CHAPTER II

REVIEW OF RELATED LITERATURE

The investigator has made an earnest effort to scan the literature related to the study in hand from the libraries of Punjab University, Department of Physical Education, Central library and State library and also various internet sources. The related studies have been given in this chapter.

Brownson et al. (2000) describes the patterns of physical activity among minority women by using a variety of definitions and determines socio-demographic and behavioural correlates of physical activity in this population. A cross sectional study was conducted in 1996 and 1997 among US women 40 years and older (n=2912) of the following racial/ethnic groups: African American, American Indian/Alaskan Native, Hispanic and White. Physical activity was lowest among African Americans and American Indians/Alaskan Natives (adjusted odds ratios (Ors) for no leisure-time activity were 1.35 (95% confidence interval (CI) = 1.08, 1.68) and 1.65 [95% CI=1.33 2.06] respectively). A much higher proportion of women were classified as being physical activity. On the basis of a composite definition of physical activity, 72% of respondents reported being physically active. Women living in rural regions (OR= 1.33; 95% CI=1.12, 1.58) were more likely than urban inhabitants to be completely inactive during leisure time. Minority women are among the least active subgroups in American society although not all groups are less active than white women when all domains of physical activity are taken into account.

Brodie and Dugdill (1993) examined health promotion intervention amongst council employees and determined the extent that any changes were subsequently maintained. The results showed that even with modest intervention, beneficial changes were observed in alcohol consumption, diastolic blood pressure, body mass, waist/hips ratio, body fat, aerobic capacity and arm
strength. Behaviour measures tended not to change, but this could be a consequence of unfocused questioning or insufficient intensity of the health promotion activities. The sickness and absenteeism rates improved during the intervention and maintenance phases, making a strong case for health promotion from the employer's perspective. A critique of the experimental procedure suggested that the testing venue, the methods of obtaining consent, the continuity of subjects, initial attitude, the intensity of the intervention.

A multivariate model proposed as explanatory and predictive of health promoting lifestyle was evaluated by Pander et al. (1990), in a sample of 589 employees enrolled in six employer-sponsored health promotion programs. Perceived personal competence, definition of health, perceived health status, and perceived control of health accounted for 31% of the variance in health promotion lifestyle patterns. Employees who reported handling life situations, defined health as high level wellness rather than merely the absence of illness, evaluated their health positively, and in the maintenance phase of the company fitness programme also had healthier lifestyle.


Massachusetts (the Seasonal Variation of Blood Cholesterol Study, 1994-98). There are 24-hour physical activity recalls administered five times during 12 months of follow-up were sued to estimate household, occupational, leisure time, and total physical activity levels in metabolic equivalent (MET) hours/days. Trigonometric models were used to estimate the peak to trough amplitude and phase of the peaks in activity during the year. Total activity increased by 1.4 MET-hours/days (121 kcal/day) in men and 10 MET hours/day (70 kcal/day) in women during the summer in comparison with winter. Moderate intensity non-occupational activity increased by 2.0-2.4 MET-hours/day in the summer. During the summer, objectively measured means physical activity increased by 51 minutes/day (95% confidence interval: 20.82) in men and by 16 minutes/day (95% confidence interval: -12.45) in women.
women. The authors observed complex patterns of seasonal change that varied in amplitude and phase by type and intensity of activity and by subject characteristics (i.e. age, obesity, and exercise). These findings have important implications for clinical research studies examining the health effect of physical activity and for health promotion efforts designed to increased population levels of physical activity.

Hu et al. (2000) the benefits of physical activity in reducing cardiovascular disease (CVD) are thought to be mediated through changes in blood lipids, insulin sensitivity, and thrombogenic factors. Few studies have addressed the effects of both long term physical activity and inactivity on these factors. The investigators assessed associations between long term leisure-time physical activity, television watching, and biomarkers of CVD risk among 468 healthy male health professionals. Prior to blood collection in 1993-94, physical activity and television watching was assessed biannually from 1986 to 1994 by a questionnaire. Physical activity was expressed as metabolic equivalents hours per week. Multivariate linear regression analyses showed that metabolic equivalents -hours in 194 were significantly associated with high density lipoprotein cholesterol (HDL cholesterol) (positively) and with lepton and C-peptide (inversely). The average number of hours television watching assessed in 1994 was significantly positively associated with low density lipoprotein cholesterol and significantly inversely associated with HDL cholesterol and lipoprotein A. Average hours of television watching per week assessed in 1988-1994 was positively associated with leptin level (p<0.01). The associations of television watching and vigorous activity with leptin and HDL cholesterol were independent of each other. In conclusion, physical activity and television watching were significantly associated with several biochemical markers of obesity and CVD risk.

Activity report logs gathered from 8 Wisconsin elementary schools were examined by Knutson-Kaske, (1995) to determine the extent to which an innovative comprehensive health education program was being diffused.
Categories were delimited to school culture/climate, staff development, and health education instruction. During years 3 and 4, increases were seen in the number of schools reporting activities in school culture/climate and health education instruction. Activities in staff development decreased; however, 6 of 7 activities within this category were being used by majority of schools. Emerging trends include leadership teams implementing activities in all categories, ownership of project activities being accepted by other staff diffusion or activities from one vehicle of distribution to another, increase of integrated health lessons in all subjects’ areas, and various forms of connections used to develop efficient means of promoting comprehensive health education to students and staff.

Several health behaviours were investigated by Lacroix et. al. (1993) in relation to maintaining mobility during 4 years of follow-up among 6,981 men and women aged 65 years and older with intact mobility at baseline between 1981 and 1983 who lived in one of three communities: East Boston, Massachusetts; Iowa and Washington countries, low and New Haven, Connecticut. Intact mobility, defined as the ability to climb up and down stairs and walk a half mile, was determined annually by interview, and study subjects were classified into one of three categories at the end of 4 years of follow-up: 1) maintained mobility (55.1%); 2) lost mobility (36.2%); or 3) died without evidence of having lost mobility prior to death (8.7%). After adjustment for age and all of the health behaviours, risk of losing mobility was significantly associated with current smoking, not consuming alcohol compared with small-to-moderate amounts of alcohol consumption, high (>80th percentile) compared with moderate (21-80th percentile) body mass index, and low physical activity levels in both men and women. These finding suggest that positive health behaviours cannot only extend longevity but also reduce the risk of losing mobility and independence in a later life.

Manson et al (1999) examined the associations between the store for total physical activity, walking, and vigorous exercise and the incidence of
coronary events among 72,488 female nurses who were 40 to 65 years old in 1986. Participants were free of diagnosed cardiovascular disease or cancer at the time of entry and completed serial detailed questionnaires about physical activity. During eight years of follow-up, investigators documented 645 incident coronary events (nonfatal myocardial infarction or death from coronary disease. These were strong, graded inverse association between physical activity and the risk of coronary events. As compared with women in the lowest quintile group for energy expenditure (expressed as the metabolic- equivalent [MET] score). Women in increasing quintile groups had age adjusted relative risks of 0.77, 0.65, 0.54, and 0.46 for coronary events ( P for trend <0.001 ) in multivariate analyses. the inverse gradient remained strong (relative rise, 0.88, 0.81, 0.74 and 0.66 for women in increasing quintile groups as compared with those in the lowest quintile group; p for trend = 0.002) walking was inversely associated with the risk of coronary events; women in highest quintile group for walking, who walked the equivalent of three or more hours per week at a brisk pace, had a multivariate relative risk of 0.65 (95 percent confidence interval, 0.47 to 0.91) as compared with women who walked infrequently. Regular vigorous exercise (greater than or equal to 6 MET) was associated with similar risk reductions (30 to 40 percent). Sedentary women who became active in middle adulthood or later had a lower risk of coronary events than their counterparts who remained sedentary. These prospective data indicate that . brisk walking and vigorous exercise are associated with substantial and similar reductions in the incidence of coronary events among women.

Sandvik et al. (1993) studied physical fitness as a predictor of mortality among healthy, middle aged Norwegian men. This study included 1960 healthy men 40 to 59 years of age (84%) of those invited to participate. Conventional coronary risk factors and physical fitness measures as the total work performed on a bicycle ergo-meter during a symptom- limited exercise -tolerance test. After an average follow-up time of 16 years, 271 men had died, 53 percent of them from cardiovascular disease. The relative risk of death from any cause in fitness quartile 4 (highest) as compared with quartile 1 (lowest was 0.54 (95 percent
confidence interval, 0.3 to 0.89; \( p = 0.015 \) after adjustment for age, smoking status, serum lipids, blood pressure, resting heart rate, vital capacity, body-mass index, level of physical activity, and glucose tolerance. Total mortality was similar among the subject of fitness quartile 1, 2 and 3 when the data were adjusted for these same variables. The adjusted relative risk of death from cardiovascular causes in fitness quartile 4 as compared with quartile 1 was 0.41 (95 percent confidence interval, 0.20 to 0.84; \( p = 0.13 \)). The corresponding relative risk for quartiles 3 and 4 (as compared with quartile 1) were 0.45 (95 percent confidence interval, 0.22 to 0.92; \( p = 0.26 \)) and 0.59 (95 percent confidence interval, 0.28 to 1.22; \( p = 0.15 \)), respectively. Researcher concluded that Physical fitness appears to be a graded, independent, long-term predictor of mortality from cardiovascular causes in healthy, middle-aged men. A high level of fitness was associated with lower mortality from any cause.

The association between leisure-time physical activity and 28 year (1965-1993) risk of death from all causes and cardiovascular disease was studied by Kalpan et al. (1996), in 6,131 adults who participated in Alameda Country Study in Northern California. The participants were interviewed on a number of occasions, it was possible to include in the analyses information on changes over time in levels of leisure-time physical activity as well as changes in a wide variety of other risk factors. There were 47,616 persons-years of observation for males (639 deaths from all causes and 321 from cardiovascular disease) and 57,666 person-years of observation for females (587 deaths from all causes and 388 from cardiovascular disease). In analyses in which only the baseline values of all covariates were included, a four-point increase on the leisure-time physical activity scale the inter quartile range, was associated with reduced risk of death from all causes (relative risk (RR) = 0.90. 95% confidence interval (CI) 0.83-0.99- and cardiovascular disease (RR- 0.85. 95% CI 0.75-0.97. When time varying information on leisure-time physical activity and all other covariates was included, there was still a protective effect and all other cause and cardiovascular disease mortality (RR= 0.84. 95% CI 0.77-0.92 and RR =0.811 95% CI0.71-0.93 respectively). The association between leisure-time physical activity and
many determinants and consequences of physical activity and many determinants and consequences of physical activity were explicitly included in survival models.

Crampton (1905) constructed a test known as Crampton Blood Ptosis test to measure cardiovascular function of an individual. In this test he observed changes in heart rate and systolic blood pressure from a reclining to standing position. He formulated a norm from his experimental data to consider the score or cardiovascular fitness and according to him 50 to 10 should be considered as normal. He further stated that score below 50 should be further investigated to find out the exact cause score below zero is evidence of impaired circulation, toxic state or severe physical disturbance.

Lowsley (1911) Developed a test to observe the effect of strenuous exercise. His test was based upon the measurement of systolic pressure, diastolic pressure and pulse rate after exercise. He concluded that if the pulse rate and blood pressure returns to normal within one hour, the exercise is beneficial for the development of health.

Stone (1913) constructed a test to measure the efficiency of circulatory system. His test was based on the measurement of the pulse pressure and diastolic pressure.

Barach (1914) developed a test to measure the efficiency of the heart. He took all the readings from the sitting position and studied three elements, pulse rate, diastolic pressure and systolic pressure for assessing the efficiency of the heart.

Barringer (1916) published his test to assess the cardiovascular fitness. His test was based on the rise of blood pressure. He advised dumbbell exercise to accelerate the circulatory system. The blood pressure was taken during exercise after every 30 seconds.

Schneider (1920) published his work under the heading. “A Cardiovascular rating as a measure of physical fatigue and efficiency” in Journal of the American Medical Association. In his study he observed the change in
pulse rate and systolic blood pressure from reclining to standing position. After the exercise the readings were again taken. For his study he developed the test which is known as Schneider Test.

Michigan (1920) constructed a test known as “Michigan Pulse-Rate Test of Physical Fitness” in the State of Michigan and published. This test was based on the recovery period after exercise. A short sprint was advised as an appropriate exercise. Normal pulse was recorded before the exercise. After the exercise the pulse recovery period was recorded at different intervals.

Hindman (1930) conducted a study to improve the scoring method of Schneider Test. D.A. Hindman successfully prepared a table for accurate scoring. His test is known as “The Hindman Revision of Schneider Test”.

The McCurdy (1931) cardiovascular rating of “Present Health” was published by McCurdy. The study was based on the pulse-rate, systolic and diastolic pressure. Norms were developed to assess the conditions of present health.

Tuttle (1931) developed a test to get 2.5 ratio. His study was based on the adaptability of the heart to exercise. He increased the intensity of exercise to get the 2.5 ratio.

Karpovich (1932) conducted a study on the patients and published it under the heading, “Physical Reconditioning”. His study was based that when the patients can resume physical exercise. He used 29 inches bench for stepping exercise.

Keller (1932) conducted a study on the basis of McCloy’s rating of present health. His subject of study was to determine the difference of score when a boy is in good health condition and ill. He also concluded that when a boy can resume physical exercise after illness. He submitted his thesis for the requirement of M.A. degree to the State University of Iowa.
The Mertinent (1934) test was developed to measure cardiovascular fitness. This test was based on three factors (i) circulatory changes from reclining to standing position (ii) effect of exercise on circulatory changes (iii) returning the pulse rate and blood pressure to normal after exercise.

Medical Department of Prudential Life Insurance Company of America (1934) developed Flerimeter test for the purpose of corrective therapy. They used the Flerimeter to give the rhythm for stepping exercise.

Maccurdy-Larson (1935) organic efficiency test was developed to measure cardiovascular fitness and published Maccurdy and Larson after a study of 26 items selected five for the test.

Bruha (1943) and his associates developed a test in the Harvard fatigue laboratory during Ward War II. This test was based on the recovery of pulse-rate to normal after stepping exercise on a 20 inches bench.

Taylor (1944) constructed a test known as “Taylor Pack Test” during World War II. He used 18 inches bench and 10 pounds of weight on the back of the subjects while performing the exercise.

Garlson (1945) conducted a study on 200 soldiers to test the absolute condition of physical fitness. His test was based on the efficiency of the heart to supply fuel to the different working muscles. He used on spot running with their own rhythm for 10 seconds. Ten repetition of the same exercise was done and the fatigue was prepared.

Howell (1964) Bakogorge and Kerr conducted a study on 180 subjects to develop a “Progressive Treadmill Test Norms for College Males”. They used treadmill to give a running exercise at a rate of 91 meters per minute. After every minutes one percent speed was increased to raise the heart rate up to 180 beats per minute. The scoring was given according to the work load.

Sander, Allan N. (1965): This study examined the impact of a Florida State Department of Education project entitled Fit to Achieve--a cardiovascular
fitness education program for elementary school children. Of the teachers implementing the program, 24 elementary physical educators and 134 elementary classroom teachers responded to a survey that asked for information on changes noted in the following areas: children’s motivation for, participation in, and knowledge of cardiovascular fitness. The survey was based on the reinforcement of the 3 areas through the use of classroom curriculum materials which included instructional aerobic routine Videotapes and an audio tape for 15 minute fitness breaks, developmental written student assignments of an interdisciplinary classroom subject nature, a comprehensive teacher guide which included active learning experience ideas, and a parent guide. The uniqueness of the program centred on physical education teachers (N=60) presenting in services which guided classroom teachers in grades K-5 who actually implemented the program with their students. The program was implemented for at least a 3 month period (from 1 to 5 days per week) in the participating elementary schools. The results of the study indicated a substantial increase in children’s motivation for cardiovascular fitness activity, a moderate increase in children’s cardiovascular fitness activity participation after or away from school, and a low to moderate increase in children’s cardiovascular fitness knowledge. Eleven recommendations based on survey’ results are included. Appendixes provide copies of the two survey instruments.

Neal, Robert B. (1966) “The Effect of Group Counselling and Physical Fitness Programs on Self-Esteem and Cardiovascular Fitness”. A study was made to determine the relationship between cardiovascular fitness and self-esteem. Ninth grade boys were divided into four groups: (1) the cardiovascular fitness group; (2) the counselling group; (3) the cardiovascular fitness and counselling group; and (4) the control group. All were administered a pre-test and post-test measuring self-esteem and fitness. The group which performed at the highest level on the post-test for physical fitness was that group which participated in the combined program of group counselling and physical education. Both the fitness group and the counselling and fitness group
performed at a level greater than the control group. No significant differences in self-esteem were found between the groups. An analysis of these findings is presented in this report and the implications for physical and health educators are discussed.

Schmidt, Sharon (1966) “Selected Activities to Improve Cardiovascular Endurance and Strength and Muscular Endurance” Activities to help the young child improve his/her physical fitness is difficult to find because of insufficient research supporting the effectiveness of proposed activities. However, several activities are assumed to improve the fitness of various areas of the body while concurrently improving cardiovascular endurance by increasing the heart rate for a definite period of time. Probably the best single activity for cardiovascular endurance is jogging at progressively longer distances and time periods. Muscular endurance is obtained through repetitive exercise of selected muscle groups. Arm and shoulder girdle strength and endurance seems to be a traditionally weak area. To increase strength in this area, exercises are needed that will get the children down on the floor supporting their bodies with their arms. The crab walk and sprinting are good activities for leg development. Another area of particular weakness in young children is the abdomen. Kindergarten children have a difficult time finding their stomach muscles and consequently have trouble doing sit ups. The easiest thing is to start the V-sit and curl-ups. These are just a few activities that increase overall as well as cardiovascular fitness, but they give a general idea of exercise patterns that effectively increase physical fitness in children. The overall progression in children of any age can be aided through the presentation of challenge questions.

Gettman, Larry R (1973) “United States Ski Team Fitness Testing Program”. Presented is a fitness profile designed to identify the individual athlete’s strengths and weaknesses. Specifically, the areas of fitness examined are a) muscular strength; b) cardiovascular respiratory function; c) body composition; and d) motor abilities, agility, and speed. The procedures in the testing program involve the following: a) the establishment of a site for ski
training and testing, b) fitness testing, c) appraisal of the fitness profile with each athlete, and d) a training prescription for improving weak areas. Detailed explanations of individual tests for the specific abilities listed above are provided.

Thompson, Patricia (1975) “North York Fall Norms for Boys and Girls Age 12-14 for: CAHPER Tests; Measures of Aerobic Fitness; Peak Flow; Muscle Strength; Percent Body Fat”. Tests are described that were given to 1,000 students randomly selected at grade 7-9 levels with an equal representation from both sexes. Participants were selected from two junior high schools in North York for a study comparing students in a regular physical education program to those in a program to develop cardiovascular endurance. The first half of the paper describes six Canadian Association for Health, Physical Education, and Recreation (CAHPER) tests in terms of purpose, equipment, performance, scoring, and gives normative data for each test for boys and girls ages 12, 13, and 14. CAHPER Fitness Tests include the one-minute speed sit up, the standing broad jump, the shuttle run, the flexed arm hand, the 50-yard run, and the 300yard run. In the second part of the paper a discussion is given about cardiovascular fitness and its importance and role in today’s society. Several methods of estimating cardiovascular endurance are explained and norm tables for the three age levels follow. In addition, norms are provided for peak respiratory flow, grip strength, and percent body fat.

Manitoba Schools’ Physical Fitness Survey (1976-77) an abundance of research relative to physical fitness and, more generally, physical education of school children, has surfaced during the past few years. Negative aspects of health and physical fitness are increasing year by year, and further evidence suggests that academic performance is negatively affected by low levels of fitness. A survey was designed to determine the physical fitness of students in Manitoba, Canada and to examine a possible relationship between student fitness and academic achievement. This data should be useful in motivating educators, students, parents, and the general public in respect to the need for optimal
physical development of the child and a greater priority for physical education in the school curriculum. Data on the following items are presented in tabular or graphic form: (1) physical education time allotment; (2) student participation; (3) weight and height; (4) postural analysis; (5) overweight student analysis; (6) exercise performance; (7) growth and development patterns; (8) cardiovascular fitness; and (9) basic motor skill analysis. Age and sex differences are noted for each of the topics. Appendices present test norms, test procedures, and data collection forms. This survey should have national and international significance. The test components of cardiovascular fitness, flexibility, and body fat percentage are not usually included in physical fitness tests, but are instrumental in the development of effective physical education programs.

Physical Fitness and Health. Annual Report (1977) this annual report from the Michigan Council on Physical Fitness and Health describes a project initiated by the Council in 1977. “Project Fitness” serves to evaluate the physical fitness levels of all students in the public schools from grades kindergarten through twelve. Emphasis is placed upon early education of children in the importance of physical exercise as a part of overall health care. A cardiovascular health program for youth is endorsed by the Council. The information dissemination activities of the Council are listed as well as the advisory roles assumed. Future plans are outlined.

Jenkins. David (1978) “Cardiovascular Fitness Education for Elementary Students Pagination” This cardiovascular fitness program for grades 1-6 (with emphasis on grades 5 and 6) consists of (1) discussion classes and exercise experiments, (2) discussion of exercise effects during regular activity sessions, (3) required cardiovascular warm up exercises, and (4) evaluation of cardiovascular fitness.

Project Super Heart. A Heart Disease Intervention Program. Annual Report (1978-1979). This document reports on the second year of a project developed to improve the cardiovascular health of elementary school children. The project objectives in the second year were to refine and expand the
Review of Related Literature

curriculum which included components on cardiovascular health, nutrition, and physical fitness. Increased family awareness and involvement were also sought. One responsibility assumed by the project was collection of baseline data to establish norms for children ages 6-12 years. Participants were randomly selected for the test and control groups, but children who had participated in the first year of the project were placed in a maintenance group to monitor their progress on a longitudinal basis. Program activities included vigorous physical exercise, classes on nutrition and a healthy lifestyle, and periodic monitoring of heart rate and lung capacity. Informational packets and a newsletter were sent to parents. Data on the project are presented in both narrative and tabular form and requirements are set forth for implementing a similar program in the public schools. Results indicated a significant improvement in the children’s physical fitness, nutritional status, and health knowledge.

Falls, Harold B. (1980) “Modern Concepts of Physical Fitness”. Physical fitness is not simply a performance oriented discipline but also, and more importantly, a health oriented discipline. The new American Alliance for Health, Physical Education, Recreation and Dance (AAHPERD) Health Related Physical Fitness Test battery reflects this idea in its four components: cardiovascular function, body composition, strength, and flexibility.

Gabbard, Carl; Le Blanc, Betty (1980) “Health-Related Fitness and Young Children” Because research indicates that American youth have become fatter since the 1960’s, the development of fitness among young children should not be left to chance. Simple games, rhythms, and dance are not sufficient to insure fitness, for, during the regular free play situation, children very seldom experience physical activity of enough intensity to promote cardiovascular fitness. Fortunately, something can be done. The Health-Related Physical Fitness Test, inaugurated by the American Alliance for Health, Physical Education, Recreation and Dance, emphasizes a philosophy which focuses upon good health and disease prevention. Aspects of the philosophy include cardiovascular endurance, muscular endurance, flexibility, and balanced body composition.
Basic benefits of health-related physical activity are numerous. Included in this document is a guide for planning fitness activities in daily lessons, examples of activities for enhancing fitness among young children and a weekly plan with illustrative activities.

Gissal, Mary L.; Ray, Robert O (1981) “On the Move with the Waukesha Walkers”. As part of a research study, a fitness trail was designed for older adults to increase their physical fitness and cardiovascular health. Exercise stations placed at quarter-mile intervals introduced exercises effective in improving flexibility, muscular strength, endurance, balance, and coordination.

Christie, Samuel G.; Saccone, Peter P (1982) “An Evaluation of the Fitness, Academic, and Self-Esteem Training Program at Meridian School” This paper reports the results of a pilot program, “Fitness, Academics, and Self-Esteem Training” (FAST), conducted during the 1984/85 school year at Meridian School to test the hypotheses that a program of aerobic exercise with the focus on running, conducted by the classroom teacher, would result in a higher rate of academic achievement, better cardiovascular fitness and respiratory efficiency, and higher self-esteem as measured by academic aspiration. Both the project group and a comparison group of fourth and fifth graders from another Cajon Valley school were measured at the beginning and end of the year on the rate of academic achievement, cardiovascular fitness, and academic aspiration. The comparison group participated in the normal physical education activities for fourth and fifth graders, but not in the aerobic exercise-running program. At the end of the year participants in the FAST program were found to be achieving at a higher rate in reading, language, and math, and to have better cardiovascular fitness and respiratory efficiency than non-participants. There were no differences in the scores on academic aspiration between participants and non-participants.

Yeo, David G. (1982) “Principles and Applications of Physical Fitness: Course Proposal”: A proposal is presented for a Community College of Philadelphia Life Sciences and Allied Health Services course in physical fitness.
Following a standard cover form, a statement of purpose explains that the course is designed to provide instruction and experience in the basic areas of nutrition and physical conditioning, including dietary analysis, weight control programs, body composition, flexibility, cardiovascular endurance, and muscular strength and endurance. Next, course goals and a course outline are presented, and corresponding course-level objectives (CLO’s) are identified. Finally, the CLO’s, related intermediate performance objectives, learning activities, and measures of acceptable performance are presented. The five CLO’s stipulate that the student will: (1) analyze physiological aspects of physical fitness (e.g., the cardiovascular, respiratory and muscular systems); (2) objectively determine his/her level of physical fitness; (3) analyze a sound nutritional program; (4) analyze selected approaches to physical fitness (e.g., specific exercises, and common pieces of fitness equipment); and (5) analyze principles of exercise prescription and food selection. A detailed course outline and sample instructional materials conclude the packet.

Hockey, Robert V. (1983) “Physical Fitness: The Pathway to Healthful Living” This text is designed for university-level foundations of physical education courses that incorporate student participation in alternate lecture and laboratory sessions. The material is presented so that each individual might evaluate his present level of physical fitness, might carefully consider all the information available, and then make an educated decision with regard to the importance of physical activity in his life. Each chapter begins with a questionnaire designed to determine students’ attitudes and present level of knowledge. Discussion, suggestions for laboratory activities, further references, and summary activities follow. Photographs and charts supplement the text throughout. Chapter headings include: the cardiovascular system: cardiovascular disease and risk factors; physical fitness; cardiovascular endurance; strength; muscular endurance; flexibility; exercise; diet and weight control; exercise and health; skill and motor ability; existing exercise programs; relative value of
various activities in the development of physical fitness; and developing an exercise program.

Milner, Evgeny G.; Volkov, Vladimir M. (1983) “Man and Running Russia’s Best-Selling Book on Exercise, Health, and Medicine. A Worldwide Literature Search”. This book attempts to systematize and generalize the data of world literature concerning the advantages of fast walking and slow running for persons with various cardiovascular diseases. The information and the fitness program outlined are based on experience and research conducted at the Nadezha Health Club in Smolensk, Russia. Major risk factors for cardiovascular disease are discussed, as well as how development of coronary disease can be attenuated or arrested by a prolonged routine of jogging. The effects of fitness running are also outlined in relation to certain diseases and conditions: diseases of the blood vessels of the lower extremities, neurasthenia, gastro-intestinal disease, diabetes, and obesity. A section is also included on running and injuries. The risk factors discussed include: high serum cholesterol, diastolic hypertension, obesity, smoking, unfavourable heredity, insufficient motor activity, and excessive nutrition high in calories. The fundamentals of training which should be applied to fitness running focus on three principles: repetition, incremental improvement, and individualization. Instruction in the basics of fitness running as well as the stages of training vary according to the health, conditioning, and age of participants. Correct planning of weekly and monthly workouts is essential to achieve health benefits. Post exercise recovery should be worked into the routine: a pattern of alternating workouts with rest days. (IAH)

Van Dusen, Frederick (1984) ‘The Effects of Cardiovascular Conditioning on Stress Levels of Law Enforcement Cadets: Politics, Law and Economics of Higher Education” The entry level cardiovascular condition test scores of 45 cadets at the Criminal Justice Training Institute (Florida) were compared with test scores after the cadets participated in a 15-week conditioning program. The test consisted of running, push-ups and sit-ups, and bench and leg presses. The conditioning program was designed to increase cardiovascular
Review of Related Literature

endurance and reduce stress, and ultimately, increase the fitness and longevity of the cadets. Results verified that there was a significant difference between pre-test and post test cardiovascular condition test scores. Cadets demonstrated that they were more aware of their conditioning level and of the importance of cardiovascular conditioning and physical fitness as a stress reduction method. The report recommends that the program become a permanent program at the Criminal Justice Training Institute and be introduced to law enforcement agencies in Palm Beach County, Florida. Appendices contain an assessment sheet and fitness profile, test scores, and statistical data.

Broussard, Lee Ann; Goldstein, Jeren; Walfoyvia B (2000) Personal Fitness. Teacher’s Guide [and Student Workbook]. Revised Edition. Parallel Alternative Strategies for Students (PASS). This teacher’s guide and student workbook are part of a series of supplementary curriculum packages of alternative methods and activities designed to meet the needs of Florida secondary students with mild disabilities or other special learning needs. Content is based on the Florida Curriculum Frameworks and correlates to Sunshine State Standards. The Personal Fitness PASS (Parallel Alternative Strategies for Students) teacher’s guide presents seven units concerned with various health and fitness topics. Each unit includes a vocabulary list, an introduction to the topic, an explanation of fallacies, content presented in words and graphics, exercises, quizzes, and answer keys in the teacher’s guide. A final examination is also included. The following units are explored in both texts: (1) “Physical Fitness”; (2) “Body Composition and Nutrition”; (3) “Flexibility”; (4) “Muscular Fitness”; (5) “Cardiovascular Fitness”; (6) “Consumer Health Issues”; and (7) “Personal Health Program.” Appendices to the teacher’s guide include correlations to Florida student performance standards and lists of multimedia sources and Federal and Florida health agencies. The student workbook contains vocabulary, an explanation of the content, and practice exercises designed to evaluate comprehension.