Chapter II

REVIEW OF RELATED LITERATURE

Astrand\(^1\) writes in his book "Health and Fitness" that Americans are unfit. Recent studies to determine the fitness of the average American showed that we are below norms of the Scandinavian countries and that many Americans had fitness level which could be classified below these set by the American Heart Association. Unbelievable as it may be seen, women are less fit then men, with teenagers and 20-29 years old women rated lowest.

Not only the adults suffer the effects of indolence: most American children are also unfit. In a 10 years longitudinal study of school children it was found out that cardiovascular fitness declines steadily from the age eight stabilizing at a very low level only in the adolescence.

Michael\(^2\) assessed the current status of health promotion programmes in order to develop a profile of the health promotion programmes conducted by employees with over 100 employees in the

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\(^1\) Astrand, Health and Fitness, p.11.
state of Tennessee. This study consisted of telephonic survey of 266 randomly selected employers in the state of Tennessee.

The analysis of the findings of this investigation led to the following conclusions:

1. Health promotion in Tennessee consists primarily of accident prevention services.

2. Most Tennessee employers do not know what their health program casts.

3. Of all agencies available the American Red Cross Society seems to be most frequently used by Tennessee employers.

Guermonprez\(^3\) conducted a study on health promotion/wellness through out of the Southern district of the American Alliance of Health, Physical Education, Recreation and Dance. There were 386 department of physical education surveyed in the Southern United States, 276 of which responded. If the respondents, forty five departments of physical education indicted they had offered alternative career tracks in health promotion/wellness. The majority of the study population reported that

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fewer than five courses were changed from the traditional teacher education programme. The respondents reported over ten different sources from which they would obtain literature regarding undergraduate curricular standards in health promotion/wellness.

Guess\(^4\) made a survey study of 49 independent but non parodical secondary schools in California. He used the questionnaire method to determine the extent to which their programmes implemented. The recommendations made by the State of California for a boys four years physical education programme. A majority of the independent schools failed to meet the state standards. Common weaknesses were in adequacy of trained personnel and lack of school parent communication points that acted favourably were limited size of classes, aquatic programs and inter scholastic athletic programmes.

Mann\(^5\) in his study elaborated one of the major function to provide training to key medical and paramedical personnel in health education. Every year it conducts about ten to twelve training course in health education for different category of personnel engaged in various health

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programmes. Including teacher educators media personnel, medical and paramedical persons and professionals.

In this study field practice and field study demonstration were conducted in effective ways for the benefit of the people. It has four fold purpose.

1. Conducting field studies on problems related to health and health education.

2. Testing and developing a strategy for health education i.e. methods, media, and techniques.

3. Demonstrating the results of health education in the health promotion of the people.

4. Providing field opportunities for developing training programmes in health education.

Sahni⁶ said, is the end of the 90's and everyone around is heavily into fitness. You try to look with it when friends, colleague, neighbors and that irritating 12 year old on the second floor drop terms like cardiovascular, step, pecs, abs... but it doesn't fool anybody. Your paunch/flabby thighs/high cholesterol/heavy breathing are sure signs you

need to get moving (a la those nubile young midriffs on the MTV). So one fine day, you venture out bravely, looking for a fitness center to solve all your woes. There are loads of them out there, right? Piece of cake, right?

Uhh.... not quite: Just what do you look out for? Plush carpet and AC? Nyet, Nyet!

Just because some places charge a bomb, it doesn't mean that they're better. Fly-by-night operators are abundant with the 'extra garage hai; chalo AC laga ke gym khollete hein;' attitude.

Coetsee\textsuperscript{7} a study on the role played by Health and Fitness Clubs addressing the causes of hypokinetic diseases and coronary heart disease. He said, in order to be well prepared, service providers should be aware of the health and fitness profiles of their clients when they join their clubs. In his study he assessed 243 white females of age ranging from 13 to 70 years. The results were analysed for risk factors and the findings compared with existing norms in literature. He found that in comparison to general female population of Durban the subjects who joined the health clubs were health conscious. Before joining almost half (49.4\%) of the subjects were inactive, and the incidence of hypertension as a risk factor

among 16.5% of subjects was found to be relatively low when compared to that reported for females in Durban.

Edwards⁸ conducted a study that constituted a comparative and longitudinal investigation of physical exercise and psychological wellness in a sample of health club members in Zululand, South Africa. The research was contextualized within a public health and community psychological model of mental health promotion. Physical exercise was categorised as regular or irregular, depending upon whether it met the criterion of exercising for an average thirty minutes of a day at least three times per week or not. A wellness profile was constructed from various questionnaires chosen on the basis of their relationship with psychological wellness and administered samples of health club members and university students. In the comparative investigation, health club members were more psychologically well than university students. Whether they were members of health club or not, participants who were regular exercisers were found to be more psychologically well than the irregular exercisers.

Wilhelmina\textsuperscript{9} studied on positive contribution of physical activity on physical and mental health that is widely acknowledged. The scholar said that participation in sport and exercise is not as high as expected. In addition to this, people who start exercising often do not adhere to their exercise programme. The study examined the effectiveness of Bandura's self efficacy theory to predict exercise adherence. A sample of new members of a gymnasium was assessed on a physical self-efficacy scale, an Adherence Efficacy Scale and on outcome Expectancy scale. The dependent variable exercise adherence was assessed by monitoring the intend and actual frequency of visits to the gymnasiums. He employed multiple regression analysis to test the hypotheses. Results indicated that physical efficacy was a significant predictor of exercise adherence for the total group as well as for the females separately. The results partly confirm the self-efficacy theory of Bandura.

Ross\textsuperscript{10} conducted a study on the courses that emphasize lifestyle changes to promote health and wellness. He said that these courses are plentiful in higher education today. However, the effectiveness of these courses is unknown. The purpose of his study was to determine the


efficacy of an introductory health course in producing positive changes in wellness behaviours of the students enrolled. He examined 860 undergraduate students enrolled in either a college health course or English general studies course. All subjects were pre and post tested during the first two weeks and last two weeks of the semester. He found that those attending the health course were positively changing their wellness behaviours that those who attended English course.

Joan\textsuperscript{11} carried out a study on the ACSM's Health/Fitness facility standards and guidelines which required health/fitness facilities to incorporate specific mandatory "standards" into their daily operations. The purpose of the study was to obtain opinions from three groups of ACSM members, academicians, managers and practitioners, regarding 49 selected standards. A survey mailed to 1035 members. He used a six point Likert Scale to determine the level of agreement with each standards. The majority of respondents agreed with three of the general opinion statements: (a) the standards enhance credibility in the field (97%), (b) if implemented, the standards would decrease liability (89%), (c) ACSM should publish guidelines not standards (68%).

Elizabeth\textsuperscript{12} assessed that evaluation has been recognised as a basic component of health promotion program design. The study was conducted to determine what types of evaluation, if any were conducted by health promotion professionals employed in worksite health promotion programs. A survey tool was developed specifically for this study and mailed to 587 members of the association for fitness in business. A total of 221 responses were received back. Results showed that evaluation activities were used by the survey participants to review or revise the health the health promotion activities.

Mae\textsuperscript{13} conducted a study on the effectiveness of walking clubs and self directed program among African American females and said that the American sub group of females have the lowest participation in leisure time physical activity. The purpose of the study was queasy experimental to test the effectiveness of two types of interventions (1) The walking club, (2) Self directed intervention. The results of the study showed that for the walking club, the mean number of days increased from 1 on the pretest to 5 on the post test. The median for minutes per week

participation also increased. For self directed program, days of participation increased from 2 on the pre test to 4 on the post test. It was concluded that both a walking club and a self directed program were effective in increasing physical activity among the African American females who participated in the study.

Jean\textsuperscript{14} says that health promotion has become a big part of many large organizations. Interest in health promotion from business and industry has increased due to the rising health care costs. These rising costs, have influenced employers to assume more responsibility for the health and safety of their employees. Recent emerging health promotion programs have become more sophisticated and complex requiring skillful managers and administrators to coordinate the delivery of programs and services. The purpose of her study was to identify the administrative and management competencies of health promotion directors. A list of 41 competencies and varying number of competency actions were identified through in depth interview. The results of this study have implications for the health promotion profession and specifically health promotion directors.

\textsuperscript{14} Barbara Jean, "Administrative and Management Competencies of Health Promotion Directors in Occupational Settings," \textit{Dissertation Abstracts International} 53 (June 1993): 4217-A.
Wyckoff\textsuperscript{15} conducted a study to determine the extent of knowledge and use of health services and facilities within a community college. The researcher developed a questionnaire which was administered to 287 students. The analysis of the data gathered from the students' responses to the questionnaire revealed that the levels of knowledge and use of the services afforded by the college and the services rendered by agencies in Dallas county were not oriented to the criteria of the questionnaire. The findings of the study were in agreement with those of the studies reviewed in the literature, all of which reported little knowledge and use of college health facilities on part of the students.

Young\textsuperscript{16} studied the employee's participation patterns in corporate fitness programs and their absenteeism rate, job satisfaction, personal health recognition and level of stress. The project included analyses of three types of employees those that did not participate in a fitness program, those participated moderately and those participated frequently. A hand out survey instrument containing 40 statements regarding issues in corporate fitness programs was developed to measure these differences.

\textsuperscript{15} Jean Elden Wyckoff, "Knowledge and Services Available at the El Centro Community College Health Center and Health Related Agencies in the City of Dallas," \textit{Dissertation Abstracts International} 41:3 (November 1980): 1965-A.

\textsuperscript{16} Michael Youn Young, "A Comparison of Employees Participation Patterns in Corporate Fitness Programs and Influential factors that Effect Personal Job Performance," \textit{Dissertation Abstracts International} 62 (October 2001): 1063-A.
Four one way ANOVA were used to compare the subject groups mean. Significant difference was found between the groups in absenteeism issue and health recognition issue. The student Newman - Kauls post hoc test revealed that for both the group of moderately participating and frequently participating were significantly different than those of the group of non participation.

Wright\textsuperscript{17} says that I aim to integrate public health knowledge of communication and transactional process with best practices to enhance health promotion program implementation and ownership in a voluntary agency. The case study methodology was chosen because it allows the researcher to capture the richness person environment situation interactions. The study found that disconnects can occur in a public health collaboration. Health promotion program develops often neither sense nor understand the social meaning and consequences of the program they introduce to organizational or community members.

Banner\textsuperscript{18} studied on the Eyesnck's model of extraversion was used to best two health related programs for their effectiveness in reducing

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\textsuperscript{17} Dawna Renee Wright, "Collaborative Transfer of A Public Health Program," \textit{Dissertation Abstracts International} 62 (June 2002): 6081-A.

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adolescent stress based on personality differences. Also of interest was the particular personality profile of academically bright teenagers. It was predicted that significant differences should accompany individuals. It was also predicted that these academically bright students would present a profile indicative of greater stress related symptomatology. 63 males and 53 females participated in the study. The results of the study partially supported the first hypothesis in that the extraversion dimension appears to play a role in affecting program effectiveness. The second hypothesis that a bright adolescent population would display more stress symptomathology was not substantiated. The addition of a relaxation training program to the school's curriculum was suggested.

Joan\textsuperscript{19} in her investigation determines the effect exercise membership in a corporate fitness center and certain health risk/lifestyle behaviours had on absenteeism. Four study group were selected based on their exercise adherence levels and membership status in the club 200 corporate fitness center at the Columbia Gas General Office Facility in Columbus, Ohio. The results of the study indicated that the exercise membership and exercise intensity groups had fewer disability absences

than the control and exercise nonmembership group for the two year study period. The study suggested that on exercise adherence level of three or more days per week, membership in a corporate fitness center, and certain health risk and life style behaviours were responsible for fewer mean disability absence in this investigation.

Elena\(^{20}\) conducted a study on factors associated with participation and non participation in an employee health promotion program at a medical center. One hundred fifty five voluntary participants and 138 non participants were randomly selected for the study. They were asked to respond to a questionnaire. Results from t-test showed significant differences between groups in number of years employed. Chi-square test showed significant difference between groups on health improvement, smoking, weight, factors that requires immediate departure from the work place.

The mind body benefits of physical fitness through health clubs exercise can help combat stress and potential said a survey conducted by American Institute of Stress.\(^{21}\) Stress from traffic, cell phones and

\(^{20}\) Maria Elena, "Factors Associated with Participation and Non-Participation in An Employee Health Promotion Program at a Medical center. Dissertation Abstracts International 57 (September 1996): 1038-A.

balancing work life is so pervasive today that it becomes a driving force behind rising health care costs. In a six year study of more than 46,000 workers, depression and unmanaged stress emerged as the costliest risk factors in terms of medical expenditures. While impossible to eliminate stress from modern life, one can control the effect it has on the mind and body. People with increased levels of anxiety and nervous tension need to develop effective ways of coping with stress. The link between mind and body was accepted in ancient India, the birth place of yoga, thousands of years ago. It has taken a while for Western Fitness Experts to embrace the idea, however the concept of holistic health and fitness rapidly gaining popularity and acceptance. In a survey of health clubs belonging to IHRSA, 23% offer classes specifically geared to wellness and stress reduction. Consumer research shows that an impressive number of American Health Club Members cite holistic motivations for working out, 54% said they exercised regularly, they feel like they have their overall act together while 38% said that when they do not exercise regularly, they just don't feel right.
Bishop's study investigated a model fitness program designed to overcome socioeconomic barriers to women fitness and meet scientific criteria for fitness programming. Features of the model program were identified through the review of literature and a pilot fitness program. The model was tested by using the Delphi process to question a panel of experts about the model features and a practical application of the model to test the hypothesis. The review of literature revealed that women are underrepresented in percentages of those who are participating in regular and vigorous activity. Women lack of time, money, safety and resources such as facilities, equipment, instruction and support were found to be greater barriers to participation than more commonly cited factors such as discrimination. The nonprofit model program featured low-cost women only daily group exercise sessions and child care. The study accepted the hypothesis that experts would approve of the model as one which identifies barrier, needed resources and fitness program components.

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For many people, the thought of visiting a gym means getting sweaty and burning calories, yet a MORI survey commissioned by Esporta plc.\textsuperscript{23} shows that in fact, given the opportunity to enjoy an afternoon at a health club, less than a third of women would close to work out.

The diverse range of facilities at luxury health clubs like Esporta means that women would prefer to relax in the Jacuzzi, Sauna or spa (51%) have a manicure, facial or massage (48%) take a dip in the pool (46%) or enjoy lunch with friends (44%). Infact women were just as likely to choose to relax with a book or the papers (31%) as they were to workout in the gym, take an aerobics class or play tennis. Men too, it appears, would prefer to use health clubs to relax and unwind. Over half of those questioned (53%) would choose to swim in the pool, with two in five (42%) preferring to relax in the Jacuzzi, sauna or spa. A similar proportion (39%) said they would work out in the gym, take a class or play tennis.

The IHRSA\textsuperscript{24} survey that the number of health club members who visit their clubs frequently has swelled by more than 135\% since 1987, according to data collected in the annual Health Club Trend Report. This 12 year study indicates that 1999, of the roughly 31 million health club members in the United States, more than 12.5 million have become core members, visiting their clubs 100 or more days in 1999, up from 5.3 million in 1987. In terms of total population of health club members, the study also found an impressive increase in the average number of visits per year members made their clubs. Besides that, club members have discovered, now more than ever, the knowledge and expertise health club staff has to offer. Broken down by gender, men aged 55-64 years old visited a health club more than twice a week, or an average of 113 days, while those 65 and older visited their clubs just less than twice a week.

IHRSA\textsuperscript{25} in a survey of sixteen leading U.S. health companies from across the country found that the companies reported outperforming their second quarter results for 2001 on several key measures. The study, conducted for the international health, Racquet and Sports Clubs Association by Ernst and Young, LLP found that Q 2 2002 total company

\textsuperscript{24} \url{http://www.ihrsa.org/info/newsarchive/news 02_09_27.html}

\textsuperscript{25} \url{http://www.ihrsa.org/info/newsarchive/news 02_09_27 html}
revenues grew by 10.2% over Q2 2001. In particular, the clubs participating in the survey indicated that revenues from membership dues improved by 10.5% while non-dues related revenues increased by 16.25% over 2001 levels. "The fact that revenue from both membership dues and non-dues sources were ahead of last years pace is particularly good news." Observed John McCarthy, executive director. Growing membership dues revenue implies that clubs continued to recruit new members, while increases in non-dues revenue indicates that membership continued to visit their clubs and make use of fee for service programs like palates or massages. The findings from this survey follow the news that the total number of commercial health clubs in U.S. grew by approximately 2% during the first six months of the year, to 18,203 facilities as of July 2002.

Jaimitra26 conducted a study to determine the effects of selected exercises on the physical fitness of sedentary adults. The subjects were 54 men, 32 from Madhav Engineering College, Gwalior and 22 from Accountant General Office, Gwalior. Two groups, one experimental and the other control were taken. Experimental group was subjected to a training programme in selected exercises for 6 weeks the control group

did not participate in exercise programme and was instructed not to participate in any vigorous exercise or recreational activity. Both the group were doing their normal daily work.

The subject were tested in physical fitness before and after the experimental period of 6 weeks.

The mean gains experimental group were tested for significance by student's 't' test and found to be significant at one percent level of confidence.

Malek\textsuperscript{27} examined relations between commonly used indicators of knowledge (training and experience) and actual knowledge of the fitness instructors. Study was based on five areas (a) nutrition, (b) health screening, (c) testing protocols, (d) exercise prescription and (e) general training knowledge regarding special populations. FIKA provided reliable measures of knowledge in these areas, fitness program for the client and for avoiding unnecessary injuries. A survey of 115 health fitness professionals revealed that a bachelor's degree in the field of exercise science and possession of American College of Sports Medicine were strong predictors of a personal trainers knowledge, where as years of

experience was not related to knowledge. The findings suggest that personal fitness trainers should have licensing requirements, such as a bachelor's degree in exercise science and certification by an organization whose criteria are extensive and widely accepted, before being allowed to practice their craft.

Hans\textsuperscript{28} said optimal health could be significantly influenced by parameters such as physical activity and a healthy lifestyle. The objective of this study was to determine whether a relationship exists between leisure-time physical activity, lifestyle and health status of black male midlevel managers. Two hundred and twenty one (221) participants were selected from black midlevel management in a company in the public sector of the North West Province. The type, intensity, frequency and duration of participation in leisure time physical activity were determined by the physical activity index (PAI) as suggested by Sharkey. The lifestyle habits and health status were determined by using the Belloc and Breslow index (BB) and the illness rating scale (IRS) of Wyler et al. respectively. Analyses of data indicated significant differences between physical activity and lifestyle as well as between lifestyle and health

status. No significant differences between physical activity and health status were present. A multiple regression analyses indicated a relationship between sleep patterns and health. The health status of the employees could be improved by the implementation of physical intervention programmes, which could be beneficial for the company on the long-term.