: Sum of # 1-34 divided by 34

B. Task Significance- Average the following items:

Section Seven: Sum of # 1-34 divided by 34

C. Skill Variety- Average the following items

Section Eight: Sum of # 1-34 divided by 34

D. Autonomy- Average the following items

Section One: # 1

Section Two: # 4

2 (reverse scoring)

E. Feedback from the job itself- Average the following items:

Section One: # 2

Section Two: # 1

3 (Reverse scoring)

II. Affective Outcomes

A. General Satisfaction- Average the following items:

Section Three: # 2, # 6

4 (Reverse scoring)

Section Five: #2

3 (Reverse scoring)

B. Internal Work Motivation- Average the following items:

Section Three: # 1, # 3, # 5

7 (Reverse scoring)

Section Five: # 1, # 4

C. Growth Satisfaction- Average the following items:

Section Four: #1, # 2, # 3, # 4

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