Chapter-II

REVIEW OF RELATED LITERATURE

2.1 INTRODUCTION

A literature review is a body of text that aims to review the critical points of current knowledge including substantive findings as well as theoretical and methodological contributions to a particular topic. Most often associated with academic-oriented literature, such as a thesis, a literature review usually precedes a research proposal and results section. Its ultimate goal is to bring the researcher up-to-date with current literature on a topic and forms the basis for another goal, such as future research that may be needed in the area. A well-structured literature review is characterized by a logical flow of ideas; current and relevant references with consistent, appropriate referencing style; proper use of terminology; and an unbiased and comprehensive view of the previous research on the topic.

The researcher made a systematic attempt to review the related literature by keeping the aforesaid points in mind. The researcher reviewed the some detailed in the following pages.

2.2 STUDIES RELATED TO PHYSICAL EXERCISES AND PHYSICAL ACTIVITIES WITH OTHER FACTORS.

Ten Hope (Spring 2015) examined the study of physical activity, motivation, and depression in college students. The samples of two hundred and fifty-four students completed the survey; however, three were excluded due to not meeting the age requirement, and 11 were excluded because of incomplete or irregular responses. Of the 240 remaining participants, 34.2% were men \((n=82)\) and 65.8% were women \((n=158)\). Participants’ age ranged from 18-22 years of age. The current study set out to explore how three different types of physical activity and three different motivational factors...
for physical activity were related to depression in college students. Overall physical activity was not related to depression. However, strength training predicted lower depression, while body-related motivation predicted greater depression. Strength training was a significant predictor of lower depression in men, but not women. There was also a trend towards body-related motivation as a predictor for greater depression in both men and women.

Rajesh and Chandrasekaran (Jan.-Feb., 2015) investigated a study of intrinsic and extrinsic motivational orientations: a study among the college students. The main purpose of the present research was to investigate the Motivational Orientations of college students in relation to certain background variables. The objectives of the study were, to find out whether there was any significant difference in Motivational Orientations of college students based on the background variables like gender, degree studying and stream of the study; and to find out the type of motivational orientations of male and female students. The study was a descriptive survey method. The samples consisted of 300 College students (Government; Government Aided; and Private Colleges) in Chennai city by adopting stratified random sampling method. The Work Preference Inventory developed by Amabile et al., (1994) was administered to collect the data. It was found that, there was significant difference in Motivational Orientations of college students with respect to their Gender, Degree Studying and Stream of the Study; there exists significant difference in type of Motivational Orientations between male and female students'; and the result shows that the male students had Extrinsic Motivational Orientation and the female students had Intrinsic Motivational Orientation. The result also shows significant difference in college students Motivational Orientations with respect to their Gender, Degree Studying and Stream of the Study. The result also reveals that the male students have Extrinsic Motivational Orientation and the female students had Intrinsic Motivational Orientation.
Maheswari and Julius (March, 2015) compared the study of perceived benefits and barriers to exercise between exercising and non-exercising adolescent girls. The sample comprised of 30 adolescent girls who engaged in moderate intensity exercise for most days a week and 30 adolescents in the non-exercising group (“Non-exercising” was defined as an individual not meeting the American College of Sports Medicine (ACSM) recommendation to accumulate 30 minutes of moderately vigorous exercise on most days over a week). The Exercise benefits/Barriers scale developed by Sechrist et al. (1987) was used for the current study. Descriptive statistics and “t” test was used to analyze the present study. The results revealed that irrespective of their levels of physical activity adolescents in general perceived more benefits than barriers to exercise. Independent sample “t” test revealed significant differences between exercising and non – exercising group on four dimensions of the benefits scale namely Life Enhancement, Physical Performance, Psychological Outlook and Social Interaction. The group of exercising and non-exercising adolescents differed significantly with respect to their perception of time as a barrier to exercise. Physical Performance was perceived as a biggest benefit and Physical Exertion was perceived to be the biggest barrier among the non-exercising group.

Wiggins (2014) “purposed a study of exercise and perceived quality of life during survivorship: a pilot study comparing traditional and non-traditional cancer recovery programs. To determine if cancer survivors could increase their perceived QOL using a non-traditional exercise and cancer recovery program consisting of resistance tubing, balance balls, and hand-weights. A second purpose was to compare perceived QOL ratings between survivors using a traditional versus non-traditional exercise program. Sixty cancer survivors were assigned into two weight training groups (traditional and non-traditional). Participants were given a pre and post-test assessment using the FACT-G scale, designed to measure QOL ratings in a cancer population. Participants worked out for 12 weeks, two times per week for 30 to 60 minutes using
individually prescribed exercise programs. The traditional group used various machines, while the non-traditional group used resistance tubing, stability balls, etc. Findings indicated that the survivors using the non-traditional exercise and cancer recovery program were able to significantly increase their perceived QOL from pre-test to post-test over the three month exercise program. A similar increase was observed in the traditional exercise program group from pre-test to posttest. Overall, cancer survivors under both conditions were able to significantly increase their total perceived QOL. There were no significant differences between the groups at pre-test, or post-test.

Nayak et al. (2014) conducted a study to identify the benefits, barriers, and cues to participating in a yoga program among community dwelling older adults. The objectives of the study were to identify the perceived benefits, barriers and cues to participate in a yoga intervention among community dwelling older adults. A cross sectional study using a previously validated survey developed based on the health belief model was administered to participants. Community Setting - Beneficiaries of the Bihl Haus Arts community center at two different locations. 275 older adults are attending community activity centers and both males and females ages 50 and older, willing to participate in the survey. Exclusions were made for any unwillingness to complete the survey or incomplete surveys. Results showed that the participants in the survey were age 50 and older with average of 70.7 years, 73% were females, 68% were Hispanic by ethnicity, 18.5% were white, 50% had high school or less education and the remaining had a professional degree. 90.6% identified as Christian or Catholic faith. Statistically significant associations were found between some survey items and participant’s willingness to do yoga was measured using chi-square statistics and student’s ‘t’ test. Also, associations were found between yoga willingness and three additive scales which were constructed for perceived physical, mental and social benefits.

Martínez-Lemos; Puig-Ribera and García-García (2014) studied on perceived barriers to physical activity and related factors in Spanish University
students. The objective of the study was to identify the influence of readiness of change for physical activity (PA), socio-demographic factors, lifestyle and physical activity status (PAS) on perceived barriers among Spanish university students. A sample included seven hundred and seventy two, men and women ages 17-39 at a north-west regional university in Spain participated in the study. The International Physical Activity Questionnaire, the States of Change for Physical Activity Behaviour Questionnaire and the Self-perceived Barriers for Physical Activity Questionnaire were used. Description, correlation and multiple regression analysis were completed. The result shows that, participants self-perceived low average-score barriers. The 3-higher scores barriers corresponded to “too much work”; “lack of time for exercise” and “laziness”. Gender, PAS and self-perceived health were shown to be associated with perceived barriers.

Krajanowski (2014) assessed a study of college influences on selected health behaviors. The objectives of the study were to determine if there was an association between having a meal plan and selected dietary behaviors; and whether the likelihood of using the campus shuttle and taking the stairs was associated with physical activity. Students enrolled in an introductory anatomy class completed a voluntary online survey that assessed PA, F&V intake, likelihood of taking the campus shuttle and of using the elevator, frequency of breakfast and dessert consumption, and demographic characteristics. Students were classified by PA level (high, not high) and whether they meet the recommendation for F&V intake (yes, no). Analyses examined the association between having a meal plan and F&V intake, breakfast, and dessert consumption. Additional analyses determined the association between the likelihood of taking the elevator and campus shuttle and PA. Barriers to PA and healthful eating were also assessed. The sample (n=87) was primarily female (n=60, 69.8%) and 74.7% (n=65) of participants reported a high level of PA. The majority of students did not consume the recommended servings of F&V/day (69.0%, n=60). There was no support of a
relationship between having a meal plan and F&V intake, frequency of consuming breakfast, or desserts. In addition, analyses determined that there was no association between likelihood of shuttle or elevator use and PA. Lack of time was the identified as the most significant barrier to both PA and healthful eating.

**Khan et al (2014)** examined the study on elaborative view about the physical, social and cultural barriers faced by the females in sports. Many efforts were made to encourage physical education, coupled with the benefits of physical activity and the risks of physical inactivity, but a substantial portion of young adults were not physically active and remain sedentary. This situation raises several questions; Why this trend? What are the factors that prevent people to engage in physical activity? Is it possible to change the attitude of inactive individuals toward physical activity, and if so, how? To examine whether there was any differences in perceived barriers to physical activity among male and female students. The current study also investigate the relationship between perceived barriers, self-efficacy and physical activity. To see the mediation effect of self-efficacy in the relationship between perceived barriers and participation in physical activity. The study attempts to examine the barriers to perform physical activity among the female students.

**Kalac; Gontarev and Velickovska (2014)** tried to study the perceived barriers to physical activity among Macedonian adolescents. The research was realized on a sample of 847 (407 male respondents (students) and 440 female respondents (students)) adolescents of Macedonian nationality. The age of the sample was defined as chronological age from 15 to 18 years. Current exercise habits and perceived barriers to physical activity were assessed in the sample. Using a Likert Type scale, participants responded an instrument with 18 items representing barriers to physical activity. Adolescents who perceive fewer barriers have higher levels of physical activity. The most often reasons for their physical inactivity according to the respondents were: too many responsibilities at school, lack of time, too busy, parents who believe that
learning was more important than exercising, lack of motivation and interest. The results should be taken into consideration when making strategies and educational programs to promote physical activity among young people.

Juarbe; Turok and Perez-Stable (2014) influenced a study on perceived benefits and barriers to physical activity among older Latina women. The investigator used a qualitative design to describe the social and culture-specific perceived benefits and barriers to physical activity among 143 Latina women, ages 40 to 79. Content analysis of these women’s responses revealed that perceived benefits (health promotion, physical fitness, and improved roles) and barriers (time constraints of women’s roles, personal health, internal and external factors) function as competing elements that may explain physical inactivity. Health care providers should emphasize overcoming barriers and promote perceived benefits as clinical interventions that may pose the greatest potential to increase physical activity among aging Latina women. This emphasis holds promise as a feasible and effective primary care intervention for achieving increased physical-activity-related health benefits.

Francis (2014) aimed at study the physical activities in elderly: benefits and barriers. The study was a Literature review with deductive content analysis method used for analyzing research. The search engines used was EBSCO, SAGE and Google Scholar. The results were grouped in categories and sub categories and the main themes were: Benefits of Physical activities and Barriers to engage in physical activities. The theoretical framework used was Health Locus of Control and refers to a perceived control over one’s health (Internal); and sense of how much control one person had in relation to their external environment (external). Results revealed that, physical frailty had a result of physical inactivity in many elderly. It was noted that individuals with an internal Locus of Control were significantly more active than those with an external Locus of Control. All individuals, regardless of age can benefit from regular physical activity, vigorous or moderate. Mobility and functioning in older adults, including the
frail, can be improved through physical activity and regular physical activity reduces morbidity and mortality from chronic diseases.

**Esmaeili (2014)** conducted a study of the strategic plan for the development of physical education and sport: a case of Iran’s ministry of education. The aim of the present research was to study the strategic plan for physical education and sport development in Iran’s Ministry of Education from the viewpoint of sport managers and professionals. A questionnaire was developed by the research with 40 questions (39 multiple-choice questions and 1 open question) and a reliability coefficient of 0.96. This instrument measured the importance of the components of this plan, the extent to which development plans were implemented by the Ministry of Education, and possible reasons for the failure of the plan. The questionnaire was distributed among 80 managers and professionals from the Physical Education Organization, National Olympics Committee, and university professors. Data were analyzed using descriptive statistics (measures of central tendency and dispersion) and inferential statistics (one-sample z-test, t-test for independent samples, and Mann-Whitney U test). The results showed that there was no significant different between the views of the developers and administrators of the plan about the importance human resources, facilities and infrastructure, management and planning, science and research, standard and evaluation, culture and sport, information technology, and the extent of implementing PE development plans. Both groups believed that these factors were in a relatively poor condition. By prioritizing the views of the participants, the possible reasons for such a condition and failure of the comprehensive development plan were identified: frequent structural changes in the PE department of the Ministry of Education, merging PE with the cultural department, disparity between financial and human resources and the plan’s missions, lack of necessary infrastructure for implementing the plan, and lack of ongoing interaction between the Physical Education Organization and the Ministry of Education.
Dashti et al. (2014) determined a study on perceived barriers to physical activity among Iranian women. The aim of this study was to determine the barriers and status of PA among Iranian women in Mashhad, Iran. Samples included 408 volunteer women aged 18 to 59 years. Demographic and anthropometric data (height, weight, BMI, waist and hip circumference and waist hip ratio) were obtained. A 24-item questionnaire on barriers to PA and the short form IPAQ were filled. 33.3% of subjects were overweight or obese and 13.48% had central obesity. Preferring being with family to doing PA, lack of company and time were chosen as the most important barriers. PA level was related only to physical environmental barriers. Marital status was related to most barriers. Physical environmental barriers were mostly related to PA performance in Iranian women.

Youssef et al. (2013) surveyed a study of physical activity and perceived barriers among high-school students in Muscat, Oman. A cross-sectional survey was conducted in March 2011 to study the patterns and determinants of physical activity among 439 secondary-school students in Muscat governorate based on a self-administered questionnaire. Half of the students (52.9%) were enrolled in physical education classes and 95.9% reported after-school physical activities. The recommended level of physical activity was met by 23.9% of students, being significantly lower among girls (9.8%) than boys (38.8%). More girls were in the stages of pre-contemplation (5.8%) and contemplation (26.7%) of adopting exercise while more boys were in the action (15.4%) and maintenance stages (36.0%). Girls reported significantly more barriers to exercise, related to lack of energy, interest in other activities, lack of encouragement, worries about looks, and time constraints from academic responsibilities and family obligations. The full model logistic regression revealed that boys, 11th-grade students and attempts to regulate weight significantly predicted physical activity meeting the recommended levels.
Tyagi and Kumar (2013) investigated the differences in attitude towards physical activity of college students in relation to their gender and caste group. The sample consisted of 400 students for this study were 200 boys and 200 girls selected from 8 different colleges of Moradabad region. 100 boys and 100 girls were taken each from the Non-Scheduled Caste category and the Scheduled Caste category. These colleges from the M.J.P. Rohilkhand University were selected through lottery system. Stratified Random sampling was used for the study. The Physical Activity Attitude Scale (PAAS) constructed by J. Bhullar (1976) was utilized to collect the data from the sample. The mean scores and ‘t’ test were used for statistical treatment of the data. The mean score disclosed the differential attitude on both parameter-gender and caste. While the mean score for boys was higher than that of girls. The same figure for non-scheduled caste students was 273.60 in comparison with the scheduled caste students with mean score of 268.63. The t-ratio between boys and girls was quite significant. The result for non-scheduled caste and Scheduled caste students was insignificant.

Sharifi; Mahdavi and Ebrahimi-Mameghani (2013) examined the study of perceived barriers to weight loss programs for overweight or obese women. In this descriptive-analytical study, 204 overweight or obese women aged 31.97± 10.62 yr, were selected randomly from the nutritional counseling centers in 2008 in Tabriz, Iran. The mean BMI was 33.83 ±5.75 kg/ m². A structured questionnaire including questions on barriers to weight-loss diet and physical activity was filled out for each participant by face-to-face interview. Height and weight measured objectively and demographic details were obtained. Data analysis carried out using multiple regression and factor analysis. The results of the study shows that, the most important perceived barriers to weight-loss diets were ‘situational barriers’, stress, depression, and food craving. High educational level was independent determinant of situational barriers (β=0.329, P=0.048). Employee women had a higher mean score on stress and depression than students and housewives. Lack of time and exercising lonely were the most important
items of "External barriers" and Lack of motivation was the most important item of "internal barriers" to physical activity. Employment and being student were highly associated with external barriers ($\beta=1.018$, $P<0.001$ and $\beta=0.541$, $P=0.002$). Moreover, older women who had low educational level, perceived more internal barriers.

**Pippin (2013)** studied on perceived benefits and barriers of exercise in college age students before and after participating in regular exercise compared to a cohort group. A quasi-experimental design was used. The sample size for this study was determined by conducting a power analyses. Using an effect size of 0.97 (Kennedy et al., 1998), an alpha of .05, and beta of 0.80, the calculated sample size is 15 per group. There were 33 participants that took the pre-test survey; 13 were in the intervention group and 20 were in the control group. 27 of the 33 took the post-test survey after taking part of an exercise regimen. Of those 27, 11 were in the intervention group and 16 were in the control group. The Exercise Benefits/Barriers Scale (EBBS) is a reliable and valid instrument, and was given to participants prior to and after completing the Physical Activity and Christian Living (PACL) class at Cedarville University. In order to increase physical exercise in young adults, it was important to understand what can affect perceived benefits and barriers of exercise in adolescents. Within this context, the perceived benefits and barriers to exercise are important mediators of exercise behavior change (Lovell, Ansari, & Parker, 2010).

**Pekmezi et al. (2013)** developed an intervention to address physical activity barriers for African–American women in the Deep South (USA). The study aimed to address high rates of inactivity and related chronic diseases among African–American women. Eleven focus groups on physical activity barriers for African–American women in the Deep South (USA) were conducted (N=56). Feedback guided an intervention development process. The resulting Home-Based Individually Tailored Physical Activity Print intervention was vetted with the target population in a 1-month, single arm, pre–post test demonstration trial (N=10). The results of the study indicate
that, Retention was high (90%). Intent-to-treat analyses indicated increases in motivational readiness for physical activity (70% of sample) and physical activity (7-day Physical Activity Recall) from baseline (mean: 89.5 min/week, standard deviation: 61.17) to 1 month (mean: 155 min/week, standard deviation: 100.86). Small improvements in fitness (6-Min Walk Test), weight and psychosocial process measures were also found.

Omolayo; Olawa and Omole (2013) evaluated the study on attitude of university undergraduate students towards physical activity and fitness exercise in Ekiti State, Nigeria. 180 students comprising of 98 male and 82 female participated in the study. Two research instruments were used to collect data from the participants namely Attitude towards Physical Activity (ATPA) and Exercise Benefit-Barrier Scale (EBBS). Data were analyzed using independent t-test and one-way Analysis of Variance (ANOVA). The results showed that undergraduates who benefited from fitness exercises had positive attitude towards physical activity than those who do not benefit from it. It was found that adolescent-aged students demonstrate favourable attitude towards physical activity like that of adult-aged students. It was concluded that there was no significant interaction effect of age and gender on physical activity.

Ledford (2013) compared the study of motivations and barriers to physical exercise among African-American female college students. This study examined differences between groups of exercising and non-exercising African American female college students. Groups were compared on a variety of psychosocial variables including perceived motivations, universal barriers, African American cultural barriers, and rejection sensitivity to race. The current study utilized a quasi–experimental design in this study. A convenience sample of 59 volunteer African American female students from Texas State University was recruited for this investigation. The utility of self-efficacy as a moderator of perceived barriers was also explored. Lastly, the moderating role of ethnic identity on the perception of African American cultural barriers was
examined. The results of this study supported the predicted relationship of physical
exercise status with perceived positive motives/benefits and perceived universal
barriers of exercise. However, the results revealed no significant relationships of
exercise status and the African-American cultural barriers or rejection-sensitivity to
race.

Justine et al. (2013) focused a study of barriers to participation in physical
activity and exercise among middle-aged and elderly individuals. Recruited individuals
were categorized into either the middle-aged or elderly group. Data on demographics,
anthropometry, as well as external and internal barriers to participation in physical
activity and exercise were collected. Results showed no significant differences in the
total scores of all internal barriers between the two groups. The total scores for most
external barriers between the two groups also showed no significant differences; only
‘cost’ and ‘exercise interferes with social/family activities’ showed significant
differences. The most common external barriers among the middle-aged and elderly
respondents were ‘not enough time’ (46.7% vs. 48.4%), ‘no one to exercise with’
(40.0% vs. 28.3%) and ‘lack of facilities’ (33.4% vs. 35.0%). The most common
internal barriers for middle-aged respondents were ‘too tired’ (48.3%), ‘already active
enough’ (38.3%), ‘do not know how to do it’ (36.7%) and ‘too lazy’ (36.7%), while
those for elderly respondents were ‘too tired’ (51.7%), ‘lack of motivation’ (38.4%)
and ‘already active enough’ (38.4%).

Hemmatinezhad et al. (2013) surveyed the relationship between parent’s
attitude and children’s attitude toward Physical Activity. The target population
consisted entirely of female and male students among high schools in city of Shiraz in
Iran (N=38000). Among them, 178 male and 222 female were selected randomly and
the same number of samples were considered for their parents. Data were collected by
Parental Questionnaire and Children’s Attitude toward Physical Activity Questionnaire
(CATPA). 13 teachers of Physical Education and Sport Sciences verified the
questionnaires’ validity. Reliability was measured by Cronbach Alpha ($\alpha=0.73$, $\alpha=0.76$ respectively for parental and children’s questionnaires). The data were analyzed through some statistics techniques such as Kolmogorov-Smirnov Test, Spearman’s correlation coefficients and U-Man Witney Were used. It was found that there was no significant correlation between parent’s attitude and children’s attitude. There was a significant difference between attitude toward physical activity among mother and father parents. There was significant difference between attitude toward physical activity levels among male and female students.

Erika; Nicolás and Laura (2013) purposed a study of perceived barriers and physical activity level in older adults from Aguascalientes, Ags: un studio transversal. The present study was cross-sectional, analytic, and observational. 150 older adults registered in the Family Integral Development System from Aguascalientes State were included at random, who accepted to participate by signing a consent form. A questionnaire to detect perceived barriers as well as an international physical activity questionnaire was applied. Z test for two proportions, p-value and odds ratio, 95% confidence interval were calculated, between external and internal perceived barriers and low physical activity level in older adults from the sample. Results of the study revealed that, in reference to the sample, 71.3% were between 60 and 70 years old; 72% were female, 78% had low physical activity level. The lack of information about physical activity benefits is a barrier in relation to low physical activity, the lack of support from their family was another barrier in relation to their low physical activity; another barrier was the lack of places (such as health centers and gyms for older adults) to perform physical activity.

Daskapan and Atalay (2013) determined a study of perceived exercise benefits and barriers among Turkish women: a pilot study. Two hundred and eighty women volunteers aged between 24-63 years participated in the study. Women answered questions related to physical activity and they rated statements related to the benefits
and barriers to exercise. Results indicated that, 69.7% of study participants did not do any exercise. When ranked from highest to lowest; perceived benefits and barriers of exercise were physical, psychological and social health benefits, environmental and personal barriers and timelessness.

Ar-youtuat et al. (2013) determined the physical activity in primary school students using the health belief model. The purpose of this study was to investigate the impact of cues, perceived benefits, and perceived barriers on the level of physical activity among primary school students. A cross-sectional study was conducted in Phitsanulok Province, Thailand, in 2011. Multistage sampling selected a total of 123 primary school students. The Physical Activity Questionnaire for Older Children and the Cues, Perceived Benefits, and Barriers to Physical Activity Questionnaire were used to assess the student levels of physical activity, as well as the perceived benefits, barriers, and cues to action. The association between these factors and the level of physical activity was determined by correlation statistics and confirmed by robust regression. Multivariate analysis of variance compared health belief model determinants: perceived benefits, perceived barriers, and cues to action on physical activity between male and female students. Self-administered questionnaires were validated and tested in a pilot study. The results of the study shows that the level of activity among primary school children was significantly influenced by perceived barriers, such as fear of strangers when playing outdoors, bad weather, and too much homework. However, activity was not influenced by cues to action or perceived benefits. Perceived benefits, barriers, and cues to physical activity did not differ by gender.

Al-Rawahi and Al-Yarabi (2013) investigated on to find out relationship between attitudes toward participation in physical activities and motives for choosing teaching physical education as a career. This study aims at investigating the relationship between physical education teachers’ attitudes toward participation in
physical activity and their motives toward choosing physical education as a teaching profession. A total of 98 prospective physical education teachers enrolled in the physical education department at Sultan Qaboos University completed the two instruments adopted for the purposes of this study, which was a response rate of 77%, 57 male and 41 female. The results showed that participants in this study had strong attitudes toward physical activities. Furthermore, participants expressed a mixture of intrinsic and extrinsic reasons as to why they opted for physical education as a teaching profession. Moreover, the findings revealed a significant relationship between participants' attitudes toward participation in physical activity and their motives toward choosing physical education as a teaching profession.

Al-Otaibi (2013) examined the study of measuring stages of change, perceived barriers and self efficacy for physical activity in Saudi Arabia. The objectives of the study was conducted to investigate the present status of physical activity among Saudi adults in Al-Ahsa, and to examine the association between the stages of change for physical activity and perceived barriers, and self efficacy. A cross-sectional study of 242 subjects (118 males and 124 females) attending health centers aged between 20-56 years, were personally interviewed for demographic data, anthropometric measurement, physical activity level, stages of change for physical activity, self efficacy and perceived barriers. Results of the study revealed that, Forty eight percent of the females were overweight and 16.9% of the males were obese with no significant difference between the genders for BMI categories. More than half of the females were inactive and 39% of the males were physically active with a significant difference (P=0.007). Twenty percent of the males were in maintenance stage, while similar percentages of the females were in contemplation stage. However the majority of the subjects were in pre-contemplation stage with a significant difference across the stages. Males had a higher mean score of self efficacy and less external barriers of physical activity. The major barrier among the females was lack of time (7.2±1.4) and in the males, lack of
motivation (7.7±1.4). The females had less internal (21.2±3.8) barriers comparable to the males (23.08±4.7). Both genders had a significant relationship between stages of changes of physical activity and perceived barriers (internal and external), but in the females no significant difference across the stages was observed for self efficacy unlike the males who had a significant difference for self efficacy and self efficacy categories.

**Al-Naggar and Osman (2013)** explored the study of perception towards physical exercise among university students in Malaysia: a medico-social problem. The objective of this study was to the practice and barriers toward physical activities among university students in Malaysia. The study was conducted among fifty students from the Management and Science University Malaysia. In-depth interviews were conducted among the participants. Simple random sampling was conducted among university students from different faculties. The study had revealed that the majority of the respondents exercise regularly. Despite that the majority of the participants had mentioned that they do exercise regularly, ‘no time to do exercise’, ‘busy’ and tight study schedule represented the main barriers towards physical activity. The data obtained in this study may be used in order to identify specific activities and programs that would promote physical activities in universities. There was also urgent need to further educate students about the benefits of physical exercises.

**Yungblut; Schinke and McGannon (2012)** studied the views of adolescent female youth on physical activity during early adolescence. Two cohorts of participants were included to glean the unique perspectives of female youth. The early adolescent cohort was comprised of 15 participants and the mid-to-late adolescent retrospective cohort was comprised of 20 participants with active and non-active females being equally represented within the cohorts. Participants in the early adolescent cohort ranged in age from 12 to 14 with a mean age of 13 and participants in the mid-to-late cohort ranged in age from 15 to 18 with a mean age of 16. The present research aimed to gain further insight into the foregoing using tenets of Interpretive Phenomenology to
further understand the lived physical activity experiences of females during early adolescence, delineating their barriers to participation and the factors enabling participation. Five themes were identified and made into vignettes to facilitate understanding from adolescent females’ perspectives: friends or don’t know anyone, good or not good enough, fun or not fun; good feeling or gross; and peer support or peer pressure.

Patel et al. (2012) conducted the study of correlation between exercise, body mass index and heart rate. The objective of the study was, to study correlation between exercise, body mass index (BMI) and heart rate. A total of 57 individuals of age group 19 to 39 were selected for the study. Out of these, 45 individuals went to gymnasium for exercise, while the other 12 did not go to gymnasium. An informed consent was taken, a questionnaire was administered to the participants and required measurements were made. Results indicated that, there was a significant effect of exercise on BMI and weight (p value was significant by paired ‘t’ test for both weight and BMI before and after exercise). There was statistically significant reduction in BMI of females as compared to males. Correlation between reduction in BMI and exercise duration of 45 to 60 minutes per day was significant. There was no correlation found between exercise done for more than 60 minutes and BMI reduction. No significant correlation was found between duration (months and years) and how many days a week exercise done with BMI. Statistically significant correlation was also noted between total duration of exercise (number of months) and heart rate.

Mahta et al. (2012) evaluated a study of barriers toward physical activity in university students in Tehran City of Iran. This study tries to rectify this with a study of Tehran university students. Undergraduate university students (n = 303) were recruited to the study. Current exercise habits and perceived barriers to physical activity were assessed in the sample. Using a Likert type scale, participants responded an instrument with 12 items representing barriers to physical activity. Mean scores were computed.
External barriers were more important than internal barriers. “Lack of time due to busy lesson schedule”, “My parents give Academic success priority over exercise.” and “lack of time due to responsibilities related to the family and social environment” were most cited items for physical activity barriers.

**Khera and Sharma (2012)** evaluated a study on physical inactivity among college students is associated with living in hostels. A standardized questionnaire was used to assess physical activity among college students in East Delhi region of Delhi, India. Of a total 297 students, 58.2% had high physical activity, 27.9% had moderate while 13.8% had low activity level. Low physical activity was significantly more among the students aged <20 years and among those residing in hostel. There was no significant difference by gender. Residing in hostel emerged as significant factor in multivariate analysis. Hostellers had significantly lesser physical activity compared to the day scholars in the transport domain and recreational domain. Hostel residents emerged as a specific at risk group for physical inactivity.

**Herrmann (2012)** conducted a study on fitness and fitting in: an exploratory study of gender and exercise. The purpose of the present study was to explore how gender and exercise related to each other using the Theory of Planned Behavior (TPB) as a framework. Using a multi-method design, female ($N = 308$) and male ($N = 131$) undergraduate and graduate students at a large Midwestern university completed a validated TPB and exercise survey. Interested undergraduate and graduate students then participated in focus groups with questions relating to the TPB constructs (i.e., attitude, subjective norms, and perceived control). Focus group participants were divided into four categories: females who participated in group exercise, females who did not participate in group exercise, males who participated in group exercise, and males who did not participate in group exercise. Descriptive statistics, t-tests, and ANOVA tests were utilized for the quantitative analysis. Results indicated that the TPB constructs of subjective norms and perceived control were significantly different within females and
within males for exercise and group exercise as well as between females and males for exercise and group exercise. The construct of attitude was not significantly different for females or males. With these quantitative results in mind, deductive content analysis was completed on focus group transcript data. Aside from the construct of attitude, qualitative results were comparable to the quantitative results. Qualitative results also provided a richer understanding of the quantitative findings.

**Fisken et al. (2012)** examined the study of perceived benefits, motives, and barriers to aqua-based exercise among older adults with and without osteoarthritis. This study aimed to identify factors that motivate older adults to participate in aqua-based exercise; identify potential barriers and compare perceptions between older adults with and without osteoarthritis (OA). Fifteen adults over 60 years of age participated in one of three focus groups during which they discussed perceived benefits, motives and barriers to aqua exercise. Pain reduction was considered a major benefit amongst those with OA, improved health and fitness was a principal benefit for those without OA. All participants felt that the instructor could act as both a motivator and barrier; the most significant barrier was cold changing facilities in winter. With the exception of pain reduction, perceived benefits, motivators and barriers to aqua-based exercise are similar among older adults with and without OA. A greater understanding of these factors may help us to facilitate older adults with OA to initiate and adhere to aqua-based exercise.

**Bai (2012)** measured a study of general activity levels in children and adolescents using self-report: youth activity profile. The primary purpose of this study was to evaluate grade and gender-related patterns of YAP scores in a large sample of 5th to 8th grade school children. A secondary goal was to examine relationships between PA levels and sedentary behavior and field measures of physical fitness (PF). Data were collected through a participatory network of schools that receive training and support through the FITNESSGRAM program. A total of 3165 youth from 31 elementary and middle schools completed the YAP and a total of 5339 youth from the
same schools completed the FITNESSGRAM test. Age and gender differences in YAP scores were tested by a two way (grade x gender) mixed model analyses of variance. Data from the YAP and FITNESSGRAM were also aggregated by grade level and combined to examine associations between PA and PF. Partial correlations (Pearson) were used to control for school level clustering. Results revealed that, significant main effects were found for gender and grade for PAS. Similar main effects were observed for PAH but the interaction term was also statistically significant. Boys were found to be more active than girls and activity was higher among younger than older children. A significant main effect for grade was found for SED but non-significant effects were found for gender and the interaction. The PAS indicator had a significant positive correlation with aerobic capacity and a significant negative correlation with BMI. The SED indicator had a significant negative correlation with aerobic capacity and a significant positive correlation with BMI.

Abedalhafiz; Altahyneh and Al-Haliq (2012) compared the study of relationship between physical activity and self-esteem among students of Zarqa education directorate. The purpose of this study was to examine the levels of physical activity and global self-esteem, and the relationships between them, for male and female students of Zarqa education directorate in 7th, 8th and 9th grades. Six hundreds eighty seven students completed the Rosenberg self-esteem scale and Leisure time physical activity questionnaire. Descriptive statistical techniques, Pearson correlation coefficient, and Analysis of Variance (ANOVA) were used to analyze the data of the study. Results showed significant differences between boys and girls on level of energy expenditure and intensity. The level of physical activity was significantly more strenuous for 7th and 8th graders than for 9th graders for both genders. Significant differences were found for the global self-esteem due to gender, but not for grade. Moreover, results indicated no significant relationship between physical activity and global self-esteem for both males and females.
Roberton et al. (2011) purposed a study of barriers to physical activity in individuals with spinal cord injury: a western Australian study. This study examined barriers to physical activity reported individuals with spinal cord injury (SCI) and the degree to which these barriers differed across varying degrees of independence. Participants were 65 individuals recruited from the Western Australian Spinal Cord Injury database. Data on physical activity participation and perceived barriers to physical activity participation were collected using a cross-sectional survey and analysed using independent samples t-tests. It was found that, regardless of level of ambulation or ability to transfer, few participants reported being physically active. While there were no significant differences in the amount of barriers reported by individuals with different levels of independence, the type of barriers reported varied across groups.

Pantelic et al. (2011) investigated a study on physical activities of the elderly population of southeast Serbia: a pilot study. This study had as its aim to investigate the participation in physical activities of the elderly in Southeast Serbia. The sample of participants includes 364 of whom were men, and 266 of whom were women over the age of 60 (average age 68.3±5.7). In order to calculate the statistical significance of the differences of the deviations from the hypothetical values, the Chi-square test ($\chi^2$) for the evaluation the quality of the match was used, and in order to determine the differences between the groups of men and women, the Chi-square test ($\chi^2$) of independence was used (conclusions were drawn at the level of 0.05). On the basis of the results, it was found that no statistically significant difference was found at the levels of physical activity between men and women, that generally both men and women are not very physically active and that there are barriers which were the same for both men and women, and which prevent them from taking part in physical activities.
Chaubal (2011) studied the effect of knowledge of exercise benefits on attitude, motivation, and exercise participation. The purpose of this study was to analyze the effect of knowledge of exercise benefits had on attitude, motivation and exercise participation in individuals within the age group of 18-50 years. University students, on-campus staff, and community members participated in this study. One hundred participants responded to four questionnaires, the Exercise Motivation Inventory (EMI-2), the International Physical Activity Questionnaire (IPAQ), the Locus of Causality for Exercise Scale (LCE), and a self-made Knowledge Questionnaire. The results of this study showed that knowledge of exercise benefits did not affect physical activity participation and attitude towards exercise but significantly affected motivation to exercise.

Butt et al. (2011) studied on adolescent physical activity participation and motivational determinants across gender, age, and race. The purposes of this study were to investigate the amount of physical and sedentary activity that adolescents participated in across age, gender, and race, and to investigate adolescents’ attraction to PA and their perceived barriers and benefits across age, gender, and race. A sample consists of high school students (N=1163) aged between 13 and 16 years completed questionnaires on minutes and intensity of physical and sedentary activity, interests in physical activity, and perceived benefits and barriers to participating in PA. The results revealed that a series of multivariate analyses of variance were conducted and followed up with discriminant function analysis. PA participation decreased in older females. In addition, fun of physical exertion was a primary attraction to PA for males more than females. Body image as an expected outcome of participating in PA contributed most to gender differences. It was concluded that there is a need to determine why PA drops-off as females get older. Findings underscore the importance of structuring activities differently to sustain interest in male and female adolescents, and highlights motives of having a healthy body image, and making PA fun to enhance participation.
Minkel (2010) presented a study of the physical activity patterns and constraints of diverse female college students. Diverse college aged females from a public university in the southwest were asked to participate in an online survey to determine their constraints to physical activity, as well as their current activity level. At the time of the survey they housed 1194 students with slightly over 50% female. The goal for participation was to obtain a minimum of 30 participants in each racial/ethnic group; including Asian or Pacific Islander, Black or African American, Hispanic or Latino, American Indian or Alaskan Native, White and non-Hispanic, and Multiracial totaling a minimum of 180 participants. Data analysis showed only one significant difference among the racial/ethnic groups, when looking specifically at the intrapersonal, interpersonal, and structural constraints categories. Hispanic women differed significantly from Caucasian women in their perception of interpersonal constraints on their physical activity. This finding should be further investigated to completely understand the cultural aspects that may lead to interpersonal constraints. No other significant differences among the racial/ethnic groups and their perceptions of physical activity constraints were found. No differences were found among the racial/ethnic groups and their physical activity level.

Lovell; Ansari and Parker (2010) explored the study of perceived exercise benefits and barriers of non-exercising female university students in the United Kingdom. Researcher used the Exercise Benefits/Barriers Scale to assess perceived benefit and barrier intensities to exercise in 200 non-exercising female university students in the UK. Although our participants were selected because they self reported themselves to be non-exercising, however they reported significantly higher perceived benefits from exercise than perceived barriers to exercise, and their perceived benefit/barrier ratio was 1.33. The greatest perceived benefit from exercise was physical performance followed by the benefits of psychological outlook, preventive health, life enhancement, and then social interaction. Physical performance was rated
significantly higher than all other benefits. Psychological outlook and preventive health were not rated significantly different, although both were significantly higher than life enhancement and social interaction. Life enhancement was also rated significantly higher than social interaction. The greatest perceived barrier to exercise was physical exertion, which was rated significantly higher than time expenditure, exercise milieu, and family discouragement barriers.

Gomez-Lopez; Gallegos and Extremera (2010) studied perceived barriers of university students in the practice of physical activities. The main goal of this research was to study in detail the main characteristics of university students in order to find out the reasons why they had adopted an inactive lifestyle. In order to do so, a questionnaire on the analysis of sports habits and lifestyle was given to 323 students. They were taken from a representative sample of 1834 students (991 were male and 843 female). These 323 students had pointed out at the moment of the fieldwork, not having practiced any sport in their spare time. It was found that there were diverse reasons for this. On one hand, reasons referred to as external barriers such as lack of time, on the other hand, internal barriers such as not liking the physical activity, not seeing its practicality or usefulness, feeling lazy or with apathy, or thinking that they are not competent in this type of activities. Other reasons such as the lack of social support are grouped within the external barriers. Finally, it was important to stress that there was also differences based on gender with respect to motivation.

Tatar (2009) studied the perceived barriers to physical activity among IIUM students: self-efficacy as mediator. The present study was conducted to explore the perceived barriers to physical activity among students at International Islamic University Malaysia (IIUM) and it looks at the mediation effects of self-efficacy in the relation between perceived barriers and physical activity. 150 IIUM students both males and females were through data screening for the criteria “inactive” students and yielded 89 students involved in this study. Descriptive statistics revealed external
barriers perceived more by IIUM students’ population than internal barriers and female students in general perceived more barriers to physical activity than male students. Correlation analysis revealed perceived barriers and self-efficacy did not correlate significantly with physical activity. Hence, mediation effect of self-efficacy could not be determined.

Shirinde (2009) compared the relationships between perceived benefits, barriers of participating in physical activity and physical activity levels of farm school children. A total of 344 children (185 boys and 159 girls) aged 15 to 16 years completed a questionnaire on perceptions of barriers and benefits of participation in physical activity, and a Previous Day Physical Activity Recall (PDPAR) questionnaire on the levels of physical activity. The data was analysed using descriptive statistics, independent t-testing and correlations by means of SPSS (Version 15.0). The results show that barriers (with high mean values) experienced by boys to be physically active included lack of time, to do work/school work, and physical activity makes one sweat. In girls barriers experienced to be physically active included lack of time, to do work/school work and lack of equipments. With regard to the perceived benefits of participating in physical activity both boys and girls showed high mean values in to stay in good health, to feel well and to have energy. The results further showed that lack of equipments was negatively associated with participation in physical activity in boys and girls during the week and weekend days respectively. In addition girls showed a significant relationship between to relieve stress and physical activity. Significant gender differences regarding the levels of physical activity with girls participating more in light physical activity than boys were found.

Ansari and Lovell (2009) examined a study of barriers to exercise in younger and older non-exercising adult women: a cross sectional study in London, United Kingdom. A survey of 100 women in the south of London, United Kingdom (UK) compared exercise barrier intensities between non-exercising younger (20-27 years)
and older (28-35 years) adult women; and examined childcare duties as perceived barriers to exercise. Perceived barriers to exercise were examined using an Exercise Benefits/Barriers Scale (EBBS) comprising four subscales (exercise milieu; time expenditure; physical exertion; family discouragement). Participants’ number of children was also noted. Non-exercising older women reported significantly higher total exercise barriers, as well as across three barrier subscales: exercise milieu, time expenditure, and family discouragement. For both age groups, significant correlation existed between number of children and women’s total exercise barrier scores. Number of children explained ≈25% and ≈30% of the variance of younger and older women’s total barrier scores respectively. For both women groups, the strongest correlation between exercise barrier and number of children was for the time expenditure subscale.

Broad grouping of 20-35 year old non-exercising women does not reflect a homogenous sample. Age categories employing narrower age brackets were recommended. Issues surrounding family responsibilities e.g. childcare duties were shared between these groups and require further research and policy attention.

Schwetschenau et al. (2008) presented a study of barriers to physical activity in an on-site corporate fitness center. Eighty-eight employees of a Midwestern corporation completed a survey designed to identify and evaluate the extent to which barriers influence participation in an on-site corporate fitness center. Regression analyses revealed that external environmental barriers (e.g., inadequate exercise facilities) significantly accounted for not joining the fitness center, and for decreased duration of visits to the facility among members. Internal barriers (e.g., feeling embarrassed to exercise around coworkers) significantly accounted for frequency of fitness center visits among members. This corporate specific measure may lead to more effective interventions aimed to increase use of on-site corporate fitness centers.

King; Tergerson and Wilson (2008) conducted a study on effect of social support on adolescents’ perceptions of and engagement in physical activity. A survey
was completed by adolescents (N= 535) at 2 single-sex (1 male, 1 female) high schools in Ohio. The results revealed that adolescents who received parental encouragement to exercise and who had an exercising friend engaged in significantly more days of physical activity in the past week than did their counterparts. Perceived benefits of physical activity differed significantly based on whether the respondent received parental encouragement and had a friend who exercised. Social support for physical activity significantly affected adolescents’ perceptions of and engagement in physical activity.

Henderson (2008) studied of benefits of exercise in the workplace: innovation and empowerment. There were ten participants in the RHC exercise study. At the time of the study, there were only five employees that exercised that were employed at RHC. The other five employees chosen for the study were picked randomly out of eight employees who did not participate in an exercise program. All the candidates chosen for the study were males because there were no female employees that worked in the field at the time of the study. In the descriptive analysis of the study the mean and the standard deviation were found from the production numbers. The data was then entered into the WebSTATISTICA program (StatSoft, 1992-2009) provided by the university to calculate the results. There were ten participant cases in the project. In each case all the participants were timed doing the same amount of work. Of the ten participants, five participants exercised regularly and five participants did not exercise at all. The sample size was ten. The mean total minutes of the exercise group was 416.60, and the mean total minutes of the non-exercise group was 469.80. The standard deviation of the project (s) exercise group was 27.47, and the non-exercise group was 24.75. However this study specifically shows why it was important to exercise and be healthy. In the end it was for the greater good of not only the organization or company but the employee that works for such organization.
Caro et al. (2008) presented a study of measuring the contributions of motives and perceived barriers to active aging. A sample of 192 middle-aged and older persons from eastern Massachusetts responded to a questionnaire concerned with motivation, perceived barriers, and activities. Reliable measures of both general and activity-specific motivation and perceived barriers to activity were developed. The measures were examined for construct validity purposes. This analysis demonstrates that general activity motivation and perceived barriers were helpful in understanding patterns of activity among older people.

Segar et al. (2007) conducted a study of midlife women’s physical activity goals: socio-cultural influences and effects on behavioral regulation springer science. A random sample of US working women (40–60 years) was taken, and resulted in 262 participants. Cluster analysis identified participants’ most important physical activity goal. A five goal cluster solution was identified: (1) sense of well-being; (2) weight loss; (3) health benefits; (4) stress reduction; and (5) weight maintenance/toning. The goal cluster solution was validated and suggested relevant socio-cultural influences and potential effects on behavioral regulation (p<.05). Data showed that weight and health-related goals have socio-cultural influences and were associated with more extrinsic and less intrinsic behavioral regulation compared to stress reduction and sense of well-being goals.

Daskapan; Tuzun and Eker (2006) purposed a study of perceived barriers to physical activity in university students. This study tries to rectify this with a study of Turkish university students. A sample included 303 of 352 students attending the undergraduate program of the faculty agreed to participate in this study. All of them were Caucasian. There were 222 females (73.3%) and 81 males (26.7%) (n = 303) were recruited to the study. Current exercise habits and perceived barriers to physical activity were assessed in the sample. Using a Likert Type scale, participants responded an instrument with 12 items representing barriers to physical activity. Mean scores were
computed. External barriers were more important than internal barriers. ‘Lack of time due to busy lesson schedule’, ‘My parents give academic success priority over exercise.’ and ‘lack of time due to responsibilities related to the family and social environment’ were most cited items for physical activity barriers.

**Chih Yu (2006)** explored the study of motivation for leisure-based physical activity: a case study of college students. This exploratory study attempted to identify college students’ motivations for leisure-based physical activity. To gain this information, interviews were utilized to learn more about the motivations for physical activity. Fifteen students finished the interviews in this study and results revealed five main motivations after open coding procedures: body image, self-efficacy, social needs, enjoyment, and health. These findings responded to self-efficacy theory and value-expectancy theory, where students were motivated for physical activities by their belief in their own ability and in positive outcomes. This study may be the first step in future motivation studies in leisure-based physical activity.

**Mirzaiinajmabadi (2005)** examined a study of physical activity and health promotion in midlife women. The objectives of the study were to identify the relationship between physical activity, menopausal symptoms and health status in midlife women; and to determine the effect of a multi-modal intervention in increasing levels of exercise in midlife women. The study was conducted in two phases. The first phase included a secondary data analysis of 886 women who took part in the Queensland Midlife Women health Survey (QMWHS) aged 45-60 years, who were randomly selected from South-East Queensland. In the second phase a randomized, controlled study was conducted on a subset of women who participated in the QMWHS. Women who were allocated to the intervention group (n=47) received an intervention, which combined a multi-modal program of physical activity with health education. Women in the control group continued their normal physical activities (n=66). Findings of this study indicated that increasing exercise was associated with
lower psychological and somatic symptoms in midlife women. The study was found that exercise was associated with decreasing menopausal symptoms. In the area of health status, significant differences were found between exercise and mental health, vitality, general health and physical function. This study also revealed that a multi-modal intervention could increase the level of activity in midlife women. There was a significant difference in monthly exercise and vigorous activity between the intervention and control groups 3 months after the intervention.

Brown (2005) measured a study of perceived benefits and perceived barriers for physical activity. The objective of the study was, to evaluate the psychometric properties and relationship to physical activity levels of the Exercise Benefits/Barriers Scale (EBBS) among college students. A total of 398 college students completed the EBBS and a measure of self-efficacy, the Physical Exercise Self-Efficacy Scale. Age of participants ranged from 18 to 35 years. In addition, a sub-sample of 275 students also completed a semi-structured interview on physical activity, the Seven-day Physical Activity Recall. The results of the study show that, psychometric properties were acceptable, but only benefits significantly accounted for variance in physical activity levels.

Tumusiime (2004) studied on perceived benefits of barriers and helpful cues to physical activity among tertiary institution students in Rwanda. The aim of the study was to ascertain perceptions of physical activity, specifically; perceived benefits of, perceived barriers and perceived helpful cues (motivational factors) to physical activity among tertiary institution students in Rwanda, and to find out whether demographic and background characteristics have an influence on these perceptions. A cross-sectional and descriptive study with quantitative design was conducted. Five hundred (500) tertiary institution students were randomly sampled from purposively selected departments and classes at each of the five government educational tertiary institutions in the country. A pre-coded self-administered questionnaire with a small number of
open-ended questions was administered to the students. A response rate of 425 (85%) was obtained. Data were analysed by descriptive and inferential statistics with SAS version 8. Frequencies and percentages for students’ demographics, mean score values with standard deviations for each perception variable were descriptively obtained. Mantel-Haenszel Chi-square (MHC) with inclusion of False Discovery Rate (FDR) at 5% for multiple test adjustment, Spearman’s correlation (r) and Kruskal Wallis H tests were used to identify the significant influence of demographic and background variables on perceptions. The average age was 26.4 years with a standard deviation (SD) of 3.8. Males constituted 63% while females were only 37% of the sample. Five categories of professional study courses were identified and many students were following arts courses. The majority of the students were motivated to participate in physical activity by their families and friends. However, more than 70% were not participating in physical activity at tertiary level. A good number of students had previously participated in physical activity in their primary school (62%) and secondary school (73%). A decline in physical activity participation was identified from primary through secondary school level but tremendously from secondary school level to tertiary level. The students felt that having a friend to participate with in physical activity was one of the most important helpful cues. Significant differences in perceptions of physical activity were observed between genders. Females perceived more barriers to physical activity compared to males. Students in education as a professional study course indicated more understanding of physical activity issues than the rest of the students. Associations were found between previous participation and the current perceptions of physical activity. Most perceived barriers were negatively associated with previous participation in physical activity while perceived benefits were positively associated with previous participation in physical activity. The findings demonstrate an influence of the demographic and physical activity background characteristics on perceptions of physical activity among the students.
Silliman; Rodas-Fortier and Neyman (2004) surveyed a study of dietary and exercise habits and perceived barriers to following a healthy lifestyle in a college population. The researcher assessed the diet and exercise habits and perceived barriers to following a healthy lifestyle of 471 college students. Sixty percent of the participants were female and 31% had BMIs > 25. Breakfast was the most commonly missed meal and 63% of students snacked one to two times per day. Fifty-eight percent of participants ate vegetables and 64% ate whole or canned fruit less than once per day. Men consumed more soda and alcohol and used higher fat dairy, ate more meat, and ate fewer vegetables and fruits than women. Over half of the subjects rated their diet as poor or fair with “lack of time” listed as the number one barrier to eating well. Men exercised more frequently and at greater intensity than women and were more confident with their body image. The most common barrier to exercise was “lack of time.” The results of this study had the design of general and specific diet and physical activity interventions among college students.

Ciccolo; Jowers and Bartholome (2004) studied the impact of benefits of exercise training for quality of life in HIV/AIDS in the post-HAART era. The use of highly active antiretroviral therapy (HAART) had served to significantly reduce the mortality of HIV-infected persons. However, this treatment was associated with a host of adverse effects: fatigue, nausea, pain, anxiety and depression. Rather than utilize traditional pharmacological treatments for these effects, many HIV/AIDS patients were utilizing adjunct therapies to maintain their quality of life while they undergo treatment. Exercise had consistently been listed as one of the most popular self-care therapies and a small number of studies were conducted to examine the impact of exercise on the most common self-reported symptoms of HIV and AIDS and the adverse effects of treatment. Although the results were generally positive, there were clear limitations to this work. The existing studies had utilized small samples and experienced high rates of attrition. In addition, the majority of the studies were conducted prior to the widespread
use of HAART, which limits the ability to generalise these data. As a result, data from other chronic disease and healthy samples were used to suggest that exercise had the potential to be a beneficial treatment across the range of symptoms and adverse effects experienced by HIV-infected individuals.

Tammelin (2003) evaluated a study of physical activity from adolescence to adulthood and health-related fitness at age 31. The aim of this study was to evaluate how physical activity and social status in adolescence are associated with physical activity in adulthood, and how a change in the level of physical activity from adolescence to adulthood is associated with overall and abdominal obesity in adulthood. This study also evaluated the relationship between occupational physical activity and physical fitness and produced reference values of cardio respiratory fitness for males and females aged 31 years. The study population consisted of the Northern Finland birth cohort of 1966 (N = 12,058). Data on physical activity and social situation at 14 and 31 years were collected by postal inquiries in 1980 and in 1997–1998, respectively. Cardio respiratory fitness, muscular fitness and obesity were measured at medical examination at age 31. Participation in sports twice a week or more after school hours, being a member in a sports club and a high grade in school sports at age 14 were associated with a high level of physical activity at age 31. Adolescent participation in rather intensive endurance sports, and some sports that require or encourage diversified sports skills appeared to be the most beneficial with respect to the enhancement of adult physical activity. Low social class and poor school achievements were associated with physical inactivity at age 14. Poor school achievements at age 14 were also associated with physical inactivity at age 31. Becoming inactive during the transition from adolescence to adulthood was associated with overall obesity in both genders and abdominal obesity in females at 31 years. A linear dose-response relationship was observed between the frequency of participation in brisk exercise and cardio respiratory fitness. The mean peak oxygen uptake was 43
ml·kg·m⁻¹·min⁻¹ in males and 34 ml·kg·min⁻¹ in females. Very low levels of cardio respiratory fitness were associated with a combination of infrequent participation in brisk exercise and increased body mass index. High level of occupational physical activity was associated with a high level of physical fitness, but low level of leisure-time physical activity at age 31. The enhancement of regular participation in physical activity across the lifespan is an important challenge for public health promotion. The present results that define the predictors and correlates of physical activity can be used to identify the target groups for interventions to enhance continuous participation in physical activities. New information on physical fitness of young adults is useful in physical activity counseling when fitness test results were interpreted and the need for health-enhancing or fitness-improving physical activity was evaluated.

Robbins, Pender and Kazanis (2003) purposed a study of barriers to physical activity perceived by adolescent girls. This descriptive study identified barriers to physical activity reported by girls in middle school. Participants were recruited from two middle schools in the Midwest. Using a Likert-type scale, a total of 77 ethnically diverse girls, ages 11 to 14, responded to 23 items representing barriers to physical activity participation. Mean scores and percentages were computed for each barrier statement. The top barriers to physical activity that emerged for the girls in this investigation were “I am self-conscious about my looks when I exercise” and “I am not motivated to be active.” Strategies that health professionals can use to counsel girls of this age in overcoming barriers to physical activity are presented. This health-related information can enhance anticipatory guidance to girls.

Cohen-Mansfield, Marx, and Guralnik (2003) examined the study of motivators and barriers to exercise in an older community-dwelling population. This study aimed to ascertain perceived barriers and motivators to exercise in people age 74–85 and to clarify the meaning of these barriers and motivators by examining participant characteristics that relate to them. 324 community dwelling participants age
74–85 completed a health questionnaire that included items on barriers and motivators to exercise, as well as questions on demographic variables, health, and exercise. Selected participants then completed a physical-performance battery to measure functional performance. Barriers and motivators were related internally, as well as to many other factors including pain and depressed affect on the Geriatric Depression Scale. The findings suggest a need for individualized and comprehensive approaches to the presentation of exercise programs. Health interventions were needed that will address both physical pain and depressed affect and explain the importance of exercise even in the presence of health problems. An understanding of the context of reported barriers and motivators was necessary for correct interpretation and program development.

Leclaire (2002) compared the study of relationship between exercise knowledge and exercise self-efficacy for the prevention of osteoporosis. The conceptual framework for this study was Self-efficacy (Bandura, 1977), based on Social Cognitive Theory (Bandura, 1986). The purpose of this study was to determine if there was a relationship between exercise knowledge and exercise self-efficacy for the prevention of osteoporosis in young adults. Population selection was based on clinical research foldings that bone health was affected by habits early in life, such as calcium intake and establishing regular exercise, which affect bone health in later years. The study was a secondary data analysis of 353 females and males 18 to 35 years of age, primarily Caucasian (92.9%). Results from descriptive statistics demonstrated no statistically significant relationship between osteoporosis knowledge and exercise self-efficacy for the prevention of osteoporosis (r=0.02). Additional findings revealed a generally low level of osteoporosis knowledge, mean OKT score was 10.81 (SD=2.27), and a moderately high level of exercise self-efficacy, mean OSE-Exercise score was 71.43 (SD=20.62).
Hassmen; Koivula and Uutela (2000) purposed a study of physical exercise and psychological well-being: a population study in Finland. The present study was to explore the association between physical exercise frequency and a number of measures of psychological well-being in a large population-based sample. A total of 3403 participants (1856 women and 1547 men) of the Finnish cardiovascular risk factor survey, ranging in age between 25 and 64, completed questionnaires. Besides answering questions concerning their exercise habits and perceived health and fitness, the participants also completed the Beck Depression Inventory, the State–Trait Anger Scale, the Cynical Distrust Scale, and the Sense of Coherence inventory. The results of this cross-sectional study suggest that individuals who exercised at least two to three times a week experienced significantly less depression, anger, cynical distrust, and stress than those exercising less frequently or not at all. Furthermore, regular exercisers perceived their health and fitness to be better than less frequent exercisers did. Finally those who exercised at least twice a week reported higher levels of sense of coherence and a stronger feeling of social integration than their less frequently exercising counterparts.

Hackmann and Mintah (2000) determined a study of pedometers: a strategy to promote increased physical activity among college students. This study examined the issue of inactivity among college students. A pedometer was used as an intervention strategy, to increase awareness and motivate college students to achieve the minimum recommended amount of daily physical activity. A convenience sample of college participants (N = 49) wore a pedometer for a three week period to assess and identify current daily physical activity level, exclusive of structured exercise. Accumulated steps were examined to determine if college students met the minimum recommended amount of daily physical activity. A survey instrument examined perception and rational toward physical activity, personal estimation of activity level, and indicators of
sedentary behavior or physical activity. Results show significant differences in steps from baseline. Significant differences were detected in participant estimation of activity level and in the activity indicators from pre- to post- test. Pedometers increased the awareness of physical activity among college students and would be a useful intervention strategy in the college and university setting.

2.3 SUMMARY OF THE STUDY

In this chapter, totally sixty four studies related relationship, predictive correlates, comparative studies on physical exercises, physical activity with exercise benefits, exercise motivations, internal and external barriers on various students, teachers were presented in India and abroad. From the observations of above extracted literature it was observed that few studies conducted on physical exercises and no research studies were done on female students and staff at degree colleges in relation to the factors related to internal and external barriers, exercise benefits and exercise motivations. Hence the researcher conducted to know the physical exercises participation among female students and staff in relation to their barriers to physical exercises, knowledge of exercise benefits and exercise motivations.