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**A review of the professional preparation for undergraduate
students in corporate/industrial and hospital/medical wellness
and fitness programs**

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Middle Tennessee State University, 1993

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A Review of the Professional Preparation for Undergraduate
Students in Corporate/Industrial and Hospital/Medical
Wellness and Fitness Programs

Byron LaGary Carter

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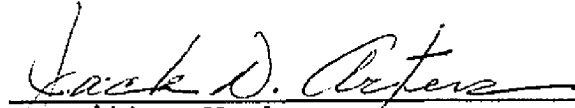
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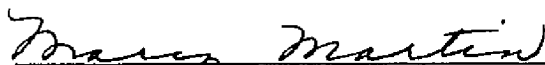
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ABSTRACT

A Review of the Professional Preparation for Undergraduate Students in Corporate/Industrial and Hospital/Medical Wellness and Fitness Programs

Byron LaGary Carter

The purposes of this study were as follows: (1) to identify the necessary background for potential wellness and fitness professionals; (2) to examine the course content of undergraduate programs in wellness and fitness, health promotion, and/or exercise science/physiology; and (3) to identify which professional organization should take precedence in accrediting a core curriculum for programs that emphasize a career in wellness and fitness and health promotion.

A questionnaire was mailed to 50 wellness and fitness directors of corporate/industrial-based programs throughout the United States. Twenty-six (52 percent) of these questionnaires were completed and returned. An identical questionnaire was mailed to 50 wellness and fitness directors of hospital/medical-based programs throughout the United States. Thirty-two (64 percent) of these questionnaires were completed and returned. The second questionnaire was mailed to 100 directors of institutions with undergraduate programs in wellness and fitness, health promotion, and/or exercise science/physiology throughout the

Byron LaGary Carter

United States. Eighty (80 percent) of these questionnaires were completed and returned.

The data from the completed questionnaires were recorded with frequencies and percentages computed. The following recommendations were made from the conclusions of the study: (1) undergraduate programs should provide additional coursework in the areas of program planning in wellness and fitness, business administration, speech communication, computer science, basic first aid (CPR), and exercise testing and prescription; (2) internship/previous job experience is highly regarded for potential employment; and (3) a majority of the undergraduate programs supported the future possibility of receiving accreditation by the American College of Sports Medicine.

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CHAPTER 1

Introduction

What does the future hold for physical education? What role will physical educators play in the health promotion movement that seems to be taking the country by storm? Are today's college graduates adequately prepared to provide the necessary answers regarding how to maintain a healthy lifestyle? These are some of the questions that are addressed in this study. The following is an examination of how physical education should respond to the needs of the American work force.

Shields (1984) regards physical education as a vital part in the overall health and well-being of society. She believes it is the responsibility of physical educators to take a leadership role in the wellness movement due to their knowledge, skills, and expertise in this area. Physical education professionals should merge with business and industry to promote adequate educational programs for disease risk factor reduction. Colleges and universities must take advantage of the position to offer quality wellness programming. Such programs should include the common necessary courses in human performance, exercise testing, fitness evaluation techniques, and exercise prescription. However, Shields also believes that curricula should be broadened to include courses in counseling,

behavior modification, nutrition, internships, and research in health and fitness matters.

McNeill (1987) believes that the rapid growth in company wellness programs may result from the failure of health and physical education programs offered in the public schools and universities over the past three or four decades. However, he also believes that the primary motive for the expansion of the wellness movement to be economically based. The rising health-care costs play a vital role in the future of wellness programs. Measures must be taken to reduce medical expenses. Furthermore, he argues that the physical fitness movement originated in physical education, but the wellness/health promotion trend began within industry. Academic departments in physical education are generally not as involved in the wellness program as they should be beyond their traditional roles. Further evaluation of wellness programs reveals a diversity in the backgrounds of the persons who manage them. An opportunity exists for the field of health and physical education to prepare professionally trained personnel to implement fitness programs. Additional effort is being made to define new subdisciplines in health and physical education, rather than integrating the knowledge that these subdisciplines provide.

Maynard and Leslie (1988) convey that physical educators among colleges and universities have expressed

great concern about the future of physical education within their institutions. The number of quality physical education majors and their future job opportunities will determine the image that the department reflects to the central administration. Both men agree with others in that physical education should not continue to recruit large numbers of students with the job market decreasing. Alternative programs, such as "exercise science," should be offered in addition to the traditional teacher-coaching preparation.

Cardinal (1990) believes that the 1975 Public Law 93-641 and the U.S. Surgeon General's report which called for health and disease prevention have triggered the physical fitness movement. He states that in order for physical education programs to survive there must be a move toward offering programs which serve the health, fitness, and wellness needs of society. Physical education programs have traditionally been limited to meeting the needs of athletics and those enrolled in the general activity programs. By joining forces with other professional organizations, physical education is making a commitment to the wellness and fitness of a more health-oriented society.

Statement of the Problem

This study surveyed established undergraduate programs in wellness and fitness, health promotion, and/or exercise science/physiology to determine: (1) the knowledge and

technical skills required for the wellness and fitness and health promotion professional, (2) the need for accreditation, and (3) the professional (academic) preparation within the previous undergraduate programs in relation to the perceived knowledge and technical skills of work-site professionals.

Purpose of the Study

The purposes of the study were as follows: (1) to identify the required background for potential wellness and fitness professionals; (2) to examine the course content for an undergraduate degree in wellness and fitness, health promotion, and/or exercise science/physiology; and (3) to identify which professional organization should take precedence in accrediting a core curriculum for programs that emphasize a career in wellness and fitness and/or health promotion.

Delimitations

This study was delimited to the colleges and universities within the United States which offer an undergraduate program in wellness and fitness, health promotion, and/or exercise science/physiology and directors of corporate/industrial and hospital/medical wellness and fitness programs. The sample for this study was a random selection of directors of work-site corporate/industrial and hospital/medical programs and institutions with degree programs recorded by the National Wellness Association and

the National Association for Sport and Physical Education, respectively.

Basic Assumptions

It is assumed that all the survey respondents were both truthful and sincere in answering the questionnaire. It is also assumed that the questionnaire utilized in the study yielded results concerning: (1) the required background for potential wellness and fitness professionals; (2) the course content for an undergraduate degree in wellness and fitness, health promotion, and/or exercise science/physiology; and (3) the identity of the professional organization which should take precedence in accrediting a core curriculum for the programs mentioned previously.

Definition of Terms

Core curriculum--the academic courses that are specifically required to be taken by students majoring in wellness and fitness, health promotion, and/or exercise science/physiology.

Exercise science/physiology--the science which deals with the study of muscular activity and the associated functional responses and adaptations.

Exercise specialist--a professionally certified individual who is required to apply scientific principles of conditioning and motivational techniques in promoting a healthy lifestyle for persons with medical or physical limitations.

Fitness--a set of personal attributes that coincide with the ability to perform physical activity.

Fitness instructor--an individual who has obtained a depth of knowledge in the multidisciplinary approach to the prevention of disease through exercise and lifestyle modifications.

Institution--a four-year college or university which offers an undergraduate degree in wellness and fitness, health promotion, and/or exercise science/physiology.

Health promotion--the various methods utilized to promote the physical, mental, and social well-being of an individual and not solely the freedom from disease.

Professional preparation--the knowledge and skills which prepare an individual for a career in wellness and fitness or health promotion.

Wellness--a broad concept that involves not only the physical parameters, but also the psychological and spiritual parameters of an individual.

Wellness and fitness director--the individual who serves as both an administrator and instructor of corporate/industrial or hospital/medical wellness and fitness programs.

Wellness and fitness program--a corporate or hospital-based program.

Significance of the Study

The study was an attempt to establish some guidelines for the professional preparation of wellness and fitness and health promotion professionals within related programs. Attention was focused on the academic background and certification preferred by work-site wellness programs when hiring a fitness instructor. Also, emphasis was placed on the core curriculum of undergraduate programs offering a major in wellness and fitness, health promotion, and/or exercise science/physiology.

Questions to be Answered

1. What are the necessary knowledge and skills required for potential employment in corporate/industrial and hospital/medical wellness and fitness programs?
2. What are the most needed core curriculum courses for the professional preparation of undergraduate students?
3. What are the preferred certifications for individuals in corporate/industrial and hospital/medical wellness and fitness programs?
4. How much internship/work experience is needed to help prepare students for the wellness and fitness and/or health promotion profession?
5. Should undergraduate wellness and fitness, health promotion, and/or exercise science/physiology programs be accredited? If so, by which organization or association should these programs be accredited?

CHAPTER 2

Review of the Literature

A review of the literature has revealed some of the concerns facing corporate America. One such problem is the rising cost of employee health care. A possible solution to this problem has commonly been the implementation of employee health promotion programs. Corporate fitness programs have contributed in establishing an alternative-career track among physical education majors. However, there do not appear to be any concrete guidelines in preparing a physical educator for a career in corporate fitness and/or health promotion. Therefore, many undergraduate programs maintain some diversity in preparing their graduates in an increasingly competitive job market. The review of related literature has been categorized into four sections: (1) needs of an employee wellness and fitness program, (2) benefits of work-site wellness and fitness programs, (3) academic preparation of the wellness and fitness or health promotion professional, and (4) needed certification and skills of a corporate fitness professional.

Needs of Employee Wellness and Fitness Programs

Griffin and Zeigler (1986) examined the need for corporate fitness programs. Their research revealed that 17 percent of the Gross National Product (GNP) is spent on

the cost of employee illness. Estimated predictions suggest that the costs could reach 30 percent of the GNP by the year 2000. Approximately 50 percent of these costs may be prevented by a healthy lifestyle. Both women state that reports from corporate headquarters worldwide emphasize employee wellness programs due to the cost-effectiveness for the employer. Many corporations believe that a fitness program will: (1) decrease sick leave, (2) increase worker productivity and morale, (3) decrease the chances of total disability, and (4) demonstrate an increased working longevity.

Health-care has become a major crisis for many American corporations. Chang and Boyle (1989) explain that in the past 10 years many companies have been confronted with rising costs in health and worker's compensation insurance and employee absenteeism, illness, accidents, and turnover rates. Contrary to the problems of implementing a fitness program, businesses with such programs are reporting data that promote corporate fitness programs. The results often include a decrease in medical-care cost, decreased absenteeism, increased employee productivity and morale, and greater worker retainment and recruitment. Both individuals agree that when each Fortune 500 company begins losing an average of \$88 million annually to worker illness and \$100 million for employee health care, corporate fitness becomes a wise investment.

Wagel (1989) states that the Center for Disease Control calculates that 54 percent of American deaths below age 65 years are related to lifestyle practices. An increase in health consciousness seems to hold the highest hope for controlling skyrocketing medical costs. In 1985, American businesses paid over \$87 billion in medical insurance premiums for employees and retirees, along with their dependents. This amount was higher than the total dividends those companies paid to their shareholders that same year. Employers can decrease health insurance costs by encouraging health promotion programs.

Sherwood (1986) states that "health promotion programs provide the only opportunity where individual employee and corporate goals coincide; health promotion programs are aimed at reducing health risks and, ultimately health care costs" (p. 98).

Braus (1989) reports that the aging work force is a current demographic trend. In 1985, the National Center for Health Statistics reported 368 hospital discharges for every 1,000 adults age 65 years or older. These data are compared to the 170 hospital discharges for adults ages 45 to 65 years. The Department of Health and Human Services predicts the average age of employees to increase from 35 years, in 1987, to as high as 42 years by 2000.

Work (1989) gives some valuable insight into the future of corporate fitness. She believes that additional clear

and concise research is needed, but many experts believe that corporate fitness is a permanent fixture. The underlying belief is that many companies will decrease their expenses by contracting with local professionals for staff and facilities. Dr. Work credits Maureen Johnson, MD, regarding the future reasons for expansion of corporate fitness programs. The three reasons are: (1) there is a decrease in qualified personnel and the need for greater benefits to recruit employees, (2) the work site is a good place for releasing health-related information, and (3) wellness programs attempt to decrease the medical-care problem of many companies.

Benefits of Wellness and Fitness Programs

An article by Leepson (1988) conveyed that "wellness" became a catchword of preventative medicine in the 1970s. The phrase stemmed from the programs being offered by companies to help reduce rising medical costs. He states that the Federal Health Care Financing Administration revealed that the nation's medical bill has more than doubled from 1980 to 1987. The agency predicts the national medical bill will exceed \$1 trillion by the year 2000. Presently, businesses primarily pay over half of the nation's health-care costs. To curb these costs many large corporations have instituted wellness programs. Such companies are Black & Decker, Chrysler, General Electric,

Honeywell, IBM, Johnson & Johnson, Kimberly-Clark, Kraft, Motorola, Shaklee, and Tenneco.

Thompson (1990) believes that small businesses can receive the benefits related to wellness programs without making a large investment. During the 1980s, many employers realized the importance of reviewing employee health claims in developing an efficient health-care system. However, the rewards of such efforts were limited and short-termed. Today, employers are encouraging workers to make lifestyle improvements through proper nutrition, exercise, smoking cessation, and regular physical exams. By making these types of improvements, employers are considering the long-term benefits of a health promotion program.

Feineman (1990) states that the rampant increase in medical care can cost some corporations billions of dollars yearly. The increase in health-care coverage has contributed to making corporate fitness a \$300 million business. Many consulting agencies specializing in fitness have begun to take advantage of this business opportunity.

There are a number of cost containments being reported by corporations. Aberth (1986) revealed that New York Telephone figured that it saved \$663,000 from its hypertension control program; \$1,565,000 from the alcohol control program; and \$268,000 from its stress management program. He also reports that AT&T Communications estimates

that \$79 million will be saved over a 10-year period through it's "Total Life Concept" health promotion program.

The Honeywell Corporation has demonstrated that its wellness program has paid off. Roberts and Harris (1989) convey that Honeywell reported that its medical-care costs have increased 4 percent at major sites, compared to an average 14 percent by other large national corporations. A three-year survey found a significant increase in worker morale after participating in a health promotion program. Honeywell raised its commitment to wellness from \$15 per employee, in 1986, to \$30 per employee, in 1987 and 1988.

Rothman (1989) looked at the impact that wellness programs have on some businesses. He reported that Johnson & Johnson's "Live for Life" wellness and fitness program has decreased its yearly insurance cost by \$150 per employee. Pillsbury estimated that every dollar spent on its wellness program provides a \$3.63 savings in medical cost. A great dual state study by Blue Cross/Blue Shield resulted in some interesting facts. The study examined mid-sized companies with wellness programs which concluded that they reduced worker absenteeism by 30 percent in Michigan and 50 percent in Indiana. The state of Indiana reported an approximate savings of \$180,000 over four years.

An award-winning fitness program was investigated by Caudron (1990). The Adolph Coors Company has spent over 10 years forming a wellness program that has been estimated to

have saved the company \$1.9 million yearly. The savings were accomplished by lowering medical costs, decreasing absenteeism, and increasing worker productivity. Coors reported that for every dollar spent on their wellness program, there was a return of \$6.15. The company's medical-care costs only increased 6 percent between 1988 and 1989, compared to most companies fighting an increase above 18 percent. The Adolph Coors Company was awarded top honors by Kelly Communications and the Association for Fitness in Business for possessing the country's top employee health program in 1989. A fitness program appears to have some psychological benefits.

Imm (1990) conducted a study utilizing 29 employees who voluntarily participated in an aerobic-fitness program in a textile industry in a large southeastern city. The majority of the participants had been employed by the business over five years. Twenty-four of the program participants were women. The mean age of the entire group was 44 years. The participants attended between 56 to 89 percent of all aerobic-fitness classes offered. The study was conducted over an eight-week period, three days per week, with each class lasting 45 minutes. A 15-item questionnaire was completed by all the participants. A rating of the participation effects along many physical and psychological dimensions was examined by the questionnaire. A Likert scale was utilized in answering the questionnaire with the

following numbers: (1) no effect, (2) a small effect, (3) a moderate effect, and (4) a large effect. The results indicated that a reduction in stress ($\bar{M} = 3.56$) had the largest effect. The second was an increase in stamina/endurance ($\bar{M} = 3.43$); next was an improvement in mood and self-esteem ($\bar{M} = 3.12$); and finally a moderate increase in flexibility ($\bar{M} = 3.0$). Many participants came to class during their day(s) off from work because they said it made them feel better about themselves. These data tend to support the notion that exercise promotes positive self feelings and knowledge regarding the importance of a physical fitness program.

Gebhardt and Crump (1990) conducted a comprehensive review of the literature concerning wellness and fitness programs up through 1988. They both state that employee wellness and fitness programs have dramatically increased over the past 15 years. Their general conclusions were that wellness programs increase fitness levels and decrease cardiovascular risk factors. Recent research has shown a strong correlation between reduced health-care costs, absenteeism, and worker turnover by implementing a comprehensive health promotion program.

Erfurt, Foote, and Heirich (1991) examined the cost-effectiveness of wellness programs for decreasing cardiovascular risk factors of personnel at four work-site programs. The cardiovascular disease risks included were

hypertension, obesity, and cigarette smoking. A wellness screening was performed over a three- to four-week period at each plant. Eighty-three to 89 percent of the average participants were males, while 67 to 76 percent were white with a mean age of 39 to 43 years. The direct cost per employee of each work site is as follows: site 1, \$2.97 (control site); site 2, \$17.68 (health education); site 3, \$30.96 (health education plus counseling); and site 4, \$38.31 (health education and counseling, plus plant organization for health promotion). Sites 3 and 4 were reported to be more cost-effective than site 2 for determining personnel with cardiovascular risks and placing them in treatment programs. Sites 3 and 4 were five to six times more cost-effective than site 2 in reducing risks and relapse prevention. In conclusion, the authors suggest that companies should incorporate wellness programs due to their cost-effectiveness.

A few higher education institutions are implementing wellness programs for their faculty and staff members. McMillen (1986) viewed the wellness program at Southern Methodist University. She stated that the university reported to have saved over \$27,000 in health-care costs, while program participants used 28 percent less sick leave. The wellness program members also filed one-third less medical claims than a control group in a study conducted by the university. She says that many universities are

utilizing their physical education and athletic departments to implement wellness programs. McMillen (1986) cites that "about twenty percent of higher education institutions now have health promotion plans in place, according to the National Wellness Institute at the University of Wisconsin at Stevens Point" (p. 21).

Academic Professional Preparation

Nelson (1984) conveyed the idea that physical education majors are drawn to the fitness movement without being the typical "gym teacher." A job directing a fitness program seems to be more appealing and attainable than the common teaching positions. Such a decision stems from the assault on the precept image of education. Nelson surveyed 102 corporate personnel directors in businesses employing 1,000 or more people within the state of Wisconsin. The return rate of the questionnaires was 75 percent, with a useable response rate of 74 percent. However, only 20 percent of the responding firms provided a fitness facility that would mandate hiring a trained professional to supervise the program. The top four qualifications given for hiring a fitness director were the following: (1) recreational experience, (2) academics in sports and exercise, (3) American College of Sports Medicine (ACSM) certified fitness instructor, and (4) other work experience within the company. Some other traits that were frequently given for a fitness instructor were leadership, diplomacy, maturity,

human relations, and good public relations. Nelson concluded that physical education programs offering an emphasis in corporate fitness should gear their programs to fit the needs of industry. Formal academic content should be avoided.

Wilson and Hall (1984) stressed that "the rise in the programs offered in business, industry, health spas, YW-YMCAs, Jewish Community Centers, hospitals, and clinics demand qualified staff to supervise them" (p. 40). Cobb (1987) revealed two factors that have promoted alternative careers, compared to that of the common teacher track in physical education. The first factor is the decreased number of primary and secondary students and faculty. Secondly, there is a surge of interest in leisure activities, such as fitness and recreational sport. A study was then instrumented which placed a questionnaire at each of the 184 four-year institutions in the southern district of the American Alliance of Health, Physical Education, Recreation, and Dance. A total of 100 (58 percent) were completed and returned. Data analysis confirmed that 94 (88 percent) of the institutions offered programs in teacher certification and 80 (75 percent) offered alternative programs related to physical education. Further data analysis demonstrated that a total of 13,382 physical education majors are enrolled in either a teaching-emphasis or an alternative-career program. There were 4,090 students

of the total enrollment who were seeking a degree with an alternative emphasis. It was determined that, due to the results, the most popular alternative-career programs included athletic administration, health and fitness management, exercise science, sports medicine, and (nonteaching) physical education. An internship was required by 63 percent of the institutions offering alternative-career specialization. Cobb believes that the areas of sports management and wellness and fitness are obviously the future trend. He emphasizes that many institutions have begun to evaluate the student need for the future job market and to initiate new curriculum development.

Golaszewski, Tomik, Pyle, and Pfieffer (1982) disclosed that corporate fitness programs are becoming more complicated. The need for qualified health professionals is crucial for the suspected future growth of the wellness and fitness profession. A team of experts representing exercise science, health education, and management was formed. The Xerox Corporation also provided management and staff personnel to aid in forming standards for the fitness instructors employed by Xerox. An overview of the expected competencies of a fitness instructor included the following:

- (1) a bachelor's degree in a health-related discipline,
- (2) membership and/or involvement in a professional organization(s),
- (3) content knowledge of general health,

- (4) content knowledge of health-behavior change, and
- (5) personal and communication skills.

Mattia (1984) conducted a study to evaluate the program directors, staff, and programs in corporate fitness. An 18-item questionnaire was sent to 250 corporate members on the mailing list of the Association for Fitness in Business. There were 170 (68 percent) of the questionnaires returned; however, only 104 (61 percent) were completed, while 66 (38 percent) did not meet the requirements of the study. After additional evaluation, only 97 (39 percent) of those mailed out were utilized. Her results indicated that 65 (67 percent) of the participants have master's degrees, while 9 (9 percent) have doctoral degrees. Twenty-nine (30 percent) of the master's degrees and six (6 percent) of the doctoral degrees were in exercise physiology. Forty-six (37 percent) of the staff members had obtained bachelor's degrees in multiple health-related fields. The majority of the program directors held a graduate degree. Full-time and part-time employees had obtained degrees connected to their job duties. The corporate fitness programs considered exercise physiology to be the most important academic subject needed by fitness professionals, although general sciences, health, and fitness management were listed among the top 10 necessary courses. There was not a substantial number of corporate fitness staff who held professional certification(s).

Gorman, Brown, and Brezzo (1986) mailed a survey instrument to 393 corporate wellness professionals. Items in the questionnaire were divided into three main categories which included academic coursework/skills, administrative skills, and experience/certification. Two hundred and forty-eight of the corporate professionals' questionnaires were analyzed, yielding a return rate of 63 percent. A profile of the respondents revealed a company size ranging from a low of 6 percent for professionals employed by companies with less than 50 employees to a high of 67 percent for those employed by companies with more than 500 personnel. Data indicated that more than two-thirds of the wellness professionals returning the questionnaire worked for corporations with more than 500 employees. The top five rankings of the perceived preparations for wellness personnel were as follows: (1) principles of exercise and conditioning, (2) exercise prescription and individual program planning, (3) CPR certification, (4) program planning and administration, and (5) exercise physiology. The authors conclude that viable professional preparation must include academic training in science courses, practical and administrative skills, and a variety of job-related experience. Coursework should include exercise physiology, exercise prescription, anatomy and physiology, basic nutrition, and first aid. Trained corporate wellness

professionals should also be involved in professional organizations and pursue a master's degree.

Webb (1987) examined the needs of corporate fitness programs and the professional preparation provided by colleges/universities. A questionnaire was sent to 50 corporate fitness program directors and 75 undergraduate program directors in adult wellness and fitness. Thirty-two (64 percent) of the questionnaires mailed to corporate fitness directors were completed and returned. Forty-one (55 percent) of those sent to undergraduate program directors were returned. The results indicated that the technical skills required by fitness directors were covered in 70 percent of the undergraduate programs. Approximately 37 percent of the undergraduate programs required an internship of 300-599 hours of on-the-job experience. However, the undergraduate programs tended to neglect the development of both personal attributes and business skills considered to be valuable by fitness directors. Nearly 75 percent of the corporate fitness directors considered certification by the American College of Sports Medicine to be a requirement for employment.

The purpose of a study conducted by McGlaughin and Taylor (1987/1988) was to develop a specific priority list of course content and skills that may serve faculty involved in corporate health planning. The sample population was taken from two health promotion conferences sponsored by the

Association for Fitness and Business and Wellness in the Workplace. A total of 1,029 people attended both conferences. A random selection of 48 names was taken from a list of 161 corporations, companies, and consultants (CCC). The survey was conducted by telephone and was derived from several sources, including the Role Delineation Project and recent literature on work-site health promotion. The survey instrument was divided into five sections. Sections 1 and 2 dealt with course content and acquired skills. Sections 3 and 4 included demographic information. Section 5 contained three open-ended questions about the future of corporate wellness programs. The data indicated that the top three skills were interpersonal, verbal, and listening. The three essential courses were health promotion/wellness, stress management, and nutrition. A baccalaureate degree was the minimum education required for an entry-level position for 80 percent of the respondents to sections 3 and 4. These findings suggest that faculty should teach courses in management, leadership, interpersonal skills, stress management, nutrition/weight control, and consumer health.

Rogers (1990) instrumented a study to evaluate the status of undergraduate programs in health promotion/wellness within the southern district of the American Alliance of Health, Physical Education, Recreation, and Dance. There were 386 physical education departments

surveyed with 276 respondents. There were 45 programs which offered career tracks in health promotion/wellness, and these were the focus of the study. An instrument was designed to evaluate curriculum content and design. The majority of the respondents (59 percent) expressed dissatisfaction with their current program and were equally split (50 percent) on a decision to revise the current curriculum. A majority of the respondents (94 percent) believed a need existed to establish curriculum standards in health promotion/wellness. However, many (34 percent) of the programs did not favor the idea of accreditation. A majority of the respondents confirmed that the National Association for Sport and Physical Education should be the organization to set future precedents in health promotion/wellness.

Jacoby (1991) believes that today's fitness directors must be well prepared to meet the increasingly wise and demanding consumer. Individuals desire a competent and educated staff to offer proper fitness instruction, along with answering their questions. An individual is no longer being hired on the basis of muscular development. Jacoby contends that the successful fitness manager must demonstrate three fundamental skills: (1) technical skills, which include exercise physiology, nutrition, psychology, and biomechanics; (2) business skills, which include evaluating proposals, internal accounting, marketing, and

personnel evaluation; and (3) conceptual skills, which involve the necessary knowledge and skills required to accomplish the mission of the organization.

Certification and Skills

Parks (1990) examined the role of proper certification for the fitness professional. Who should set the standard for fitness instructor certifications? Some individuals believe that universities and other educational institutions should set standards for the fitness industry. However, the responsibility may not coincide with the mission of higher education. Parks believes that colleges and universities exist to provide qualified people for the job, but not to protect industries from persecution. She also believes that one reason some fitness establishment owners flourish is that they are able to employ underqualified people who look good in a leotard and work for minimum wage. Certification developed by the fitness industry should aid the students who are preparing for a career in fitness. Parks (1990) states:

It is reasonable to predict that if these types of stringent certification standards become accepted nationwide, the industry will become more professionalized and the more highly qualified candidates should get the jobs. (p. 72)

Corbin and Lindsey (1988) define an expert in exercise and physical fitness as a "person who has a degree(s) in physical education, exercise physiology, physical therapy, or corrective therapy from an accredited university and has

specialized in exercise prescription and physical fitness" (p. 202).

Seaward and Snelling (1990) contend that the rapid growth of the corporate wellness and fitness programs has created some problems. Among these is the fact that many people are employed within this field without the necessary qualities, training, and skills to promote professionalism. Both authors provide some qualities to look for in a prospective fitness instructor: (1) creativity and organizational skills, (2) effective communication skills, (3) exercise leadership skills, (4) health and fitness assessment skills, and (5) counseling and motivational skills. The fitness instructor should promote professionalism throughout his/her job performance.

Abbott (1989) notes that recent surveys and litigation have questioned the qualifications of commercial fitness instructors to offer safe and adequate exercise programming. He conducted a study to measure the exercise-science knowledge base of commercial fitness instructors within the state of Florida. The test scores were then compared to fitness instructors certified by the American College of Sports Medicine (ACSM). Samples of the commercial fitness instructors were taken from five geographically distributed, large metropolitan areas from within the state of Florida. ACSM fitness instructors scored twice as high as commercial fitness instructors on the testing instrument. The study

concluded that commercial fitness instructors within the state of Florida have significantly less knowledge of exercise science than ACSM-certified health/fitness instructors. The results cause concern that practicing commercial fitness instructors may not be qualified to provide safe and effective exercise programming within the state.

The American College of Sports Medicine has established six levels of professional certification for professionals in both prevention and rehabilitation programs:

(1) exercise leader, (2) health fitness instructor, (3) health fitness director, (4) exercise test technologist, (5) preventative/rehabilitative exercise specialist, and (6) preventative/rehabilitative program director. The normal process for successfully obtaining each certification is to complete a bachelor's or master's degree in or related to exercise science/physiology, wellness and fitness, and nursing. A certain amount of professional work experience is generally required to qualify to take the ACSM exam at each certification level (American College of Sports Medicine, 1991).

Fain (1983) expressed some concern about the employment possibilities of university-based professionally prepared fitness instructors. He believes that by utilizing the knowledge in medical science, health promotion, exercise physiology, and leisure, employers appear to be convinced of

the importance of fitness programs. However, Fain through his research found no data that would support the notion that a university graduate in health, leisure, recreation, physical education, or exercise physiology is employed before anyone else in corporate fitness. Persons with diverse backgrounds are often competing for the same jobs. The entrepreneur has created problems for the university-prepared fitness instructor. The personnel located in the private-enterprise sector are not required to obtain a college degree to substantiate a respectable level of competence. This process often inhibits the professionalism of college-prepared individuals, who wish to offer their knowledge and skills in the workplace.

CHAPTER 3

Methods and Procedures

The major emphasis of the study was to examine the preferred qualifications among individuals interested in a career in corporate/industrial and/or hospital/medical wellness and fitness programs. These data were then compared to that obtained from four-year colleges and universities offering preparational programs for a career in the wellness and fitness and health promotion fields.

Sample of the Study

This study involved 26 corporate/industrial and 32 hospital/medical wellness and fitness program directors and also 80 institutions with undergraduate programs in wellness and fitness, health promotion, and/or exercise science/physiology. The work-site wellness and fitness directors and institutions with undergraduate-degree programs in the previous areas were randomly selected from the National Wellness Association and the National Association for Sport and Physical Education, respectively.

Instrumentation

The survey instruments utilized in this study were prepared after a careful examination of surveys found in a comprehensive review of related literature. The survey, constructed by Dr. Carol L. Christensen (see Appendix E) and published in a study by Gorman et al. (1986), established

the foundation from which the survey instruments utilized in this study were constructed. The survey found in a study by Rogers (1990) also assisted briefly in the development of a survey instrument completed by the university undergraduate program directors within this study.

The panel of experts adopted in constructing the final survey instruments consisted of the following: (1) Guy D. Penny, Ed.D., Director of the Middle Tennessee State University Wellness Center and Physical Education Professor; (2) Kent Johnson, Ph.D., Physical Education Professor at David Lipscomb University, specializing in instructing undergraduate students in the area of exercise science; and (3) Jeff Holt, MS, Director of the Wellness and Fitness Program at Baptist Hospital in Nashville, Tennessee.

The data were collected from two separate survey instruments. Each instrument was approved by the panel of experts in the fields of higher education and corporate/hospital fitness programs. The survey instrument mailed to the directors of corporate/industrial and hospital/medical wellness and fitness programs covered five main areas: (1) academic coursework and skills, (2) administrative knowledge and personal skills, (3) education levels and experience, (4) professional certification, and (5) potential job responsibilities. The survey instrument mailed to institutions with undergraduate preparational

programs included: (1) institutional demographics and (2) preparational coursework and technical skills.

Data Collection

A survey instrument (see Appendix B) and cover letter (see Appendix A), with an enclosed stamped envelope, were mailed to 50 corporate/industrial and 50 hospital/medical wellness and fitness program directors. The second survey instrument (see Appendix D) and cover letter (see Appendix C), also with an enclosed stamped envelope, were mailed to 100 directors of colleges and universities throughout the United States offering an undergraduate degree in wellness and fitness, health promotion, and/or exercise science/physiology.

The cover letters explained the manner in which each instrument was to be answered, along with the general purpose of the study. Each participant was asked to complete and mail the questionnaire within 10 days. After a period of 30 days, each person who had not returned the questionnaire was sent a letter of encouragement.

The final results revealed that 26 (52 percent) of the 50 questionnaires sent to corporate/industrial wellness and fitness program directors were returned. Thirty-two (64 percent) of the 50 questionnaires sent to hospital/medical wellness and fitness program directors were returned. Eighty (80 percent) of the 100 questionnaires sent to the directors of undergraduate programs in wellness

and fitness, health promotion, and/or exercise science/physiology were returned. After the return of the questionnaires, the data were tabulated concerning the different aspects of each questionnaire.

Research Design

The type of research utilized in this study was descriptive in nature. Two survey instruments were constructed to obtain the necessary data inherent to this study. One survey instrument was used to obtain the necessary knowledge and skill requirements for individuals with an interest in corporate/industrial and hospital/medical wellness and fitness programs. The second survey instrument was utilized to evaluate undergraduate programs in wellness and fitness, health promotion, and/or exercise science/physiology regarding the aspect of present professional preparation. The data were then compared to determine if professional preparation is in correlation with the perceived knowledge and skills identified by current professionals in the field and the need for accreditation.

Data Analysis

The data from the completed questionnaires were recorded with frequencies and percentages computed. Interpretations were made from responses from the wellness and fitness program directors and the directors of undergraduate programs as to core curricula, knowledge and skills, and need for accreditation.

CHAPTER 4

Results and Discussion

A questionnaire was mailed to 50 wellness and fitness directors of corporate/industrial-based programs throughout the United States. Twenty-six (52 percent) of these questionnaires were completed and returned. The same questionnaire was mailed to 50 wellness and fitness directors of hospital/medical-based programs throughout the United States. Thirty-two (64 percent) of these questionnaires were also completed and returned. A Likert scale was utilized in recording the response for each question according to the following: (1) strongly disagree, (2) disagree, (3) undecided, (4) agree, and (5) strongly agree.

The second questionnaire was mailed to 100 directors of institutions with undergraduate programs in wellness and fitness, health promotion, and/or exercise science/physiology throughout the United States. Eighty (80 percent) of these questionnaires were completed and returned.

The responses from both survey instruments were reported, with frequencies and percentages tabulated. Conclusions were drawn from each questionnaire regarding the necessary knowledge and skills for a potential wellness and

fitness professional and the current collegiate preparation of such individuals.

Academic Coursework and Skills

The directors of the corporate/industrial programs rated the need for 13 academic courses or subject areas (see Table 1) in the following manner: in exercise prescription and leadership, the majority (82 percent) agreed or strongly agreed that this course should be included in an undergraduate program, while only 2 percent were in disapproval regarding the subject. In regard to exercise/fitness testing and interpretation, 78 percent agreed or strongly agreed that the course was of considerable importance. A majority (88 percent) of the directors either agreed or strongly agreed in support of an exercise physiology course within a student program. As for a course in exercise prescription for special medical or lifestyle problems, 90 percent either agreed or strongly agreed that such a course should be taught in an academic setting. There was almost an equally divided response (51 percent) concerning the relative importance of a course in the prevention and care of athletic injuries. A large majority (92 percent) of the directors agreed or strongly agreed that a course in nutrition should be included in preparational programs. Only 29 percent of the directors were in favor of the relative value of a course in chemistry. A majority (92 percent) of the directors agreed

Table 1
Comparison of Academic Coursework and Skills by Corporate/Industrial
Wellness and Fitness Program Directors

Coursework/Skills	SD	%	D	%	U	%	A	%	SA	%
Exercise prescription and leadership	0	0	1	2	4	16	6	24	15	58
Exercise/fitness testing and interpretation	1	2	2	8	3	12	6	24	14	54
Exercise physiology	0	0	0	0	3	12	8	30	15	58
Exercise prescription for special medical or lifestyle problems	0	0	1	2	2	8	12	47	11	43
Prevention and care of athletic injuries	1	2	3	12	9	35	11	43	2	8
Nutrition	0	0	0	0	2	8	10	38	14	54
Chemistry	1	2	8	31	10	38	4	16	3	13
Anatomy and physiology	0	0	2	8	0	0	10	38	14	54
Kinesiology and biomechanics	0	0	3	12	2	8	12	46	9	34
Health	0	0	0	0	1	2	8	31	17	67
Electrocardiogram interpretation	6	24	11	43	1	2	6	24	2	7

Table 1 (continued)

Coursework/Skills	SD	%	D	%	U	%	A	%	SA	%
Program planning in wellness and fitness	0	0	0	0	0	0	7	27	19	73
Weight training	1	3	1	3	7	28	9	35	8	31

Note: SD = strongly disagree, D = disagree, U = undecided, A = agree, SA = strongly agree, % = percentage.

or strongly agreed that an academic course in anatomy and physiology is important for professional development. A significant number of the respondents either agreed or strongly agreed that a kinesiology and biomechanics course should be included in a degree program. Regarding a course in health, 98 percent of the directors agreed or strongly agreed that it would tremendously aid future wellness and fitness professionals. Only 31 percent of the respondents favored an academic course in electrocardiogram interpretation. An overwhelming majority of the directors (100 percent) either agreed or strongly agreed that a course in program planning in wellness and fitness was crucial toward the professional preparation of students. A significant number (66 percent) of the directors considered a course in weight training to be relatively important in preparing wellness and fitness professionals.

The directors of the hospital/medical programs rated the need for 13 academic courses or subject areas (see Table 2) in the following manner: concerning a course in exercise prescription and leadership, 72 percent of the directors either agreed or strongly agreed that it should be part of a preparational curriculum. A relatively significant number of the participants (62 percent) agreed or strongly agreed that an exercise/fitness testing and interpretation course was valuable. In regard to exercise

physiology, 72 percent of the respondents agreed or strongly agreed in support of its importance. A majority (75 percent) of the directors favored the inclusion of an exercise prescription for special medical or lifestyle problems in the student curriculum. The directors were divided (50 percent) concerning the value of a course in the prevention and care of athletic injuries. As for a course in nutrition, 84 percent of the participants either agreed or strongly agreed in admiration of its value. Less than half (46 percent) of the directors supported a course in chemistry. A considerable majority (82 percent) of the survey participants found a course in anatomy and physiology to be of relative importance. In regard to the subject kinesiology and biomechanics, the majority (66 percent) agreed or strongly agreed that this course should be included in a collegiate program. A course in health was held in high esteem by 81 percent of the directors. Less than a majority (44 percent) of the directors supported a student course involving electrocardiogram interpretation. The survey response indicated that 85 percent of the directors agreed or strongly agreed that a course in program planning in wellness and fitness is of significant value. A majority (62 percent) of the directors also favored a course in weight training.

In conclusion, the responses from the corporate/ industrial and hospital/medical program directors are

Table 2
Comparison of Academic Coursework and Skills by Hospital/Medical
Wellness and Fitness Program Directors

Coursework/Skills	SD	%	D	%	U	%	A	%	SA	%
Exercise prescription and leadership	1	3	3	9	5	16	7	22	16	50
Exercise/fitness testing and interpretation	1	3	4	13	7	22	8	25	12	37
Exercise physiology	1	3	1	3	7	22	10	31	13	41
Exercise prescription for special medical or lifestyle problems	1	3	2	6	5	16	11	34	13	41
Prevention and care of athletic injuries	0	0	7	22	9	28	14	44	2	6
Nutrition	0	0	3	10	2	6	11	34	16	50
Chemistry	0	0	4	13	13	41	14	43	1	3
Anatomy and physiology	1	3	2	6	3	9	12	38	14	44
Kinesiology and biomechanics	1	3	1	3	9	28	13	41	8	25
Health	1	3	1	3	4	13	8	25	18	56
Electrocardiogram interpretation	3	9	5	16	10	31	13	41	1	3

Table 2 (continued)

Coursework/Skills	SD	%	D	%	U	%	A	%	SA	%
Program planning in wellness and fitness	1	3	2	6	2	6	7	22	20	63
Weight training	1	3	4	13	7	22	14	43	6	19

Note: SD = strongly disagree, D = disagree, U = undecided, A = agree, SA = strongly agree, % = percentage.

similar to those found in a study by Wilson and Hall (1984), Gorman et al. (1986), Cobb (1987), and Jacoby (1991). These studies indicate the need for more scientifically based undergraduate programs.

Administrative Knowledge and Personal Skills

The directors of the corporate/industrial programs indicated the importance of administrative knowledge and personal skills (see Table 3). A large majority (92 percent) considered a course in business administration to be essential in preparing a wellness and fitness professional. The directors either agreed or strongly agreed (86 percent) that individuals should be familiar with computers by taking a course(s) in computer literacy. An overwhelming number of the directors (98 percent) were in agreement that a course in speech communication and writing should be offered in an academic program, while only 2 percent disapproved. A majority (78 percent) of the participants regarded a course in psychology to be of relative importance toward student preparation, although less than half (46 percent) of the directors believed a course in sociology was of relative importance.

The directors of the hospital/medical programs revealed the importance of administrative knowledge and personal skills (see Table 4). A course in business administration was considered to be valuable by the directors (78 percent) in preparing future wellness and fitness professionals. The

Table 3

Comparison of Administrative Knowledge and Personal Skills by Corporate/Industrial
Wellness and Fitness Program Directors

Knowledge/Skills	SD	%	D	%	U	%	A	%	SA	%
Business administration	0	0	2	8	0	0	16	62	8	30
Computer literacy	0	0	1	2	3	12	11	43	11	43
Speech communication and writing	0	0	1	2	0	0	8	31	17	67
Psychology	0	0	1	2	5	20	12	47	8	31
Sociology	0	0	6	23	8	31	9	34	3	12

Note: SD = strongly disagree, D = disagree, U = undecided, A = agree, SA = strongly agree,
% = percentage.

Table 4

Comparison of Administrative Knowledge and Personal Skills by Hospital/Medical
Wellness and Fitness Program Directors

Knowledge/Skills	SD	%	D	%	U	%	A	%	SA	%
Business administration	1	3	2	6	4	13	13	41	12	37
Computer literacy	1	3	2	6	2	6	15	48	12	37
Speech communication and writing	1	3	1	3	2	6	6	19	22	69
Psychology	0	0	4	13	5	15	15	47	8	25
Sociology	0	0	12	38	7	22	9	28	4	12

Note: SD = strongly disagree, D = disagree, U = undecided, A = agree, SA = strongly agree,
% = percentage.

directors also agreed or strongly agreed that a course in computer literacy should be included in an undergraduate program. Many of the survey participants (88 percent) regarded a course in speech communication and writing essential for adequate student preparation. In regard to psychology, 72 percent agreed or strongly agreed that such a course should be included in an undergraduate program. Again, less than half (40 percent) of the directors considered a course in sociology to be of importance.

In conclusion, the results from this study are similar to those found by Webb (1987) and Jacoby (1991). The development of strong business and technical skills is crucial toward becoming a successful wellness and fitness professional.

Educational Experience

The directors of the corporate/industrial programs responded to seven preferential levels of education and experience (see Table 5). A majority (92 percent) of the directors considered a baccalaureate degree to be the most preferred level of education. Although a significant majority (72 percent) agreed or strongly agreed that a master's degree would be a valuable asset for a potential wellness and fitness professional, less than half of the directors did not prefer an associate degree (35 percent) or doctoral degree (15 percent) for potential employment. Many of the directors (88 percent) agreed or strongly agreed that

Table 5
Comparison of Educational Levels and Experience by Corporate/Industrial
Wellness and Fitness Program Directors

Education/Experience	SD	%	D	%	U	%	A	%	SA	%
Associate degree	4	15	7	27	6	23	2	8	7	27
Baccalaureate degree	0	0	0	0	2	8	4	15	20	77
Master's degree	1	2	1	2	6	24	8	32	10	40
Doctorate degree	4	15	7	27	11	43	3	13	1	2
Active member in professional organizations	0	0	0	0	3	12	15	58	8	30
Practicum/internship(s)	0	0	0	0	4	16	11	42	11	42
Previous job experience	1	2	3	12	3	12	15	58	4	16

Note: SD = strongly disagree, D = disagree, U = undecided, A = agree, SA = strongly agree,
% = percentage.

students should become active members of a professional organization(s) to cultivate their career. A majority (84 percent) of the directors regarded undergraduate practicum/internship(s) experience to be important when searching for a job. Seventy-four percent of the directors also agreed or strongly agreed that previous job experience would be helpful in fulfilling potential job expectations.

The directors of the hospital/medical programs responded to seven preferential levels of education and experience (see Table 6). A majority (88 percent) of the directors favored a master's degree as the necessary level of education for potential employment. However, a baccalaureate degree was highly regarded by a significant number (82 percent) of the program directors. An associate degree (50 percent) or doctoral degree (44 percent) was not considered to be an appropriate level of education for employment by the program directors; however, a great many of the directors were undecided about the importance of the two degrees. Many of the directors (74 percent) agreed or strongly agreed that individuals should become active members in a professional organization(s) to help shape their career. The directors (85 percent) highly regarded undergraduate practicum/internship(s) experience when searching for a potential program employee. Previous job experience was also considered to be important in increasing

Table 6
Comparison of Educational Levels and Experience by Hospital/Medical
Wellness and Fitness Program Directors

Education/Experience	SD	%	D	%	U	%	A	%	SA	%
Associate degree	10	31	6	19	10	31	1	3	5	16
Baccalaureate degree	2	6	2	6	2	6	6	19	20	63
Master's degree	1	3	1	3	2	6	14	44	14	44
Doctorate degree	4	13	10	31	13	40	4	13	1	3
Active member in professional organizations	1	3	1	3	6	20	12	37	12	37
Practicum/Internship(s)	2	6	0	0	3	9	10	31	17	54
Previous job experience	1	3	1	3	3	9	12	37	15	48

Note: SD = strongly disagree, D = disagree, U = undecided, A = agree, SA = strongly agree,
% = percentage.

the likelihood for satisfactory job performance by the program directors (85 percent).

In conclusion, these results are similar to those obtained by Golaszewski et al. (1982). A baccalaureate degree is the minimum level of education required for a wellness and fitness professional. Individuals are also encouraged to become active members in a professional organization(s).

Professional Certification

The directors of the corporate/industrial programs gave priority to nine standards of professional certification (see Table 7). An overwhelming number of the directors agreed or strongly agreed that certifications in cardiopulmonary resuscitation (100 percent) and basic first aid (84 percent) were important. Certification granted by the Association for Fitness in Business was held in high esteem by 65 percent of the program directors. Those certifications granted by the American College of Sports Medicine were second (42 percent) to that of the Association for Fitness in Business (65 percent). However, certification from the National Strength and Conditioning Association, Aerobics and Fitness Association of America, Institute for Aerobics Research, International Dance-Exercise Association, and others was not considered to be appropriate by the program directors.

Table 7

Comparison of Professional Certification Standards by Corporate/Industrial
Wellness and Fitness Program Directors

Certifications	SD	%	D	%	U	%	A	%	SA	%
Basic first aid	0	0	2	8	2	8	6	23	16	61
Cardiopulmonary resuscitation	0	0	0	0	0	0	2	8	24	92
American College of Sports Medicine	2	8	4	15	9	35	8	30	3	12
National Strength and Conditioning Association	5	20	10	40	8	30	2	8	1	2
Association for Fitness in Business	3	13	1	2	5	20	8	30	9	35
Aerobics and Fitness Association of America	4	16	4	16	11	42	6	24	1	2
Institute for Aerobics Research	5	20	3	12	13	50	4	16	1	2
International Dance-Exercise Association	5	20	6	24	8	30	6	24	1	2
Other	0	0	0	0	23	90	2	8	1	2

Note: SD = strongly disagree, D = disagree, U = undecided, A = agree, SA = strongly agree,
% = percentage.

The directors of the hospital/medical programs gave priority to the same nine standards of professional certification (see Table 8). A majority of the directors either agreed or strongly agreed that certification in cardiopulmonary resuscitation (88 percent) and basic first aid (65 percent) is quite necessary. Certification granted by the American College of Sports Medicine (59 percent) and the Association for Fitness in Business (53 percent) was also highly regarded by the program directors. Again, certification by the National Strength and Conditioning Association, Aerobics and Fitness Association of America, Institute for Aerobics Research, International Dance-Exercise Association, and others was not regarded as substantial by the program directors.

In conclusion, the data from the hospital/medical programs are similar to that obtained by Webb (1987). Certifications granted by the American College of Sports Medicine are considered to be valuable for employment in a wellness and fitness program.

Potential Job Responsibilities

The directors of the corporate/industrial programs responded to 11 possible tasks that are often performed by themselves or the personnel within their program (see Table 9). Their responses were as follows: health-risk evaluations, 24 (92 percent) yes and 2 (8 percent) no; physical evaluations, 23 (88 percent) yes and 3 (12 percent)

Table 8

Comparison of Professional Certification Standards by Hospital/Medical
Wellness/Fitness Program Directors

Certifications	SD	%	D	%	U	%	A	%	SA	%
Basic first aid	1	3	4	13	6	19	5	15	16	50
Cardiopulmonary resuscitation	1	3	1	3	2	6	6	19	22	69
American College of Sports Medicine	4	13	3	9	6	19	11	34	8	25
National Strength and Conditioning Association	5	15	8	25	12	38	6	19	1	3
Association for Fitness in Business	3	9	3	9	9	29	8	25	9	28
Aerobics and Fitness Association of America	3	9	10	31	12	38	5	16	2	6
Institute for Aerobics Research	4	13	7	22	13	40	7	22	1	3
International Dance-Exercise Association	3	9	8	25	12	38	6	19	3	9
Other	1	3	0	0	20	63	6	19	5	15

Note: SD = strongly disagree, D = disagree, U = undecided, A = agree, SA = strongly agree,
% = percentage.

Table 9

Comparison of Potential Job Responsibilities by
Corporate/Industrial Wellness and
Fitness Program Directors

Responsibilities	Yes		No	
	#	%	#	%
Health risk evaluations	24	92	2	8
Physical evaluations	23	88	3	12
Treadmill testing	7	27	19	73
Bicycle ergometer testing	13	50	13	50
Any other exercise testing	6	23	20	77
Newsletter preparation	24	92	2	8
Computer skills	24	92	2	8
Wellness and fitness counseling	25	98	1	2
Individualized exercise prescription	21	80	5	20
Exercise leadership	19	73	7	27
Administrative duties	26	100	0	0

Note: # = number of responses, % = percentage of responses.

no; treadmill testing, 7 (27 percent) yes and 19 (73 percent) no; bicycle ergometer testing, 13 (50 percent) yes and 13 (50 percent) no; any other exercise testing, 6 (23 percent) yes and 20 (77 percent) no; newsletter preparation, 24 (92 percent) yes and 2 (8 percent) no; computer skills, 24 (92 percent) yes and 2 (8 percent) no; wellness and fitness counseling, 25 (98 percent) yes and 1 (2 percent) no; individualized exercise prescription, 21 (80 percent) yes and 5 (20 percent) no; exercise leadership, 19 (73 percent) yes and 7 (27 percent) no; and administrative duties, 26 (100 percent) yes and 0 (0 percent) no.

The directors of the hospital/medical programs responded to 11 possible tasks that are often performed by themselves or the personnel within their programs (see Table 10). Their responses were as follows: health-risk evaluations, 32 (100 percent) yes and 0 (0 percent) no; physical evaluations, 29 (90 percent) yes and 3 (10 percent) no; treadmill testing, 10 (31 percent) yes and 22 (69 percent) no; bicycle ergometer testing, 17 (53 percent) yes and 15 (47 percent) no; any other exercise testing, 7 (22 percent) yes and 25 (78 percent) no; newsletter preparation, 25 (78 percent) yes and 7 (22 percent) no; computer skills, 32 (100 percent) yes and 0 (0 percent) no; wellness and fitness counseling, 32 (100 percent) yes and 0 (0 percent) no; individualized exercise prescription,

Table 10

Comparison of Potential Job Responsibilities by
Hospital/Medical Wellness and Fitness
Program Directors

Responsibilities	Yes		No	
	#	%	#	%
Health risk evaluations	32	100	0	0
Physical evaluations	29	90	3	10
Treadmill testing	10	31	22	69
Bicycle ergometer testing	17	53	15	47
Any other exercise testing	7	22	25	78
Newsletter preparation	25	78	7	22
Computer skills	32	100	0	0
Wellness and fitness counseling	32	100	0	0
Individualized exercise prescription	26	81	6	19
Exercise leadership	25	78	7	22
Administrative duties	31	97	1	3

Note: # = number of responses, % = percentage of responses.

26 (81 percent) yes and 6 (19 percent) no; exercise leadership, 25 (78 percent) yes and 7 (22 percent) no; and administrative duties, 31 (97 percent) yes and 1 (3 percent) no.

In conclusion, the potential job responsibilities of wellness and fitness program personnel are similar to those found in a study by Seaward and Snelling (1990). The personnel within a wellness and fitness program should possess exercise leadership skills, fitness assessment skills, administrative knowledge, and communication skills.

The final analysis of each survey instrument disclosed that 22 (86 percent) of the corporate/industrial and 26 (81 percent) of the hospital/medical wellness and fitness programs were utilized by over 500 employees. A final analysis also indicated that 21 (80 percent) and 28 (87 percent) of the program directors desired a copy of the abstract from this study, respectively.

Institutional Demographics

There were 80 questionnaires completed by 20 (25 percent) private and 60 (75 percent) public institutions. The approximate full-time enrollments (see Table 11) of the institutions were as follows: 4 (5 percent) with less than 1,000 students; 10 (12 percent) with 1,000 to 2,500 students; 11 (14 percent) with 2,501 to 5,000 students; 7 (9 percent) with 5,001 to 7,500 students; 9 (11 percent) with 7,501 to 10,000 students; 9 (11 percent)

with 10,001 to 12,500 students; 11 (14 percent) with 12,501 to 15,000 students, and 19 (24 percent) with greater than 15,000 students.

Table 11
Approximate Full-Time Student Enrollment
of all the Colleges and Universities

Students	Number	Percentage
<1,000	4	5
1,000-2,500	10	12
2,501-5,000	11	14
5,001-7,500	7	9
7,501-10,000	9	11
10,001-12,500	9	11
12,501-15,000	11	14
>15,000	19	24

The undergraduate programs included 33 (41 percent) in wellness and fitness, 4 (5 percent) in health promotion, and 43 (54 percent) in exercise science/physiology. The undergraduate programs had been offered over the following periods of time: 10 (12 percent) from one to three years, 16 (20 percent) from four to six years, and 54 (68 percent) were available for more than six years.

The approximate undergraduate enrollments, including the programs in wellness and fitness, health promotion, and/or exercise science/physiology were the following: 14 (18 percent) with less than 25 students, 26 (32 percent) with 25 to 50 students, 17 (21 percent) with 51 to 75 students, 8 (10 percent) with 76 to 100 students, and 15 (19 percent) with greater than 100 students.

The directors of the undergraduate programs were asked to disclose what the student enrollment had demonstrated over the past two years within their department. An increase in student number was reported by 53 (66 percent) of the directors; a decrease was reported by 1 (2 percent); and it remained the same in 26 (32 percent) of the undergraduate programs. A five-year forecast concerning future program growth was also given by the directors. This forecast indicated that an increase in student enrollment was estimated by 35 (44 percent), a decrease was estimated by 2 (2 percent); 39 (49 percent) believed it would remain the same, and 4 (5 percent) were undecided concerning future expectations.

The results also revealed that 44 (55 percent) of the undergraduate program directors believe that program emphasis in the areas of wellness and fitness, health promotion, and/or exercise science/physiology will have the greatest number of students over the next five years. The track emphasizing teacher preparation (primary and secondary

education) would have the second largest number of students, as indicated by 20 (25 percent) of the directors. There were 9 (11 percent) of the program directors who were undecided, and 7 (9 percent) believed that another alternative program would have the greatest number of students. These results were indicative of each individual physical education department's program content.

The required credit hours in the core curriculum for a baccalaureate degree in wellness and fitness, health promotion, and/or exercise science/physiology were announced by each program director. The necessary credit hours were required according to the following: 6 (8 percent) with 15 to 30 hours, 26 (32 percent) with 31 to 45 hours, 29 (36 percent) with 46 to 60 hours, 11 (14 percent) with 61 to 75 hours, and 8 (10 percent) with 76 to 100 required core credit hours. A related question also found that 58 (72 percent) of the program directors believed that "teacher preparation courses" should be eliminated from an alternative nonteaching program track. The directors conveyed that 72 (90 percent) institutions' academic year adhered to the semester system, and 8 (10 percent) adhered to the quarter system.

The undergraduate program coordinators also unveiled whether their students were required to minor in a specific academic area. The responses to this question were as follows: 4 (5 percent) in business, 6 (7 percent) in

science, 2 (2 percent) in communications, 1 (2 percent) in computer science, 3 (4 percent) in nutrition, 4 (5 percent) in an "other" area, and 60 (75 percent) were not required to minor in a specific area.

One of the objectives for this study was to determine if an internship in wellness and fitness or rehabilitation was required by each program for the students majoring in wellness and fitness, health promotion, and/or exercise science/physiology. There were 67 (84 percent) of the programs which required an internship, and there were 13 (16 percent) which did not. Those institutions were then asked to report the total contact hours for the required student internship. The responses of the 67 institutions regarding the internship contact hours (see Table 12) were

Table 12

Approximate Contact Hours for Undergraduate Internship(s)
in Wellness and Fitness or Rehabilitation Programs

Contact hours	Number	Percentage
<100	5	8
100-200	22	33
201-300	11	16
301-400	10	15
401-500	10	15
>500	9	13

in the following manner: 5 (8 percent) with less than 100 hours, 22 (33 percent) with 100 to 200 hours, 11 (16 percent) with 201 to 300 hours, 10 (15 percent) with 301 to 400 hours, 10 (15 percent) with 401 to 500 hours, and 9 (13 percent) requiring greater than 500 student contact hours. These results were similar to those obtained in a study by Cobb (1987).

Many of the institutions participating in the study supported the accreditation of programs in wellness and fitness, health promotion, and/or exercise science/physiology. A final data analysis showed that 61 (76 percent) of the undergraduate program directors favored accreditation and 19 (24 percent) did not. The question was then asked regarding which organization or association should establish accreditation guidelines. Many of the directors cast an opinion for more than one specific organization or association when providing their answer. Therefore, the total number of responses is greater than 61. An equal representation of percentages was not permissible. The directors' recommendations were the following:

1. 40 in favor of the American College of Sports Medicine;
2. 18 in favor of the American Alliance for Health, Physical Education, Recreation, and Dance;
3. 13 in favor of the National Association for Sport and Physical Education;

4. 1 in favor of the American Medical Association;
5. 2 in favor of the Southern Association;
6. 0 in favor of the National Council for the Accreditation of Teacher Education;
7. 1 in favor of the National Wellness Institute; and
8. 2 in favor of an "other" organization or association.

The directors were asked if their program currently required student certification by a professional organization or association before graduation. The responses indicated that one (1 percent) undergraduate program required students to be certified by the American College of Sports Medicine. The other 79 (99 percent) did not require student certification; however, many institutions stated that it was strongly encouraged after graduation.

There were 68 (85 percent) of the undergraduate program directors who stated they were presently satisfied with their program and 12 directors who stated they were not satisfied. An immediate plan to change the core curriculum was in consideration by 25 (31 percent) of the program directors. The directors of 55 (69 percent) undergraduate programs had no immediate plans to change their core curriculum. The directors considering future changes made the following remarks pertaining to their program:

1. Add courses in kinesiology, business, health promotion/wellness, and computer applications in wellness. The internships will be fewer in number, but of a longer duration.

2. Include sports management in the current health promotion program.

3. Focus on accreditation.

4. Combine the program with the health department to reduce redundancy.

5. Implement a management and science track.

6. Establish a science core for exercise science majors.

7. Add a marketing course, increase the practicum to 200 hours, and add a "hands-on" testing course.

8. Develop a senior seminar class.

9. Reduce the number of required activities and add a course in exercise leadership and prescription.

10. Make changes in the nonteaching core requirements.

11. Add an epidemiology course and additional biomechanics and exercise physiology courses.

12. Add coursework in instrumentation, exercise leadership, and fitness center management.

13. Develop a core of coursework in specialized areas from which students can choose.

14. Include more clinical exposure and courses in ethics and law.

15. Have a consultant evaluate the program and require an internship in the future.

16. Provide more "in-house" practical experiences.

17. Exercise science has been an option to the physical education degree, but will become health promotion and a distinct major.

18. Include more "hands-on" work in fitness testing/client education and additional field experience before the internship.

19. We are designing a way for students to become more active in our human performance lab.

20. Place an additional emphasis on theoretical/practical experiences.

21. Consolidate "teaching methods of exercise" courses and initiate more specific skill/activity courses.

22. We currently offer only the B.A. degree, but will add the B.S. degree and, thus, more science courses.

23. Add an exercise leadership course and delete the tests and measurements course.

24. Incorporate more health promotion/wellness coursework.

Undergraduate Preparational Coursework

The undergraduate program directors were asked to disclose the number of required course credit hours in 21 subject areas regarding a major in wellness and fitness, health promotion, and/or exercise science/physiology (see

Table 13). The majority of the courses yielding three or more credit hours were in the following order:

1. Anatomy and physiology course (99 percent),
2. Exercise physiology course (94 percent),
3. Kinesiology and biomechanics course (93 percent),
4. Psychology course (80 percent),
5. Internship in fitness or rehabilitation course and nutrition course (79 percent),
6. Exercise prescription and/or exercise leadership course (78 percent),
7. Health course (77 percent),
8. Exercise/fitness testing and interpretation course (72 percent),
9. Chemistry course (71 percent),
10. Speech communication and writing course (65 percent),
11. Computer science course and prevention and care of athletic injuries course (64 percent),
12. Program planning in wellness and fitness course (63 percent),
13. Laboratory implementation course (53 percent),
14. Business administration course (52 percent),
15. Sociology course (48 percent),
16. First aid course (45 percent),
17. Exercise prescription for special populations course (34 percent),

Table 13

Approximate Number of Credit Hours Required by the Institutions
with Either a Wellness and Fitness, Health Promotion, or
Exercise Science/Physiology Curriculum

Courses	Credit hours							
	No	%	<3	%	3-6	%	>7	%
Exercise prescription and/or exercise leadership	5	6	13	16	51	64	11	14
Exercise/Fitness testing and interpretation	6	8	16	20	48	60	10	12
Exercise physiology	0	0	5	6	67	84	8	10
Laboratory implementation	7	9	30	38	42	52	1	1
Exercise prescription for special populations	18	22	35	44	26	33	1	1
Prevention and care of athletic injuries	10	12	19	24	51	64	0	0
Nutrition	4	5	13	16	59	74	4	5
Chemistry	22	28	1	1	32	40	25	31
Anatomy and physiology	0	0	1	1	37	46	42	53
Kinesiology and biomechanics	0	0	6	7	68	85	6	8

Table 13 (continued)

Courses	Credit hours							
	No	%	<3	%	3-6	%	>7	%
Psychology	11	14	5	6	56	70	8	10
Sociology	38	47	4	5	35	44	3	4
Speech communication	17	21	11	14	50	62	2	3
Business administration	34	42	5	6	22	28	19	24
Computer science	13	16	16	20	50	63	1	1
Internship in fitness or rehabilitation	13	16	4	5	25	31	38	48
First aid	7	9	37	46	36	45	0	0
Health	11	14	7	9	50	62	12	15
Electrocardiogram interpretation	30	38	27	34	22	27	1	1
Program planning in wellness and fitness	13	16	17	21	47	59	3	4
Weight training	13	16	62	78	5	6	0	0

Note: No = 0 credit hours, <3 = less than 3 credit hours, 3-6 = 3 to 6 credit hours, >7 = greater than 7 credit hours, % = percentage.

18. Electrocardiogram interpretation course
(28 percent), and

19. Weight training course (6 percent).

The undergraduate program directors were asked to list any courses excluded from the questionnaire that were offered within their program and were considered to be important toward the professional preparation of students in wellness and fitness, health promotion, and/or exercise science/physiology. Among the courses listed were the following:

1. Stress management course,
2. Drug-Use and abuse course,
3. Motor learning course,
4. Health behavior modification course,
5. Substance abuse course,
6. Work-site injury prevention course,
7. Health and aging course,
8. Critical issues in health and wellness course,
9. General physics course,
10. Principles and philosophy of physical education course,
11. Legal issues course,
12. Sport psychology course,
13. Neuromuscular relaxation course,
14. Physiology of aging course,

15. Professional foundation in exercise and sport science course,
16. Introduction to research in health and physical education course,
17. Applied statistics course,
18. Mathematics course,
19. Physics course,
20. Cell biology course,
21. Methods of teaching aerobic fitness course,
22. Organization and administration of physical education course,
23. Research course,
24. Health promotion in the workplace course,
25. Technical writing course,
26. Algebra and trigonometry course,
27. Emotional health course,
28. Determinants of health behavior course,
29. Career exploration in physical education course,
30. Gerontology course,
31. Adult learning course,
32. Prevention and intervention programs course, and
33. History and philosophy of physical education course.

CHAPTER 5

Summary, Conclusions, and Recommendations

Summary

A questionnaire was mailed to 50 wellness and fitness directors of corporate/industrial-based programs throughout the United States. Twenty-six (52 percent) of these questionnaires were completed and returned. The same questionnaire was mailed to 50 wellness and fitness directors of hospital/medical-based programs throughout the United States. Thirty-two (64 percent) of these questionnaires were also completed and returned. The questionnaire was divided into five basic segments: (1) academic coursework and skills, (2) administrative knowledge and personal skills, (3) education levels and experience, (4) professional certification, and (5) potential job responsibilities. A Likert scale was utilized in recording the response for each question according to the following: (1) strongly disagree, (2) disagree, (3) undecided, (4) agree, and (5) strongly agree. The purpose of the survey instrument was to identify the preferential knowledge and skills required of a potential wellness and fitness professional within a corporate/industrial- and hospital/medical-based program.

The second questionnaire was mailed to 100 directors of institutions with undergraduate programs in wellness and

fitness, health promotion, and/or exercise science/physiology throughout the United States. Eighty (80 percent) of the questionnaires were completed and returned. The survey instrument was divided into two basic categories: (1) institutional demographics and (2) preparational coursework and technical skills. The purpose of the questionnaire was to determine: (1) the knowledge and technical skills required for a wellness and fitness and health promotion professional, (2) the need for program accreditation, and (3) the professional (academic) preparation of undergraduate programs for those individuals interested in a career in wellness and fitness and health promotion.

Conclusions

Academic Coursework and Skills

The 26 corporate/industrial program directors identified the academic courses and skills necessary for a potential wellness and fitness professional within their program. The courses and skills agreed to be most important by a majority of the respondents were the following:

(1) program planning in wellness and fitness, (2) health, (3) anatomy and physiology and nutrition, (4) exercise prescription for special medical or lifestyle problems, (5) exercise physiology, (6) exercise prescription and leadership, (7) kinesiology and biomechanics, (8) exercise

testing and interpretation, (9) weight training, and (10) prevention and care of athletic injuries.

The 32 hospital/medical program directors identified the academic coursework and skills necessary for a potential wellness and fitness professional within their program. The courses and skills agreed to be most important by a majority of the respondents were the following: (1) program planning in wellness and fitness, (2) nutrition, (3) anatomy and physiology, (4) health, (5) exercise prescription for special medical or lifestyle problems, (6) exercise prescription and leadership and exercise physiology, (7) kinesiology and biomechanics, (8) weight training and exercise/fitness testing and interpretation, and (9) prevention and care of athletic injuries.

Administrative Knowledge and Personal Skills

The 26 corporate/industrial program directors revealed the administrative and personal skills most needed for a potential wellness and fitness professional within their program. A majority of the respondents indicated that the courses and skills were the following: (1) speech communication and writing, (2) business administration, (3) computer literacy, and (4) psychology.

The 32 hospital/medical program directors revealed the administrative and personal skills most needed for a potential wellness and fitness professional within their program. A majority of the respondents indicated that the

courses and skills were the following: (1) speech communication and writing, (2) computer literacy, (3) business administration, and (4) psychology.

Educational Experience

The 26 corporate/industrial program directors disclosed the most needed amount of education and experience for a potential wellness and fitness professional within their program. A majority of the respondents found a baccalaureate degree to be the most suitable, with a master's degree following closely for the level of needed education. The directors also highly regarded an active membership in a professional organization(s), practicum/internship(s) experience, and previous job experience.

The 32 hospital/medical program directors disclosed the most needed amount of education and experience for a potential wellness and fitness professional within their program. A majority of the respondents found a master's degree to be the most suitable, with a baccalaureate degree following closely behind for level of education needed. The directors highly requested practicum/internship(s) experience, previous job experience, and being an active member of a professional organization(s).

Professional Certification

The 26 corporate/industrial program directors divulged the most needed certifications for a potential wellness and fitness professional within their program. A majority of

the respondents declared the following certifications to be the highest favored: (1) cardiopulmonary resuscitation, (2) basic first aid, and (3) Association for Fitness in Business.

The 32 hospital/medical program directors also divulged the most needed certifications for a potential wellness and fitness professional within their program. A majority of the respondents indicated the following certifications to be the highest regarded: (1) cardiopulmonary resuscitation, (2) basic first aid, (3) American College of Sports Medicine, and (4) Association for Fitness in Business.

Potential Job Responsibilities

The 26 corporate/industrial program directors disclosed the most often performed job tasks within their program. A final analysis uncovered the following job responsibilities to be the most utilized: (1) administrative duties, (2) wellness and fitness counseling; (3) newsletter preparation, computer skills, and health-risk evaluations; (4) physical evaluations, (5) individualized exercise prescription, (6) exercise leadership, and (7) bicycle ergometer testing.

The 32 hospital/medical program directors also disclosed the most often performed job tasks within their program. The final analysis acknowledged the following job tasks to be the most utilized: (1) health-risk evaluations, (2) computer skills, (3) wellness and fitness counseling,

(4) administrative duties, (5) physical evaluations, (6) individualized exercise prescription, (7) exercise leadership and newsletter preparation, and (8) bicycle ergometer testing.

Institutional Demographics

A large majority of the 80 undergraduate program directors who completed the questionnaire were affiliated with public institutions. A majority of the programs were in exercise science/physiology; however, a significant number emphasized wellness and fitness. A significant majority of the undergraduate programs had existed for over six years. The respondents indicated that a majority of the undergraduate programs had experienced a growth in student enrollment within the past two years, although many of these respondents believe the student enrollment will remain about the same over the next five years. A majority of the directors are confident that programs in wellness and fitness, health promotion, and/or exercise science/physiology will have the greatest number of students compared to other program tracks within a physical education department.

A large majority of the undergraduate program directors were in favor of accrediting programs in wellness and fitness, health promotion, and/or exercise science/physiology. The greatest number of responses encouraged the American College of Sports Medicine to be the leader in

establishing program standards or guidelines. A significant number of the program directors stated immediate future plans for making changes in the core curriculum of their program.

An internship was required by a large majority of the undergraduate programs in wellness and fitness, health promotion, and/or exercise science/physiology. However, the number of total student contact hours required for an internship varies greatly.

Undergraduate Program Preparation

The undergraduate program directors were asked to identify the number of course credit hours in 21 academic subject areas. These courses were to be utilized in the preparation of wellness and fitness and health promotion professionals. The courses or subject areas containing three or more credit hours were examined. The courses or subject areas with the majority of credit hours were the following: (1) anatomy and physiology course, (2) exercise physiology course, (3) kinesiology and biomechanics course, (4) psychology course, (5) internship in fitness or rehabilitation course and nutrition course (6) exercise prescription and/or exercise leadership course, (7) health course, (8) exercise/fitness testing and interpretation course, (9) chemistry course, (10) speech communication and writing course, (11) computer science course and prevention and care of athletic injuries course, (12) program

planning in wellness and fitness course, (13) laboratory implementation course, and (14) business administration course.

Recommendations

The following recommendations are proposed, considering the framework of this study:

1. Undergraduate programs should provide more coursework in the areas of program planning in wellness and fitness, business administration, speech communication and writing, computer science, basic first aid (including CPR), and exercise testing and prescription.

2. An internship should be required for all students during their senior year. The number of contact hours should be long enough for the students to obtain extensive experience.

3. Students should be encouraged to become an active member in a professional organization(s) or association(s).

4. Students should be encouraged to obtain a master's degree in a related area.

5. Undergraduate programs should closely examine the future possibility of receiving national accreditation by the American College of Sports Medicine.

The researcher further recommends that future studies examine: (1) the professional preparation of corporate/hospital wellness and fitness program directors; and (2) the professional preparation of master's degree programs

in wellness and fitness, health promotion, and/or exercise science/physiology.

APPENDICES

APPENDIX A
COVER LETTER TO CORPORATE/HOSPITAL WELLNESS AND
FITNESS PROGRAM DIRECTORS

APPENDIX A
COVER LETTER TO CORPORATE/HOSPITAL WELLNESS AND
FITNESS PROGRAM DIRECTORS

Dear Program Director:

Hello, my name is LaGary Carter. I am a doctoral student in Physical Education at Middle Tennessee State University. Enclosed is a questionnaire to be utilized in the data collection for my doctoral dissertation.

The purpose of my study is to examine the necessary preparation of future wellness and fitness professionals. Individuals interested in this field must be able to identify the competencies needed for a successful career in a corporate/hospital-based wellness and fitness program. Endeavors to promote professionalism in this area are substantially needed.

Please take a moment to complete the questionnaire and place it in the enclosed stamped envelope. Please return this vital information within the next 10 work days. Your remarks will remain confidential. Thank you for your cooperation in my study.

Respectfully,

LaGary Carter, MS
Graduate Assistant
MTSU Wellness Center

APPENDIX B
CORPORATE/HOSPITAL SURVEY INSTRUMENT

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- a. 1-100
- b. 101-200
- c. 201-300
- d. 301-400
- e. 401-500
- f. Over 500

Would you like to receive a copy of the abstract from this study?

- a. Yes
- b. No

APPENDIX C
COVER LETTER FOR UNDERGRADUATE PROGRAM DIRECTORS

APPENDIX C

COVER LETTER FOR UNDERGRADUATE PROGRAM DIRECTORS

Dear Program Director:

We are reviewing our undergraduate wellness and fitness program. Our program was approved by the university and the Board of Regents in 1988 as an option in our nonteaching physical education track. Interns from our program have had assignments throughout the southeastern United States. After reviewing the interns' evaluations from site supervisors for the past several years, we have determined the need for the aforementioned review.

LaGary Carter, a doctoral candidate in our Physical Education Department, has experience in sports medicine and wellness centers and is interested in professional preparation within the wellness and fitness field. His dissertation will study professional preparation of institutions with degree programs in light of the perceived knowledge and skills, as determined by wellness and fitness directors for practitioners.

I appreciate your help with this survey. The results can identify areas that we need to change, add, or stress in our program revision.

Sincerely,

Guy D. Penny, Ed.D.
Director of Wellness

APPENDIX D
UNDERGRADUATE PROGRAM SURVEY INSTRUMENT

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APPENDIX E
PERMISSION FOR SURVEY INSTRUMENT

APPENDIX E
PERMISSION FOR SURVEY INSTRUMENT

LaGary Carter
1619 Hanover Drive Apt. M-6
Murfreesboro, Tennessee 37130

I, C.L. CHRISTENSEN, do hereby grant LaGary Carter my permission to utilize any and/or every portion of the survey published in the October/November (1986) issue of Health Education. The article is titled "Professional Training for Corporate Wellness Personnel: Survey Results from Practicing Professionals" and is to be utilized in developing a survey instrument for his Doctoral Dissertation. This agreement is now effective this 29th day of MAY, 1992.

Sincerely,


Dr. Carol L. Christensen

BIBLIOGRAPHY

BIBLIOGRAPHY

- Abbott, A. A. (1989). The exercise knowledge base of commercial fitness instructors in the state of Florida (Doctoral dissertation, Florida Atlantic University, 1989). Dissertation Abstracts International, 50, 1977A.
- Aberth, J. (1986, October). Worksite wellness programs: An evaluation. Management Review, pp. 51-53.
- American College of Sports Medicine. (1991). Guidelines for exercise testing and prescription (4th ed.). Philadelphia: Lea and Febiger.
- Braus, P. (1989). A workout from the bottom line. American Demographics, 11(10), 34-38.
- Cardinal, B. J. (1990, October). An old wine in a new bottle: Opportunities for physical educators to package and deliver it, not just stomp grapes. Paper presented at the Annual Conference of the Western College Physical Education Society, Reno, NV.
- Caudron, S. (1990). The wellness payoff. Personnel Journal, 69(7), 55-62.
- Chang, O. H., & Boyle, C. (1989). Fitness programs: Hefty expense or wise investment? Management Accounting, 70((7), 45-50.
- Cobb, P. R. (1987, April). Trends reflecting new and/or alternative professional preparation for physical education. Paper presented at the National Convention of the American Alliance for Health, Physical Education, Recreation, and Dance, Las Vegas, NV.
- Corbin, C. B., & Lindsey, R. (1988). Concepts of physical fitness (6th ed.). Dubuque, IA: Wm. C. Brown.
- Erfurt, J. C., Foote, A., & Heirich, M. A. (1991). The cost effectiveness of work-site wellness programs for hypertension control, weight loss, and smoking cessation. Journal of Occupational Medicine, 33(9), 962-969.
- Fain, G. S. (1983). Why employee recreation? Journal of Physical Education, Recreation, and Dance, 54(8), 32-33.

- Feineman, N. (1990). From boardroom to locker room. Health, 22(8), 49-51.
- Gebhardt, D. L., & Crump, C. E. (1990). Employee fitness and wellness programs in the workplace. American Psychologist, 45(2), 262-272.
- Golaszewski, T., Tomik, W., Pyle, R., & Pfieffer, G. (1982). Competency identification, evaluation and improvement for corporate health program fitness specialists: Health education variables. Health Education, 13(4), 32-35.
- Gorman, D., Brown, B. S., & Brezzo, R. D. (1986). Professional training for corporate wellness personnel: Survey results from practicing professionals. Health Education, 17(5), 71-74.
- Griffin, T., & Zeigler, S. (1986). Corporate wellness. Physical Educator, 43(1), 11-17.
- Imm, P. S. (1990). Perceived benefits of participants in an employees' aerobic fitness program. Perceptual and Motor Skills, 71(3), 753-755.
- Jacoby, S. M. (1991, December). Academic preparation for club employees. Fitness Management, pp. 40-41.
- Leepson, M. (1988). Does wellness really work? Nations Business, 76(8), 46-48.
- Mattia, G. (1984). Profile of program directors, staff, and programs in corporate fitness. Unpublished master's thesis, University of Oregon, Eugene, OR.
- Maynard, J. A., & Leslie, D. K. (1988). Exercise science: An alternative for pre-health professions. Journal of Health, Physical Education, Recreation, and Dance, 59(4), 65-67.
- McGlaughin, E. J., & Taylor, M. E. (1987/1988). Professional preparation for corporate health educators: A different perspective, Health Education, 18(6), 20-22.
- McMillen, L. (1986, February 19). Colleges finding "wellness" programs cut absenteeism, boost productivity and morale of their staff members. Chronicle of Higher Education, pp. 22-23.

- McNeill, A. W. (1987). Wellness programs and their influence on professional preparation. In J. D. Massengale (Ed.), Trends towards the future in physical education (pp. 85-94). Champaign, IL: Human Kinetics.
- Nelson, K. H. (1984). Is corporate fitness really the career of the future? Physical Educator, 41(2), 100-103.
- Parks, J. B. (1990). Directory of fitness certifications. Journal of Health, Physical Education, Recreation, and Dance, 61(1), 71-75.
- Roberts, M., & Harris, G. T. (1989, May). Wellness at work. Psychology Today, pp. 54-58.
- Rogers, W. G. (1990). Undergraduate physical education programs in health promotion/wellness in the southern United States (Doctoral dissertation, Middle Tennessee State University, 1990). Dissertation Abstracts International, 51, 1547A.
- Rothman, H. (1989). Wellness works for small firms. Nations Business, 77(12), 42-44.
- Seaward, B. L., & Snelling, A. (1990, March). Essential qualities of a health promotion professional. Fitness Management, pp. 80-84.
- Sherwood, M. B. (1986). Benefits: Justifying health promotion in terms of dollars and cents. Personnel Journal, 65(11), 98-104.
- Shields, S. L. (1984). The physical education profession in the corporate sector: Its role and influence. Journal of Health, Physical Education, Recreation, and Dance, 55(3), 32-34.
- Thompson, D. (1990). Wellness programs work for small employers, too. Personnel, 67(3), 26-28.
- Wagel, W. H. (1989). Employee wellness: TIAA-CREF's Rx for good living. Personnel, 66(1), 7-9.
- Webb, J. L. (1987, April). Fitness/Wellness specialists: Corporate wants vs. university preparation. Paper presented at the National Convention of the American Alliance for Health, Physical Education, Recreation, and Dance, Las Vegas, NV.

- Wilson, P. K., & Hall, L. K. (1984). Industrial fitness, adult fitness, and cardiac rehabilitation. Journal of Physical Education, Recreation, and Dance, 55(3), 40-44.
- Work, J. A. (1989). How healthy are corporate fitness programs? The Physician and Sports Medicine, 17(3), 226-237.