THE SOCIAL CLIMATE OF ALLIED HEALTH EDUCATIONAL PROGRAMS AS PERCEIVED BY PROGRAM DIRECTORS

A DISSERTATION

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ABSTRACT

The study compared social climate perceptions of allied health educational (AHE) program directors in order to discover the potential for high performance in accredited allied health educational programs. The study sought similarities, differences, and relationships in workplace social climate perceptions of program directors grouped by selected demographic characteristics.

Directors from accredited AHE programs were surveyed using the unmodified Work Environment Scale (WES) instrument. Forty null hypotheses were tested using multiple means comparison and linear regression.

WES scores showed no significant differences when compared by levels of allied health specialty, tenure status, highest degree, public or private institutional governance, and number of program degree offerings. WES scores showed the greatest number significant differences with respect to organizational structure. The strongest relationship was between WES scores and number of faculty supervised. Some WES scores differed significantly with respect to director's gender and among types

of institutions. One WES score regressed with number of years experience as director.

The social climate of allied health programs differed or regressed with respect to organizational characteristics more strongly than with respect to characteristics of individual program directors. Social climate differed most strongly by type of institution and by organizational structure. Academic health centers and coordinated administrative arrangement had the most favorable social climate for achieving high performance. Universities and dissociated administrative arrangements provided the least favorable social climate among accredited programs. The clarity with which directors see their roles improves with experience. Male directors perceived their director role more clearly than did females. Male directors perceived more external control on AHE than did females. Male directors perceived the physical environment as more physically comfortable than did females. Social climate of AHE directors improves with the number of AHE faculty in the academic unit. The potential for high performance AHE programs is expected to increase with more cooperation and intercommunication among program units.

Dedication

This work is dedicated to my mother, Marcella M. Brown, R. N., B. S. She demonstrated her dedication to learning by overcoming great difficulties to earn a high school diploma and registered nurse certificate. Considering herself a nursing professional, she strove to raise public consciousness of the relationship between nutrition, life style, and health. Years before a program existed to feed the poor with substandard food discarded by supermarkets, she salvaged and distributed large amounts of food to the poor and elderly of her community. She promoted national health care delivery strategies decades before it became a topic for polite conversation. Widowed, she demonstrated her respect for education by returning to the University of Wisconsin and earning a bachelors degree, which she completed in her 70th year. She traveled with nursing groups to northern Europe, the former Soviet Union, and China to promote international understanding. She then returned to professional practice for another twelve years, commuting alone over dangerous roads in Wisconsin winters, as she had all her professional life. Now in her 89th year, this study is, indirectly, another product of her life's work.

Acknowledgments

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CHAPTER I

Introduction to the Study

Medical and allied health education must undergo profound change. State and federal efforts to extend health care to all and to reduce its cost have highlighted a discrepancy between the goals of academic health centers and the primary care needs of American society. Whereas emphasis has been placed on highly technical and expensive new approaches to diagnosis and treatment of disease, the national need is for inexpensive options for primary care and for prevention (The White House Domestic Policy Council, 1993). Quality of allied health educational programs now includes the ability to adapt to changing regulations, goals, and manpower requirements. The ability to adapt is built into organizations, but adaptation may be at the expense of some organizational units. Needed Allied health educational programs should not be weakened or lost as change shakes the system.

This study measures and compares organizational social climates of accredited allied health professional preparation programs in American four year colleges and universities, as perceived by their directors. The study was based on the organizational theory that proposes that high performance requires a favorable organizational social climate. High performance exists when an organization's products and services consistently fill the needs of its clients for such products

and services. Clients are all groups and individuals who utilize the products or services of the academic department or program. This study assumes that allied health education can achieve high performance only when its social climate is favorable.

Social climate of accredited allied health programs has not been previously studied. It is possible that some programs have a less favorable social climate than others. What conditions or characteristics are associated with improved social climate? The answer was sought using perceptions held by directors of accredited programs regarding their workplace social climate.

Organizational structure, function, values, and commitments become realized in the daily reconstruction of social reality known as organizational climate. Social climate is the composite of conditions contributed by, and subjectively perceived by, members of an organization, and includes the social consequences of an organization's unique structure, its meaning, and its continuity of purpose (Moos, 1976). Complex organizations, such as colleges and universities, may develop social climates that favor some missions more than others. Although technically supported by mission statements and funding, some academic programs receive less than full social support from their institutions.

Equivocal support for an academic unit by its parent organization can affect the unit's quality and productivity. When low quality or low productivity become manifest, the parent organization may close it, to the detriment of the institution and of the society it serves. In this way, a climate of neglect may result in restrictions upon or failure of academic units needed by the communities they serve.

Most allied health educational (AHE) programs came to the college campus within the past forty years, often transferred from hospital training schools (Vogt & Ducanis, 1977). Their acceptance by faculty and administration has been based as much on their contribution to enrollment as their contribution to educating America's allied health workforce. AHE programs are costly, have low research output, and emphasize teaching, service, and employability of graduates, although research achievement has been the means to funding and status in higher education. Acceptance of AHE programs, therefore, has been equivocal in some institutional settings.

The pace of change within medicine and within higher education is so rapid that isolated programs and individuals quickly become obsolete. High performance implies cooperation and interaction in such a climate. High performance organizational units are more likely to exist in supportive social climates than in nonsupportive ones (Likert, 1967).

Where institutional commitment to allied health education is strong, organizational climates are likely to be perceived as supportive by program directors. Where organizational commitment is vague, program directors, the individuals responsible for growth and development of allied health educational programs, are likely to perceive their organizational social climates as ambivalent or nonsupportive.

Leaders in allied health education have been looking for interconnections among individuals in their own diverse specialties and with faculty from other disciplines as a means for strengthening programs, reducing costs, promoting cooperative research, and encouraging curricular innovation (DiBiaggio, 1992). For such connections to exist, they must be planned and supported. They do not occur spontaneously, since allied health faculty from different specialties differ with respect to personal and professional interests, specialized knowledge, and may be physically separated both on campus and in the clinical setting. One way of fostering connections between these groups appears to be through AHE program directors, who have much in common. They share similar job descriptions, require about the same job performance competencies, and interact with many of the same individuals and institutions (Rines, 1990). Like academic department chairs, allied health program directors are likely to do many

of the same things on a day to day basis, regardless of discipline or type of institution (Jennerich, 1981). Supportive organizational climates are likely to promote interconnections among program directors through organizational arrangements, while nonsupportive climates may isolate directors and thereby weaken their programs. However, the effect of social climate on AHE program directors has not been previously studied.

Directors of professional preparation programs, such as AHE, differ from other academic middle managers. Whereas the typical academic department head rose to faculty rank and administrative responsibility through successive experiences in graduate and post doctoral settings that emphasized research, the typical AHE program director relies primarily upon professional credentials and several years of professional experience as qualifications for faculty appointment in teaching institutions. The director who seeks promotion and tenure in the four year college or university may be in the process of attaining an additional academic degree, maintaining his or her technical proficiency, being an effective teacher, meeting research and publication requirements, and providing community service (Flanigan, Ballinger, Grant, Bennett, Schiller, Waller, Jordan, Gierhart, Brodnik, Pariser, Van Son, & Testat, 1988). AHE program directors tend to have longer term administrative appointments than other academic department

heads (Dietrich, King, & Protas, 1980). In a favorable organizational climate, such differences would be recognized for their positive effects on the organization; where social climate for allied health education is equivocal, such differences would be perceived as impediments to high status within the institution (Peters, 1982).

Besides being the program administrator, an AHE director is often chair of a small academic department and coordinator of off-campus student clinical training. Besides being accountable to the usual campus bureaucracy, AHE directors are also accountable for professional preparation of students (McTernan, 1982). In a favorable organizational social climate, directors would receive assistance with the extra burden resulting from program accreditation and relations with external agencies. In a less favorable social climate, support would be discussed primarily in terms of fiscal expenditure and productivity comparisons.

Program directors have considerable influence on the quality and viability of their programs (Selker & Vogt, 1978). Since state and national health initiatives are predicated on availability of a sufficient supply of qualified allied health workers, the attitudes of program directors regarding their workplaces are linked to both the success of the programs they administer and to health care policies and needs of the state

and nation. Directors' social climate perceptions are expected to affect their attitudes and, ultimately, their administrative behavior. In supportive social climates, directors would continuously strive for and develop innovative ways to improve program quality and effectiveness for all clients, including the general public, medical providers, student populations, program faculty, and institutional members. In unfavorable social climates, directors they would soon reach a falsely low performance maximum once accreditation and sufficient graduate production was attained.

Although the chair or director has a pivotal role in the success of an academic unit, this administrative position has had inadequate study (Knight & Holen, 1985). Social climate among community college department chairs was studied by Seiter (1984), but no studies have evaluated organizational climate aspects of allied health education program directors in four year institutions. This void in administrative and allied health research is addressed in this study.

It has been unclear whether program directors' perceptions of organizational social climate are more closely associated with their individual backgrounds than with organizational factors. Whereas personal background characteristics are based in cultural background, which is difficult to change, institutional background factors that affect directors'

perceptions of social climate are subject to improvement. Such improvement would ultimately improve program performance.

Whereas background characteristics of allied health administrators have been studied in relation to behavioral outcomes (Waller, Jordan, Gierhart, et al. 1988), effects on directors' perceptions of the organizational climate have not been studied. Individual characteristics that have been studied in relation to attitude or behavior formation of directors included professional specialty, years of directorship experience, gender, tenure status, and highest academic degree. Institutional characteristics evaluated in other studies included number of faculty supervised, public or private governance, type of sponsoring institution, number of degree offerings, and administrative structure for allied health programs. For purposes of comparison, those characteristics are also used in the present study, classed as individual and organizational background factors, collectively termed demographic information.

Theoretical Basis

The study will employ the functionalist paradigm, wherein AHE directors work in the professional preparation environment subsystem of higher education (Stark, Lowther, Hagerty, and Orczyk, 1986). Perceptions by members are treated as data that measure organizational social reality. The functionalist

paradigm for social research includes studies that treat social reality as objective and measurable (Burrell & Morgan, 1979).

Social climate constructs are based in theories of environmental press (Murray, 1938), the behavior setting (Barker, 1963) and social ecology (Moos, 1976). Selection of directors as a behavioral setting is based on the work of Barker (1963), who proposed that behavior settings can be specified in terms of roles they define, and that role-related behavior may be associated with specific social settings. The relationship between director perceptions of social climate and the support provided allied health education are derived from Moos (1976), who proposed the theory that social climate perceptions are based upon individual expectations regarding ideal relationships, personal growth and development, and system effectiveness. Since social climate perceptions form around a combination of individual and organizational background characteristics, groups with particular configurations of background characteristics create different social climates. Allied health educational program directors from programs accredited by the same agency form such a group.

Purpose of the Study

The overall purpose of this study was to answer the question: What similarities, differences, and relationships may be identified in workplace social climate perceptions of allied

health educational (AHE) program directors when grouped by selected demographic characteristics? Conclusions from answers to this question will be used to estimate differences in the social climate of allied health education in American four year colleges and universities. Implications of conclusions will be explored regarding achievement of high performance allied health programs.

Questions to be Answered

Considering allied health program directors of bachelors degree granting programs accredited by the Committee for Allied Health Education Accreditation (CAHEA), 10 research questions were developed.

Question 1: Is the perceived social climate different for directors from different professional specialties?

Question 2: Is the perceived social climate affected by the number of faculty supervised?

Question 3: Is the perceived social climate affected by the amount of director experience?

Question 4: Is the perceived social climate different for males and females?

Question 5: Is the perceived social climate different for directors with different tenure status?

Question 6: Is the perceived social climate different for directors with different highest academic degrees?

Question 7: Is the perceived social climate different at public and private institutions?

Question 8: Is the perceived social climate different for directors from different types of sponsoring institutions?

Question 9: Is the perceived social climate different for directors whose programs offer degrees in addition to the bachelors?

Question 10: Is the perceived social climate different for directors working under different institutional structures for administration of allied health education?

Constructs of Social Climate

Four constructs of social climate were derived from social climate theory: overall social climate, interpersonal relationship aspects, personal development aspects, and system specific aspects. Overall social climate is a combination of all subordinate aspects. Interpersonal relationship aspects of social climate are concerned with self-group, self-peer, and self-superior relationships. Personal development aspects of social climate are concerned with personal freedom and responsibility, group involvement with organizational function, and urgency imposed by workload. System specific aspects of social climate include communication of system roles and functions, regulation and control imposed by the system, degree

of innovation introduced into the system, and physical environment provided by the system.

Hypotheses

From the 10 research questions and four social climate constructs, 40 hypotheses were developed.

Question 1: Social climate and professional specialty

Hypothesis 1: There is no significant difference in overall perceived social climate among directors with different professional specialties.

Hypothesis 2: There is no significant difference in relationship aspects of social climate among directors with different professional specialties.

Hypothesis 3: There is no significant difference in personal development aspects of perceived social climate among directors with different professional specialties.

Hypothesis 4: There is no significant difference in systematic aspects of perceived social climate among directors with different professional specialties.

Question 2: Social climate and number of faculty

Hypothesis 5: There is no significant relationship between overall perceived social climate and number of faculty supervised.

Hypothesis 6: There is no significant relationship between relationship aspects of perceived social climate and number of faculty supervised.

Hypothesis 7: There is no significant relationship between personal development aspects of perceived social climate and number of faculty supervised.

Hypothesis 8: There is no significant relationship between system effectiveness aspects of perceived social climate and number of faculty supervised.

Question 3: Social climate and experience

Hypothesis 9: There is no significant relationship between overall perceived social climate and years of director experience.

Hypothesis 10: There is no significant relationship between relationship aspects of perceived social climate and years of director experience.

Hypothesis 11: There is no significant relationship between personal development aspects of perceived social climate and years of director experience.

Hypothesis 12: There is no significant relationship between system effectiveness aspects of perceived social climate and years of director experience.

Question 4: Social climate and gender

Hypothesis 13: There is no significant difference in overall perceived social climate between males and females.

Hypothesis 14: There is no significant difference between relationship aspects of perceived social climate between males and females.

Hypothesis 15: There is no significant difference between personal development aspects of the perceived social climate between males and females.

Hypothesis 16: There is no significant difference between system effectiveness aspects of perceived social climate between males and females.

Question 5: Social climate and tenure status

Hypothesis 17: There is no significant difference in overall perceived social climate among directors with different tenure status.

Hypothesis 18: There is no significant difference in relationship aspects of perceived social climate among directors with different tenure status.

Hypothesis 19: There is no significant difference in personal development aspects of perceived social climate among directors with different tenure status.

Hypothesis 20: There is no significant difference in system effectiveness aspects of perceived social climate among directors with different tenure status.

Question 6: Social climate and highest academic degree

Hypothesis 21: There is no significant difference in overall perceived social climate among directors with different highest academic degrees.

Hypothesis 22: There is no significant difference in relationship aspects of perceived social climate among directors with different highest academic degrees.

Hypothesis 23: There is no significant difference in personal development aspects of perceived social climate among directors with different highest academic degrees.

Hypothesis 24: There is no significant difference in system effectiveness aspects of perceived social climate among directors with different highest academic degrees.

Question 7: Social climate and institutional governance

Hypothesis 25: There is no significant difference in overall perceived social climate between directors from public and private institutions.

Hypothesis 26: There is no significant difference in relationship aspects of perceived social climate between directors from public and private institutions.

Hypothesis 27: There is no significant difference in personal development aspects of perceived social climate between directors from public and private institutions.

Hypothesis 28: There is no significant difference in system effectiveness aspects of perceived social climate between directors from public and private institutions.

Question 8: Social climate and type of institution

Hypothesis 29: There is no significant difference in overall perceived social climate among directors with different types of sponsoring institutions.

Hypothesis 30: There is no significant difference in relationship aspects of perceived social climate among directors with different types of sponsoring institutions.

Hypothesis 31: There is no significant difference in personal development aspects of perceived social climate among directors with different types of sponsoring institutions.

Hypothesis 32: There is no significant difference in system effectiveness aspects of social climate among directors with different types of sponsoring institutions.

Question 9: Social climate and degree offerings

Hypothesis 33: There is no significant difference in overall perceived social climate among directors whose programs offer more than the bachelors degree.

Hypothesis 34: There is no significant difference in relationship aspects of perceived social climate among directors whose programs offer more than the bachelors degree.

Hypothesis 35: There is no significant difference in personal development aspects of perceived social climate among directors whose programs offer more than the bachelors degree.

Hypothesis 36: There is no significant difference in system effectiveness aspects of perceived social climate among directors whose programs offer more than the bachelors degree.

Question 10: Social climate and administrative structure

Hypothesis 37: There is no significant difference in overall perceived social climate among directors from institutions with different structures for administering allied health programs.

Hypothesis 38: There is no significant difference in relationship aspects of perceived social climate among directors from institutions with different structures for administering allied health programs.

Hypothesis 39: There is no significant difference in personal development aspects of perceived social climate among directors from institutions with different structures for administering allied health programs.

Hypothesis 40: There is no significant difference in system effectiveness aspects of perceived social climate among

directors from institutions with different structures for administering allied health programs.

Definition of Terms

Arrangement is the variable used to categorize three levels of structure used to organize the group of allied health programs within a college or university as clustered, coordinated, or dissociated. In a clustered arrangement, programs are distinctly located in a single administrative unit within a well-organized academic health center, school, or college. In a coordinated arrangement, programs are indistinctly grouped and loosely supervised through the office of a coordinator. In a dissociated arrangement, programs are dispersed among academic departments or colleges with no direct coordination.

Governance is the variable used to categorize two levels of primary institutional control, either public or private.

Degree is the variable used to categorize three levels of directors as having earned, as their highest credential, the bachelors, masters, or doctors degree.

Experience is the continuous variable that designates the number of years of experience a director has gained in the director role.

Faculty is the continuous variable that designates the number of full time equivalent (FTE) teaching staff a director

supervises. The number of FTE faculty is the theoretical number of full time professors needed to perform the workload carried by all full and part time teaching staff employed in a program, calculated to one decimal place.

Field is the variable used to categorize up to 16 levels of professional specialties of AHE programs and their directors. Directors operate programs in 16 bachelors degree granting programs with the occupational titles of cytotechnologist, diagnostic medical sonographer, emergency medical technician-paramedic, histotechnologist, medical technologist, medical records administrator, nuclear medical technologist, perfusionist, physician assistant, radiation therapy technologist, radiographer, respiratory therapy technologist, and surgeon assistant.

Gender is the variable used to categorize directors as male or female.

Offerings is the variable used to categorize five levels of allied health programs by the combination of degrees they offer besides the bachelors degree, including associate, masters, and doctors.

Tenure is the variable used to categorize three levels of directors as having attained tenure, not yet having attained tenure, or not concerned with tenure.

Type is the variable used to categorize three levels of AHE programs by the class of institution, whether academic health center, university, or four year college.

Significance of the Study

Results of the study should prove useful to program directors, allied health faculty, administrators, and health professionals concerned with planning and conducting undergraduate AHE programs. The study provides program directors an opportunity to compare their own social climate perceptions with those of their peers. They may look at composite data and identify ways in which such perceptions might be improved or constructively used. Administrators may employ the results in order to improve the directors' perceptions. Both allied health leaders and higher education administrators can apply the results to improving allied health education through the concept of high performance programs.

The study adds to the literature on evaluation of the internal environment of allied health peer programs, a part of strategic planning often overlooked by decision makers (Summers, Falleur, and Lingwall, 1993). It identifies relationships and areas of similarity and difference among directors. Leaders of allied health education may use this information to identify groups of directors for cooperative educational enterprises. Social climate may affect retention of

AHE program directors, given the competitive market for practitioners of allied health specialties. Director retention and continued effectiveness in higher education are of considerable importance to the stability and high performance of allied health programs. Individual institutions may repeat the study at subsequent times and compare results with nationally derived norms.

Relationships between perceived social climate and experience or number of faculty would suggest strategies for director training and for modifying allied health unit size and complexity. Discovery of social climate perception differences related to gender may identify social conditions that may make the director's workplace more or less attractive for both males and females. Differences due to tenure or degree would illustrate the contribution of academic status to directors' behaviors. Differences found in perceived social climate associated with organizational characteristics may suggest better administrative structures for allied health programs. Future studies may associate director social climate perceptions with program growth patterns, changes in the quantity and quality of applicants, attrition rates of faculty and students, and faculty research productivity. Differences related to institutional governance or type would permit aspiring directors to select an institution more suited to his

or her social climate requirements. Administrators and faculty considering adding more degree options to programs can use the results to estimate the social climate effect of changing program missions.

Limitations

Limitations on the study are basically those of survey research involving perceptions by respondents. Further limitations are mostly due to time and resource limitations.

1. Perceptions of workplace social climate at individual institutions may not provide an objective description of the composite social climate of allied health administration nationally.

2. Directors' ideal work environments are not determined.

3. No comparisons are made between allied health faculty and directors, between directors and deans, or between directors and other academic middle managers such as department chairs.

4. Interaction of background characteristics may be important, but was not tested.

5. Respondent-nonrespondent bias may affect the results.

6. Selection of procedures for statistical significance testing may affect interpretation of results.

7. The survey method incompletely measures social climate in the selected population, so conclusions regarding social climate may be incorrect.

8. Trends in director perceptions over time are not measured.

CHAPTER II

Survey of Related Literature

A search of literature was conducted in the subject areas of organizational climate, academic department administration, and allied health program administration. A summary of findings applicable to the study is presented.

Origins of Organizational Climate Studies

Durkheim (1873) wrote that industrial society imposes disharmony and misery throughout society through loss of respect for authority. He proposed systematic, scientific, positivist study of social structures with a view toward rebuilding industrial society based upon equality of opportunity and democracy. He emphasized the importance of shared values and beliefs on social phenomena, including deviance resulting when the valued objects of society are not achievable by the anomic individual or groups (Ashley, D., and Orenstein, D. M., 1985).

Dewey (1933) proposed a model of thought processes involved in pragmatic problem solving: identification and conceptualization of the problem, proposing hypotheses or generalizations that provide answers to the problem, deduction of consequences and implications of the hypotheses, and testing of the hypotheses. He differentiated between theoretical and practical problem solving, explaining that solving theoretical

problems requires consistency and universality, whereas solving practical ones requires application of authority, use of compromise, consideration of immediacy, and some level of inconsistency.

Lewin (1935), in his psychological field theory, discussed environmental valences through which people satisfy needs. Murray (1938) proposed the expression environmental press for the concept that individual behavior is influenced by forces in the environment. Brunswick (1957) proposed that relations among environmental variables with respect to a desired outcome are uncertain, from the perspective of a behavioral organism. Barker (1963) developed the idea that whereas environment shapes behavior, behavior also shapes environment. Pavlov's experiments with conditioned reflexes (Pavlov, I. P., 1926) illustrated the value which environmental objects may acquire to behavioral organisms. Behavioral psychologists, such as Skinner (1938), held that social environment shapes human behavior through operant conditioning, which involves reinforcers.

Taylor (1911) proposed the concept of scientific management to increasing quality and productivity. He introduced time and motion studies that were used to simplify industrial processes for individual workers.

Administrative management theorists, typified by Urwick and Gulick (1937), proposed the concept of division of labor, whereby workers' jobs were narrowly defined within the context of overall industrial processes. An extension of this principle led to the organizing principle called homogeneity of positions. This principle was used to group workers into departments based upon similarity of skills, technology, geography, materials used, or client base. Studies by Roethlisberger & Dickson (1939) and Follett (1941) held that workers' response to human engineering in the workplace was strongly influenced by group norms, not always resulting in outcomes envisioned by management. Likert (1955) proposed that human relations aspects of organizations are subject to scientific study. He classified organizations by the degree of participation permitted in management functions by workers, wherein system I organizations were nonparticipatory and system IV organizations were highly participatory. His studies showed that highest consistent levels of output quality and productivity resulted when workers had high levels of participation in planning and decision making, and when management and labor shared mutual trust and confidence. He called these high performance organizations (Likert, 1967). Peters (1982) found high degrees of intercommunication and trust in organizations he identified as having high

performance. Miller (1991) proposed that principles of total quality management be applied to administration of institutions of higher education in order to improve utilization of human resources and to redefine institutional quality.

Pace and Stern (1958) developed the logic of using perceptions of organizational members as measurements of organizational climate. Blau and Scott (1962) defined organizational climate as perceptions that members of an organization hold about their organizational environment. They proposed that organizational climate is what enables individuals to distinguish one organization from another.

Halpin and Croft (1962) mapped the organizational climate of elementary schools and developed the Organizational Climate Description Questionnaire (OCDQ) to comprehensively measure school climates. They classified school climates as open, autonomous, controlled, familiar, paternal, and closed based upon six leadership climate dimensions (supportive, directive, restrictive, collegial, intimate, disengaged) that they perceived as key components of organizational climate. Open climates displayed cooperation and respect within and among faculty and administrators, while closed climates displayed apathetic, unsympathetic and unconcerned teachers and highly directive principals. School climates perceived by their

members as open demonstrated higher levels of student achievement and employee satisfaction.

Pace and Stern (1958) assessed organizational climate using the Organizational Climate Index (OCI), an instrument based upon the concept of need-press, a desire for expression of behavior that will satisfy expectations. At least thirty factors that contribute to organizational climate have been identified in the OCI, but these have been further factored into personal and organizational factors (Stern, 1970). A model of relationships between organizational climate, organizational culture, and organizational effectiveness was developed by Turnipseed (1988).

Moos (1976) identified three interrelated constructs involved in behavior settings: interpersonal relationships, personal growth potential, and system effectiveness. He also identified several conceptual dimensions within each. He included physical environment as a component of system effectiveness. He developed social climate scales for measuring social climate in organizational settings that provide direct human services. His Work Environment Scale (WES) uses ten conceptual dimensions, categorized into three domains (relationship, personal growth/ goal orientation, and system maintenance/ system change). It measures employee perceptions of organizational social climate. Using the WES, Spinks (1989)

found that nurses in a special baby care unit were frustrated by excessive autonomy. Docker (1989) showed that the WES could distinguish between work environments. He used real (R) and ideal (I) forms of the instrument to study 599 Australian teachers. He found that climates in elementary schools had more favorable school environments than high schools, district schools, and secondary colleges on nearly all of the WES dimensions. Pretty (1991) used the WES to measure the psycho social climate and sense of community in managers and nonmanagers in a Canadian public utility company. She found that the WES predicted differences among males and females, managers and nonmanagers.

Academic Department Administration

Hill and French (1967) found that power of academic department chairs was weakly correlated with perceived achievement of departmental goals. They found that interpersonal influence and being an inspiration to others was perceived to be the power factor that gave them greatest satisfaction.

Jennerich (1981) proposed that department chairs perform common functions and therefore need a common set of administrative skills for accomplishing those functions. In a study of 218 department chairs, he concluded that a universal set of competencies is needed by department chairs regardless

of discipline or type of institution, and that they have more in common with each other than with their respective faculties, regarding their daily duties.

Bolding (1982) discussed the importance of organizational climate in the higher educational setting. Sandefur and Oglesby (1982) examined the social, professional, and administrative team relationships between the academic dean and the department chair. They discovered that organizational structure influenced this important relationship.

Bennett (1983) has shown that the chair may perform 97 activities and act in 28 roles. Knight and Holen (1985) discussed the importance of the department chair in academic organizations, but asserted that the position had received insufficient attention from educational researchers. In a survey of 458 department chairs in 65 colleges and universities, they found that department chairs considered most effective scored high in both consideration and in structure initiation.

Hengst (1984) proposed a holistic approach to measuring quality among universities. He proposed measurements of clarity of purpose, degree of departmental autonomy, staff description, and available resource as estimates of institutional quality. He proposed use of reputational studies of individual academic departments, which would include perceptions of institutional

clarity of purpose drawn from societal leaders, faculty, and students .

Bostrom (1984), studying the relationship between roles expected of the department chair and stress leading to burnout, found that chairs with higher useful productivity were less prone to burnout. Seiter (1984) found a positive relationship between leadership behavior of community college chairs, as perceived by faculty, and faculty educational effectiveness. Gmelch and Burns (1991) studied stress experienced by academic department chairs. They classified departments by subject matter of disciplines, as combinations of hard or soft, applied or pure, and life or nonlife. They found little difference among stress levels among levels, except for professional identity factors. Gender appeared to make no difference in stress level. They found that the most stress producing conditions for chairs they studied involved conflict mediation.

Seedorf and Gmelch (1989) compared academic chairs to managers in business organizations. They described the time utilization of both groups and found that academic chairs are frustrated by time pressure resulting from an inability to perform necessary administrative work without interruption.

Johnson (1989) found that college organizational structure, administrative style, communication problems, and environmental problems contributed to faculty burnout.

Gardiner (1987) examined the structure of collaborative research groups among research universities. He found that the academic department remains the base of operations, but the interdisciplinary research group is becoming the most effective workplace in the university.

A study of personal fulfillment in department chairs among colleges and universities in Puerto Rico showed that their greatest unfulfilled need was security. Differences were identified between the personal fulfillment perceptions of department chairs between private sector and public sector faculty regarding collegiality and participative decision making (Burgos-Sasscer, 1988).

Spicer and Staton-Spicer (1988) examined the socialization process of new department chairs. They categorized communication dimensions used as new chairs established relationships and discovered strategies. O'Reilly and Kellams (1988) studied academic chairs as members of a professional community. They proposed proactive socialization of potential academic administrators through opportunities for mentorship and behavior modeling from experienced department heads.

Hart and Naylor (1992), in studying social relationships in an academic department which included clinical faculty, found that academic department culture differed from

practitioner orientation. This difference created a conflict between academic and clinical faculty over values.

Stresses, dilemmas, and satisfactions of the department chair role were discussed by Creswell et al. (1990). The Center for the Study of the Department Chair (CSDC) factor analyzed the roles of academic department chairs (CSDC Newsletter, 1992). The roles of leader, scholar, faculty developer, and manager emerged.

Allied Health Program Administration

The current shortage of allied health manpower (Gupta, 1992) has lead the Association of Schools of Allied Health to set as its first goal the strengthening of allied health academic units and programs (Strategic Planning Session, 1992). Allied health leadership has asserted that more cooperation is needed among allied health programs and with associated disciplines. Allied health programs are described as poorly linked, often controlled by forces outside allied health (Shugars, 1991). Strengthening allied health programs requires its leadership to cooperate in planning and anticipating change (DiBiaggio, 1992).

Pyne (1975) cited the importance of organizational pattern on the relative importance an institution gives to allied health education. Organizational arrangements for allied health programs have been described as a source of conflict within

colleges and universities (Vogt & Ducanis, 1977), and several organizational models have been tried. The workplace environment of the AHE director has been described as extremely turbulent and chaotic (Selker & Vogt, 1978).

Gunne and Wise (1980) studied the organizational patterns for schools of allied health professions in academic health centers at colleges and universities. They identified three organizational models most frequently used for structuring AHE programs in health science or academic health centers, based upon the structural variables of complexity, stratification, formalization, and centralization. They identified the models as distinct, indistinct, and dispersed. The distinct model administratively grouped allied health programs into well-organized schools of allied health. The indistinct model had AHE programs scattered throughout the administrative structure of the health center, but loosely associated and coordinated from a single office. The dispersed model had AHE programs scattered throughout the administrative structure of the academic health center, with no direct coordination among them. They used numbers of academic degrees awarded by departments as a measure of complexity. Their study measured did not evaluate the effects of degree offerings per program on organizational complexity. Seigliano & Seigliano (1981) considered

organizational arrangements to be politically derived designs for success or failure of allied health programs.

King and Dietrich (1980) proposed that the organizational arrangement of an allied health unit within the university follows a cyclical pattern of political conflict associated with distinct developmental stages the unit traverses as it matures. They predicted that middle managers in allied health adapt to their organizations over a period of five years, during which they have little impact on resolution of the conflicts inherent in their organizations. After about five years, directors develop into local outsiders who de-emphasize organizational change but seek the status of organizational dependability. They also studied biographic profiles of allied health chairs in order to discover relationships between individual director backgrounds and affective outcomes. Chairs with high administrative influence appeared to experience less stress. Females outnumbered males as AHE department chairs by a ratio of 2:1, although department chairs in higher education generally were predominantly male. They found that male and female allied health chairs had similar salaries, educational experience, and scholarly productivity. Most had permanent chair appointments, had little interest in research and scholarly activity, and had earned a masters degree. Both groups typically entered teaching after an average 8 years'

clinical experience. Most wanted to remain as department chair or to return to teaching, rather than to enter academic administration or return to clinical practice. The authors contended that the relationship of sex differences to the self-perceived role of the allied health chair needs further examination. They also recommended further study of the organizational climate of AHE programs.

A study of organizational climate and burnout in nursing faculty showed that collegial support, positive feedback from the dean, and a participatory management style are more important for protecting faculty from burnout than attention to workload (Dick, 1986).

Littlefield (1989) described the change process within an academic nursing department as it changed its administrative structure to a more participative arrangement.

Rines (1990) confirmed the functional similarity of administrators termed allied health department chairs and allied health program directors.

In a study of job satisfaction of AHE department chairs Selker, Rozier, & Vogt (1983), 68% of respondents indicated that they had earned a doctoral degree, and 81 said they had received tenure. Allied health department chairs appeared more satisfied with their jobs when leadership, academic, and administrative opportunities were under their own control. AHE

faculties were twice as likely to have a masters degree as their highest academic credential as to have a bachelors or doctors degree. About one in four reported to have achieved tenure. Hiller and Ritvo (1991) proposed that tenure for allied health faculty should not be granted until the individual had earned a terminal degree.

Flanigan et al. (1988) found that 25.6% of surveyed AHE faculty, including AHE directors, had earned doctoral degrees. Not surprisingly, they found that research productivity by AHE faculty was directly related to level of attained academic degree and tenure status.

Drennan (1973) studied AHE chairs' rankings of administrative duties with respect to their daily importance. Chairs gave the highest ratings to representing faculty to central administration, conducting regular meetings for coordinators, reporting department progress to an administrative superior, signing all expenditure requisitions, and disseminating communications from central administration to the department.

Rines (1990) conducted a Delphi study of competencies required of directors of allied health education programs. Her results confirmed an earlier study of the same nature, but identified additional competencies and found differences in rankings.

According to McKibbin, Allen, and Shawver (1978), the decision making process regarding space allocations for allied health programs should be affected by the number of faculty involved in the unit. They contended that many planners and administrators showed little sensitivity to environmental influences on employee behavior.

Summary of Literature Review

Psychologists and social scientists believe that environment strongly influences human behavior. Organizational theorists believe that physical and social environmental factors influence quality and productivity of workers. Management studies report that highly skilled workers are more productive and quality conscious when they intercommunicate effectively with all parts of their organizations. Academic department chairs have complex and conflicting roles, but strongly influence program quality. Chairs typically have little preparation for their administrative roles, but could benefit from participation in a community of academic administrators. Allied health education program directors are a population of individuals who profoundly affect the performance level of their academic units. Medical and allied health leaders feel that there is a need to assess and to improve the performance of allied health education. No studies of the organizational social climate of AHE directors were found.

CHAPTER III

Research Design and Procedure

This study of the social climate perceived by directors of allied health educational (AHE) programs involved the detection of similarities, differences, and relationships in workplace social climate perceptions of allied health educational (AHE) program directors when grouped by selected demographic characteristics. Mean social climate measurements were the dependent variables, and demographic characteristics were the independent variables.

Survey design was employed (Alreck & Settle, 1985), involving analysis of variance and linear regression among means. Computerized statistical methods were used for multiple means comparisons of WES scores between two or more unmatched demographic groups. The general linear model (GLM) with Scheffe's test was the method used to detect significant differences (SAS, 1985). The stepwise linear regression method was used to detect significant linear regression of continuous variables (SAS, 1985). A confidence limit of $p \leq 0.05$ was chosen for testing significance of difference or regression. Because of the high degree of error involved in unmatched groups, Scheffe's test rather than Tukey's was employed for means comparisons within the GLM procedure.

Background characteristics included eight categorical and

two continuous variables that were unevenly distributed in the test population: up to 16 levels of allied health specialty field, two levels of gender, three levels of tenure status, four levels of highest academic degree, two levels of institutional governance, four levels of institutional type, five levels of program degree offerings, and four levels of administrative arrangement. Continuous variables included number of full time equivalent faculty supervised and number of years of experience as director.

Population

The test population included directors of allied health educational programs accredited by the Committee for Allied Health Education Accreditation (CAHEA) in 230 public and private institutions of higher education which awarded bachelors degrees in 1992. The population was identified through the American Medical Association (AMA) Medical Education Data Services. A lease rental agreement was established between the investigator and the AMA (Appendix A) for research use of the electronic file of names, addresses, and program identification.

The population included programs offering degrees under the occupational titles of cytotechnologist, diagnostic medical sonographer, emergency medical technician-paramedic, histotechnologist, medical technologist, medical records

administrator, nuclear medical technologist, occupational therapist, ophthalmic medical technologist, perfusionist, physician assistant, radiation therapy technologist, radiographer, respiratory therapy technologist, and surgeon assistant.

Although 422 programs were listed in the AMA file, three individuals on the list directed more than one program, so the list included 419 individual program directors. Nine more names were removed from the population of program directors when it was determined that the associated programs were incorrectly classified. Six more programs were currently inactive. The final population size estimate was 410. The minimum response rate was set at 51%, 209 directors.

Survey Instrument

Instrument selection

Criteria for selection of the survey instrument included ability to measure perceived social climate in the most comprehensive manner with adequate validity and reliability, applicability, overall appeal, availability, and low overall cost. Since the survey would include only AHE directors at each institution, an instrument must be applicable to a narrow social climate setting. The instrument should appeal to the directors as being reputable and worthy of their effort, as well as easy to read and answer. The instrument should be

potentially self-scoring and available at low cost for further applications this study might cultivate. Small size to minimize mailing costs was also a consideration. The Work Environment Scale (WES) of Moos & Insel, (1974) was selected because it met these criteria.

Other instruments considered were The Organizational Climate Index (Pace & Stern, 1958), The Managerial Mirror (Sashkin, 1990), and The Corporate Culture Survey (Glaser, 1983). The WES was selected in favor of the OCI because it conceptually included physical environment as a dimension, whereas the OCI does not. The Managerial Mirror was rejected because it considered only the social climate effects generated by management, making it less applicable to colleges and universities where academic governance must also be considered. The Corporate Culture Survey was rejected because it was designed to promote understanding and awareness of culture more than to identify social climate items suitable for modification through intervention.

Work Environment Scale: Operational Variables

The WES survey instrument was designed to measure three domains that describe social climates. Three or four measurable dimensions classify components of each domain. The interpersonal relationships construct corresponds to the relationship WES domain, with the measurable dimensions of

involvement, peer cohesion, and supervisor support. The individual growth potential construct corresponds to the personal growth/ goal orientation WES domain, which includes the measurable dimensions of autonomy, task orientation, and work pressure. The system effectiveness construct corresponds to the system maintenance/ system change WES domain, which includes the measurable dimensions of clarity, control, innovation, and physical comfort. The total WES score is the sum of all WES dimension scores, corresponding to the construct of a total overall measurement of perceived workplace social climate (Moos, 1976).

Validity and reliability

Validity and reliability for the WES instrument have been established in a variety of population settings (Moos, Clayton, & Max, 1979). Its authors and various investigators have measured construct, content, external, face, and predictive validity. Normative evaluations have found the WES to be within acceptable limits of internal validity.

Normative data from 1,442 employees in representative general work groups and 1,607 employees in a variety of health care work groups was used to establish psychometric statistics. Regarding internal consistencies, Cronbach's alpha for each of the 10 WES subscales ranged from 0.69 to 0.86. Test-retest reliability varied from 0.69 for the clarity sub scale to 0.83

for involvement. The stability coefficient after 12 months for each person averaged 0.61, with 75 of the 90 item stabilities 0.50 or above, and 46 of these 0.70 or above (Moos, 1981).

Collateral studies have been conducted with the WES, and it has repeatedly discriminated successfully between and among work environments. Seiter (1984) found a positive correlation among the work environments of department chairs in community colleges, leadership behavior of the chair as perceived by faculty, and educational effectiveness using the WES with the LBDQ and her own effectiveness instrument. Lowry (1987) used the WES and four other instruments concurrently to study 274 staff employees at the University of Utah to assess personal and environmental impacts on work performance. Savicki (1987) used the WES and MBI concurrently to study environmental effects on burnout in 94 mental health professionals.

Data Collection and Handling

Survey procedure

The 90-item Work Environment Scale (WES) questionnaire with its answer sheet and a demographic information questionnaire developed by the investigator were used in a mailed survey of the population. Copies of the WES were purchased from the publisher. A permission agreement with Consulting Psychologists Press, publisher of the WES

instrument, may be found in Appendix A. A demographic questionnaire was developed by the researcher, designed to elicit information about personal and organizational characteristics. Respondents were asked to complete the WES answer sheet and demographic questionnaire and to provide narrative comment about the favorableness of their workplace social climate toward allied health education.

The investigator generated mailing labels using AMA data. Surveys were sent by first class mail. Respondent anonymity was assured through the use of identical, preprinted answer sheets and business reply envelopes. The first mailing was November 12, 1992, followed by reminders on December 1, 1992, and January 4, 1993. Copies of cover letters can be found in Appendix B. Instructions, demographic forms, and sample questions from the WES instrument can be found in Appendix C. Only returns received by January 31, 1993, were included in the study.

Data encoding and scoring

Upon receipt, corresponding demographic forms and answer sheets were separated, but marked with identical, sequential numbers. Most data had been directly encoded by respondents onto general purpose answer sheets. Upon return, answer sheet markings were checked for darkness, fullness, and duplicate marks. Some markings were darkened to facilitate optical

scanning. Duplicate marks were treated as invalid data, but invalid replies did not invalidate an answer sheet.

Demographic items were read from questionnaires and manually encoded onto the corresponding general purpose answer sheets by the investigator. Some respondents did not provide demographic information. In 11 instances, some missing demographic information was deduced from postmarks.

The encoded answer sheets were optically scanned into an electronic data file on a minicomputer, with each respondent's replies comprising one record. The researcher transcribed written comments to a computer text file, deleting information which might identify a respondent. Original answer sheets and demographic forms were saved for later reference.

Scoring involved electronic comparison of respondent replies with a scoring template developed by the investigator from the Work Environment Scale interpretive report form (Moos, 1989). Each WES item had been evaluated by the respondent as true or false, or was not answered. If a respondent's answer corresponded to the template answer, the reply was given a score of one; otherwise it was scored a zero. An electronic scoring template was prepared in the form of a data file. The template was electronically compared to respondent data through use of a computer program written by the researcher in the Statistical Analysis System (SAS) application language, as

shown in Appendix D. The output file contained total WES score, 10 WES dimension scores, three WES domain scores, and demographic category codes for each respondent. This score file was saved onto magnetic media and subsequently used for statistical analysis.

Statistical Analysis

A SAS computer program for statistical analysis was developed by the investigator as shown in Appendix D. The score file developed as a result of the data analysis program was used with the statistical analysis program for calculation of frequencies, means, standard deviations, and multiple means comparisons using the general linear model (GLM), including Scheffe's test. Correlations among continuous variables were calculated using stepwise linear regression analyses. Significant differences and regressions were identified and marked. Summary data tables were developed from the program output.

Multiple means comparison

The GLM multiple means comparison procedure is a step-down, multiple stage statistical test employing the Ryan, Einot, Gabriel, & Welsch multiple *F* test (REGWQ and REGWF) on all main effect means in the means statement (SAS, 1985). These tests evaluate the means of dependent variables with regard to levels of the independent variable in the model, dependents =

independents. The model calculates corrected total sum of squares, indicating the contributions of the model itself and of error toward this total sum of squares. The subsequently derived mean square is used to calculate the F ratio, which was then tested for significance. The probability (PR > F) value indicated whether the function tested was significantly different from zero. The development of F ratios and PR > F tests are repeated in the subsequent levels of analysis and ultimately resulted in a p significance value. The R-Square value measures the degree of error contributed by the model. The root mean square (Root MSE) is an estimate of the standard deviation of the dependent variable error term. The degree of freedom (DF) for each step is calculated, along with the coefficient of variation and the sample mean of the dependent variable. The process is repeated using the type I sum of squares (SS), which measures the model for each variable as it is added to the model. Type III SS is the resultant when the last variable is added to the model. Both type I and type III SS are tested for probability of significance, the p value.

Scheffe's test

The Scheffe test was used ex post facto to identify means that showed significant differences in the GLM means test. Use of Scheffe's test reduced the degree of type I error for such comparisons compared to the GLM procedure, although it

increased the likelihood of type II error. Scheffe's test is a multiple means comparison procedure which establishes critical parameters for F values and minimum significant differences between means based upon the harmonic mean of group sizes, and which then identifies pairs of means with differences significant at alpha $\leq$ 0.05.

Stepwise linear regression

Stepwise linear regression was used to test hypotheses involving continuous variables using the model, dependents = independents. WES scores were the dependent variables. Number of faculty and years of experience were the continuous independent variables. The stepwise procedure enters variables into the model one by one if they meet the minimum entry level of significance, SLENTRY. They remain in the model only if the F ratio meets another minimum level of significance, SLSTAY (SAS, 1985). For this analysis, SLENTRY and SLSTAY were both set at 0.1500. Variables which remain in the model after stepwise comparisons, all having met the SLSTAY level test when the process ends, are then tested for significance of the F-ratio. As in the GLM procedure, degree of freedom (DF) is figured for each level of analysis in order to calculate error contributed by the independent variable. The total sum of squares is calculated based upon sources of variation contributed by the regression model and by error. Mean squares

are used to calculate the F-ratio, which is then used for significance testing. Type II sum of squares (SS) is added to the error SS if the variable was removed from the model. The intercept indicates variables entered into the model. B-values are the corresponding estimated regression coefficients. Bounds indicate the number of conditions for variables in the correlation matrix of the model (SAS, 1985).

Summary of Research Design and Procedure

The entire population of AHE program directors listed by the Medical Education Data Service of the American Medical Association as granting bachelors degrees in 1992 was surveyed by mail. The survey included the Work Environment Scale questionnaire, a computer scorable answer sheet, and a demographic form. Directors completed and returned the forms. Results were analyzed statistically to identify similarities, differences, and relationships between and among mean social climate scores for unmatched levels within demographic groups selected by the investigator. Differences and relationships were to be determined by multiple means comparison analysis of variance and by linear regression.

CHAPTER IV

Results of the Study

The problem addressed in this study was: What similarities, differences, and relationships may be identified in workplace social climate perceptions of allied health educational (AHE) program directors when grouped by selected demographic characteristics? The study is based upon organizational climate theory, which deals with the composite of conditions contributed by, and subjectively perceived by, members of an organization. Organizational social climate includes the social consequences of an organization's unique structure, its meaning, and its continuity of purpose (Moos, 1976). The consequences of social climate are expected to be reflected in the performance level of an organization. Differences and relationships among directors' perceptions of their workplace social climate are expected to provide insight into background factors which lead to high performance in allied health education.

The study utilized workplace social climate perception scores obtained by allied health educational (AHE) program directors on the Work Environment Scale (WES) survey instrument. WES mean scores were compared with respect to directors' individual and organizational (demographic)

characteristics using multiple means comparison. Correlation was tested using stepwise linear regression.

Due to the large volume of data involved with this study, and upon recommendation of the research committee, this report includes only summary information. Complete data is available.

Respondent Information

There were 238 usable replies from a national survey of 410 directors from American AHE programs that granted bachelors degrees in 1992, a 58% response rate. Respondents included 12 of the 16 allied health specialty fields found in the population. The least represented specialty was respiratory therapy, with 46% of programs in that specialty responding. The highest representation was from radiation therapy technology, with 75% of all programs responding. There were no respondents from histotechnologist, medical assistant, ophthalmic medical technologist, or surgeon assistant programs.

The specialty of medical technology included 82 respondents and comprised 34.5% of the respondents. The second largest specialty group responding was occupational therapy, comprising 14.3%. Health information management (medical records administration) made up 12.2%, nuclear medicine technology 8.8%, respiratory therapy 7.6%, and physician assistant 6.7%. Directors from cytotechnology, radiation therapy, cardiopulmonary perfusion, diagnostic medical

sonographer and emergency medical technician programs together made up the remaining 10.5%.

Nearly 57% of respondents reported three or less full time equivalent faculty in their unit, and approximately 10% reported 10 or more faculty. The average program director reportedly supervised 4.1 faculty.

About 45% of respondents reported five years or less experience as director. Approximately 30% reported more than 10 years Experience. The average program director reportedly held the position for 8.1 years.

Individual background characteristics of respondents are summarized in Table 1. Female directors comprised 67.6% of the population. Tenured directors included 48.9%, and nontenured 29.1%. Tenure did not apply for 22%. The highest academic degree reportedly earned by 28.7% was the doctors, while 63.7% said they had earned the masters, and 7.2% the bachelors.

Table 1

Background Profile Reported by Respondents

Characteristic	Number of Respondents	Percent
Gender		
Female	161	67.6 %
Male	77	32.4 %
Tenure Status		
Tenured	111	48.9 %
Nontenured	66	29.1 %
Tenure not applicable	50	22.0 %
Highest Degree		
No bachelors degree	1	0.4 %
Bachelors degree	17	7.2 %
Masters degree	151	63.7 %
Doctoral degree	68	28.7 %

Note: 238 directors responded to the survey. Some respondents did not answer all items on the questionnaire.

Frequencies of reported institutional characteristics are listed in Table 2. Public institutions sponsored 71.5% of responding programs; 28.5% were private. Sponsoring institutions were: academic health centers, 37.5%; universities, 46.4%; four year colleges, 13.1%, and other sponsors, 3%. Programs offering only bachelors degrees comprised 61.2% of the respondents. Those offering associate

and bachelors degrees only included 10.1% of the programs. Masters and bachelors degrees only were offered by 14.8%. Bachelors, masters, and doctors degrees were offered by 6.7% of respondent programs, while 7.2% of programs reported offering all four degrees (associate, bachelors, masters, and doctors). Administrative arrangements reported by respondents included 69.1% clustered, 9.1% coordinated, 17% dissociated, and 4.8% with some other arrangement.

Table 2

Organizational Profile Reported by Respondents

Characteristic	Number of Respondents	Percent
Institutional Type		
Academic health center	89	37.5 %
University	110	46.4 %
Four-year college	31	13.1 %
Other type of institution	7	3.0 %
Institutional Governance		
Public	168	71.5 %
Private	67	28.5 %
Degrees Offered by Program		
Bachelors only	145	61.2 %
Associate & Bachelors	24	10.1 %
Bachelors & Masters	35	14.8 %
Bachelors, Masters, & Doctors	16	6.7 %
Associate, Bachelors, Masters, & Doctors	17	7.2 %
Administrative Arrangement		
Clustered	159	69.1 %
Coordinated	21	9.1 %
Dissociated	39	17.0 %
Other arrangement	11	4.8 %

Note: 238 directors responded to the survey. Some respondents did not answer all items on the questionnaire.

Hypothesis Testing Criteria

Null Hypotheses were generally accepted with values of $p > 0.05$. Null Hypotheses were generally rejected with the reliability factor $p \leq 0.05$ for stepwise linear regression tests. Hypotheses were also rejected if $p \leq 0.05$ for both the general linear model (GLM) and Scheffe's multiple means comparison tests. Since the Scheffe test increases the probability of type II error, decisions to accept the null hypothesis were evaluated based upon data trends in related findings. When reliability factor values fell between $p = 0.05$ and $p = 0.06$, and when the GLM procedure indicated significance and the Scheffe procedure did not, an alternative decision was considered.

Hypothesis Decisions and Data Tables

Hypothesis decisions and related summary data tables are included here. Tables showing comparisons not directly involved with hypothesis decisions are included in Appendix E, where they are identified as Table E-1 through Table E-33.

Question 1: Social climate and professional specialty

Hypothesis 1 stated that there is no significant difference in overall perceived social climate among directors with different professional specialties.

Decision 1: Since no significant differences were detected among means of total WES scores by multiple means comparison, as summarized in Table 3, the hypothesis was accepted.

Table 3

Means Comparisons: Total Work Environment Scale Scores by Specialty Field

Source	DF	Sum of Squares	Mean Square	F-value
Model	11	1353.26210528	123.02382775	0.60
Error	226	46027.41436531	203.66112551	p-value
Corrected	237	47380.67647059		0.8245
R-Square	C.V.	Root MSE	Mean	
0.028561	24.4194	14.27098895	58.44117647	
Source	DF	Type I SS	F-value	p-value
FLD	11	1353.26210528	0.60	0.8245
Source	DF	Type III SS	F-value	p-value
FLD	11	1353.26210528	0.60	0.8245

Note: FLD = allied health specialty field. The p-values indicate the probability that differences among levels within a demographic category are significant. Significance at $p \leq 0.05$ by general linear model is indicated by **. Significance at $p \leq 0.05$ confirmed by Scheffe test is indicated by ***.

Hypothesis 2 stated that there is no significant difference in relationship aspects of social climate among directors with different professional specialties.

Decision 2: Since no significant differences were detected among means of relationship domain WES scores by multiple means comparison, as summarized in Table 4, the hypothesis was accepted.

Table 4

Significance Tests for the Relationship Domain Score Comparisons by Specialty Field

Score Category	p-value
Relationship Domain	0.3742
Involvement dimension	0.1069
Peer Cohesion dimension	0.8033
Supervisor Support dimension	0.4224

Note. The p-values indicate the probability that differences among levels within a demographic category are significant. Significance at $p \leq 0.05$ by general linear model is indicated by **. Significance at $p \leq 0.05$ confirmed by Scheffe's test is indicated by ***.

Hypothesis 3 stated that there is no significant difference in personal development aspects of perceived social climate among directors with different professional specialties.

Decision 3: Since no significant differences were detected among means of personal growth/ goal orientation domain WES scores by multiple means comparison, as summarized in Table 5, the hypothesis was accepted.

Table 5

Significance Tests for the Personal Growth/Goal Orientation Domain Score Comparisons by Specialty Field

Score Category	p-value
Personal Growth/ Goal Orientation Domain	0.6109
Autonomy dimension	0.1854
Task orientation dimension	0.7980
Work pressure dimension	0.9301

Note: The p-values indicate the probability that differences among levels within a demographic category are significant. Significance at $p \leq 0.05$ by general linear model is indicated by **. Significance at $p \leq 0.05$ confirmed by Scheffe's test is indicated by ***.

Hypothesis 4 stated that there is no significant difference in system effectiveness aspects of perceived social climate among directors with different professional specialties.

Decision 4: Since no significant differences were detected among means of system maintenance/ system change domain scores by multiple means comparison, as summarized in Table 6, the hypothesis was accepted.

Table 6

Significance Tests for System Maintenance/ System Change Domain Score Comparisons by Specialty Field

Score Category	p-value
System Maintenance/ System Change Domain	0.8516
Clarity dimension	0.8287
Control dimension	0.1799
Innovation dimension	0.8881
Physical Comfort dimension	0.5120

Note: The p-values indicate the probability that differences among levels within a demographic category are significant. Significance at $p \leq 0.05$ by general linear model is indicated by **. Significance at $p \leq 0.05$ confirmed by Scheffe's test is indicated by ***.

Question 2: Social climate and number of faculty

Hypothesis 5 stated that there is no significant relationship between overall perceived social climate and number of faculty supervised.

Decision 5: Since total WES scores regressed with number of faculty supervised, as shown in Table 7, the hypothesis was rejected.

Table 7

Summary of Stepwise Regression Total Work Environment Scale Score with Number of Faculty Supervised

Step	Variable Entered	Variable Removed	Number In	Partial R2	Model R2	C(P)
1	FTE		1	0.0274	0.0274	2.57039

Step	Variable Entered	Variable Removed	F-value	p-value
1	FTE		6.2850	0.0129*

Note 1: FTE = number of full time equivalent faculty supervised. The p-values indicate the probability that correlations among levels within a demographic category are significant. Significance at $p \leq 0.05$ by stepwise linear regression is indicated by *.

Note 2: Regression = I + B. Intercept (I) = 56.88144970. B-value = 0.39837687.

Hypothesis 6 stated that there is no significant relationship between relationship aspects of perceived social climate and number of faculty supervised.

Decision 6: Relationship domain overall scores, peer cohesion dimension scores, and supervisor support dimension scores significantly regressed with number of faculty supervised, as summarized in Table E-1, Table E-2, and Table E-3. Since significant regression was detected between relationship domain WES scores and number of faculty supervised, as summarized in Table 8, the hypothesis was rejected.

Table 8

Significance Tests for the Relationship Domain Score Regression with Number of Faculty Supervised

Score Category	Intercept (I)	B-value	p-value
Relationship Domain	18.72186197	0.17089397	0.0128*
Involvement	--	--	0.0653
Peer Cohesion	5.82072281	0.05532342	0.0336*
Supervisor Support	5.88859793	0.07011743	0.0116*

Note: The p-values indicate the probability that correlations among levels within a demographic category are significant. Significance at $p \leq 0.05$ by stepwise linear regression is indicated by *. Regression = I + B.

Hypothesis 7 stated that there is no significant relationship between personal development aspects of perceived social climate and number of faculty supervised.

Decision 7: Regression information regarding overall personal growth/ goal orientation domain scores and number of faculty supervised is shown in Table E-4. Since significant regression was found for personal growth/ goal orientation domain WES scores, as summarized in Table 9, the hypothesis was rejected.

Table 9

Significance Tests for Personal Growth/ Goal Orientation Domain Score Regression with Number of Faculty Supervised

Score Category	Intercept (I)	B-value	p-value
Personal Growth/ Goal Orientation Domain	19.59507392	0.09710477	0.0250*
Autonomy	6.85897177	0.05251506	0.0103*
Task Orientation	6.13740019	0.05936199	0.0157*
Work Pressure	--	--	>0.1500

Note. The p-values indicate the probability that differences or correlations among levels within a demographic category are significant. Significance at $p \leq 0.05$ by stepwise linear regression is indicated by *. Regression = I + B.

Hypothesis 8 stated that there is no significant relationship between system effectiveness aspects of perceived social climate and number of faculty supervised.

Decision 8: Regression information regarding Innovation dimension scores with number of faculty supervised is located in Table E-5. Since significant regression was detected with the Innovation dimension scores of the system maintenance/ system change WES domain and number of faculty supervised, as summarized in Table 10, the hypothesis was rejected.

Table 10

Significance Tests for System Maintenance/ System Change Domain Score Regression with Number of Faculty Supervised

Score Category	Intercept (I)	B-value	p-value
System Maintenance/			
System Change Domain	17.55842676	0.13341278	0.0872
Clarity	5.11307307	0.05297556	0.0921
Control	--	--	>0.1500
Innovation	4.85510772	0.09763539	0.0031*
Physical Comfort	--	--	>0.1500

Note: The p-values indicate the probability that correlations among levels within a demographic category are significant. Significance at $p \leq 0.05$ by stepwise linear regression is indicated by *. Regression = I + B.

Question 3: Social climate and experience

Hypothesis 9 stated that there is no significant relationship between overall perceived social climate and years of director experience.

Decision 9: Since total WES scores did not meet the $p \leq 0.15$ SLENTRY level of confidence for entry into the stepwise linear regression model, the hypothesis was accepted.

Hypothesis 10 stated that there is no significant relationship between relationship aspects of perceived social climate and years of director experience.

Decision 10: Since relationship domain WES scores did not meet the $p \leq 0.15$ SLENTRY level of confidence for entry into

the stepwise linear regression model, the hypothesis was accepted.

Hypothesis 11 stated that there is no significant relationship between personal development aspects of perceived social climate and years of director experience.

Decision 11: Since personal growth/ goal orientation WES scores did not meet the $p \leq 0.15$ SLENTRY level of confidence for entry into the stepwise linear regression model, the hypothesis was accepted.

Hypothesis 12 stated that there is no significant relationship between system effectiveness aspects of perceived social climate and years of director experience.

Decision 12: Clarity dimension scores within the system maintenance/ system change WES domain positively regressed with experience, as shown in Table E-6. Since scores within the system maintenance/ system change domain significantly regressed with experience, as summarized in Table 11, the hypothesis was rejected.

Table 11

Significance Tests for System Maintenance/ System Change Domain Score Regression with Years of Experience

Score Category	Intercept (I)	B-value	p-value
System Maintenance/ System Change Domain	--	--	0.0921
Clarity	4.89887946	0.05391870	0.0422*
Control	--	--	>0.1500
Innovation	--	--	>0.1500
Physical Comfort	--	--	>0.1500

Note: The p-values indicate the probability that correlations among levels within a demographic category are significant. Significance at $p \leq 0.05$ by stepwise linear regression is indicated by *. Regression = I + B.

Question 4: Social climate and gender

Hypothesis 13 stated that there is no significant difference in overall perceived social climate between males and females.

Decision 13: Since no significant differences were detected among means of total WES scores by multiple means comparison, as summarized in Table 12, the hypothesis was accepted.

Table 12

Means Comparisons: Total WES Scores by Gender

Source	DF	Sum of Squares	Mean Square	F-value
Model	1	392.74535822	392.74535822	1.97
Error	236	46987.93111237	199.10140302	p-value
Corrected	237	47380.67647059		0.1615
R-Square	C.V.	Root MSE	Mean	
0.008289	24.1445	14.11032966	58.44117647	
Source	DF	Type I SS	F-value	p-value
D1	1	392.74535822	1.97	0.1615
Source	DF	Type III SS	F-value	p-value
D1	1	392.74535822	1.97	0.1615

Note: D1 = Gender. The p-values indicate the probability that differences among levels within a demographic category are significant. Significance at $p \leq 0.05$ by general linear model is indicated by **. Significance at $p \leq 0.05$ confirmed by Scheffe's test is indicated by ***.

Hypothesis 14 stated that there is no significant difference between relationship aspects of perceived social climate between males and females.

Decision 14: Since no significant differences were detected among means of relationship domain WES scores by multiple means comparison, as summarized in Table 13, the hypothesis was accepted.

Table 13

Significance Tests for Relationship Domain Score Comparisons by Gender

Score Category	p-value
Relationship Domain	0.3466
Involvement	0.4533
Peer Cohesion	0.5510
Supervisor Support	0.2701

Note. The p-values indicate the probability that differences among levels within a demographic category are significant. Significance at $p \leq 0.05$ by general linear model is indicated by **. Significance at $p \leq 0.05$ confirmed by Scheffe's test is indicated by ***.

Hypothesis 15 stated that there is no significant difference between personal development aspects of the perceived social climate between males and females.

Decision 15: Significant differences were detected among means of Work Pressure dimension scores within the personal growth/ goal orientation domain by multiple means comparison, as shown in Table E-7. Since significant differences were found within the personal growth/ goal orientation WES domain, as summarized in Table 14, the hypothesis was rejected.

Table 14

Relationship Significance Tests for Personal Growth/ Goal Orientation Domain Score Comparisons by Gender

Score Category	p-value
Personal Growth/ Goal Orientation Domain	0.4620
Autonomy	0.6573
Task Orientation	0.1989
Work Pressure	0.0274***

Note: The p-values indicate the probability that differences among levels within a demographic category are significant. Significance at $p \leq 0.05$ by general linear model is indicated by **. Significance at $p \leq 0.05$ confirmed by Scheffe's test is indicated by ***.

Hypothesis 16 stated that there is no significant difference between system effectiveness aspects of perceived social climate between males and females.

Decision 16: Means comparisons by gender, located in Table E-8, Table E-9, Table E-10, and Table E-11, show that males scored significantly higher than females in system maintenance/ system change domain scores overall, and in clarity, control, and physical comfort dimension scores. Since significant differences were found between system maintenance/ system change domain WES scores, as summarized in Table 15, the hypothesis was rejected.

Table 15

Significance Tests for System Maintenance/ System Change Domain Score Comparisons by Gender

Score Category	p-value
System Maintenance/ System Change Domain	0.0144***
Clarity	0.0385***
Control	0.0223***
Innovation	0.6816
Physical Comfort	0.0327***

Note. The p-values indicate the probability that differences among levels within a demographic category are significant. Significance at $p \leq 0.05$ by general linear model is indicated by **. Significance at $p \leq 0.05$ confirmed by Scheffe's test is indicated by ***.

Question 5: Social climate and tenure status

Hypothesis 17 stated that there is no significant difference in overall perceived social climate among directors with different tenure status.

Decision 17: Since no significant differences were detected among means of total WES scores by multiple means comparison, as summarized in Table 16, the hypothesis was accepted.

Table 16

Means Comparisons: Total WES Scores by Tenure Status

Source	DF	Sum of Squares	Mean Square	F-value
Model	2	953.24121017	476.62060509	2.45
Error	224	43577.92178542	194.54429368	p-value
Corrected	226	44531.16299559		0.0886
R-Square	C.V.	Root MSE	Mean	
0.021406	23.7683	13.94791360	58.68281938	
Source	DF	Type I SS	F-value	p-value
D2	2	953.24121017	2.45	0.0886
Source	DF	Type III SS	F-value	p-value
D2	2	953.24121017	2.45	0.0886

Note: The p-values indicate the probability that differences among levels within a demographic category are significant. Significance at $p \leq 0.05$ by general linear model is indicated by **. Significance at $p \leq 0.05$ confirmed by Scheffe test is indicated by ***.

Hypothesis 18 stated that there is no significant difference in relationship aspects of perceived social climate among directors with different tenure status.

Decision 18: Since no significant differences were detected among means of relationship domain WES scores by multiple means comparison, as summarized in Table 17, the hypothesis was accepted.

Table 17

Significance Tests for Relationship Domain Score Comparisons by Tenure Status

Score Category	p-value
Relationship Domain	0.2108
Involvement	0.1449
Peer Cohesion	0.3356
Supervisor Support	0.4647

Note: The p-values indicate the probability that differences among levels within a demographic category are significant. Significance at $p \leq 0.05$ by general linear model is indicated by **. Significance at $p \leq 0.05$ confirmed by Scheffe's test is indicated by ***.

Hypothesis 19 stated that there is no significant difference in personal development aspects of perceived social climate among directors with different tenure status.

Decision 19: Since no significant differences were detected among means of personal growth/ goal orientation domain WES scores by multiple means comparison, as summarized in Table 18, the hypothesis was accepted.

Table 18

Significance Tests for Personal Growth/ Goal Orientation Domain Score Comparisons by Tenure Status

Score Category	p-value
Personal Growth/ Goal Orientation Domain	0.4901
Autonomy	0.6209
Task Orientation	0.5877
Work Pressure	0.7370

Note: The p-values indicate the probability that differences among levels within a demographic category are significant. Significance at $p \leq 0.05$ by general linear model is indicated by **. Significance at $p \leq 0.05$ confirmed by Scheffe's test is indicated by ***.

Hypothesis 20 stated that there is no significant difference in system effectiveness aspects of perceived social climate among directors with different tenure status.

Decision 20: Overall system maintenance/ system change domain scores, as well as clarity and innovation dimension scores, approached significance. However, since no other data supported a trend, and since no differences significant by the Scheffe test were found, as summarized in Table 19, the hypothesis was accepted.

Table 19

Significance Tests for System Maintenance/ System Change Domain Score Comparisons by Tenure Status

Score Category	p-value
System Maintenance/ System Change Domain	0.0579
Clarity	0.0390**
Control	0.4457
Innovation	0.0476**
Physical Comfort	0.9529

Note: The p-values indicate the probability that differences among levels within a demographic category are significant. Significance at $p \leq 0.05$ by general linear model is indicated by **. Significance at $p \leq 0.05$ confirmed by Scheffe's test is indicated by ***.

Question 6: Social climate and highest academic degree

Hypothesis 21 stated that there is no significant difference in overall perceived social climate among directors with different highest academic degrees.

Decision 21: Since no significant differences were detected among means of total WES scores by multiple means comparison, as summarized in Table 20, the hypothesis was accepted.

Table 20

Means Comparison Tests: Total WES Scores by Highest Degree

Source	DF	Sum of Squares	Mean Square	F-value
Model	3	1337.56653624	445.85551208	2.26
Error	233	46040.66975068	197.59944099	p-value
Corrected	236	47378.23628692		0.0826
R-Square	C.V.	Root MSE	Mean	
0.028232	24.0560	14.05700683	58.43459916	
Source	DF	Type I SS	F-value	p-value
D3	3	1337.56653624	2.26	0.0826
Source	DF	Type III SS	F-value	p-value
D3	3	1337.56653624	2.26	0.0826

Note: The p-values indicate the probability that differences among levels within a demographic category are significant. Significance at $p \leq 0.05$ by general linear model is indicated by **. Significance at $p \leq 0.05$ confirmed by Scheffe test is indicated by ***.

Hypothesis 22 stated that there is no significant difference in relationship aspects of perceived social climate among directors with different highest academic degrees.

Decision 22: Since no significant differences were detected among means of relationship domain scores of the WES by multiple means comparison, as summarized in Table 21 the hypothesis was accepted.

Table 21

Significance Tests for Relationship Domain Score Comparisons by Highest Degree

Score Category	p-value
Relationship Domain	0.3585
Involvement	0.3577
Peer Cohesion	0.9359
Supervisor Support	0.0343

Note. The p-values indicate the probability that differences among levels within a demographic category are significant. Significance at $p \leq 0.05$ by general linear model is indicated by **. Significance at $p \leq 0.05$ confirmed by Scheffe's test is indicated by ***.

Hypothesis 23 stated that there is no significant difference in personal development aspects of perceived social climate among directors with different highest academic degrees.

Decision 23: Since no significant differences were detected among means of personal growth/ goal orientation domain WES scores by multiple means comparison, as summarized in Table 22, the hypothesis was accepted.

Table 22

Significance Tests for Personal Growth/Goal Orientation Domain Score Comparisons by Highest Degree

Score Category	p-value
Personal Growth/ Goal Orientation Domain	0.2334
Autonomy	0.1074
Task Orientation	0.6142
Work Pressure	0.4163

Note: The p-values indicate the probability that differences among levels within a demographic category are significant. Significance at $p \leq 0.05$ by general linear model is indicated by **. Significance at $p \leq 0.05$ confirmed by Scheffe's test is indicated by ***.

Hypothesis 24 stated that there is no significant difference in system effectiveness aspects of perceived social climate among directors with different highest academic degrees.

Decision 24: Since no differences significant by the Scheffe test were detected among means of system maintenance/ system change domain WES scores by multiple means comparison, as summarized in Table 23 the hypothesis was accepted.

Table 23

Significance Tests for System Maintenance/ System Change Domain Score Comparisons by Highest Degree

Score Category	p-value
System Maintenance/ System Change Domain	0.0194**
Clarity	0.0550
Control	0.1721
Innovation	0.0640
Physical Comfort	0.0685

Note: The p-values indicate the probability that differences among levels within a demographic category are significant. Significance at $p \leq 0.05$ by general linear model is indicated by **. Significance at $p \leq 0.05$ confirmed by Scheffe's test is indicated by ***.

Question 7: Social climate and institutional governance

Hypothesis 25 stated that there is no significant difference in overall perceived social climate between directors from public and private institutions.

Decision 25: Since no significant differences were detected among means of total WES scores by multiple means comparison, as summarized in Table 24, the hypothesis was accepted.

Table 24

Means Comparisons: Total WES Scores by Institutional Governance

Source	DF	Sum of Squares	Mean Square	F-value
Model	1	90.75596032	90.75596032	0.45
Error	233	47149.86531628	202.35993698	p-value
Corrected	234	47240.62127660		0.5037
R-Square	C.V.	Root MSE	Mean	
0.001921	24.3265	14.22532731	58.47659574	
Source	DF	Type I SS	F-value	p-value
D4	1	90.75596032	0.45	0.5037
Source	DF	Type III SS	F-value	p-value
D4	1	90.75596032	0.45	0.5037

Note: D4 = Governance: 1 = public 2 = private. The p-values indicate the probability that differences among levels within a demographic category are significant. Significance at $p \leq 0.05$ by general linear model is indicated by **. Significance at $p \leq 0.05$ confirmed by Scheffe's test is indicated by ***.

Hypothesis 26 stated that there is no significant difference in relationship aspects of perceived social climate between directors from public and private institutions.

Decision 26: Since no significant differences were detected among means of relationship domain WES scores by multiple means comparison, as summarized in Table 25, the hypothesis was accepted.

Table 25

Significance Tests for Relationship Domain Score Comparisons by Institutional Governance

Score Category	p-value
Relationship Domain	0.6133
Involvement	0.9414
Peer Cohesion	0.6986
Supervisor Support	0.1210

Note. The p-values indicate the probability that differences among levels within a demographic category are significant. Significance at $p \leq 0.05$ by general linear model is indicated by **. Significance at $p \leq 0.05$ confirmed by Scheffe's test is indicated by ***.

Hypothesis 27 stated that there is no significant difference in personal development aspects of perceived social climate between directors from public and private institutions.

Decision 27: Since no significant differences were detected among means of personal growth/ goal orientation domain WES scores by multiple means comparison, as summarized in Table 26, the hypothesis was accepted.

Table 27

Significance Tests for System Maintenance/ System Change Domain Score Comparisons by Institutional Governance

Score Category	p-value
System Maintenance/ System Change Domain	0.8594
Clarity	0.7175
Control	0.4551
Innovation	0.8248
Physical Comfort	0.6686

Note: The p-values indicate the probability that differences among levels within a demographic category are significant. Significance at $p \leq 0.05$ by general linear model is indicated by **. Significance at $p \leq 0.05$ confirmed by Scheffe's test is indicated by ***

Question 8: Social climate and type of institution

Hypothesis 29 stated that there is no significant difference in overall perceived social climate among directors with different types of sponsoring institutions.

Decision 29: Since means comparisons by institutional type, shown in Table 28, Table E-12and, Table E-13, indicate that directors from academic health centers had significantly higher total WES scores than those from universities, the hypothesis was rejected.

Table 28

Means Comparisons: Total WES Scores by Institutional Type

Source	DF	Sum of Squares	Mean Square	F-value
Model	3	1764.22808869	588.07602956	3.02
Error	233	45310.97022354	194.46768336	p-value
Corrected	236	47075.19831224		0.0304 ***
R-Square	C.V.	Root MSE	Mean	
0.037477	23.8319	13.94516703	58.51476793	
Source	DF	Type I SS	F-value	p-value
D5	3	1764.22808869	3.02	0.0304 ***
Source	DF	Type III SS	F-value	p-value
D5	3	1764.22808869	3.02	0.0304 ***

Note: The p-values indicate the probability that differences among levels within a demographic category are significant. D5 = Institutional Type. Significance at $p \leq 0.05$ by general linear model is indicated by **. Significance at $p \leq 0.05$ confirmed by Scheffe's test is indicated by ***.

Hypothesis 30 stated that there is no significant difference in relationship aspects of perceived social climate among directors with different types of sponsoring institutions.

Decision 30: The Scheffe test may have missed significant differences in supervisor support, since there appears to be a data trend toward better perceived interpersonal relationships for AHE programs in academic health centers than in universities. Since differences considered significant were identified among supervisor support dimension scores of the relationship WES domain by multiple means comparison and by a

data trend, as summarized in Table 29, the hypothesis was rejected.

Table 29

Significance Tests for Relationship Domain Score Comparisons by Institutional Type

Score Category	p-value
Relationship Domain	0.0415**
Involvement	0.1061
Peer Cohesion	0.0667
Supervisor Support	0.0262**

Note: The p-values indicate the probability that differences among levels within a demographic category are significant. Significance at $p \leq 0.05$ by general linear model is indicated by **. Significance at $p \leq 0.05$ confirmed by Scheffe's test is indicated by ***.

Hypothesis 31 stated that there is no significant difference in personal development aspects of perceived social climate among directors with different types of sponsoring institutions.

Decision 31: Summaries of means comparisons, Table E-14, Table E-15, Table E-16,and Table E-17, show that directors from academic health centers scored significantly higher than those from universities on overall personal growth/ goal orientation domain scores and on task orientation dimension WES scores. Since significant differences were found between personal

growth/ goal orientation domain WES scores, as summarized in Table 30, the hypothesis was rejected.

Table 30

Significance Tests for Personal Growth/ Goal Orientation Domain Score Comparisons by Institutional Type

Score Category	p-value
Personal Growth/ Goal Orientation Domain	0.0043***
Autonomy	0.9235
Task Orientation	0.0211***
Work Pressure	0.0241**

Note: The p-values indicate the probability that differences among levels within a demographic category are significant. Significance at $p \leq 0.05$ by general linear model is indicated by **. Significance at $p \leq 0.05$ confirmed by Scheffe's test is indicated by ***.

Hypothesis 32 stated that there is no significant difference in system effectiveness aspects of social climate among directors with different types of sponsoring institutions.

Decision 32: Since no significant differences were detected among means of system maintenance/ system maintenance domain scores by multiple means comparison, as summarized in Table 31, the hypothesis was accepted.

Table 31

Significance Tests for System Maintenance/ System Change Domain Score Comparisons by Institutional Type

Score Category	p-value
System Maintenance/ System Change Domain	0.1590
Clarity	0.0639
Control	0.7945
Innovation	0.2693
Physical Comfort	0.4037

Note: The p-values indicate the probability that differences among levels within a demographic category are significant. Significance at $p \leq 0.05$ by general linear model is indicated by **. Significance at $p \leq 0.05$ confirmed by Scheffe's test is indicated by ***.

Question 9: Social climate and degree offerings

Hypothesis 33 stated that there is no significant difference in overall perceived social climate among directors whose programs offer more degrees than the bachelors degree.

Decision 33: Since no significant differences were detected among means of total WES scores by multiple means comparison, as summarized in Table 32, the hypothesis was accepted.

Table 32

Means Comparisons: Total WES Scores by Degree Offerings

Source	DF	Sum of Squares	Mean Square	F-value
Model	4	915.72446166	228.93111542	1.15
Error	232	46159.47385057	198.96324936	p-value
Corrected	236	47075.19831224		0.3335
R-Square	C.V.	Root MSE	Mean	
0.019452	24.1058	14.10543333	58.51476793	
Source	DF	Type I SS	F-value	p-value
D6	4	915.72446166	1.15	0.3335
Source	DF	Type III SS	F-value	p-value
D6	4	915.72446166	1.15	0.3335

Note: D6 = Degree Offerings. The p-values indicate the probability that differences among levels within a demographic category are significant. Significance at $p \leq 0.05$ by general linear model is indicated by **. Significance at $p \leq 0.05$ confirmed by Scheffe's test is indicated by ***.

Hypothesis 34 stated that there is no significant difference in relationship aspects of perceived social climate among

directors whose programs offer more degrees than the bachelors degree.

Decision 34: Since no significant differences were detected among means of relationship domain WES scores by multiple means comparison, as shown in Table 33, the hypothesis was accepted.

Table 33

Significance Tests for the Relationship Domain Score Comparisons by Degree Offerings

Score Category	p-value
Relationship Domain	0.2295
Involvement	0.4749
Peer Cohesion	0.5325
Supervisor Support	0.1058

Note: The p-values indicate the probability that differences among levels within a demographic category are significant. Significance at $p \leq 0.05$ by general linear model is indicated by **. Significance at $p \leq 0.05$ confirmed by Scheffe's test is indicated by ***.

Hypothesis 35 stated that there is no significant difference in personal development aspects of perceived social climate among directors whose programs offer more degrees than the bachelors degree.

Decision 35: Since no significant differences were detected among means of personal growth/ goal orientation domain WES scores by multiple means comparison, as summarized in Table 34, the hypothesis was accepted.

Table 34

Significance Tests for the Personal Growth/ Goal Orientation Domain Score Comparisons by Degree Offerings

Score Category	p-value
personal growth/ Goal Orientation Domain	0.1960
Autonomy	0.5924
Task Orientation	0.2008
Work Pressure	0.4998

Note: The p-values indicate the probability that differences among levels within a demographic category are significant. Significance at $p \leq 0.05$ by general linear model is indicated by **. Significance at $p \leq 0.05$ confirmed by Scheffe's test is indicated by ***.

Hypothesis 36 stated that there is no significant difference in system effectiveness aspects of perceived social climate among directors whose programs offer more degrees than the bachelors degree.

Decision 36: Since no significant differences were detected among means of system maintenance/ system change domain WES scores by multiple means comparison, as summarized in Table 35, the hypothesis was accepted.

Table 35

Significance Tests for the System Maintenance/ System Change Domain Score Comparisons by Degree Offerings

Score Category	p-value
System Maintenance/ System Change Domain	0.7583
Clarity	0.7926
Control	0.6041
Innovation	0.1835
Physical Comfort	0.9209

Note: The p-values indicate the probability that differences among levels within a demographic category are significant. Significance at $p \leq 0.05$ by general linear model is indicated by **. Significance at $p \leq 0.05$ confirmed by Scheffe's test is indicated by ***.

Question 10: Social climate and administrative structure

Hypothesis 37 stated that there is no significant difference in overall perceived social climate among directors from institutions with different structures for administering allied health programs.

Decision 37: Since Means comparisons, Table 36, Table E-18, and Table E-19, indicate that directors from coordinated arrangements scored significantly higher total WES scores than those from dissociated arrangements, the hypothesis was rejected.

Table 36

Means Comparisons: Total WES scores by Administrative Arrangement

Source	DF	Sum of Squares	Mean Square	F-value
Model	3	33220.19936353	1073.39978784	5.73
Error	226	42319.30063647	187.25354264	p-value
Corrected	229	45539.50000000		0.0008***
R-Square	C.V.	Root MSE	Mean	
0.070712	23.3916	13.68406163	58.50000000	
Source	DF	Type I SS	F-value	p-value
D7	3	3220.19936353	5.73	0.0008***
Source	DF	Type III SS	F-value	p-value
D7	3	3220.19936353	5.73	0.0008***

Note: D7 = Administrative Arrangement. The p-values indicate the probability that differences among levels within a demographic category are significant. Significance at $p \leq 0.05$ by general linear model is indicated by **. Significance at $p \leq 0.05$ confirmed by Scheffe test is indicated by ***.

Hypothesis 38 stated that there is no significant difference in relationship aspects of perceived social climate among directors from institutions with different structures for administering allied health programs.

Decision 38: Means comparisons indicate that directors from coordinated programs scored significantly higher than those from dissociated programs in overall relationship domain scores (Table E-20 and Table E-21), in involvement dimension (Table E-22 and Table E-23), and in supervisor support dimension scores (Table E-24 and Table E-25). Since significant differences were detected in relationship domain WES scores, as summarized in Table 37, the hypothesis was rejected.

Table 37

Significance Tests for the Relationship Domain Score Comparisons by Administrative Arrangement

Score Category	p-value
Relationship Domain	0.0067***
Involvement	0.0027***
Peer Cohesion	0.1885
Supervisor Support	0.0067***

Note: The p-values indicate the probability that differences among levels within a demographic category are significant. Significance at $p \leq 0.05$ by general linear model is indicated by **. Significance at $p \leq 0.05$ confirmed by Scheffe's test is indicated by ***.

Hypothesis 39 stated that there is no significant difference in personal development aspects of perceived social climate among directors from institutions with different structures for administering allied health programs.

Decision 39: Means comparisons, Table E-26, Table E-27, Table E-28, and Table E-29, show that directors from coordinated programs scored significantly higher than those from dissociated programs on personal growth/ goal orientation domain and Task Orientation dimension scores. Since significant differences were detected, as summarized in Table 38, the hypothesis was rejected.

Table 38

Significance Tests for Personal Growth/ Goal Orientation Domain Score Comparisons by Administrative Arrangement

Score Category	p-value
Personal Growth/ Goal Orientation Domain	0.0025***
Autonomy	0.0397**
Task Orient.	0.0037***
Work Pressure	0.2564

Note: The p-values indicate the probability that differences among levels within a demographic category are significant. Significance at $p \leq 0.05$ by general linear model is indicated by **. Significance at $p \leq 0.05$ confirmed by Scheffe's test is indicated by ***.

Hypothesis 40 stated that there is no significant difference in system effectiveness aspects of perceived social climate among directors from institutions with different structures for administering allied health programs.

Decision 40: Means comparisons, Table E-30, Table E-31, Table E-32, and Table E-33, show that directors from coordinated arrangements had significantly higher scores than directors from clustered arrangements on system maintenance/ system change domain and Innovation dimension scores. Since significant differences were detected, as summarized in Table 39, the hypothesis was rejected.

Table 39

Significance Tests for the System Maintenance/ System Change Domain Score Comparisons by Administrative Arrangement

Score Category	p-value
System Maintenance/ System Change Domain	0.0089***
Clarity	0.0374**
Control	0.9984
Innovation	0.0021**
Physical Comfort	0.0670

Note: The p-values indicate the probability that differences among levels within a demographic category are significant. Significance at $p \leq 0.05$ by general linear model is indicated by **. Significance at $p \leq 0.05$ confirmed by Scheffe's test is indicated by ***

Results Summary

A summary of hypothesis decisions by research question and hypothesis number is included in Table 40. Summaries of significance tests for differences among Work Environment Scale (WES) mean total scores is included in Table E-34. Table E-35, Table E-36, and Table E-37 summarize significance tests for mean WES scores for each of the three domains and for the dimensions within each domain.

No significant differences were detected among means of scores for allied health educational (AHE) program directors grouped by professional specialty, tenure status, highest degree, institutional governance, and program degree offerings Hypotheses numbered 1, 2, 3, 4, 9, 10, 11, 13, 14, 17, 18, 19, 20, 21, 22, 23, 24, 25, 26, 27, 28, 32, 33, 34, 35, and 36 were accepted.

Significant relationships were found among means of Work Environment Scale (WES) scores for directors grouped by years of experience and number of faculty supervised. Only the clarity dimension was found to significantly regress upon years of experience, but both relationship and personal growth/ goal orientation domains significantly regressed upon the number of faculty supervised by each director. Significant differences were found among directors grouped by gender, institutional

type, and administrative arrangement. Hypotheses numbered 5, 6, 7, 8, 12, 15, 16, 29, 30, 31, 37, 38, 39, and 40 were rejected.

Table 40

Hypothesis Decisions by Research Question and Independent Variable:

Research Question Number And Independent Variable	Accepted Null Hypothesis Numbers	Rejected Null Hypothesis Numbers
1: Specialty Field	1, 2, 3, 4	
2: Faculty Supervised		5, 6, 7, 8
3: Years of Experience	9, 10, 11	12
4: Gender	13, 14	15, 16
5: Tenure Status	17, 18, 19, 20	
6: Highest Degree	21, 22, 23, 24	
7: Institutional Governance	25, 26, 27, 28	
8: Institution Type	32	29, 30, 31
9: Degree Offerings	33, 34, 35, 36	
10: Arrangement		37, 38, 39, 40

WES scores among individual characteristics showed differences with respect to gender. Although a director's gender made no significant differences on mean scores in two of the three WES domains or in six of the 10 dimensions, WES scores differed in the work pressure dimension of the personal growth/ goal orientation domain. Females scored significantly higher mean scores on the perceived work pressure dimension than did males. Mean scores for the system maintenance/ system

change WES domain and for three out of four dimensions within that domain were significantly different for males and females. Specifically, male directors scored their work environments as having significantly more clarity and as having more physical comfort than did their female counterparts. Male directors scored their work environments as having significantly more outside control by rules and regulations than did females. WES scores were not associated with significant differences due to tenure status. The clarity dimension of the system maintenance/ system change domain showed significant regression with years of experience.

WES scores showed more differences or relationship with organizational characteristics than with individual characteristics. WES scores showed no significant differences associated with public or private institutional governance. Means of total WES scores, personal growth/ goal orientation domain scores, and of task orientation dimension scores were significantly higher for directors whose institutional type was academic health center than were those whose institutional type was university. When WES mean scores were compared by administrative arrangement, directors from coordinated arrangements had significantly higher mean scores for the relationship domain and for the innovation dimension than did those from institutions using dispersed administration. Both

coordinated and clustered arrangements had significantly higher mean scores for the personal growth/ goal orientation domain than did those with dispersed administration.

Respondent Comments

Narrative comments were included by 134 directors, 56.3% of the return. Comments ranged from single words to two page letters, expressing a wide range of perceptions. Comments are reproduced in Appendix E. Several positive responses indicated that a large allied health enrollment at the institution. Some comments focused upon personal job satisfaction rather than favorableness toward allied health education. Other comments were balanced statements of positive and negative aspects of the social climate. The meaning of some appeared ambiguous. Several comments expressed dissatisfaction with the unmodified WES as a survey instrument. Comments often identified areas of problems or excellence within the respondent's institution. Respondents frequently mentioned status of allied health education among academic peers and relations with central administration.

CHAPTER V

Summary, Conclusions, Implications, and Recommendations

Summary of the Study

The study attempted to answer the question, what similarities, differences, and relationships may be identified in the workplace social climate perceptions of allied health educational (AHE) program directors when grouped by selected demographic characteristics? Results of the study were expected to provide an image of the social climate for allied health education in American four year colleges and universities. Examination of that image may useful for improving the performance of AHE programs.

Organizational social climate studies have shown that units with greater degrees of openness tend to have higher levels of performance over a period of years. Studies of allied health education have shown that administrators of AHE programs appear to have much in common. Leaders in AHE have recognized the need for greater cooperation and collaboration among allied health specialists in order to strengthen AHE academic units.

The 90 item Work Environment Scale (WES) instrument (Moos & Insel, 1974) was selected to assess the social climate perceptions of AHE directors. WES Scores for each respondent were calculated. WES scores include 10 dimension scores, three domain scores, and a total score for each respondent. The

procedure included evaluation of mean scores attained by directors categorized by levels within demographic groups. These were to be compared statistically and tested for significance at $p \leq 0.05$ using either multiple means comparison or linear regression.

Directors responded anonymously to a mailed survey by supplying demographic information and answers to the WES instrument. Data was scored and statistically evaluated electronically.

Results indicated that many social climate measurements showed no significant differences with respect to levels of individual and organizational demographic categories. For individual background characteristics, no significant differences were found among levels of directors grouped by professional specialty, tenure status, or highest degree. Organizational background categories of institutional governance (public or private) and number of degrees offered per program showed no significant differences among measurements of social climate.

Significant differences or relationships among social climate measurements were found with respect to the individual background characteristics of years of experience and gender. Differences or relationships regarding social climate measurements were found among levels of three organizational

background characteristics: number of faculty supervised, institutional type, and administrative arrangement.

Differences were found between social climate measurements of male and female directors. With respect to personal development aspects of social climate, females perceived work pressure to be higher than did their male counterparts. However, males typically had higher composite mean scores on system specific aspects of the workplace social climate than did females. Specifically, male directors rated clarity, control, and physical comfort aspects of their social climate higher than did female directors.

Total social climate measurements regressed positively with the number of full time equivalent faculty supervised. Interpersonal relationship aspects of social climate, particularly measurements for peer cohesion and supervisor support, also correlated with number of faculty supervised. Personal development measurements of the social climate, specifically those of autonomy and task orientation, correlated with number of faculty supervised. Composite measurements of system specific aspects of the social climate, particularly innovation also correlated with number of faculty supervised. The number of years of experience as director correlated with the measurement for clarity within the system specific aspects of social climate, but with no other social climate

measurements correlated with experience.

Results showed differences in overall social climate measurements compared by institutional type. Highest total score was achieved by academic health centers, followed by four- year colleges and universities. However, the difference was considered significant only for academic health centers and universities. Academic health centers scored significantly higher mean scores than universities on overall personal relationship aspects of social climate. Supervisor support scores in the personal relationship aspect of social climate were significantly higher for directors from academic health centers than for those from universities. Likewise, task orientation scores within the personal development aspect of social climate were higher for respondents from academic health centers than they were for those from universities.

Significant differences were found among social climate measurements when grouped by administrative arrangement for allied health programs. Directors in coordinated arrangements had the highest overall mean climate scores, followed by those from clustered and dissociated arrangements, but the difference was significant only between coordinated and dissociated arrangements. Measurements of composite interpersonal relationship aspects, personal development aspects, and system specific aspects were all significantly higher in coordinated

arrangements than they were in dissociated arrangements. Directors from clustered arrangements also had significantly higher scores for the personal development aspect than did those from dissociated arrangements. Interpersonal relationship aspects of involvement and supervisor support, as well as personal development aspect scores for task orientation, were significantly higher in coordinated arrangements than in dissociated arrangements.

Conclusions

Conclusions regarding the ten research questions are presented. For some questions, more than one conclusion have been drawn.

Question 1: Is the perceived social climate different for directors from different professional specialties?

Conclusion 1: Social climate perceptions of directors from the different professional specialties were not significantly different. Hypothesis decisions numbered 1, 2, 3, and 4 support this conclusion, since none of the social climate measurements showed significant differences with respect to specialty.

Question 2: Is the perceived social climate affected by the number of faculty supervised?

Conclusion 2: A director's perception of social climate became more favorable as the number of faculty supervised

increased. This conclusion is supported by hypothesis decisions numbered 5, 6, 7, and 8.

Question 3: Is the perceived social climate affected by the amount of director experience?

Conclusion 3: Job role clarity aspects of the social climate were affected by the amount of director experience, but other aspects were probably not affected. This conclusion is supported by hypothesis decisions numbered 9, 10, 11, and 12.

Question 4: Is the perceived social climate different for males and females?

Conclusion 4-A: Personal development aspects of social climate perceived by directors were different with respect to gender. Female directors perceive significantly greater personal development as a result of work pressure than do males. This conclusion is supported by hypothesis decision 15.

Conclusion 4-B: System specific aspects of social climate perceived by directors are different with respect to the director's gender. This conclusion is supported by decision number 16.

Conclusion 4-C: The clarity of job requirements was perceived as lower by female directors than by male directors. This conclusion is supported by decision number 16.

Conclusion 4-D: Female directors were more likely than males to feel that their workplace physical surroundings were

unsatisfactory. This conclusion was supported by decision number 16.

Conclusion 4-E: Controls by rules, regulations, and supervisors were perceived more strongly by male than by female directors (hypothesis decision number 16).

Question 5: Is the perceived social climate different for directors with different tenure status?

Conclusion 5: Tenure status does not make a difference in directors' perceptions of their social climate. This conclusion was supported by hypothesis decisions numbered 17, 18, 19, and 20.

Question 6: Is the perceived social climate different for directors with different highest academic degrees?

Conclusion 6: Perceptions of social climate did not differ among directors with different highest academic degrees. This conclusion is supported by hypothesis decisions numbered 21, 22, 23, and 24.

Question 7: Is the perceived social climate different at public and private institutions?

Conclusion 7: Social climate perceived by directors was about the same at public and private institutions. This conclusion is supported by hypothesis decisions numbered 25, 26, 27, and 28.

Question 8: Is the perceived social climate different for

directors from different types of sponsoring institutions?

Conclusion 8-A: Overall Social climate was perceived differently by directors from different types of sponsoring institutions. This conclusion is supported by hypothesis decision number 29. Directors in academic health centers perceived their overall social climate to be more favorable than did directors who work in universities.

Conclusion 8-B: Interpersonal relationship aspects of social climate, including supervisor support aspects of social climate, were perceived by directors as more favorable at academic health centers and four year colleges than in universities. This conclusion is supported by hypothesis decision number 30.

Conclusion 8-C: Individual achievement aspects of social climate were perceived as more favorable at academic health centers and four year colleges than in universities. This conclusion is supported by hypothesis decision number 31. Directors at academic health centers perceived their social climate as having about the same task orientation as did those at four year colleges; directors at universities perceived significantly less task orientation than did directors at academic health centers.

Conclusion 8-D: System specific aspects of perceived social climate were not significantly different among academic

health centers, universities, and four year colleges. This conclusion is supported by hypothesis decision number 32.

Question 9: Is the perceived social climate different for directors whose programs offer degrees in addition to the bachelors?

Conclusion 9: The director's perceived social climate was not different for directors who offer degrees in addition to the bachelors. This conclusion is supported by hypothesis decisions numbered 33, 34, 35, and 36.

Question 10: Is the perceived social climate different for directors working under different institutional structures for administration of allied health education?

Conclusion 10-A: The overall social climate perceived by directors was different for directors working under different structures for administration of allied health education. This conclusion is supported by hypothesis decision number 37. Directors from dissociated arrangements perceived their social climates overall as significantly less favorable than did their counterparts from clustered or coordinated arrangements. Directors under coordinated administrative arrangements perceived generally more favorable social climates than did their counterparts in either clustered or dissociated arrangements.

Conclusion 10-B: Directors from coordinated arrangements

perceived significantly better interpersonal relations than did directors under dissociated arrangements. This conclusion is supported by hypothesis decision number 38. Directors working in coordinated arrangements rated involvement with their job and supervisor support significantly higher than did directors from dissociated arrangements.

Conclusion 10-C: Personal development aspects of the social climate were perceived by directors from coordinated arrangements as more favorable than did those from clustered or dissociated arrangements. Of the three arrangements, directors from dissociated arrangements rated this factor least favorably. Directors' perceptions of task orientation were also significantly higher under coordinated administrative arrangements than under dissociated arrangements. This conclusion is supported by decision number 39.

Conclusion 10-D: Overall system specific aspects of social climate were perceived as significantly more favorable by directors from coordinated and clustered arrangements than by directors of dissociated programs. Innovation aspects received significantly higher scores from directors in both cooperative and in clustered arrangements than from those in dissociated arrangements. This conclusion is supported by decision number 40.

Summary of Conclusions

Results showed that directors' perceptions of their workplace social climate were more likely to differ with respect to organizational characteristics than with respect to individual characteristics. Arrangement for administration of allied health programs was the organizational characteristic showing the most differences in social climate perceptions among directors of allied health educational (AHE) programs. Social climate perception was significantly affected by the number of faculty supervised. Differences in perceived social climate were also apparent among different types of institutions. Individual characteristics that made a difference in program directors' perceptions of social climate were number of years of experience as director and gender. The most social climate perception differences involving an individual characteristic were found with gender.

Implications

Implications drawn from the study's conclusions are discussed with respect to the social climate for allied health education, their relationship to previous studies of allied health education, and with respect to organizational theory.

Variability among institutional social climates for administration of AHE is probably not due to professional

specialty. Although AHE programs may need to be compartmentalized for instructional purposes, program directors have a solid basis of similarity for cooperation and collaboration. Organizational climate for AHE programs should improve when an extensive interaction-influence system exists among directors. This implication supports O'Reilly and Kellams (1988) in their concept of professional community and socialization needs among academic administrators.

The social climate for allied health programs improves as the number of full time equivalent faculty increases. This implication supports Selker and Vogt (1978), who predicted that small size causes AHE programs to operate from a very weak power base. It also supports the work of Burgos-Sasscer (1988), who found that the greatest unfulfilled need of department chairs in her study was security. It also supports studies of understaffed work environments, which indicate that the range and direction of forces acting on individuals are greater in understaffed units. These forces will push the individual into roles of greater responsibility and participation, but create greater insecurity and more opportunities for failure. Units staffed at the maintenance minimum result in lower levels of maximum or best performance (Moos, 1976).

Experience level of the AHE director affects the social climate of an AHE program. The improved clarity with which the

more experienced director perceives his or her functions and program goals implies that programs under more experienced directors operate more smoothly. This implication supports Buchanan (1974), who indicted that socialization and role clarification of administrators develops in stages and takes at least five years. It also supports Spicer and Staton-Spicer (1988) who indicated that new department chairs undergo a period during which they discover communications pathways for learning their new duties.

The social climate for AHE is more favorable for programs directed by males than for programs directed by females. This implication is supported by studies that have shown that female managers have lower performance expectations and ability self-evaluations than males, and many must deal with role conflicts resulting from being a wife and mother (Terborg, 1977). It also supports the work of Kuyper (1987), who found that the women in academic settings do not prepare themselves for administration as well as the men. The study also supports social climate studies, which show consistent differences in perceptions of social climate due to gender. These findings imply that females, traditionally the majority gender in allied health, are not as adapted to or accepted within college and university administration as are males. These findings could also imply that female directors have different expectations of the

collegiate environment than do male directors.

The social climate for AHE is not affected by the tenure status of the director. This implication is not supported by Burgos-Sasscer (1988), who found that chairpersons with tenure perceive greater fulfillment and satisfaction with security than nontenured chairs. It is also not supported by the work of O'pt Holt (1991), who found that tenure policies are shifting toward requiring terminal degrees and research, and that faculty in nontenure tracks suffers the disadvantages of lower morale and indifference. Without terminal degrees and with little research productivity, many AHE directors (48.9% of respondents) have achieved tenure anyway. Tenure status of the director appears to have little effect on the social climate of allied health education.

The social climate for AHE is not affected by the director's highest academic degree. This implication supports the work of O'pt Holt (1991), who found that teaching, rather than advanced degrees or research, was the most important criterion for allied health faculty seeking tenure. The percentage of AHE directors who reported having earned doctoral degrees, 28.7% of respondents on this survey, compares with 25.6% of AHE faculty with doctoral degrees in 1987 (Flanigan et al., 1987). The implication is that scholarly activity is not a factor for the work environment of about 70% of AHE educators.

This may be due to teaching or administrative workload, or may result from other factors.

Social climate for AHE is not different in public and private institutions. This conclusion differs from that made by Burgos-Sasscer (1981), who found that chairs in private colleges perceive greater autonomy and better interpersonal relations than those in public colleges in Puerto Rico. This may imply that AHE program directors from public and private institutions have more similar organizational climates than do general academic department chairs. It may also reflect differences between Puerto Rican and mainland institutions.

Social climate for AHE is most favorable at academic health centers, slightly less favorable in four year colleges, and least favorable in universities. This implication supports the practice of locating allied health education within academic health centers. The improved task orientation of the academic health center is consistent with the intensity of medical focus at such centers (National Commission, 1980), but does not answer challenges regarding any dichotomy between academic quality and professional quality.

Social climate for AHE is not significantly different when programs offer more than one degree option. This implication is new to this study, but supports the contention that organizational climate is more involved with the processes of a

system than with its products (Likert, 1967). Offering several degree levels does not necessarily imply increased complexity, since AHE instruction may be identical at two or more levels. It may imply that the complexity added by additional degree offerings lies outside AHE program administration.

The social climate is most favorable when administration of AHE programs is done in coordinated arrangements, less favorable when done in clustered arrangements, and least favorable when done in dissociated arrangements. This implication is a partial answer to the work of Gunne and Wise (1980), who developed models used for administration of AHE programs in schools of allied health. Although defining the three models in common use, they were not able to discuss the advantages and disadvantages of each model. The study supports the contention that high performance organizations are highly interdependent and interacting (Likert, 1967). This implication supports the view that open systems, as illustrated in the cooperative arrangement, are more effective than closed systems in producing high performance social climates (Moos, 1976). The argument for employing a coordinated administrative arrangement was weakened by Pyne (1975), who discussed the failure of the Mankato model. The Mankato model was a coordinated administrative arrangement which failed, possibly due an inadequate role definition for the administrative coordinator.

Other factors beyond directors' perceptions must be considered.

Overall, the results of the study imply that the organizational climate for AHE is enhanced in organizations where there is unity of purpose, coordination of action, and multilateral communication. In such a social climate, individual background characteristics are not as significant as organizational factors in achieving an environment conducive to high performance.

Recommendations

Recommendations presented are for administration of allied health educational (AHE) programs and for further research in AHE program administration. Recommendations are based on the assumptions that AHE programs in four year colleges and universities are needed to supply health care manpower, and that their performance must be improved in every institutional setting.

Allied health leaders should identify performance criteria that define high performance AHE programs. They should be guided by the writings of Likert and Peters in order to develop a vision of high performance organizations, since changes in health care delivery and education will require new approaches (Selker & Broski, 1991). Retaining the departmentalized model for allied health education is likely to have the same results

on campus as it has had in industry: high cost, low productivity, and ultimately, inability to compete effectively.

AHE program directors must look to a standard of high performance set outside their own institutions and specialty accrediting agencies. Above all, many AHE educators must escape complacency and break their programs out of excessive compartmentalization if they are to attain high performance. It is unquestionably important for an AHE program to demonstrate sufficient numbers of quality graduates, but unsatisfied needs remain. A high performance organization conducts research to find applications for its services beyond existing markets. This is the attitude that allied health education must develop in order to remain a force in higher education. In order to gain higher status in the academic setting, AHE must develop an environment that promotes scholarly activity. This can only happen when organizational structures permit small programs to work together synergistically. AHE directors should find ways to recreate their own organizational systems, disregarding differences in professional specialty, physical location, type of governance, and institutional type.

This study raises additional questions about the meaning of high performance in the allied health education setting. Some of those questions concern the consequences of individual characteristics of program directors on allied health

education. Others concern the consequences of organizational characteristics. With so many females employed as AHE program directors, why is there still such a difference between male and female directors regarding perceived work pressure, clarity of the job role, and satisfaction with physical surroundings? With such a low percentage of AHE directors having terminal degrees, why is it that there appears to be little social pressure upon them in a setting that is degree conscious? With so many allied health programs producing quality graduates, is AHE already at peak performance, or can performance be improved? Are criteria for high program performance in allied health education the equivalent to essentials for accreditation? How can existing administrative arrangements, such as the dissociated arrangement, become as favorable as cooperative or clustered arrangements? How are coordinated arrangements managed in practice? Is there a relationship between the coordinated administrative arrangement and output of graduates, either in quantity or in quality? Are allied health programs suffering from long term understaffing? What criteria are used at different colleges and universities for setting the size of an AHE program faculty?

The use of the WES instrument and other measures of organizational social climate would be useful in further studies of academic and administrative units in colleges and

universities. Differences and relationships among social climate perceptions of general academic department chairs and deans, as well as among administrators in other professional preparation programs may provide information useful to anyone hoping to improve the overall social climate and level of performance in higher education.

Answers to the questions provoked by this study should be sought in additional studies. Social climate studies of allied health education should be conducted at individual institutions using social climate measurements and comparing them to national means for all AHE programs. Historical studies are needed which would provide a context for discussing development of AHE programs and institutions. Interpretive studies are needed regarding AHE mission identification and policy development. Theoretical studies of allied health as an academic discipline remain to be performed, such as critical study of social mechanisms which limit allied health practice and education in post-industrial society. Longitudinal demographic studies comparing allied health educational programs with different administrative arrangements need to be done. Although this study demonstrated no significant differences and relationships among WES scores for some independent variables those independent variables may be found to influence social climate in subsequent studies.

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APPENDIX A

Authorizations

American Medical Association
Physicians dedicated to the health of America

Gloria C. Gupta, RDH, MS
Assistant Director
Department of Information
Analysis and Publications

515 North State Street
Chicago, Illinois 60610

312 464-4695
312 464-5830 Fax

October 20, 1992

Bruce Brown, MS, MT(ASCP)
Rt 4/Box 396
Ironton, OH 45638

Dear Mr. Brown:

Thank you for contacting the Medical Education Data Service for allied health information. Your request for special sort mailing labels has been approved.

Attached for completion is the list agreement we discussed in earlier phone meetings. Your request will be processed once we have received and reviewed the completed agreement.

Do not hesitate to contact me at 312 464-4695 for additional information or clarification.

Sincerely yours,

Gloria Gupta, RDH, MS, Director
Medical Education Data Services

cc: Hannah Hedrick, PhD

Attachment

0216p

Consulting Psychologists Press, Inc.

Bruce J. Brown
Route 4. Box 196
Ironton, Ohio 45638

PERMISSION AGREEMENT FOR SAMPLE ITEMS
Agreement Issued: September 28, 1993
Customer Number: H9907
Invoice Number: 64492
Permission Code: 5211

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6.1 Test users should evaluate the available written documentation on the validity and reliability of tests for the specific use intended.

6.3 When a test is to be used for a purpose for which it has not been validated, or for which there is no supported claim for validity, the user is responsible for providing evidence of validity.

6.5 Test users should be alert to probable unintended consequences of test use and should attempt to avoid actions that have unintended negative consequences."

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CONSULTING PSYCHOLOGISTS PRESS, INC.
By Lisa Gonzalez
Lisa Gonzalez - Permissions Specialist
Date October 5, 1993

I AGREE TO THE ABOVE CONDITIONS
By Bruce J. Brown
Bruce J. Brown
Date October 1, 1993

APPENDIX B

Survey Process

Education Administration
West Virginia University
College of Human Resources and Education

November 9, 1992

Allied Health Program Directors
CAHEA-approved programs
American Colleges and Universities

Dear Program Director:

Please help with this nationwide study of allied health education program directors, which I am conducting as part of a doctoral degree program.

Most allied health educational programs came into colleges and universities within the last 30 years. How have your college or university and clinical affiliates adapted to the needs of your program as you see them? The results of this study are expected to provide useful information about the role of program director and will indirectly gauge the social support given allied health education in the collegiate setting.

It should take about 20 minutes to read the instructions, record your answers, and complete the demographic information form. Please schedule time to do this now and return the questionnaire and all completed forms using the prepaid envelope by Dec. 15, 1992.

Instructions are enclosed. You need not answer every item, but the study is more useful if you do. Your responses will remain anonymous, used only to develop composite models. The final results will be published.

If you have questions, please call me at ( )

Sincerely,

Bruce J. Brown

Bruce J. Brown, MS, MT(ASCP)

304 293-3707/2467 ◻ 606 Allen Hall ◻ P.O. Box 6122 ◻ Morgantown, WV 26506-6122

Education Administration
West Virginia University
College of Human Resources and Education

December 1, 1992

Allied Health Program Directors
CAHEA-approved programs
American Colleges and Universities

Dear Program Director:

You should have received a program directors survey packet in the mail. If you have already replied, thank you very much for your contribution. If you have not, please do so now and return the questionnaire and answer sheets by return mail. Since this time of year is so busy, return the survey by January 15, 1993 if necessary.

The survey is part of a nationwide study of allied health educational programs, and *your reply is vital to the completeness and accuracy of the study* . If you have not received the packet, which contains the Moos and Insel *Work Environment Scale* (WES), answer sheet, and associated demographic form, please notify me and I will send you one. I can be reached by BITNET electronic mail at CLS001@MARSHALL, by telephone at or by FAX at (304) 696-3333.

Sincerely

Bruce J. Brown

Bruce J. Brown, MS, MT(ASCP)
WVU Doctoral Student

304 293-3707/2467 ◻ 606 Allen Hall ◻ P.O. Box 6122 ◻ Morgantown, WV 26506-6122
Equal Opportunity / Affirmative Action Institution

Education Administration
West Virginia University
College of Human Resources and Education

January 4, 1993

Allied Health Program Directors
CAHEA-approved programs
American Colleges and Universities

Dear Program Director:

This is a reminder that we need your participation with our study of the work environment of allied health program directors. Your responses are needed for an accurate and meaningful study useful for allied health education planning.

If you have already responded to this survey, thank you and please disregard this mailing. Otherwise, Please return the questionnaire and BOTH completed answer forms using the prepaid envelope.

It takes about 20 minutes to read the instructions, record answers, and complete the demographic information form. Please schedule time for this today. Instructions are enclosed.

Please call me at work (304) 696-3188 or at home ( ) if you have questions.

Sincerely,

Bruce J. Brown

Bruce J. Brown, MS, MT(ASCP)

304 293-3707/2467 ◻ 608 Allen Hall ◻ P.O. Box 6122 ◻ Morgantown, WV 26506-6122
Equal Opportunity / Affirmative Action Institution

APPENDIX C

Survey Instruments

Instructions for Program Director Survey

You should have received:

- one copy of the Moos and Insel *Work Environment Scale* (WES) booklet,
- one general purpose answer sheet
- one demographic form (on the reverse side of this instruction sheet)
- a prepaid reply envelope.

There are TWO PARTS to the survey. Please place your responses to the WES onto the general purpose answer sheet. Other information you supply should be put directly onto the DEMOGRAPHIC form.

Read the instructions on the booklet about interpreting the questions. The protocol for placing answers on the answer sheet is different than that described on the booklet (see below).

Your answers should accurately reflect the way your personal work setting seems to you. Consider administrators, faculty, staff, and affiliate personnel as supervisors or employees as you consider appropriate. Students are to be considered as served by the organization, not part of it.

Use column A = TRUE and column B = FALSE on the general purpose answer sheet for WES items. With a *No. 2 pencil*, completely darken the little circles on the general purpose answer sheet. Our scanner does not read ink. *Do not include personal identification.*

1. Answer WES items numbered 1 - 90 using corresponding numbered rows on side 1 of the *general purpose answer sheet*.

2. Next, please write your answers to the DEMOGRAPHIC items *on the reverse side of this page* . Please also include a few comments about the degree of favorableness toward allied health education you experience as a program director.

3. When done, please put the WES booklet, answer sheet, and demographic information form in the prepaid return envelope and mail .

Bruce J. Brown, MS, MT(ASCP)
Marshall University
Huntington, WV 25755
(304) 696-3188 or (614)532-0876

Consulting Psychologists Press, Inc.

SAMPLE ITEMS FOR THE

WORK ENVIRONMENT SCALE - REAL FORM

by Paul M. Insel and Rudolf H. Moos

Directions: These statements are about the place in which you work. The statements are intended to apply to all work environments. However, some words may not be quite suitable for your work environment. For example, the terms "supervisor" is meant to refer to the boss, manager, department head, or the person or persons to whom an employee reports. You are to decide which statements are true of your work environment and which are false.

Involvement Scale
1. The work is really challenging.

Peer Cohesion
2. People go out of their way to help a new employee feel comfortable.

Task Orientation
5. People pay a lot of attention to getting work done.

Work Pressure
6. There is constant pressure to keep working.

Control
8. There's a strict emphasis on following policies and regulations.

Innovation
9. Doing things in a different way is valued.

Supervisor Support
13. Supervisors usually compliment an employee who does something well.

Autonomy
14. Employees have a great deal of freedom to do as they like.

Clarity
17. Activities are well-planned.

Physical Comfort
20. The lighting is extremely good.

APPENDIX D

Computer Programs

Raw Data Manipulation Program

```
*Identification of variables;
    *FLD = Allied Health Specialty;
    *FTE = Number Of Faculty Supervised;
    *YEX = Years Of Director Experience;
    *DI1-DI10 = WES Dimensions 1-10;
    *I1-I90 = 90 Items Of The WES Instrument;
    *D1-D9 = Demographic Categories;
    *DO1-DO3 = WES Domains 1-3;
DATA WESRESP;
    INFILE WESSURV;
    INFORMAT FTE YEX 4.2; INPUT FLD $ 1-3 FTE 4-8 YEX 9-13
     (I1-I90) (1.) (D1-D9) (1.);
CARDS;
    *Enters raw responses into a dataset called wesresp;
DATA DEMOGR;
    SET WESRESP;
    DROP I1-I90;
    *Demographic data temporarily set aside;
DATA SC_IMAGE;
    INFILE TEMPLATE;
    INPUT (I1-I90) (1.);
CARDS;
    *Enters scoring template into a dataset called
score_it;
PROC COMPARE DATA=WESRESP COMPARE=SC_IMAGE METHOD=ABSOLUTE
    OUT=WESSCORE NOOBS NOSUMMARY;
VAR I1-I90;
*Foregoing process results in an image of template vs.
response comparison data;
    DATA WESNUM;
    SET WESSCORE;
```

```
    ARRAY ITEMS{90} I1-I90;
    DO M=1 TO 90;
        IF ITEMS{M}=0 THEN ITEMS{M}=1;
        ELSE ITEMS{M}=0;
    END;
*Creates a negative image of template-response comparison
data;
DATA WESCAT;
    SET WESNUM;
    ARRAY ITEMS{90} I1-I90;
    ARRAY CAT{10} DI1-DI10;
    TOTAL=SUM(OF I1-I90);
    A=1;
    CA=0;
    DO P=1 TO 10;
        DO N=A TO 90 BY 10;
        A=CA+ ITEMS{N};
        END;
    CAT{P}=CA;
    A=A+1;
    CA=0;
    END;
    *Accumulates scores for each of 10 wes dimensions;
    *(Every 10th WES item is in the same dimension);
    DO1=DI1+DI2+DI3;
    DO2=DI4+DI5+DI6;
    DO3=DI7+DI8+DI9+DI10;
    *Combines dimension scores for each wes domain;
    DROP I1-I90 N M A P CA;
*Formats new file, eliminates temporary variables;
DATA COMBINED;
    MERGE DEMOGR WESCAT;
```

```
*Merges demographics and dimension scores into new
dataset;
DATA COMBINE1;
    SET COMBINED;
    FILE COMBINED;
    FORMAT FTE YEX 6.2;
     PUT @1 FLD @6 FTE @12 YEX @18 (D1-D9) (1.)@28 (DI1-
     DI10) (2.) @50 DO1 @53 DO2 @ 56 DO3 @59 TOTAL;
    *Prepares system external file named 'COMBINED.DAT';
    *Available for later statistical analysis;
ENDSAS;
```

Note: program written by the investigator in SAS (1985) application language.

Statistical Analysis Program

```
*Identification of variables;
   *FLD = Allied Health Specialty;
   *FTE = Number Of Faculty Supervised;
   *YEX = Years Of Director Experience;
   *DI1-DI10 = Scores for WES Dimensions 1-10;
   *I1-I90 = 90 Items Of The WES Instrument;
   *D1-D9 = Nine Demographic Categories, not all used;
   *DO1-DO3 = Scores for WES Domains 1-3;
DATA OUR;
   INFILE COMBINED;
   INFORMAT FTE YEX 5.2;
   INPUT FLD $ 1-3 FTE 6-10 YEX 12-17 @18 (D1-D9) (1.)
         @28 (DI1-DI10) (2.) @50 (DO1-DO3) (3.) @59 TOTAL,
   DROP D8 D9;
   CARDS;
   *Dataset for analysis is from external data file;
PROC FREQ;
   *Develops frequency tables for all variables;
PROC STEPWISE;
   MODEL TOTAL  DO1 DO2 DO3 DI1-DI10 = FTE YEX;
   *Performs stepwise regression on continuous variables;
PROC GLM;
   CLASS FLD;
   MODEL TOTAL  DO1 DO2 DO3 C8 = FLD;
   MEANS FLD /SCHEFFE;
PROC GLM;
   CLASS D1;
   MODEL TOTAL  DO1 DO2 DO3 DI1-DI10 = D1;
   MEANS D1 /SCHEFFE;
PROC GLM;
   CLASS D2;
```

```
    MODEL TOTAL DO1 DO2 DO3 DI1-DI10 = D2;
    MEANS D2 /SCHEFFE;
PROC GLM;
    CLASS D3;
    MODEL TOTAL DO1 DO2 DO3 DI1-DI10 = D3;
    MEANS D3 /SCHEFFE;
PROC GLM;
    CLASS D4;
    MODEL TOTAL DO1 DO2 DO3 DI1-DI10 = D4;
    MEANS D4 /SCHEFFE;
PROC GLM;
    CLASS D5;
    MODEL TOTAL DO1 DO2 DO3 DI1-DI10 = D5;
    MEANS D5 /SCHEFFE;
PROC GLM;
    CLASS D6;
    MODEL TOTAL DO1 DO2 DO3 DI1-DI10 = D6;
    MEANS D6 /SCHEFFE;
PROC GLM;
    CLASS D7;
    MODEL TOTAL DO1 DO2 DO3 DI1-DI10 = D7;
    MEANS D7 /SCHEFFE;
    *Above sequence performs multiple means comparisons
    using the general linear model and Scheffe tests on WES
    scores for each demographic category;
ENDSAS;
```

Note: Program written by the investigator in SAS (1985) application language.

APPENDIX E

Supplemental Data Tables

Table E-1

Summary of Stepwise Regression: Relationship Domain Work Environment Scale Score With Number of Faculty Supervised

Step	Variable Entered	Variable Removed	Number In	Partial R2	Partial R2	Model C(P)
	1 FTE	1	0.0275	0.0275	1.16546	

Step	Variable Entered	Variable Removed	F-value	p-value
1	FTE		6.3046	0.0128*

Note 1: FTE = number of full time equivalent faculty supervised. Significance at $p \leq 0.05$ by stepwise linear regression is indicated by *.

Note 2: Regression = I + B. Intercept (I) = 18.7218619. B-value = 0.17089397.

Table E-2

Stepwise Regression: Peer Cohesion Dimension Work Environment Scale Scores With Number Faculty Supervised

Step	Variable Entered	Variable Removed	Number In	Partial R2	Partial R2	Model C(P)
1	FTE	10.0201	0.0201	1.11802		

Step	Variable Entered	Variable Removed	F-value	p-value
1	FTE		4.5733	0.0336*

Note 1: Peer Cohesion is a component of the relationship domain. FTE = Number of Faculty Supervised. Significance at $p \leq 0.05$ by stepwise linear regression is indicated by *.

Note 2: Regression = I + B. Intercept (I) = 19.59507392. B-value = 0.09710477.

Table E-3

Stepwise Regression: Supervisor Support Dimension Work Environment Scale Scores With Number of Faculty Supervised

Step	Variable Entered	Variable Removed	Number In	Partial R2	Partial R2	Model C(P)
1	FTE	1	0.0283	0.0283	1.17886	

Step	Variable Entered	Variable Removed	F-value	p-value
1	FTE		6.4843	0.0116*

Note 1: Supervisor Support is a component of the relationship domain. FTE = Number of Faculty Supervised. Significance at $p \leq 0.05$ by stepwise linear regression is indicated by *.

Note 2: Regression = I + B. Intercept (I) = 5.88859793. B-value = 0.07011743.

Table E-4

Summary of Stepwise Regression: Personal Growth/ Goal Orientation Dimension Work Environment Scale Score With Number of Faculty Supervised

Step	Variable Entered	Variable Removed	Number In	Partial R2	Partial R2	Model C(P)
1	FTE	1	0.0223	0.0223	1.50439	

Step	Variable Entered	Variable Removed	F-value	p-value
1	FTE		5.0943	0.0250*

Note 2: FTE = number of full time equivalent faculty supervised. Significance at $p \leq 0.05$ by stepwise linear regression is indicated by *.

Note 2: Regression = I + B. Intercept (I) = 19.59507392. B-value = 0.09710477.

Table E-5

Summary of Stepwise Regression: Innovation Dimension Work Environment Scale Scores With Number of Faculty Supervised

Step	Variable Entered	Variable Removed	Number In	Partial R2	Partial R2	Model C(P)
1	FTE	1	0.0384	0.0384	2.02281	

Step	Variable Entered	Variable Removed	F-value	p-value
1	FTE		8.9123	0.0031*

Note 1: Innovation is a component of the system maintenance/ system change domain. FTE = number of full time equivalent faculty supervised. Significance at $p \leq 0.05$ by stepwise linear regression is indicated by *.

Note 2: Regression = I + B. Intercept (I) = 4.85510772. B-value = 0.09763539.

Table E-6

Summary of Stepwise Regression: Clarity Dimension Scores in the System Maintenance/ System Change Domain of the Work Environment Scale With Years of Experience

Step	Variable Entered	Variable Removed	Number In	Partial R2	Partial R2	Model C(P)
1	YEX	1	0.0184	0.0184	3.86133	

Step	Variable Entered	Variable Removed	F-value	p-value
1	YEX		4.1734	0.0422*

Note 1: YEX = years of director experience. FTE = number of full time equivalent faculty supervised. Significance at $p \leq 0.05$ by stepwise linear regression is indicated by *.

Note 2: Regression = I + B. Intercept (I) = 4.89887946. B-value = 0.05391870.

Table E-7

Scheffe's Means Comparison Tests: Work Pressure Dimension Work Environment Scale Scores by Gender

Gender	N	Mean	Standard Deviation
Females***	161	6.702	2.336
Males***	77	6.0390	2.064

Note: Work Pressure is a component of the personal growth/ goal orientation domain. Comparisons significant at $p \leq 0.05$ are indicated by ***.

Note 2: DF = 236, MSE = 4.64649, critical-value of F = 3.88116, minimum significant difference = 0.5884, harmonic mean of cell sizes = 104.176.

Table E-8

Scheffe's Means Comparison Tests: System Maintenance/ System Change Domain Work Environment Scale Scores by Gender

Gender	N	Mean	Standard Deviation
Males***	77	20.623	6.819
Females***	161	18.273	6.998

Note 1: Comparisons significant at $p \leq 0.05$ are indicated by ***.

Note 2: DF = 236 MSE = 47.2968, critical-value of F = 3.88116, minimum significant difference = 1.8773, harmonic mean of cell sizes = 104.176.

Table E-9

Scheffe's Means Comparison Tests: Clarity Dimension Work Environment Scale Scores by Gender

Gender	N	Mean	Standard Deviation
Males***	77	6.039	2.647
Females***	161	5.286	2.536

Note 1: Clarity is a component of the system maintenance/ system change domain. Comparisons significant at $p \leq 0.05$ are indicated by ***.

Note 2: DF = 236, MSE = 6.82093, critical-value of F = 3.88116, minimum significant difference = 0.71291, harmonic mean of cell sizes = 104.176.

Table E-10

Scheffe's Means Comparison Tests: Control Dimension Work Environment Scale Scores by Gender

Gender	N	Mean	Standard Deviation
Males***	77	4.091	1.997
Females***	161	3.453	2.008

Note 1: Control is a component of the system maintenance/ system change domain. Comparisons significant at $p \leq 0.05$ are indicated by ***.

Note 2: DF = 236, MSE = 4.00112, critical-value of F = 3.88116, minimum significant difference = 0.54601, harmonic mean of cell sizes = 104.176.

Table E-11

Scheffe's Means Comparison Tests: Physical Comfort Dimension Work Environment Scale Scores by Gender

Gender	N	Mean	Standard Deviation
Males***	77	5.195	2.580
Females***	161	4.403	2.815

Note 1: Physical Comfort is a component of the system maintenance/ system change domain.

Comparisons significant at $p \leq 0.05$ are indicated by ***.

Note 2: DF = 236, MSE = 7.06286, critical-value of F = 3.88116, minimum significant difference = 0.72544, harmonic mean of cell sizes = 104.176.

Table E-12

Means Comparisons: Total Work Environment Scale Scores by Institutional Type

Institutional Type	N	Mean	Standard Deviation
Academic Health Center	89	61.528	11.964
University	110	55.691	14.701
Four Year College	31	60.065	16.174
Other	7	57.714	14.784

Note: Institutional types designated as "Other" by respondents granted bachelors degrees in allied health careers, but were not academic health centers, universities, or four-year colleges.

Table E-13

Scheffe's Means Comparison Tests. Total Work Environment Scale Scores by Institutional Type

Institutional Type Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
1 - 3	-6.726	1.464	9.653
1 - 4	-11.602	3.814	19.229
1 - 2	0.238	5.837	11.436***
3 - 1	-9.653	-1.464	6.726
3 - 4	-14.083	2.350	18.783
3 - 2	-3.612	4.374	12.359
4 - 1	-19.229	-3.814	11.602
4 - 3	-18.783	-2.350	14.083
4 - 2	-13.284	2.023	17.331
2 - 1	-11.436	-5.837	-0.238***
2 - 3	-12.359	-4.374	3.612
2 - 4	-17.331	-2.023	13.284

Note 1: Institutional Type: 1 = academic health center, 2 = university, 3 =four year college, 4= Other. Arrangements designated by respondents as "Other" did not fit the three general models for administrative structures in allied health education. Comparisons significant at $p \leq 0.05$ are indicated by ***.

Note 2: DF = 233, MSE = 194.468, critical value of F = 2.64334.

Table E-14

Means Comparisons: Personal Growth/ Goal Orientation Domain Scores by Institutional Type

Institutional Type	N	Mean	Standard Deviation
Academic Health Center	89	21.090	3.373
University	110	19.264	3.864
Four Year College	31	19.065	4.203
Other	7	19.857	5.080

Note: Institutional types designated as "Other" by respondents granted bachelors degrees in allied health careers, but were not academic health centers, universities, or four year colleges. The AMA data base included federal government institutions.

Table E-15

Scheffe's Means Comparison Tests: Personal Growth/ Goal Orientation Domain Work Environment Scale Scores by Institutional Type

Institutional Type Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
1 - 4	-2.9358	1.2327	5.4013
1 - 2	0.3122	1.8263	3.3403***
1 - 3	-0.1893	2.0254	4.2400
4 - 1	-5.4013	-1.2327	2.9358
4 - 2	-3.5459	0.5935	4.7329
4 - 3	-3.6512	0.7926	5.2364
2 - 1	-3.3403	-1.8263	-0.3122***
2 - 4	-4.7329	-0.5935	3.5459
2 - 3	-1.9602	0.1991	2.3585
3 - 1	-4.2400	-2.0254	0.1893
3 - 4	-5.2364	-0.7926	3.6512
3 - 2	-2.3585	-0.1991	1.9602

Note 1: Institutional Type: 1 = academic health center, 2 = university, 3 = four year college, 4= other. Arrangements designated by respondents as "Other" did not fit the three general models for administrative structures in allied health education. Comparisons significant at $p \leq 0.05$ are indicated by***.

Note 2: DF = 233, MSE = 14.2204, critical value of F = 2.64334.

Table E-16

Means Comparisons: Task Orientation Dimension Work Environment Scale Scores by Institutional Type

Institutional Type	N	Mean	Standard Deviation
Academic Health Center	89	6.932	1.684
University	110	5.991	2.169
Four year College	31	6.323	2.868
Other	7	6.714	2.498

Note: Task orientation is a component of the personal growth/ goal orientation domain. Arrangements designated by respondents as "Other" did not fit the three general models for administrative structures in allied health education.

Table E-17

Scheffe's Means Comparison Tests: Task Orientation Dimension Work Environment Scale Scores by Institutional Type

Institutional Type Comparison	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
1 - 4	-2.1247	0.2183	2.5613
1 - 3	-0.6348	0.6100	1.8548
1 - 2	0.0907	0.9417	1.7927***
4 - 1	-2.5613	-0.2183	2.1247
4 - 3	-2.1061	0.3917	2.8895
4 - 2	-1.6033	0.7234	3.0501
3 - 1	-1.8548	-0.6100	0.6348
3 - 4	-2.8895	-0.3917	2.1061
3 - 2	-0.8821	0.3317	1.5454
2 - 1	-1.7927	-0.9417	-0.0907***
2 - 4	-3.0501	-0.7234	1.6033
2 - 3	-1.5454	-0.3317	0.8821

Note 1: Task orientation is a component of the personal growth/ goal orientation domain. Institutional type: 1 = academic health center, 2 = university, 3 = four year college, 4= other. Arrangements designated by respondents as "Other" did not fit the three general models for administrative structures in allied health education. Comparisons significant at $p \leq 0.05$ are indicated by***.

Note 2: DF = 233, MSE = 4.49266, critical value of F = 2.64334.

Table E-18

Means Comparisons: Total Work Environment Scale Scores by Administrative Arrangement

Arrangement	N	Mean	Standard Deviation
Clustered	159	59.308	13.200
Coordinated	21	66.524	6.645
Dissociated	39	52.590	15.990
Other	11	52.455	20.476

Note: Arrangements designated by respondents as "Other" did not fit the three general models for administrative structures in allied health education.

Table E-19

Scheffe's Means Comparison Tests: Total Work Environment Scale Scores by Administrative Arrangement

Administrative Arrangement Comparisons	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
2 - 1	-1.733	7.216	16.165
2 - 3	3.502	13.934	24.366***
2 - 4	-0.276	14.069	28.415
1 - 2	-16.165	-7.216	1.733
1 - 3	-0.169	6.718	13.606
1 - 4	-5.163	6.854	18.870
3 - 2	-24.366	-13.934	-3.502***
3 - 1	-13.606	-6.718	0.169
3 - 4	-13.023	0.135	13.294
4 - 2	-28.415	-14.069	0.276
4 - 1	-18.870	-6.854	5.163
4 - 3	-13.294	-0.135	13.023

Note: Administrative arrangement: 1 = clustered, 2 = coordinated, 3 = dissociated, 4 = other. Arrangements designated by respondents as "Other" did not fit the three general models for administrative structures in allied health education. Comparisons significant at $p \leq 0.05$ are indicated by ***.

Note 2: DF = 226, MSE = 187.254, critical value of $F = 2.64455$.

Table E-20

Means Comparisons: Relationship Domain Work Environment Scale Scores by Administrative Arrangement

Arrangement	N	Mean	Standard Deviation
Clustered	159	19.597	5.716
Coordinated	21	22.762	3.285
Dissociated	39	17.846	6.877
Other	11	16.455	7.967

Note: Arrangements designated by respondents as "Other" did not fit the three general models for administrative structures in allied health education.

Table E-22

Means Comparisons: Involvement Dimension Work Environment Scale Scores by Administrative Arrangement

Arrangement	N	Mean	Standard Deviation
Clustered	159	7.365	2.020
Coordinated	21	8.095	0.889
Dissociated	39	6.410	2.521
Other	11	5.910	2.982

Note: Arrangements designated by respondents as "Other" did not fit the three general models for administrative structures in allied health education.

Table E-23

Scheffe's Means Comparison Tests: Involvement Dimension Work Environment Scale Scores by Administrative Arrangement

Administrative Arrangement Comparisons	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
2 - 1	-0.6390	0.7305	2.0999
2 - 3	0.0885	1.6850	3.2814***
2 - 4	-0.0091	2.1861	4.3814
1 - 2	-2.0999	-0.7305	0.6390
1 - 3	-0.0994	0.9545	2.0085
1 - 4	-0.3832	1.4557	3.2945
3 - 2	-3.2814	-1.6850	-0.0885***
3 - 1	-2.0085	-0.9545	0.0994
3 - 4	-1.5124	0.5012	2.5148
4 - 2	-4.3814	-2.1861	0.0091
4 - 1	-3.2945	-1.4557	0.3832
4 - 3	-2.5148	-0.5012	1.5124

Note 1: Administrative arrangement: 1 = clustered, 2 = coordinated, 3 = dissociated, 4 = other. Arrangements designated by respondents as "Other" did not fit the three general models for administrative structures in allied health education. Involvement is a component of the relationship domain. Comparisons significant at $p \leq 0.05$ are indicated by ***.

Note 2: DF = 226, MSE = 4.38494, critical value of $F = 2.64455$.

Table E-24

Means Comparisons: Supervisor Support Dimension Work Environment Scale Scores by Administrative Arrangement

Arrangement	N	Mean	Standard Deviation
Clustered	159	6.164	2.352
Coordinated	21	7.714	1.309
Dissociated	39	5.641	2.767
Other	11	5.182	3.093

Note: Arrangements designated by respondents as "Other" did not fit the three general models for administrative structures in allied health education.

Table E-25

Scheffe's Means Comparison Tests: Supervisor Support Dimension Work Environment Scale Scores by Administrative Arrangement

Administrative Arrangement Comparisons	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
2 - 1	-0.0145	1.5508	3.1160
2 - 3	0.2486	2.0733	3.8980***
2 - 4	0.0233	2.5325	5.0416***
1 - 2	-3.1160	-1.5508	0.0145
1 - 3	-0.6821	0.5225	1.7271
1 - 4	-1.1201	0.9817	3.0835
3 - 2	-3.8980	-2.0733	-0.2486***
3 - 1	-1.7271	-0.5225	0.6821
3 - 4	-1.8423	0.4592	2.7607
4 - 2	-5.0416	-2.5325	-0.0233***
4 - 1	-3.0835	-0.9817	1.1201
4 - 3	-2.7607	-0.4592	1.8423

Note 1: Administrative arrangement: 1 = clustered, 2 = coordinated, 3 = dissociated, 4 = other. Supervisor support is a component of the relationship domain. Arrangements designated by respondents as "Other" did not fit the three general models for administrative structures in allied health education. Comparisons significant at $p \leq 0.05$ are indicated by ***.

Note 2: DF = 226, MSE = 5.72852, critical value of $F = 2.64455$.

Table E-26

Means Comparisons: Personal Growth/ Goal Orientation Domain Work Environment Scale Scores by Administrative Arrangement

Arrangement	N	Mean	Standard Deviation
Clustered	159	20.434	3.492
Coordinated	21	21.143	2.798
Dissociated	39	18.231	3.869
Other	11	18.636	6.360

Note: Arrangements designated by respondents as "Other" did not fit the three general models for administrative structures in allied health education.

Table E-27

Scheffe's Means Comparison Tests: Personal Growth/ Goal Orientation Domain Work Environment Scale Scores by Administrative Arrangement

Administrative Arrangement Comparisons	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
2 - 1	-1.6964	0.7089	3.1142
2 - 4	-1.3492	2.5065	6.3622
2 - 3	0.1081	2.9121	5.7160***
1 - 2	-3.1142	-0.7089	1.6964
1 - 4	-1.4321	1.7976	5.0273
1 - 3	0.3521	2.2032	4.0543***
4 - 2	-6.3622	-2.5065	1.3492
4 - 1	-5.0273	-1.7976	1.4321
4 - 3	-3.1311	0.4056	3.9423
3 - 2	-5.7160	-2.9121	0.1081***
3 - 1	-4.0543	-2.2032	0.3521***
3 - 4	-3.9423	-0.4056	3.1311

Note 1: Administrative arrangement: 1 = clustered, 2 = coordinated, 3 = dissociated, 4 = other. Comparisons significant at $p \leq 0.05$ are indicated by ***. Arrangements designated by respondents as "Other" did not fit the three general models for administrative structures in allied health education.

Note 2: DF = 226, MSE = 13.527, critical value of F = 2.64455.

Table E-28

Means Comparisons: Task Orientation Dimension Work Environment Scale Scores by Administrative Arrangement

Arrangement	N	Mean	Standard Deviation
Clustered	159	6.459	2.037
Coordinated	21	7.714	1.347
Dissociated	39	5.641	2.230
Other	11	6.000	3.406

Note: Arrangements designated by respondents as "Other" did not fit the three general models for administrative structures in allied health education. Task orientation is a component of the personal growth/ goal orientation domain.

Table E-29

Scheffe's Means Comparison Tests: Task Orientation Dimension Work Environment Scale Scores by Administrative Arrangement

Administrative Arrangement Comparisons	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
2 - 1	-0.1182	1.2552	2.6286
2 - 4	-0.4873	1.7143	3.9159
2 - 3	0.4722	2.0733	3.6743***
1 - 2	-2.6286	-1.2552	0.1182
1 - 4	-1.3851	0.4591	2.3033
1 - 3	-0.2389	0.8181	1.8751
4 - 2	-3.9159	-1.7143	0.4873
4 - 1	-2.3033	-0.4591	1.3851
4 - 3	-1.6605	0.3590	2.3784
3 - 2	-3.6743	-2.0733	-0.4722***
3 - 1	-1.8751	-0.8181	0.2389
3 - 4	-2.3784	-0.3590	1.6605

Note 1: Administrative arrangement: 1 = clustered, 2 = coordinated, 3 = dissociated, 4 = other. Arrangements designated by respondents as "Other" did not fit the three general models for administrative structures in allied health education. Task orientation is a component of the personal growth/ goal orientation domain. Comparisons significant at $p \leq 0.05$ are indicated by ***.

Note 2: DF = 226, MSE = 4.41037, critical value of $F = 2.64455$.

Table E-30

Means Comparisons: System Maintenance/ System Change Domain Work Environment Scale Scores by Administrative Arrangement

Arrangement	N	Mean	Standard Deviation
Clustered	159	19.277	6.869
Coordinated	21	21.143	2.798
Dissociated	39	16.513	7.667
Other	11	17.364	7.487

Note: Arrangements designated by respondents as "Other" did not fit the three general models for administrative structures in allied health education.

Table E-31

Scheffe's Means Comparison Tests: System Maintenance/ System Change Domain Work Environment Scale Scores by Administrative Arrangement

Administrative Arrangement Comparisons	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
2 - 1	-1.1401	3.3423	7.8247
2 - 4	-1.9300	5.2554	12.4408
2 - 3	0.8808	6.1062	11.3316***
1 - 2	-7.8247	-3.3423	1.1401
1 - 4	-4.1058	1.9131	7.9319
1 - 3	-0.6858	2.7639	6.2136
4 - 2	-12.4408	-5.2554	1.9300
4 - 1	-7.9319	-1.9131	4.1058
4 - 3	-5.7400	0.8508	7.4417
3 - 2	-11.3316	-6.1062	-0.8808***
3 - 1	-6.2136	-2.7639	0.6858
3 - 4	-7.4417	-0.8508	5.7400

Note 1: Administrative arrangement: 1 = clustered, 2 = coordinated, 3 = dissociated, 4 = other. Arrangements designated by respondents as "Other" did not fit the three general models for administrative structures in allied health education. Comparisons significant at $p \leq 0.05$ are indicated by ***.

Note 2: DF = 226, MSE = 46.9782, critical value of F = 2.64455.

Table E-32

Means Comparisons: Innovation Dimension Work Environment Scale Scores by Administrative Arrangement

Arrangement	N	Mean	Standard Deviation
Clustered	159	5.421	2.915
Coordinated	21	6.381	1.910
Dissociated	39	3.692	3.054
Other	11	5.364	3.264

Note: Arrangements designated by respondents as "Other" did not fit the three general models for administrative structures in allied health education. Innovation is a component of the system maintenance/ system change domain.

Table E-33

Scheffe's Means Comparison Tests: Innovation Dimension Work Environment Scale Scores by Administrative Arrangement

Administrative Arrangement Comparisons	Simultaneous Lower Confidence Limit	Difference Between Means	Simultaneous Upper Confidence Limit
2 - 1	-0.9249	0.9596	2.8441
2 - 4	-2.0036	1.0173	4.0382
2 - 3	0.4918	2.6886	4.8855***
1 - 2	-2.8441	-0.9596	0.9249n
1 - 4	-2.4727	0.0577	2.5882
1 - 3	0.2787	1.7291	3.1794***
4 - 2	-4.0382	-1.0173	2.0036
4 - 1	-2.5882	-0.0577	2.4727
4 - 4	-1.0996	1.6713	4.4422
3 - 2	-4.8855	-2.6886	-0.4918***
3 - 1	-3.1794	-1.7291	0.2787***
3 - 3	-4.4422	-1.6713	1.0996

Note 1: Administrative arrangement: 1 = clustered, 2 = coordinated, 3 = dissociated, 4 = other. Arrangements designated by respondents as "Other" did not fit the three general models for administrative structures in allied health education. Innovation is a component of the system maintenance/ system change domain. Comparisons significant at $p \leq 0.05$ are indicated by ***.

Note 2: DF = 226, Msc = 8.30342, critical value of F = 2.64455.

Table E-34

Significance Tests for Differences and Correlations in Total Work Environment Scale Scores Within Levels of Demographic Categories:

Demographic Category	Total Score p-value
Specialty Field	0.8245
Faculty Supervised	0.0129*
Years of Experience	>0.1500
Gender	0.1615
Tenure Status	0.0886
Highest Degree	0.0826
Institutional Governance	0.5037
Institution Type	0.0304***
Degree Offerings	0.3335
Arrangement	0.0008***

Note: The p-values indicate the probability that differences or correlations among levels within a demographic category are significant. Significance at $p \leq 0.05$ by stepwise linear regression is indicated by *. Significance at $p \leq 0.05$ by general linear model is indicated by **. Significance at $p \leq 0.05$ confirmed by Scheffe's test is indicated by ***.

Table E-35

Significance Tests for Differences and Correlations in Relationship Domain Work Environment Scale Scores Within Levels of Demographic Categories:

Demographic Category	Relationship Domain p-value	Involvement Dimension p-value	Peer Cohesion Dimension p-value	Supervisor Support Dimension p-value
Specialty Field	0.3742	0.1069	0.8033	0.4224
Faculty Supervised	0.0128*	0.0653	0.0336*	0.0116*
Years of Experience	>0.1500	>0.1500	>0.1500	>0.1500
Gender	0.3466	0.4533	0.5510	0.2710
Tenure Status	0.2108	0.1449	0.3356	0.4647
Hignest Degree	0.3585	0.3577	0.9359	0.0343**
Institutional Governance	0.6133	0.9414	0.6986	0.1210
Institution Type	0.0415**	0.1061	0.0667	0.0262**
Degree Offerings	0.2295	0.4749	0.5325	0.1058
Arrangement	0.0067***	0.0027***	0.1885	0.0067***

Note: The p-values indicate the probability that differences or correlations among levels within a demographic category are significant. Significance at $p \leq 0.05$ by stepwise linear regression is indicated by *. Significance at $p \leq 0.05$ by general linear model is indicated by **. Significance at $p \leq 0.05$ confirmed by Scheffe's test is indicated by ***.

Table E-36

Significance Tests for Differences and Correlations in Personal Growth/ Goal Orientation Domain Work Environment Scale Scores Within Levels of Demographic Categories:

Demographic Category	Personal Growth/ Goal Orientation Domain p-value	Autonomy Dimension p-value	Task Orientation Dimension p-value	Work Pressure Dimension p-value
Specialty Field	0.6109	0.1854	0.7980	0.9301
Faculty Supervised	0.0250*	0.0103*	0.0157*	>0.1500
Years of Experience	>0.1500	>0.1500	>0.1500	>0.1500
Gender	0.4620	0.6573	0.1989	0.0274***
Tenure Status	0.4901	0.6209	0.5877	0.7370
Highest Degree	0.2334	0.1074	0.6142	0.4163
Institutional Governance	0.1754	0.3831	0.7131	0.1913
Institution Type	0.0043***	0.9235	0.0211***	0.0241**
Degree Offerings	0.1960	0.5924	0.2008	0.4998
Arrangement	0.0025***	0.0397**	0.0037***	0.2564

Note: The p-values indicate the probability that differences or correlations among levels within a demographic category are significant. Significance at $p \leq 0.05$ by stepwise linear regression is indicated by *. Significance at $p \leq 0.05$ by general linear model is indicated by **. Significance at $p \leq 0.05$ confirmed by Scheffe's test is indicated by ***.

Table E-37

Significance Tests for Differences and Correlations in System Maintenance/ System Change Domain Work Environment Scale Scores Within Levels of Demographic Categories:

Demographic Category	System Maintenance/ System Change Domain p-value	Clarity Dimension p-value	Control Dimension p-value	Innovation Dimension p-value	Physical Comfort Dimension p-value
Specialty Field	0.8516	0.8287	0.1799	0.8881	0.5120
Faculty Supervised	0.0872	0.0921	>0.1500	0.0031*	>0.1500
Years of Experience	0.0921	0.0422*	>0.1500	>0.1500	>0.1500
Gender	0.0144***	0.0385***	0.0223***	0.6816	0.0327***
Tenure Status	0.0579	0.0390**	0.4457	0.0476	0.9529
Hignest Degree	0.0194**	0.0550	0.1721	0.0640	0.0695
Institutional Governance	0.8594	0.7175	0.4551	0.8248	0.6686
Institution Type	0.1590	0.0639	0.7945	0.2693	0.4037
Degree Offerings	0.7583	0.7926	0.6041	0.1835	0.9209
Arrangement	0.0089***	0.0374**	0.9984	0.0021***	0.0670

Note: The p-values indicate the probability that differences or correlations among levels within a demographic category are significant. Significance at $p \leq 0.05$ by stepwise linear regression is indicated by *. Significance at $p \leq 0.05$ by general linear model is indicated by **. Significance at $p \leq 0.05$ confirmed by Scheffe's test is indicated by ***.

APPENDIX F

Respondent Comments

Respondent Comments

A total of 134 Allied health program directors commented regarding the favorableness of their work environment toward allied health education. Their returned comments are reproduced below.

"Physical facilities are presently inadequate, although a new facility is planned for next year. Low profile on campus because of lack of coordination of allied health professions."

"Very favorable."

"It is good in that I am given much freedom to make decisions and conduct my work. However, there is a lack of support and interest by administration at times when it is needed."

"The department of allied health is very innovative and aggressive. However, it is always an uphill battle with the college administration in terms of funding, space, and understanding the dynamics of such an intensive program as compared to other programs on campus. Altogether I enjoy my work and being with students enough to continue 'swimming upstream' so to speak."

"Probably more favorable than in some institutions, from what I hear and read."

"The university has relatively recently noticed and verbally supported our program due to the numbers of interested students, the high quality of our graduates, community support, and the involvement of our faculty in

the service and scholarly mission of the university. Resources that would serve as real, tangible support have been few. Thus, the environment is a mixed one regarding favorableness."

"It is favorable here because we are not associated with other allied health programs who usually, because of numbers, ram rod their views for their own personal gain."

"Favorable."

"Positive within school of allied health, oblivious within university."

"There is no favorableness in my work environment to allied health education. It has been an uphill battle to establish the program in a liberal arts (teacher) institution. The program after 13 years is treated like a 'wing' of the nursing program."

"Fairly favorable, funding a problem."

"Program is seen as too expensive and non-productive in terms of scholarly activity."

"Very favorable."

"Work environment at this time in a state of change and general chaos. Institution was static for about 20 years. Now has new director making sweeping changes to bring the institution in line with CLIA, etc. This also includes the school."

"Being in a school of allied health sciences it is very favorable. Faculty are dedicated, administration is generally supportive."

"The institution is generally favorable, although needs of allied health often take a back seat to the medical school. I must comment that many of the questions on the questionnaire are simply unanswerable as posed. At some levels people are helpful, at other levels they aren't; some policies are strict, some aren't. There are only 10-15 questions here which either T or F are really honest."

"There is a large conflict in environment between liberal arts and allied health sciences."

"I work in a very supportive environment. My supervisors strongly support the program to the administration, even in these unfavorable budgetary times."

"The general climate is supportive and receptive to dialogue."

"Environment has been and still is somewhat suspicious and hostile with the issue of "liberal arts" vs. 'vocational' education being discussed year after year. It seems there is always a veiled implication that an allied health field is not really worthy of being taught at a liberal arts college. In addition, financial and other support for this program is subminimal."

"Since it is an academic medical center, very favorable although hard to get funding due to small size of program (4 students)."

"Extremely well received. Contributions respected."

"I found it difficult to respond to questions about supervision, as the supervision provided differs at various levels. From dean to chair there is over-supervision and over-correction; from chair to faculty the opposite is true: faculty and staff are treated as the chair would like to be treated."

"1. Other units on campus still view health sciences as on the job training. 2. Workload is very heavy for health sciences faculty. 3. Unit of health sciences is considered very expensive and not an income producer unit because of low enrollment and expensive accreditation mandates."

"Excellent environment."

"Our department is the only allied health program on campus. The university really doesn't understand what allied health education is all about. Other science departments do not consider medical technology courses as legitimate science courses but rather as 'vocational'."

"The work is continuously challenging and rewarding."

"Excellent work environment."

"Our program is physically removed from the rest of the department with the bulk of the department being located in a fairly modern building. We are in an old boy's dorm with only a few window air units and radiator heat that rarely works. However, our supervisors are

extremely supportive and we are currently in a growth period. Many new faces are coming aboard in our department and we will be hiring a new person in our program soon. This has given an air of great hope and fresh ideas. We all enjoy our work immensely and are pretty much self driven and motivated."

"The atmosphere within the school is positive. However, other faculty in the university do not respect or understand allied health education. We are all 'nurses'!"

"If the allied health program generates money for the college it is well received; otherwise efforts are used to transfer the programs to hospitals and get medical reimbursement."

"The $ go to nursing."

"WES data applies only to the clinical environment, not the academic administrative unit. It is wonderful This school of allied health professions has accomplished a very great deal over the past 5 years despite the lack of support it should have to make it comparable to the colleges of nursing, pharmacy, and medicine. The clinical environment at this institution has reached a nadir and will improve with new dept. chair and changes in supervisors."

"Our college enjoys a fine reputation for allied health programs in a liberal arts setting. Approximately 1/2 of the students are enrolled in an allied health program. This does include nursing."

"Innovative, supportive dean. Limited support staff for program director. Poor physical environment. Good market location. Strong community interest."

"Seems to be fairly favorable."

"Very happy. Much autonomy."

"On this campus the school of medicine is the 'golden haired boy' and the school of nursing and allied health have to fight for resources."

"I would be interested in the results of this survey, if possible."

"Supportive."

"Very favorable. Very supportive."

"Flexibility of work hours."

"a) Our college ranks 6-7 in a group of 14 colleges; funding levels for research are very important and offer units leverage in this time of decreased economic resources. b) All colleges have had budget cuts in the last 3 years. c) The spirit of cooperation and purpose is high between various department heads and the dean. d) Class schedules are heavy and a number of students are part time. e) Allied health has made its presence known on our campus."

"Very supportive chair of our department of medical allied health professions and our associate dean from the medical school."

"The public and students look upon allied health favorably. However, university administrators do not have a clear understanding of AH and do not fully support it."

"The dean of the college is well respected among her peers and by the provost. The faculty in the college are well thought of by their peers within the university at large. The academic programs are respected throughout the university, and there is support for what the college is attempting to do."

"O.K."

"I think the university administration has not understood our unique contributions and problems (i.e. lack of tenurable faculty, lab., clinical requirements, etc.) but this is partly because we've had no advocate, administrator pushing our cause. With a new dean I see this as changing slowly as he is assertive and educates other university administrators."

"Not the best. The school of medicine faculty and the dean hardly realize we exist. We are really left on our own."

"I work in a school where the environment is friendly, courteous, and challenging. Administration strives to provide faculty with the adequate resources to do a quality job."

"Allied health has not been 'embraced' by this university (nor by the last two colleges). There is some support, but we seem to be viewed as the 'odd department out' by the rest of the college of science. We seem to do a hell of a lot of work (as compared to 'real' faculty,

but with 1/2 the status and authority. Would really appreciate a copy of your summary. It could help as background for my dissertation. Thanks. Will call you."

"My personal work environment is not good for allied health education because of a general conflict with biology. Medical technology is part of biology and there is competition for the better students. Good medical technology students are encouraged to change their major in order to accept MARC scholarships and Packard grants for minority students. We are told that medical technology students are not eligible for consideration."

"Mostly favorable. I love the freedom to do things that interest you, but first you have to get the rest of your 'chores' done. Turnover in faculty is hurting our school of allied health."

"Increased favorableness within the college of health sciences. Currently surveying interest within our state for the need and support for additional allied health degree offerings."

"Workload is outrageous. Generally left alone to get job done."

"Generally favorable as far as budget and facilities. We are mainly left alone to manage the program as we see fit. Additional pressure comes from other school related administrative tasks."

"It was great until recently and now it is uncomfortable. From 1976 until 1992 we were located as a program in the school of nursing and health sciences. I was treated as a Dept. head even though we were too small

to be called a department. I was given a budget allocation based upon strategic planning budget request bid. We were allowed input into the school. Now it is still good but not the same."

"Our program has been in existence since 1923. also, we strongly support the NCA credential, not ASCP."

"I have extraordinary easy access to a large health sciences library and computer facilities. Geographic proximity to clinical faculty and other AH program directors creates easy networking and communications. Access to dean and department head is not as easy, making some tasks difficult. Biggest problem is lack of private office space for faculty; much time and energy is devoted to coping with the lack of privacy needed for counseling and scholarly activity."

"Very supportive, but funds are tight -- hard to expand program as a result."

"Problem with classroom size and with preventive maintenance in labs and offices, etc."

"Local work environment and attitudes contrast sharply at times with central administration. This makes some answers ambiguous -- may be true locally, but false generally, etc."

"Excellent work environment especially at the departmental level, and that is how I responded to your survey. We have a new dean of the college and since I believe she is still very insecure in her position, it would not be fair to answer the questionnaire based upon my projections of her. Everyone in our department (9

faculty) are wholeheartedly and totally dedicated to the education of our students in each respective allied health field."

"In this school of health related professions and on a university academic health sciences campus, it's wonderful. Faculty are involved in school and university wide committees."

"Moderately favorable."

"The program is supported in part by the school of health related profession and part by the school of medicine. School of HRP supplies 1.5 FTE and a very small budget. If it were not for the school of medicine support there would be no program."

"Good support from upper administration. What administration doesn't understand, they are willing to learn. Only problem is too heavy of a work load due to the many students, not enough faculty, and schedule."

"Unfavorable in general. Major difficulty relates to allocation of resources to AH and nursing from medicine."

"Excellent offices, laboratory, and general classroom facilities."

"Reasonable."

"Work in a teaching environment. Professional setting dress is required because students have a professional dress code. Rules and policies of college

must be followed. Teaching freedom and innovative ideas are welcomed."

"Very favorable; strong dean supportive of faculty, interested in growth and new opportunities; demands high quality from faculty; central administration is also supportive."

"Generally supportive, but question the high cost of our program."

"In general, allied health programs are gaining respect within medical communities but in the general public there is still lack of knowledge about what we do."

"I don't know what your are asking for."

"It is unfavorable. This program is looked down upon by the pseudointellectual snobs in our college of science."

"Allied health programs within the medical school are not valued, e.g. PT, OT, MT. the medical school is only concerned with research and the training of physicians. We survive by hard work, pluck, and personal sacrifice."

"Administrative support is excellent. Physical work conditions and workload are very difficult."

"Administration does not always understand the special needs of MT or other allied health fields. Hard work trying to compete with arts and sciences."

"Very favorable and supportive. We have a particularly fine faculty in Med. Tech., but all the allied health faculty are good."

"My working environment is favorable and includes the operating room as well as an office area."

"Highly favorable."

"All lab, office, and administrative areas have recently undergone complete, modern renovations. Therefore, the physical environment is exceptionally conducive to productivity and learning. Each faculty has a fully-equipped office, including computer, modem, etc. and access to all telecommunications, video, etc. teaching equipment. However, level of effort required to perform all facets of an academic faculty (scholarship, research, grants, etc.) creates a work expectation that is overwhelming and probably not sustainable when demanded on top of teaching and administrative duties. Expectation is that most faculty (esp. higher faculty ranks) will do almost everything with excellence all the time."

"During a recent fiscal crisis, the other 4 departments in the college suggested 'sacrificing' the department of allied health sciences to meet financial cuts. Often looked at as 'training' or vocational education."

"Enjoy my work immensely -- would only change if there was a personality conflict with a supervisor."

"Many of your questions seem only relevant for hospital based programs."

"This is a very supportive environment due to the dean and president who both believe allied health is important."

"Our college (allied health professions) is very supportive of our program and faculty. The university is fairly supportive of the college. We are growing in enrollment, scholarly output, and prestige -- all of which increases our visibility and administrative support."

"Very supportive!"

"Excellent."

"Administration and clinical affiliates are very supportive -- equipment, supplies and materials are adequate to provide education for entry-level education. Physical plant environment is adequate; 50% of faculty are tenured."

"Support of clinical facilities is excellent versus campus administration and organizational set-up."

"Allied health perceived as strong in teaching and service but weak in research."

"Very supportive administration. However, soon there will be a change in department chair and we will become a hospital based vs. university based lab. Funding guaranteed 2 years, unsure after that."

"We are a small program in a relatively small university. The environment towards our program is generally quite favorable. However, the entire university is scrutinizing carefully all operations. Our board has

instituted a program called 'productivity, quality, and priorities.' Each program had to prepare a very extensive productivity report. Since our program costs are high, we have been closely scrutinized. So far, support has continued."

"Administration appears to appreciate the quality of the program but does not really understand the unique requirements (facility, faculty, and clinical) necessary to maintain a strong, viable, growing program. Sometimes it appears we succeed not because of, but in spite of upper administration."

"Very favorable. The three faculty members in th MT program have as much status and recognition as any biology faculty. Two are tenured, third was just hired last June."

"I am allowed to run the program as I see fit, with little interference, but with much support from administration and other faculty."

"College very supportive in providing flexibility for clinical education environment. 60% of student enrollment at this college is in school of allied health and natural sciences. Dean of the school is progressive / innovative / supportive of new programs in allied health."

"Very favorable and appropriate to have programs in allied health as higher education. Budgetary conditions of state have forced closure of smaller programs, however."

"Quite favorable."

"It was very poor up until 8 months ago when 3 of the faculty decided to go 50% time to attempt to make more money. The dean of the school found some funds and may have to stop other programs to support ours."

"College of allied health sciences has a new director. Therefore, I believe the overall environment is changing. For that reason, some questions were hard to answer."

"After 10 years as an allied health program director, I have noted the following. 1. Faculty from the more traditional, 'hard sciences' are either clueless or are indifferent as to what we teach. Worse yet, many hold contempt for our areas because most of our allied health faculty do not hold doctoral degrees, rarely get grants, teach heavy loads, and are indeed more interested in teaching and producing competent, employable practitioners than they are. We are viewed as merely technical fields, non-academic in orientation, and should probably be relocated to a hospital, or at best, a community college. Nursing is slowly shedding the 'non-academic' persona they held for years (mostly by creating their own paradigm, and increasing the number of doctorally trained nursing teachers/ researchers. Still, many of the newer fields (Rad. Tech., Med. Tech., Ultrasound, etc.) are still searching for their place in academia. 2. Our programs (in the college of health sciences) tend to get less external funding than the other, 'more mature' disciplines. Since we are not associated with an academic health center, there is little or no opportunity for external funding through traditional medical school grants. It seems few funding agencies will fund projects at universities which

are free standing and send their students off to remote clinical affiliates. 3. My personal work environment, however, is great! I am allowed to do what I wish, when I wish. All this freedom does however, come with an expectation - I am expected to accept, teach, and graduate competent health professionals, which I love to do! Since I have a relatively unknown field (nuclear medicine), I am afforded even greater freedom because so few here know exactly what it is I am teaching! Still, others in the university tend to look down upon allied health professors. I would not give up what I do. It is too much fun, the students are a joy (even the 'problem' ones, and research is too interesting. I would be interested in seeing the results of your work. If you produce a synopsis of your results, please send it to me. I have enclosed my card. Thanks, and good luck."

"The university fully supports the 5 allied health programs. Efforts are underway to develop both masters and doctoral programs in the health sciences."

"This program and possibly the entire school of allied health are scheduled for phase out and closure by mid-1994. Allied health education is not a priority in this health science center."

"Allied health has the lowest status of the 5 schools here. Education is the lowest priority. Faculty salaries are lower than technical school salaries."

"Administration supports allied health education and tries to provide a good psychological climate for the development and support of people and programs. Financial

aspects (budgetary constraints) limit what the administration can do."

"Best possible way to enjoy allied health is in education: no hospital politics!"

"Excellent."

"Dedicated faculty who work as a team. Challenging work. Strong, supportive president. Helpful faculty from other departments. Well kept campus."

"Excellent. Any frustration comes from inadequate budget."

"Frustrating. Education appears to be the least of the priorities at our institution. The programs with the most political clout always compete for the resources thus programs with few faculty cannot generate funds. -Only teach and this is not appreciated in health care today."

"As a replacement for a program director who left in 'disgrace'.... I was faced with a self study for accreditation. I was just scratching to get competent at lecturing students! I had jumped into all of this and was working from a perspective of having had twenty years of laboratory experience, but not recent college instructor experience. There is no training program for the work of the program director position in allied health disciplines. There is not even a welcome brochure sent by the agency that accredits the programs, informing anyone new of what needs to be attended to. Even a long experienced technologist such as myself has little idea of the greater portion of the responsibilities attendant upon the directing the education of college seniors. It's an

OJT experience for all who enter. New program directors must be gregarious and ready to hustle around and get the information they need. Even a person with technologist experience as well as a degree in education methodologies still has the periodic CAHEA-NAACLS hurdles to clear in addition to those hurdles put there by the academic institution. How does one promote experienced technologists to go out and obtain a degree in education methodologies before tackling a program director's job? ....Not a well publicized career path is it? Most allied health professionals/technologists are working just to stay afloat. Can they take time out to get the BA/MA to feel competent with educational issues? And where does the management experience come from if not already had by trial and error in the professional workplace? This top job is a real challenge.... Allied health education at this institution is not promoted in any sort of coordinated fashion. I have broken with tradition by associating with the (another) program director and supporting him in his efforts to do some consolidation of efforts in marketing our programs.... I'll tactfully and consistently fight the good fight for promoting management skills in pathologists and promoting the need to combat institutional academic inbreeding here as long as I can resist the financial temptation to move elsewhere and make a more comfortable living,...but I doubt if we'd move to West Virginia, though. Hope you have fun with your research. Best wishes."

"Administration pleased enrollment is up."

"Work environment is fine. Space is 'rare.' Favorableness of personal work environment is fine.

Constant change and work pressure for both supervisor and faculty not acceptable. Gradual continuous changes with less work pressure would be quite acceptable."

"We are a school of allied health in the college of pharmacy and health sciences which includes schools of pharmacy, nursing, and us. AHS is still the 'step-child" compared to salaries, funding, and facilities of pharmacy and nursing programs even though our school has the majority of students in our college and is larger than some entire colleges at our university."

"Very comfortable, relaxed, supportive environment where employees are expected to complete assigned work. Good support from supervisors. Difficulties pertain to limited resources and aging facilities."

"The hours get to be excessive. Last year 65-hour week, and 35 per week during 'vacations.' I have been in medical lab. science education at this university for 31.5 years; the first eight alone; the next three 1.5 FTE. As person 'in charge,' coordinator, director, acting director about 18 years. Our department has a chairman who is not the director. The director reports to him."

"Budgetary constraints impose constant pressures."

"Promotes allied health education."

"Excellent."

"Being a research oriented clinical department in an academic center we are always trying to develop new procedures and updating protocols. The staff is kept up to date on change. The workload is steady but manageable.

Attention to detail and protocol are stressed to maintain quality and reputation of our services."

"The model (perceived) that is assumed in this study is a very autocratic, hierarchal management model. Current belief and studies indicate such a model to be ineffective in our information society. Management needs to be teamlike and non-coercive."

"Very positive and supportive. Approximately one half of total college population major in a health related program so the college administration is attentive to the needs of health science division programs."

"The allied health programs are not supported as well as other programs. They seem to be the lowest on the totem pole."

"Supportive from upper level administration. Excellent working of personnel. Space problem due to limited state budget."

"It's always a challenge."

"We receive favorableness by those who understand what we do. We are on a medical center with medical school campus. We are in a step-child posture here. The MD's don't know what we do and the central administration doesn't much care."

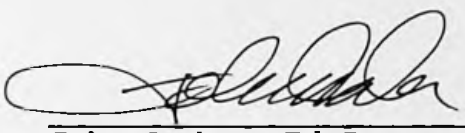
"A wonderful group of people to work with -- it is like a family!"

"The immediate work environment is more pleasant than the mother institution. However, we are in an unusual

situation where we are co-sponsored by two institutions: a university and a hospital. The office and program budget are locused within the hospital center, while the academic and administrative support (registration, grade reports, etc.) are within the university. Both institutions collect tuition."

"1. Much friendliness and interaction among employees. 2. Physical facilities need improvement. Crowded offices, not enough storage space, new furniture needed."

APPROVAL OF EXAMINING COMMITTEE



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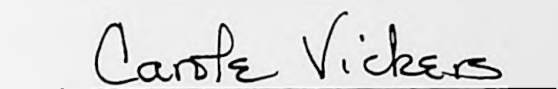

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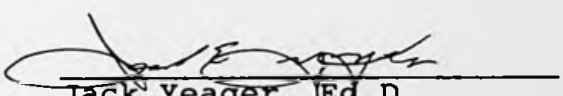

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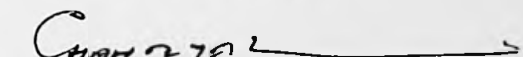

Hamid Chahryar, Ph.D.

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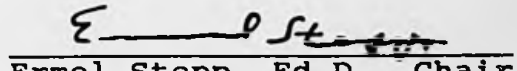

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