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2.1 REVIEW OF RELATED LITERATURE

2.2 CRITICAL ABSTRACTS OF REVIEW
CHAPTER - II

2.1 Review of Related Literature

Reviews of related research reports on Scholastic Achievement, Motor Fitness and Self-concept among adolescents that the researcher could locate and make available from various libraries have been incorporated in this chapter.

2.1.1 Scholastic Achievement and Self-concept

Jomdt\(^1\) observed the relationship between physical fitness and academic achievement among 358 senior high school boys. He found no significant relationship between physical fitness and academic achievement.

Feng\(^2\) study was to investigate the relationship between self-esteem and educational outcome, in Chinese children and adolescents. A correlation study was conducted on 260 students (grades 3 through 6 in elementary school, and grades 1 to 2 in junior high school). The Piers-Harris self-concept scale was administered. The Piers Haris involving six-cluster scores and the total score was used to assess self-esteem levels. Five educational records consisting of character, intellectual, physical, training in group life and aesthetic education were used as educational outcomes. Analysis of data indicated that:

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\(^1\) George S. Jomdt, "The Relationship Between Physical Fitness and Academic Achievement" *Completed Research in Health Physical Education and Recreation* ; 10 (1968) : 36.

\(^2\) Wu Ching Feng, "The Relationship Between Self-esteem and Educational Outcome with Elementary and Junior high School Students in Taiwan". *Dissertation Abstracts International* ; 51 (January, 1991) : 2327 - A.
1. Female students did report significantly higher mean total scores and behaviour cluster scores than male students;

2. Grade differences were significant in total score, behaviour cluster, intellectual and school status cluster and happiness and satisfaction cluster;

3. 25 pairs of statistically significant relationships were found to exist between self-esteem and educational outcomes;

4. 8 pairs of statistically significant relationships were found to exist between self-esteem and educational outcomes in male students and 25 pairs in female students;

5. 27, 2, 19, 10, 12 and 5 pairs of statistically significant relationships were found to exist between self-esteem and educational outcomes in 3rd, 4th, 5th, 6th, 7th and 8th grade students respectively;

6. High self-esteem group of students had significantly higher educational outcomes than low self-esteem group students.

Carpenter\(^3\) had taken up a study to find out the relationship between Self-Concept and Study Habits among different sub-groups of 9th grade at risk students by administering two independent measures - the Piers Harris Self-concept scale and the survey of Study Habit and Attitudes. Raw scores on self-concept and study habits were converted into percentage scores and a correlation coefficient was calculated for each subgroup. Findings indicated that more than 50% of the subjects had deficient study habits and

\(^3\)Robert Marshall Carpenter, “The Relationship of self-concept and study habits of t-risk students as measured by the Piers-Harris Children's self-concept scale and the survey of study habits and attitude" Dissertation Abstract International ; 51 (March, 1991) : 3014-A.
a small percentage possessed significantly low self-concept scores. Again it was found that students at risk participating in school activities had higher self-concept and study habit scores than non-participating at risk students.

Broyles\textsuperscript{4} examined self-concept and Academic Achievement in a newly coeducational environment. The subjects tested were formerly placed in single sex school situation and later on coeducational environment for the first time was arranged. The results of the study revealed no changes in self-concept over time. The literature suggested a specific pattern of correlation between self-concept and academic achievement, and the result of the study supported that belief.

Kelly\textsuperscript{5} investigated gender influence and academic achievement in relation to career self-efficacy for female, male and sex-balanced occupations. Ss were 101 girls; and 85 boys in grades 9 and 11. Ss gave self efficacy and interest ratings to 20 occupations. Girls had higher efficacy expectation for some female careers and lower efficacy expectations for some male careers than did boys. Girls and boys did not differ in their efficacy expectations for sex-balanced occupations. The overall influence of gender on career self-efficacy was modest. Achievement was a more powerful predictor of career self-efficacy than was gender.

Lyon\textsuperscript{6} examined the relationship of academic self-concept (ASC) to achievement for 88, 7th and 8th graders. ASC was found to correlate significantly more

\begin{itemize}
  \item Jim Broyles, "An Examination of self-concept and academic achievement in a newly coeducational environment", Dissertation Abstract International; 53 (April, 1993) : 3475-A.
  \item Kevl R. Kelly, "The relation of Gender and academic achievement to career self-efficacy and interests". Psychological abstracts 80 (October, 1993) : 4672.
  \item Mark A. Lyon, "Academic self-concept and its Relationship to achievement in a sample of junior high school student". Psychological Abstracts; 80 (September, 1993) : 4207.
\end{itemize}
strongly with achievement than general self-concept, motivation and classroom behaviour. The correlation between ASC and locus of control was non significant and ASC was approximately twice as powerful a predictor of achievement as locus of control. Results suggest that measures of ASC are more relevant to understanding student's achievement behaviour than are measures of general self-concept.

2.1.2 Motor Fitness and Self-concept:

Parker\(^7\) conducted a study in which the non-Physical Education major students were categorized according to low, middle and high motor ability groups, and the Physical Education major group was classified as a separate high motor ability group. The 71 college women showed no relationship between motor ability and self-concept as measured by "Who Am I" Twenty Statements Test. Self-concept differed significantly between the non-physical education major group and physical education major group.

Doudlah\(^8\) reporting significant correlation of self-concept with body-image and body-image with movement concept, indicated that the subjects apparently perceived themselves as a self with a body that moves. The subjects showed themselves more favourably in terms of self-concept than in terms of body image on movement concept as measured by Q-sort method.

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\(^7\) Nancy Kay Parker, "The relationship between Motor Ability and Self Concept of Women Non-Physical Education Major Students and Physical Education Major students", *Completed Research in Health, Physical Education and Research*, 4 (1962) : 84.

\(^8\) Anna May Doudlah, "The relationship between self-concept, body-image and movement concept of college women with low and average motor ability", *Completed Research in Health, Physical Education and Recreation* ; 5(1963) : 99.
Johnson carried out a study to gain an understanding of the interrelationship between Negro and white male students' level of physical fitness. He found out that Negro high school boys were superior to white boys in strength, cardio-vascular endurance, state of health, physical appearance, skill and sexuality. A greater relationship between physical fitness and self concept was found among whites than among Negro high school students.

On the basis of performances of Lincoln Oseretsky motor development scale and eight selected gross motor tasks, Torbert ranked the boys within the top and bottom 27 percent to investigate the relationship between motor proficiency and self-concept. He found that out of self concept scores as measured by the Piers Harris Children's Self concept scale, "The way I feel about myself", was more related to gross motor proficiency than to fine manipulatory motor abilities, and that self-concept as such appears to be related to power, speed, strength and endurance.

Floyd reported absence of any significant (.05 level) linear relationship between physical performance and self-concept. The result of the study also indicated that there were no significant relationships between physical performance and self-description, physical performance and self-acceptance, physical performance and ideal concept, and physical performance and discrepancy score.

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10 Marianne Rothhass Torbert. "Relationship Between Motor Proficiency and Self-Concept of Sixth Grade Boys." Dissertation Abstracts International 32 (June 1972) : 6802-A.

Black\textsuperscript{12} categorized athletes and non-participants as having high and low in physical skill. He found no significant difference in self-concept between athletes and non-participants; but found significant difference (P < 0.05) between those of high and low physical skill on physical self-concept, moral-ethical self concept and family concept. In each of these cases individuals of higher physical skill had the higher self-concept as measured by Tennessee self-concept scale.

Clower\textsuperscript{13} administered AAHPER Youth Physical Fitness Test Battery, Doudlah's Q-sort for movement concept and Tennessee self-concept scale on college women to investigate the innerrelationship and the effects of an eight-week activities curriculum on self-concept, movement concept, and physical fitness. The results of the study indicated that there was a moderate positive correlation for movement concept and self-esteem for low fitness subjects, for movement concept and several self-concept sub-scores for the low fitness subjects; but high fitness subjects exhibited a correlation only with the physical self-esteem.

Young\textsuperscript{14} administered AAPHER Youth Fitness Test, Tennessee Self-concept Scale and Questionnaire concerning academic achievement, estimation and perception to grade seventh and grade ninth boys and girls in his study on relationship

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among achievement, physical fitness and self-concept. Significant correlation was reported between various sub-scale scores of Tennessee self-concept scale and dependent variables. A significant (P .05) relationship between self-concept and physical fitness was indicated for seventh grade boys (r = 41) but not for girls or ninth grade boys and girls.

Mason\(^\text{15}\) indicated that there was no significant relationship between self-concept and fitness performances of white women college students and no significant difference in self-concept of the three groups White American, Indian and Black Women College Students.

To investigate relationship between motor performance in selected motor tasks and self-concept, Sorenson\(^\text{16}\) used Martinek Zaicketousky self-concept scale and the jump and reach test, the wall pass test and zigzag run test for motor performance and found significant correlation between self-concept and performance on all three motor tasks for the sixth grade girls (P .05) but absence of significant relationship between self-concept and motor performance in first grade children and sixth grade boys.

Husak\(^\text{17}\) investigated the relationship in respect of perceptual motor ability, self-concept and reading achievement in early elementary school children, so (N=213), 2nd and 3rd grade students were administered the Science Research Associates'...
Assessment Survey, three tests of perceptual motor ability; the stebilometer test, a modified manual dexterity and the ability to perform a task with speed and accuracy. The level of predictability of perceptual motor ability and self-concept to reading achievement was low.

Rodriguez\textsuperscript{18} undertook a study to determine relationship between self-concept and motor ability and further to determine whether or not tenth grade Negro girls differ significantly to Caucasian girls of the same grade. 176 tenth grade girls were studied of which 88 were Negros and 88 Caucasians. The Scot Motor Ability Test was administered, and the subjects were tested during their regular class time. The Tennessee Self Concept Scale was administered thereafter. Pearson ‘r’ was computed to find out the relationship, and ‘t’ test was used to find out the differences. Following conclusions were drawn:

1. Negro tenth grade girls had a lower overall level of self-concept than Caucasian girls;

2. Caucasian girls were more variable and inconsistent in terms of self-concept than Negro girls;

3. Negro girls were found superior to Caucasian girls in terms of leg strength and shoulder girdle strength;

4. Negro girls were found more coordinate than Caucasian girls;

5. No specific differences were found in case of ball handling, ball control and leg power.

Messineo\textsuperscript{19} investigated the effect of physical activity, influence of gender and test sessions on strength and self-concept of at-risk high school students. 42 male and female students were given physical activities of weight training and paddleball for 9 weeks, twice a week, self-concept and strength were measured though Tennessee Self-concept Scale (TSCS) and Military Press, Bench Press, Lateral Pull and Leg Press respectively. From the findings it was concluded that (1) significant gain in strength could be achieved through weight training as compared to paddleball; (2) gain in strength did not affect gain in physical, personal or total self-concept for both males and females at-risk school students.

2.1.3 Other Related Reviews

Ray\textsuperscript{20} studied 432 High School boys and found that those boys who had been out of physical education classes during substantial parts of their high school careers showed general inferiority to the average of their class in physical, mental and citizenship achievements; failures in academic subjects were double those of boys participating regularly in physical education.

Richard, Donald and Ray\textsuperscript{21} reported a positive significant relationship between interest in sports and self-concept score in the seventh, eight and ninth grade boys, but not in between physical ability and self-concept.

\textsuperscript{19}MaryAnne Eloise Messineo. “Effect of a Selected Physical Activity on the Self-Concept of At-risk High School Students”. Dissertation Abstract International 53 (December, 1992) : 1841-A.

\textsuperscript{20}Howard C. Ray, “Interrelationships of Physical and Mental Abilities and Achievement of High School Boys.” Research Quarterly (March 1940) : 126.

Ronald's study was to find out if the employment of full time physical education teacher and use of obstacle course designed to develop components of motor fitness would influence significant changes in selected variables. These variables were items of motor fitness measured by curl ups, standing broad jump, 50 yard dash, shuttle run, flexed arm hang and 600 yard run / walk. Self-concept was measured by elementary school index of adjustment, and values and levels of achievement in reading and mathematics were measured by the California achievement Test. From the academic achievement data it was found that the experimental fourth grade group improved significantly over the control group in mathematics and both groups registered equal gains in reading, whereas the sixth grade groups indicated no significant difference in improvement in reading and mathematics.

Hilmi and Marrison have studied athletes (N=100) representing men and women from both high school and college, and compared them with 100 non-athletes in their self-concept and self-actualizing traits. In general, athletes were found to be average in their self-actualizing traits and less than average in self concept. While male high school athletes differed to some extent, from the non-athletes in both self-concept and self-actualization, female college athletes differed from the non-athletes in self-actualization only. Female high school athletes and male college athletes did not differ significantly from their counterparts.

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Martinek, Cheffers and Zaichkowsky\textsuperscript{24} studied the effect of organized physical activity on the development of specific motor skill and self-concept. They found that motor development and self-concept scores were significantly higher for the group which participated in the physical activity programme than for the control who did not participated. However, as motor skills improved progressively in higher classes, self-concept actually declined in classes third, fourth and fifth, thus indicating non-significant correlation between motor skill and self-concept.

Noah\textsuperscript{25} investigated the manner in which the student was perceived significantly by others and by himself at it related to academic achievement. The subjects were 60 children (30 males and 30 females) between ages 7-11 years in grades 2 through 5 of a Jewish Day School. Demographic data (Age, Sex, socio-economic status), IQ and Achievement motivation were obtained for each subject, and matched for in the two groups of achievers and under-achievers. Academic Achievement was determined by teacher's evaluation as seen from the second term progress report. A two way analysis of variance was carried out. The result indicated that academically successful students were rated higher than the under-achievers on the socio-metric evaluation, the teacher class room behaviour inventory, and parent rating scale. There was no significant difference found between the two groups relative to the self-rating scale. The fact that no significant difference was found between the two groups relative to the self rating scale implied that self-concept was not related to academic Achievement.


\textsuperscript{25} Malowitzky, Noah. "Peer, Teacher, Self, Parent Perception as they affect school Achievement." \textit{Dissertation Abstracts International} 40 (June 1980) : 6207-A.
Tannenbaum, Mathieu, Salas and Cannon-Bowers\(^{26}\) investigated the development of organization commitment, academic self-efficacy, physical self-efficacy and motivation was examined in a socialization-type training context with data collected from 666 military trainees. The hypotheses were that (a) training fulfilment or the extent to which training meets or fulfills a trainee's expectations and desires; (b) trainee reactions and; (c) training performance would be related to the development of post-training attitudes. Support was obtained for each hypothesis. Training fulfilment was positively related to post-training organizational commitment, physical self-efficacy, academic self-efficacy and training motivation, even after pre-training attitudes and a set of individual variables were controlled. Pre-training motivation, trainee reactions and training performance were also related to the development of post-training attitude.

Munson\(^{27}\) examined the effect of motivation orientation and self-concept of ability on the academic achievement of African-American students. The results supported the relationship between self-concept, ability and intrinsic mastery motivation. The relationship between internal attributions and autonomous judgement was significant but unexpectedly negative.

Lombardo\(^{28}\) investigated the effect of self-focus and self-concept of ability on performance, effort and interest. 129 ninth and tenth grade students were chosen.


Pre-measures of reading and problem solving and test anxiety were collected and used as covariates. Subjects were assigned randomly to one of two groups. The high self-focus group was given a computer-based lesson, in addition a video camera was present during treatment to record the increase in the level of self-focus. The low-focus group's performance were more private and no video camera was used. The results indicated that students in the high self-focus group performed more poorly on the lesson post-test and expended less effort than students in the low self-focus group.

Narain investigated with the assumption that perception and feelings of social deprivation of female college students intervene their social adjustment process and development of a desirable self-concept. 166 college students of Patna District were studied here by three standard local scales. The measures were treated by appropriate statistical methods to verify research assumptions. The findings indicate a significant influence of intervening variable on adjustment process and self-concept development.

Strein reviewed research on the most commonly posited structural models of self-concept, and the pervasive frame of reference effects that link individual academic self-concepts to the larger social context. Implications for practice flowing from this research are discussed. It is suggested that the adverse effects of social comparison could be mitigated by the increased use of educational practices that recognize student's individual differences. These might include flexible grouping for short-term focus on particular skill, a decreased emphasis on traditional letter grading in favour of mastery-oriented learning and evaluation, and cooperative classroom environments.


Walling\textsuperscript{31} took up a study to investigate self-concept in High Achieving Women and compared in that respect medical and nursing educators. A group of 102 female nursing and medical educators were surveyed in order to obtain data on self-concept. Both group of educators were found to have comparable self-concept as measured by TSCS. The mean score of the group was found higher than the TSCS norm group. It was also found that women who scored higher on a measure of competitiveness were more likely to have lower overall self-concept score while those who indicated that they enjoyed working diligently were more likely to score high on measures of self-concept.

Agarwal\textsuperscript{32} examined the effect of the variables of subjects' sex on general self-concept and its various dimensions as measured by the Hindi version of Fitt's Tennessee Self-concept and scale. 234 boys and 199 girls of grade IX were selected randomly for the study and the tools were used Background Questionnaire, Kuppuswamy socio-economic status scale and TSC scale. It was found that (1) girls were superior to boys in their role of specific concept. (2) girls showed greater score than the boys in respect of identity, self-satisfaction, behaviour, physical, moral-ethical, personal, self-criticism, total self-concept and its instability dimensions.

2.2 CRITICAL ABSTRACTS OF THE REVIEWS

In a study on academic achievement Jomdt found no significant relationship between physical fitness and academic achievement amongst subjects who were senior high school boys. Inclusion of girls of the same grade would have given the result more authenticity.


Feng investigated the relationship between self-esteem and educational outcome in children and adolescents of both sexes. The study was conducted on 260 subjects only with a larger number of subjects, better generalization of the results could follow.

Carpenter while investigating the relationship between self-concept and study habits, established that more than 50% of the subjects had deficient study habits and students at-risk participating in school activities possessed high self-esteem.

Broyles found that altered school situation from single sex to coeducational did not affect self-concept over time. The result of the study supported the literature suggested specific pattern of correlation. But what was that specific pattern?

Kelly investigated the influence of Gender and Academic Achievement in relation to career self-efficacy, and found that boys and girls did not differ in sex-balanced occupations and overall influence of gender was modest. According to his finding achievement was a more powerful predictor of career self-efficacy than gender. For the study, ratings of only 20 occupations were considered.

Lyon found that measures of Academic self-Concept were more relevant for understanding students’ achievement behaviour than were measures of general self-concept.

Parker found no relationship between motor ability and self-concept of non-physical college women majors, but self-concept differed significantly between non-physical education and physical education college women groups. A similar study conducted with male students might provide interesting result.

Doudlah reported significant correlation of self-concept with body image and body image with movement concept.
Johnson directed his study to find out and compare the level of physical fitness of Negro and White male students. He found that Negros were superior to whites in most of the physical fitness components, but a greater relationship between physical fitness and self-concept persisted amongst the White male students. With female subjects the study could have indicated a newer sex-balanced direction.

Torbert found that self-concept was more related to Gross Motor Proficiency; and self-concept was related to power speed, strength and endurance.

Floyed found no relationship between physical performance and self-concept.

Black reported no difference in self-concept between athletes and non-participants, but noticed significant difference in respect of self-concept, moral-ethical self-concept and family concept between high and low physical-skill groups.

Clower found a positive moderate correlation for movement concept and self-esteem in low fitness subjects; and high fitness subjects were found to have correlation with only physical self-esteem.

Young found significant relationship between self-concept and physical fitness amongst seventh grade boys but not among girls or ninth grade boys.

Mason found no relationship between self-concept and fitness programmes of white women college students. The question may haunt if non-white student also were subjects of the study.

Sorenson found significant correlation between self-concept and Motor performance of sixth grade girls but that was not the case in relation to first grade children and sixth grade boys.
Husak found the level of predictability of perceptual motor ability and self-concept to reading achievement as low among 2nd and 3rd grade students.

Rodriguez concluded that Caucasian girls were superior to Negros in respect of self-concept; they were found more variable and inconsistent. And Negros were found superior to Caucasians in respect of leg-strength and shoulder girdle strength, and also more coordinated.

Messineo found that significant gain in strength could be achieved through weight-training exercises as compared to paddle ball; and gain in strength did not affect gain in physical, personal or total self-concept of both males and females at-risk school students.

Ray found absence from physical education classes for long duration caused inferior physical, mental and citizenship achievements and failure in academic subjects become double.

Richard, Donald and Ray found positive relationship between interest in sport and self-concept, but that was not found between physical ability and self-concept.

From the academic achievement data Ronald, in his study, found that fourth grade students gained significantly in mathematics, while sixth group students registered no significant improvement in reading and mathematics over the control group.

Comparing athletes and non-athletes Hilmi and Marrison found that athletes possessed average self-actualization; high school athletes differed in self-concept and self-actualization from non-athletes; and college female athletes differed from non-athletes in respect in self-actualization.
Martinek, Cheffers and Zaichkousky found that students who participating in organized physical activity programme showed significantly high score on motor development and self-concept; but as motor skills improved, self-concept declined indicating non-significant correlation between motor skill and self-concept.

Naoh in his study on 30 male and 30 female children found that self-concept was not related to academic achievement.

Tammenbaum, Mathieu, Sales and Canon-Bowers found training fulfillment was positively related to post-training organizational commitment, physical self-efficacy, academic self-efficacy and training motivation. They found that pre-training motivation, trainee reaction and training programmes were also related to the development of post-training attitude.

Munson found a significant relationship between self-concept ability and intrinsic mastery motivation while there was a significant negative relationship between internal attributions and autonomous judgement.

Lombardo found that high self-focus group performed poorly on the lesson post test and expended less effort than the low self-focus group.

Narain found significant influence of intervening variable on adjustment process and self-concept development.

Strein suggested flexible grouping for particular skill, decreased emphasis on traditional letter grading in favour of mastery oriented learning and evaluation and cooperative class-room environment for structural model of self-concept.
Walling found that women who scored higher on a measure of competitiveness were more likely to have lower level of self-concept while those who enjoyed diligent work were more likely to have high score on self-concept.

Comparing boys and girls Agarwal found that girls were superior to boys in their role of specific self-concept. Girls were also found superior to boys in respect of identify, self-satisfaction, behaviour, physical, moral-ethical, personal, self-criticism, total self-concept and its instability dimensions.