Chapter II

REVIEW OF RELATED LITERATURE

In the process of prevailing research investigation, sincere attempt was made to broaden the spectrum of knowledge by going through the various sources of literature and acquainting oneself with current ideas of other researchers. This chapter presents a resume of research studies relevant to the present investigation. The findings of past research have been summarized at the end of the chapter.

1 Sihi and Saha conducted a study of self-concept, movement concept and physical fitness among the school boys of West Bengal. 99 subjects were randomly selected of 14 to 16 years of age from Rural (R) Urban (U) and Semi-urban (SU) area of Nadia Murshidabad. To measure physical fitness, North Carolina Motor Fitness Battery was administered. This test battery includes five items: (i) leg flexed

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sit-ups for 30 sec. (ii) side stepping for 30 sec. (iii) squat thrust for 30 sec. (iv) modified pull-ups for 30 sec. standing broad jump but investigator adopted push-ups test for 30 sec. in place of modified pull-ups to overcome some administrative difficulties. Self-concept and movement concept were estimated by using standard questionnaires i.e. the Doudlah Movement Concept Test and Cratty adaptation of Piers-Harris self-concept scale. Though he has done standardization of questionnaires.

In order to compare the self-concept movement concept and physical fitness variables in between rural urban and semi-urban school boys t-ratio was computed. Conclusion drawn that the rural group is significantly better than urban and semi-urban group in push-up and standing broad jump. The semi-urban is better than urban and rural in squat thrust and side test. The urban and semi-urban group are better than the rural group in self-concept and movement concept. The urban group is also better than the rural group in side step test. The significant procedure correlation was found between physical
fitness and movement concept at 05 level of confidence.

Plummer² conducted a study to examine the effects of one semester of rhythmic aerobic or racquetball on the self-concept of college women. In pre-test post-test designed study 254 women completed the study; racquetball 39, rhythmic fitness 124, and control 111. Tennessee self-concept scale was used to measure self-concept. An information form was completed by each Ss at pre and post-test, statistical procedure ANOVA and ANCOVA was used. Sig. diff. were found between rhythmic aerobic group and control group in the areas of physical self and self satisfaction, sig.diff. were found between the rhythmic aerobic and racquetball group in the areas of personal-self, family-self, behaviour and total positive score.

Conclusions were drawn that rhythmic aerobic is a positive self-concept activity for college women.

Riley took a study and its main purpose was to assess the interrelationships among physical estimation, physical performance and self-concept from the perspective of symbolic interaction theory. Sixth grade subjects measured at two identical phases of 12 weeks apart with subjects participating in the school's coeducational physical education programme during 12 weeks interval between measurements. Three variables (physical estimation, physical performance and self-concept) were measured at phase one and again at phase two. Scores for both male and females were analysed separately since relationship and differences between the variables may have been obscured by treating the Ss as a homogeneous group. The scores were analyzed using Pearson Product Moment Correlation coefficient t-test of significance and a cross lagged panel correlation analysis to determine the significance of the hypothesis. Significant positive relationships were found among the three variables.

Teagardin took a study to compare self-concept among students in relation to their physical fitness, motor ability and an overall physical performance. The population was comprised of fifth seventh and tenth graders (N=665) who have regularly participated in athletics and enrolled in physical education classes. Ss were classified into groups according to grade level, high or low physical fitness level, high or low motor ability level and high or low composite level. The subject must have scored in the top 25% of all subjects tested. To be classified as low in physical fitness, composite levels and motor ability subject must have scored in the bottom 25% of all subjects tested. Physical fitness level was determined by flexed arm hang, two min. bent knee sit-ups, one and one-half mile run (seven, ten grade). Nine min. run (five grade). Texas Physical Fitness Motor Ability Test was use to measure the physical aspect of this study and Bills

attitude inventory was used to measure self-concept. ANOVA was used to analyze self-concept in relation to physical fitness motor ability and the composite score. Comparison was made amongst the grades (fifth, seventh and tenth). Fisher's test for independent samples was used to compare self-concept with high and low fitness group. Analysis of data revealed that no significant difference was identified when comparing self-concept among students in relation to their physical fitness motor ability and comparison scores in fifth, seventh and tenth grade girls.

Toole and Arink did a study to evaluate transfer of movement education training to new skill performance and to evaluate skill improvement as a result of movement education and traditional training. The subjects were 47 first grade students who were in one of two classes. Each physical education class received one 30 minute class and one 20 minute class per week for 20 weeks. Subjects were

5 Tonya Toole and Elizabeth A. Arink, "Movement Education: It's Effect on Motor Skill Performance" Research Quarterly 53 (June 1982): 156.
taught movement principles either by a movement education approach or by a traditional approach. Johnson's Throw and Catch Test (1962) and a batting test for distance were used as a pretest. These same tests were repeated as post-test in addition to two other tests which measured performance on striking and kicking distance and accuracy. Teaching approach groups were not significantly different on the latter two tests which measured the transfer of training effect. Traditional learning was better than movement education in developing throwing, catching and batting performance. These results suggest that when one's objective is to teach a specific skill within a relatively short time period, a command style with demonstration is better than movement education.

Wescott took a study on 312 students from 22 elective activity classes at South Eastern Oklahoma State University. 31 students from science classes not taking physical education

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were controls. The Tennessee self-concept scale was given at the beginning and end of a semester. The variables, total positive, physical self, personal self and self satisfaction were closely examined. There were no significance difference between experimental and control group. On the post test there were significance difference favouring the experimental group on family self and identity from pre to post test the experimental group showed significant improvement on all four of the primary variables that were examined.

7 Clower administered AAHPER youth physical fitness test battery. Doublah's Q-sort for movement concept and Tennessee self-concept scale on college women to investigate the inter-relationship and the effects of an eight week activities curriculum on self-concept movement 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, but high fitness subjects exhibited a correlation only with the physical self-item.

Sorenson conducted a study on 39 1st grade children and 39 6th grade children from 2 ELE Schools in North Central IL. The Martinek Ziachkowsky self-concept scale was used to measure the children's self-concept. The jump and reach test, the wall pass test and the zig zag run test were selected to measure motor performance. Data were analyzed using the SPSS for regression. Pearson Product Movement r's were obtained to determine the relationship between self-concept and performance on each of 3 selected motor tasks. Results indicated a sig. r between self-concept and performance on all 3 motor tasks for the 6th grade girls (P<.05). All other r's were non sig. These appeared to be no sig. relationship between self-concept and motor performance of 1st grade children and 6th grade boys, but such a relationship may exist in the case of 6th grade girls.

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Gall took a study: experimental subjects and control subjects participating and not participating in intramural sports programme were tested initially on 3 paper and pencil self-concept (S.C.) tests and motor skills tests. After the programme of IM sports, subjects were tested again on all tests. Data were analysed using description statistics among the changes in Sc and final MS development. There were no changes in selected measures of SC of experimental and control subjects after an 8 week bowling IM programme and 6 weeks track and field IM programme plus regular PE. There were changes in MS development of experimental and control subjects after the 8 week bowling programme and 6 week TF programme. Slight correlations for positive change in bowling track skills were observed on the final tests the Piers-Harris SC and BT SC; the Piers Harris SC and the inter locus of control; the internal locus of control and the BT SC; the bowling SC and

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the bowling skills; the track SC and track skills the 220 yd. dash and the shot-put, the 220 yds. dash and the softball throw. General SC, sports SC, and MS development of 7th grade boys and girls were related.

Jacob investigated changes in self-concept, ideal self-concept, body image and movement concept of college females participating in a 10 weeks jogging programme. 19 females comprised the experimental group, the control group consisted of 19 females in a 10 weeks golf instructional unit. 5 sets of data were collected on the 2 groups through the use of an activity questionnaire, anthropometric measurement, wt. and % body fat measurement and 3 Q-sorts assessing self: body and movement concept. The Cooper 12-min. field test was administered to the experiment group only. The independent t-test and dependent t-test revealed no sig.diff. in self-and ideal self-concept discrepancy.

body image, and movement concept between or within the jogging and golf groups from the beginning to termination of the study. The Spearman \( r \) indicated no significant relationship between the self-awareness variables and cardiorespiratory fitness test results. A significant negative \( r \) between self- and ideal self-concept discrepancy and wt.loss, anthropometric, and % body fat scores was found for the experimental group at the beginning of the investigation but not at the end. A significant negative \( r \) was found between movement concept and anthropometric measures at the initiation and termination of the investigation.

Luebke\(^{11}\) conducted a study on class 3 (N=73) were randomly assigned to a teacher directed study programme of basic motor skills, a teacher-guided study programme of exploration of selected movement elements, and a control programme of no planned physical activity.

Study groups met for 26-30 min. lessons. Variables were measured by pre and post program administration of the CAHPER Fitness Performance Test, Piers-Harris children's self-concept scale, and AAHPER Cooperative PE Test, from 4A modified. Time in activity was quantified through 3 timed observations of each study group participant.

ANCOVA, ANOVA and Pearson r were employed to examine effects by program and across programmes, and changes in overall patterns. No differences were observed in main effects of the 3 variables across the 3 programmes. Subsequent analysis indicated the study programmes to be equally effective (P/.05) in promoting positive changes in fitness and knowledge and in strengthening the inter relationships among the variables. Both programmes were more effective than the control (P/.05) in strengthening inter-relationships. No programme produced significant change in self-concept. Time in activity for the movement participants was significance greater (P/.05) than that of standard programme participants.
Bruya conducted a study on 36 boys and 36 girls in fourth grades who were exposed to basketball movement conditions which included the skills of dribble, chest pass, lay up, pivot, guarding and two hand set shot. Eight 1/2 hr. treatment periods were spread evenly over 4 wk. and took place within the regularly assigned school physical education period. Two class groups, which included 9 boys and 9 girls each were randomly assigned by class to an experimental group which received treatment while two class groups were assigned by class to the control group. No differences between changes in self-concept as estimated by the Piers-Harris scale for treatment and control conditions were significant.

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 which would influence significant changes in selected variables. These variables were items of motor fitness measured by curl ups; standing broad jump; 50 yards dash; shuttle run; flexed arm hang and 600 yards run/walk. Self-concept was measured by elementary school index of adjustment and values and levels of achievement in reading mathematics was 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 for mathematics and both groups registered equal gains for reading, where as the sixth grade groups indicate no significant differences in improvement for reading and mathematics.

Taylor 14 investigated the relationship between self-concept and motor performance of second grade children. 109 subjects were

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taken for the study from four classes of second grade students enrolled in Whittier Elementary School in Westerville, Ohio. All 130 students were given the Piers-Harris self-opinion test. The criteria used to categorized the positive and negative self-concept as identified by the Piers-Harris self-opinion test are as follows:

1. Positive Self-concept - determined by a score of 16 or higher on the test.

2. Negative Self-concept - determined by a score of 14 or lower on the test.

Following the administration of self-concept test the students were given five selected items of the Peacock Achievement Scales in Physical Education Activities. Five items were: forty yard run, soccer punt for distance, softball throw for distance and standing broad jump and side stepping.

Pearson Product Moment correlation were computed for total self-concept scores, the total motor performance scores with each of the five motor performance test items. The findings indicated no significant difference when combining high and low scores on both the
self-concept and motor performance test items of the total population. In conclusion it seems necessary to study self-concept and motor performance on a longitudinal basis.

Albins carried out the study on self-concept which was measured by Tennessee self-concept scale and motor performance was measured by the Photoelectric Rotary Pursuit Tachometer, the Mirror Tracer with electric scoring, and the Dekan Automatic Performance Analyzer. Thirty 6th grade girls enrolled in an ELE school and 30 8th grade girls enrolled in a JHS School in Denton, Texas and 30 college women enrolled in the required PE Programme at the Texas Women's University served as subjects. The data were collected from each group and presented in tabular form. Pearson product moment 'r' was utilized for determining the degree of relationship. A t-test for significance of 'r' was utilized. Conclusions were: a relationship existed between

the ELE and JHS female students' ability to perform well on the pursuit rotor and mirror tracing; a relationship existed between JHS girls' self-concept and their ability to perform on the pursuit rotor; no relationship existed between university women's score on the pursuit rotor, mirror tracing, performance analyzer, or self-concept test; and Miror Tracing was not related to performance ability on the pursuit rotor, mirror tracing, or self-concept test for each group.

Darden conducted a comparative study of body image and self-concept variables among various sports groups. He took total 145 male athlete as subjects for study. They were selected from Florida State University on the basis of availability in team sports-football (N=65), basketball (N=12), baseball (N=26) individual sports-weight lifting (N=15), swimming (N=18) gymnastic (N=9). They were tested during initial team meetings. Self-concept was measured by

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Second and Jourard's revised self and body Cathix Scales, while body image was measured by a body image discrepancy test devised by Darden. These tests were administered by the academic athletic advisor at university.

Data collected from six groups were analyzed using multivariate analysis and univariate analysis with significance set at the .01 level. Multiple discriminant analyses were used to make comparisons between and among the three team sports and three individual sports. The results of the multiple discriminant analyses indicated significant differences among the team sports and individual sports, but not between the combined team sports and combined individual sports. Significant differences were also noted among the six sports groups for the body and self Cathix variables when analysis of variance was employed. Of the groups tested basketballers and gymnasts were found to be the most different from each other.

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Ball conducted a study on second grade

subject's self-adjustment scores were examined in relation to the type of physical education experienced for 50 consecutive school days. Subjects experiencing individual movement exploration activities gained in standardized test mean scores at the .01 level of confidence, subject participating in recess showed loss of mean scores.

Doudlah \(^{18}\) 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.

McBEE \(^{19}\) conducted a study to determine whether

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\(^{18}\) Anna May Doudlah, "The Relationship Between the Self-concept, the 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.

security of body image was positively related to concept of movement patterns, undergraduate women at UCLA having the most favourable and unfavourable self-rating scores on the ball throwing and broad jumping items of the Smith-Clifton Perception checklist were also given the Hunt-Weber Body Image Projective Test. From this a "Body Image Security" score was derived as a difference between the self image and the ideal image. A secure body image was significantly related to secure feelings about the movement patterns of ball throwing and broad jumping. Differentiation between the positive and negative groups on ball throwing was more significant than that on broad jumping. The correlation between the body image security scores and the combined ball thrown and broad jump scores was more significant for the combined group than for the high or low group.

TESSIER\(^{20}\) carried out a study on the items emphasizing attitudes and feelings towards the

body were derived from the literature. Critical analysis by six expert resource persons assisted development of the final form consisting of 12 open-end questions concerning interests, attitudes, etc.; 20 self rating personality items; and 42 self items on bodily parts and processes. The inventory was administered to 20 female college students in a movement education class to obtain the reactions of students.

Cogan's study was based on interviews with psychiatrists, psychologists, physical educators and persons in related professions, supplemented by a review of the literature. The body image concept, emphasizing the fallacy of separating mind from body and of emphasizing physical health while ignoring related psychological factors, provided a starting point for evaluating the contribution of physical education to self-understanding and self-acceptance. Healthy attitudes toward the bodies, the recognition of bodily

movement as a means of self-expression, the use of physical activity as a means of releasing socially unacceptable emotions such as hostility, and the appropriate involvement in competitive activities all contributed in this process. The possibilities for developing self-understanding through physical education appeared almost limitless, although they have been relatively unexplored to date.

Allen conducted a study to determine the effect of two weeks (ten school days) intensive dance movement education programme on the self concept of developmentally handicapped fourth and fifth grade students as measured by the Piers-Harris children's self concept scale. The study took place in two elementary schools. School were located in communities that were characterized as low to lower middle socio-economic class, 28 subjects (15 males, 13 females) in two self contained developmentally handicapped classes at each school. Subject's age ranged from 9.11

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of age to 15.3 years of age. IQ score ranged from 63 to 80. Two males and two females were randomly selected for observation by the researcher and the unbiard observer experimental group received one hour each day for two weeks. Control group received no treatment from the researcher. Dance programme was based on Laban's sixteen basic movement themes. The concept of body awareness, space awareness and effort qualities were used as a basis for content development. Results of the statistical data indicated dance/movement education programme did not change the general self-concept of fourth and fifth grade developmentally handicapped students. There was a significant difference between the scores of 54% of the experimental group and 75% of the selected subjects.

Result indicated that there was no significant difference in the self-concept of male and female developmentally handicapped students.

It appeared that the selected subjects did develop changes in their attitude towards dance/movement education. The results of the Pearson correlation coefficient indicated strong linear correlation between the qualitative and quantitative data.
Clements did a study to investigate the extent to which movement education had been implemented in kindergarten through second grade classes, by examining to what extent elementary physical educators had based their teaching practices on commonly accepted characteristics of the programme. The study sample was delimited from a larger population of teachers (N=79). The selected subjects (N=10) were qualified and experienced. Using the information obtained from initial observations, a document analysis, a questionnaire, and an informal interview which examined pertinent aspects of each participant's background and physical education programme in conjunction with the data obtained from the checklist, the investigator ascertained the extent of actual programme implementation occurring in 60 class observation (i.e. 6 observation per teacher).

The findings were reported in detailed case narratives. A cross-case revealed the degrees to which the schools had adopted movement education.

Two schools exhibited a high occurrence of the theoretical frameworks, methodologies and content themes and two followed programmes unlike the studies framework.

The study demonstrates how movement education has become an integral part of the overall physical education programme, and how it has been used to maintain a balance in the curriculum and serve as a foundation for more advanced sports skills.

Clayton studied the movement education as a curriculum concept for physical education at the elementary school level, was interpreted by using a framework drawn from critical theory. More specifically, critical theory was used to develop an interpretation of movement education as it was presented in selected physical education literature during the period from 1960 to 1980.

The interpretative analysis suggested that movement education was and is a viable curricular

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idea rooted in the cognitive human interest in emancipation. Evidence was presented that indicated: (a) movement education grow out of a history of movement analysis, (b) movement education was clearly articulated by professionals concerned with children's movement; and (c) movement education was oppressed by professionals who were operating and writing from a position developed out of the cognitive human interest in control.

Lee conducted a study to investigate the effects of participation in a selected programme of physical activities upon self-concept, self-acceptance and ideal self of college students. Subjects (N=261) were college students enrolled at Nicholls State University in Thibodaux, Louisiana during 1987 fall semester. Participants were enrolled in the physical activity classes of weight training, karate, or golf. Other subjects were enrolled in course in the professional education sequence for prospective elementary

teachers and a student development class. The adult index of adjustment and values was used as the measure for self-concept. This instrument consisted of 49 trait words on a scale of one to five which provided scores for self-concept self-acceptance, ideal self, and discrepancy. It was administered before and after 12 week periods of classes.

Correlated 't' tests were used to determine whether or not there was a significant change in any of the four sub-scores for each of four groups during the period between the administration of pre-test and post-test.

Findings indicated changes significant at the .05 level on self-acceptance for the golf group. There was a significant difference in both the self-concept and in discrepancy scores for the professional education group.

In conclusions: students in academic subjects showed greater gains in their self-concept and ideal self than students in activity classes.
Crawford and Griffin conducted a study to see the interaction of such factors as competence, potential for enjoyment, potential for harm as postulated in the model for movement confidence was studied by analyzing responses of 250 fifth grade children in the Omaha Public Schools to a playground movement confidence inventory (PMCI). The PMCI was designed to assess movement confidence and the bases for performance decisions. Multiple discriminant analyses and analytical cross validation were used to determine an index of discriminatory power, stability of the instrument and a validity of coefficient for scale classification power. All three model factors were found to influence the confidence of children in performing the playground tasks in the inventory. The PMCI classified 85.16% of total cases representing a .5726 professional reaction in error over chance. The factor analysis model accounted for 54% of the total variance with 90% of this variance explained by the competency sub scale. Findings

of this study significant step in the validation and elaboration of the model for movement confidence. Identity, separability, and measureability of the factors postulated in the model were demonstrated and the probably multivariate nature of the harm factor identified. In this study the discriminating variables operated with a degree of task specificity.

27 King analyzed the influence of motor ability, self-concept, peer relationship, reported interests, age and sex on children's choices in physical education. 85 children, age 4-7, came to open gym. a choice time in phy.edu. once or twice a week. After hearing initial directions and safety rules children played for 20 min. 4-5 activities in each category was available: five motor, manipulative, balance and strength/flexibility. Children's play choices were recorded by tape recorders and behaviour mapping technique during the 4th month observation period. Each child was given Basic Motor Ability

Test. The Martinek-Zaichkowsky self-concept scale the favourite playmates and the Interest Inventory. Regression analysis determined if the variability in choice was explained and showed the unique contribution of each variable to the explained variance. Analyzing the majority choice category identified patterns in children's choices. Conclusions of the study:

1. Children ages 4-7 choose to play with strength/flexibility activities given choice between fine motor manipulative, balance and strength/flexibility activities. The test variables in total account for 11% of the variability in choice.

2. With children ages 4-7 (a) motor ability increases linearly with age, (b) global self-concept most positive at age of 6, (c) motor specific self-concept is most positive at age 5, (d) peer relationship shows an increase in 5-6, (e) boys score are higher than girls on all variables.

3. Teacher need to share in the decision making process if exposure to a wide variety of activities of physical education.
Nolan conducted a study on 52 children age 4-6 years were randomly assigned into experimental and control groups. Ss were pre and post-tested for self-concept and perceptual motor ability using Martinek-Zaichowsky self-concept scale and Cratty six category Gross Motor Test. The exp. group engaged in an 8 wk. perceptual motor program for 1/2 hr. each school day. ANCOVA showed no sig. difference for overall and subtest self-concept. ANOVA showed a favourable significant change in experimental group sub-factors of satisfaction, happiness, personality traits and emotional tendencies. There was no sig. difference between groups in overall perceptual motor performances. There were significant changes in sub-factors of balance, body perception, and locomotor agility. In the exp. group, a low 'r' was found between both overall post-test scores. The study partially supports the position that changes can occur in specific self-concept as a result of perceptual motor performance.

Merkly\textsuperscript{29} carried out the study on physical self-image and physical activity in which a form of Osgood's Semantic Differential Technique formed the basic test called actual physical self. After developing the instrument, it was tested on 40 male and 33 female students enrolled in racquetball, tennis and fitness for living classes at B.Y.U. The new instrument was administered in conjunction with the Tennessee self-concept scale and Budge's Physical Self-Description and Evaluation Scale to compare results and determine relationships. There were sig. correlation found between the new test and each of the other test scores. In administering the battery of test on a sample group, several relationships were found combining various ages, sex and activities.

30 Canabal Torres took a study in which


\textsuperscript{30} Maria Y. Canabal Torres, "Organization of Movement Information in the Short Term Motor Memory of Young Children" Completed Research in Health, Physical Education and Recreation 23 (1981): 193.
a linear positioning task was used to assess short term motor memory of 7-8 yrs. old (N=30) and 11 to 12 yrs. old (N=30) childrens from both sexes. After demonstration and practice, Ss were given 10 experimental trials. A trial consisted of random presentation of 5 movement extents (10, 20, 30, 40, and 50 cm.) followed by the reproduction of each in an assigned condition. Reproduction conditions were: SDO (subject directed order as desired), EPO (experimental produced order; linear ascending, and FR (forced random presentation order. Ss were blind folded and individually tested in 1 session of about 30 min. Reproduction error was the absolute difference between each presentation and it's reproduction for the 10 trials. A 3x2x2x5. ANOVA (reproduction condition x age x sex x movement extent) was computed. Age was significant (P/.05) with older children having less reproduction error than the young ones. A sig. reproduction condition x movement interaction (P/.01) was assessed by 1 factor ANOVAs for simple effects and Tykey's WSD. FR condition had more absolute error than either SDO or EPO, with no sig. diff. between the latter 2. The Fr, 30 and 40 cm. has less
reproduction error than the rest. For SDO and EPO no sig.diff. in reproduction error among the 5 extents was evident. Thus for 7-8 yrs. and 11-12 yrs-olds reproducing randomly presented information, less error is produced when organization is possible (SDO and EPO) than when it is prevented (FR).

Cloward studied the effect of the Adventure Education Programme, project life, on the self-concept of elementary school children. It was hypothesized that there would be a significant positive growth in self-concept for the children resulting from the programme. Further it was hypothesized that the change in self-concept would be greater for girls than it was for boys. The major findings did not reach significantly using ANOVA for the overall group scores, however the changes for girls from pre to post was significantly less than the change for boys from the pre to post.

Martinek\textsuperscript{32} Cheffers and Zaichkowsky studied the effect of organised 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 participate in the physical activity programme than for the control who did not participate. However, a motor skill improve 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.

\textsuperscript{33} Weinman took a study to determine if self-esteem and augmented feedback had an effect on the number of negative self re-inforcements which high school girls in physical education classes would give themselves after they performed a novel


motor task. 40 subjects were identified, from a sample of 312 HS girls, by scores on the revised self-ideal-ordinary (SIO) Q-sort. The 20 subjects scoring highest on the SIO were designated as a high self-esteem group. The low self-esteem (LSE) group was made up of the 20 subjects scoring lowest on the SIO. A t test of the difference between these 2 groups was sig. (P < .01). The subjects were blocked randomly to 2 treatment conditions. 1 condition was augmented affective reinforcement (AAR). The other was augmented informational feedback (AIF). The exp. included 2 phases 1 was the training phase in which treatment was applied. 2nd phase was self-reinforcement one in which Ss was made self-reinforcement statements in response to a view of their performances on a television monitor. A tape recorded interview of each subject was carried out to help clarity subjective awareness and feeling. Analysis with a 2x2 factorial design revealed that negative self-reinforcement is a function of the level of self-esteem (P < .05) and that negative self-reinforcement is not a function of augmented feedback nor is a function of augmented feedback interacting with the level of self-esteem.
Floyd\textsuperscript{34} reported absence of significant (.05 level) linear relationship between physical performance and self-concept. The results of the study also indicated that there was no significant relationship between physical performance and self-description, physical performance and self-acceptance, physical performance and ideal concept and physical performance and discrepancy score.

Puretz\textsuperscript{35} conducted a study on modern educational dance that one of the desirable features of this art medium is its value in the development of a positive self-concept. This study exposed seventy five disadvantaged, inner city elementary school girls, in their regular school setting to classes in modern educational dance as a substitute for the standard, required physical education curriculum to which a control group of seventy five girls

\textsuperscript{34} Connie Sturkie Floyd, "Relationship Between Physical Performance and Self-concept" \textit{Dissertation Abstracts International} \textsuperscript{33} (June 1973): 6712-A.

\textsuperscript{35} Susan Luskin Puretz, "A Comparison of the Effects of Dance and Physical Education on the Self-concept of Selected Disadvantaged Girls" \textit{Dissertation Abstracts International} \textsuperscript{34} (December 1973): 3124-A.
were exposed. A comparison between experimental and control group. Subject, using a 't' test for significant positive findings in the self-concept of these girls who had received modern educational dance as a substitute for physical education. A later comparison indicated that these significantly positive findings were of a long term nature.

Graves conducted a study and administered the TSCS and 3 physical tests (50 yds. dash, pull-ups, and baseball throw for accuracy) to boys (N=277)-mo. apart. Subjects were divided into 4 groups. Bryan Boys club, advantaged and disadvantaged (BB C-A, BBC-D), and non boys club, advantage and disadvantage (NBC-A, NBC-D), (P<.05). The total groups significant r's were between total personality, physical self, social self and speed. NBC-A r's were speed, strength, and total personality, physical personal and social self. ANOVA found gains for NBC-D in speed, and NBC-A, in normal ethical and in personal

self. The advantaged scored higher in family self than disadvantaged. NBC-A was found to be superior to NBC-D in speed.

Lord did a study on grade 3 boys (N=70) from selected public schools in Springfield, Massachusetts. Thirty five boys had been rated by their classroom teachers on the behavioural problems. These 2 groups were compared for performance on 7 perceptual motor tasks and self-concept. The 't' test showed the well adjusted boys to be better (P<.05) on visual achievement forms, for both the form and organization sub-tests. Differences on all other perceptual motor tasks were significant. The well adapted boys did better (P<.05) than the maladjusted boys on all 7 factors of the Piers-Harris self-concept scale.

Sheppard investigated the effects of learning to swim upon the body concept and self-concept of college students who voluntarily enrolled in non-swimmer classes and the relationship of these effects to sex and swimming proficiency. The sample included 50 male and 50 female non-swimmer students at Queens College who wanted to learn to swim. Males (N=25) and females (N=25) participated in swimming classes 3 times/wk. for 12 wk. Secord and Jourard's Body Cathexis Scale, Bills' Index of Adjustment and values, Osgood's Semantic Differential Technique, and the Fox power test were used. Multivariate ANCOVA was performed on pretest and post-test scores. It was concluded that learning to swim has no effect upon the college students' body concept, self acceptance, and self-esteem. However, there was evidence that it has a positive effect upon self-description. These effects are unrelated to sex and acquired swimming proficiency.

Brugel conducted a study on eight and nine yrs. old boys (N=48) participating in the Nittany Valley Little League C Division and they were administered the Piers-Harris children's self-concept scale at the beginning and end of a season of play. The subjects were grouped according to age, amount of experience percentage of participation, and level of skill. The 8 yrs. old group evidenced a change in a positive direction in self-concept as measured by the Piers-Harris self-concept scale over a season of participation in a competitive baseball league (P<.05). This change was not evident in 9 yrs. olds. No differences in self-concept scores were found when subjects grouped according to experience, percentage of participation and level of skill were compared.

Jones presented a study which was undertaken to investigate the validate, the

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awareness which is an element from the purpose-process curriculum framework. A theory of body awareness was formulated and 3 tests were developed in order to measure selected components of the construct. The instruments were designed to measure abilities in discrimination and movement in various spatial coordinates. Subjects were 64 1st and 3rd grade students. Results indicated that: the tests measure discrete constituents of the construct, there were no differences between males and females, and there were differences between 6 and 8 yrs. old and between performance on motor and cognitive sub-tests.

Richard, Donald and Ray \(^1\) reported a positive significant relationship between reported interested in sports and self-concept score in the seventh, eighth and ninth grade boys but not in between physical ability and self-concept.

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Mahone did the study to determine whether physical educators produce more physically educated students under the modular scheduling system as compared to traditional scheduling. Boys and girls of physical education classes in ninth and tenth grade were used as subjects. Total 2040 students were tested during school year. Of those tested 1191 students were usable for this study. Hypothesis was that there is no significant difference in physical fitness pre and post scores between ninth and tenth grade boys and girls enrolled in a modular and a traditional school. There are no significant differences in sports skills pre and post scores of the same subject of the study.

Instruments used to measure the achievements of students included 600 yards run, pull-ups to test physical fitness and various sports skills test. Football and basketball test were given to all ninth and tenth grade boys, basketball

to all ninth grades girls and volleyball to all tenth gradegirls. Sports skills tests were administered at the begining and end of each six week teaching unit.

Statistics showed that there was overall minimal improvement correlation matrix showed that little correlation of physical fitness scores and sports skill test items. The data presented reveal that student in physical education in these schools did not gain appreciably under either schedule in the area of physical fitness or sport skills. There were few significant gain differences in the group tested.

On the basis of performance of Lincoln Oseretsky Motor Development Scale and Eight selected gross motor task, Torbert ranked the boys within the top and bottom 27 percent to investigate the relationship between motor proficiency and self-concept. He found that

43 Marianne Rothhass Torbert, "Relationship Between Motor Proficiency and Self-concept of Sixth Grade Boys" Dissertation Abstracts International 32 (June 1972):6802-A.
the self-concept 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 five manipulatory motor abilities and that self-concept appears to be related to power, speed, strength and endurance.

Johnson carried out the study to gain an understanding of the inter-relationship between a student's level of physical fitness. The purpose was to determine if Negro self-concept of White students. 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 White than that of the Negro high school students.

Dobson studied that there is much controversy


across the country today as to the status of physical education, inter-scholastic sports, and little league programme for children between the ages of eight to twelve years of age. This study was undertaken to determine the status of physical education and inter-scholastic sports in the public schools of Oklahoma (grades four to six); a sub-study involving little league programs in the communities where the schools were located was conducted for analysis purpose. A questionnaire was used to classify the 690 elementary schools districts in Oklahoma. A stratified random sample of size 50 was drawn from the school districts personal visitations were made by the writer to the 50 schools to follow up questionnaire results and to obtain more thorough answers to various sub-problems.

Majority of elementary schools in Oklahoma had some time of physical education programme. Many of these were very weak and some actually consisted of interscholastic sports rather than basic physical activities for "all" children. More than 50 percent of the elementary school districts had interscholastic sports programs in operation with basketball, baseball, football
track and field and softball (in that order) being more popular.

Schools offering physical education programmes were superior to inter-scholastic sports programmes in the number of skills being offered. A phase of the study which sought to find out if schools emphasizing inter-scholastic sports were winning more contests as a significant level than schools emphasizing physical education, revealed that they were not doing so. More students were found to be participating in physical education programmes than in inter-scholastic sports programmes.

46 Gussis took a study to investigate the influence of selected sports skills oriented programmes of physical education on the self-concept and body image of boys in grade ten. 163 boys from four tenth grade required physical classes were used as sample. Random method was used for the boys participating in the tennis (N=49) and soccer (N=48) programmes. Those were

not selected for tennis (N=49) and soccer (N=29) were served as controlled group and were given free play classes of physical education during twenty class instructional period.

Revised Dyer Back Board Tennis Test and the McDonald volleying soccer test and tennessee self-concept scale and body cathix test were used.

't'-Test, analysis of covariance and the Pearson Product Moment correlation coefficient was used to compare and to measure these aspects.

Conclusions of the study were (1) the experimental tennis and soccer group made statistically significant gains in terms of tennis and soccer sports skill level as compared to controlled group. (2) The experimental group didn't make significant gains in terms of self-concept and body image level after participating programme.

Stone\textsuperscript{47} did a study on forty two physically

\textsuperscript{47} Marjorie Eleanor Stone, "The Relationship of Selected Physical Activities of Handicapped College Student" Dissertation Abstracts International 31 (April 1971): 5188-A.
handicapped undergraduate college students, nineteen males and twenty three females enrolled in Adaptive physical education at Kansas State Teachers college. Stadical the effects of improvement in physical education performance in a nine week physical education class of selected activities on self-concept of physically handicapped students. Related areas of investigations were the relationship between a moderate or severe disability and physical performance and the relationship between male female differences and both self-concept and physical performance. They were assigned to one of four selected physical activities of archery, bowling, swimming and therapeutic exercises.

The instruments employed to assess the major variables of study were: (1) the index of adjustment and values yielding a self-concept score: an ideal concept score and a discrepancy score (2) skill test yielding a physical performance score in each of the four selected physical activities. Chi square correlation were employed to test the hypothesis pertaining to (i) the relationship of moderate and severe physical disability rating and physical performance scores. (2) the relationship between physically handicapped
male and female physically performance scores, and the relationship physically handicapped male and female self-concept scores. All hypothesis were tested at the .05 level.

Analysis of the study revealed a significant relationship between self-concept and improvement in archery (.05 level) bowling (.01 level) swimming (.05 level) and therapeutic exercise (.1 level).

Conclusions were that (1) physically handicapped college student who participate in selected physical activities improved significantly in both physical performance and self-concept scores. (ii) physically handicapped males and females do not differ significantly in either physical performance scores in selected physically activities or in self-concept ratings. Further a moderate or a severe physical disability does not significantly affect improvement of performance scores in selected physical activities of handicapped college students.

Killam\(^{48}\) conducted a study on groups of

\(^{48}\) Mary Frances Killam, "The Relationship Between the Body-image and Movement-concept of College Freshmen Women with Low, Average, and High Motor Ability and Posture" Completed Research in Health, Physical Education and Recreation 9 (1967):87.
freshman women (25 each) who were high, average, or low on both the Scott three-item motor ability test and the New York state posture rating test were given Q sorts to measure body image and movement concept. The correlation between body-image and movement concept within the low group was significant at the .05 level but was not significant within the other two groups. Differences between body-image and movement concept were not significantly different within groups. Movement concept scores differed significantly between the low and high groups but not between the average group and the other two. Body image scores did not differ significantly among groups.

Nelson tested 42 subjects before and after a 7 week basketball unit for motor ability with Scott's 3 items test and for real self and ideal self concept with a 75 statement Q sort technique. They were classified into low, average, and high motor ability groups. Self

concept showed no significant differences among motor ability groups before or after the basketball unit, although ideal-self concepts changed for the average and high motor ability groups and real-self concepts changed for all groups. Self-concept had no significant relationship with motor ability and real-self concept had no significant relation with ideal-self.

Smith examined the nature of problem solving and its potential application in movement education was discussed. The review of studies focused on the unique meanings inherent in human movement, the learner and his perceptions, the teacher's function in the learning environment, and other environmental factors. A discussion was made between problem-centered learning and the application of known principles to new situations. Problem solving was discussed as a process employed by the learner. The teacher's function was considered in assisting problem recognition, motivation, the selection of procedures, and evaluation.

Problem solving in movement education may effectively focus on the capabilities of the body and provide the base for a hierarchy of specific motor skills particularly for elementary school children. Not all situations in which the learner is required to develop a solution involve problem solving. Examples and guidelines for teachers were offered and implications for objectives, curriculum planning, and professional preparation were suggested.

Hirsch investigated was the effect of level of movement Cathexis and self-confrontation on change in expressed movement satisfaction of college women (N=165). The study employed a 3x4 factorial arrangement with high average, and low movement Cathexis a 4 videotape self-confrontation procedures. Movement Cathexis was measured by Nelson and Allen's scale for the appraisal of movement satisfaction. Following the videotape self-confrontation procedures, the discrepancy scores between the pre-test

and 't' the post-test were submitted to ANOVA. The results indicated no difference among the self-confrontation procedures. However, among the movement Cathexis level, the Newman-Keuls posteriori multiple comparisons test revealed that the low movement cathexis group had a different positive change (P<.01) from both the average and the high movement cathexis group.

Parker conducted a study in which the non-physical education major students were categorized according to low, middle and high motor ability groups, and the 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 tests. Self-concept differed significantly only between the low non physical education major group and physical education group.

Mauser and Reynolds studied the effects of a developmental physical activity programme on children's body coordination and self-concept. Significant increases in body coordination, little change in self-concept, and moderate, negative correlations between these variables were found after 12 children participated in an eight-week developmental physical activity programme.

Summary of Literature:

The literature reviewed by the investigator has thrown light on the aspect of physical education and movement education with regard to self-concept of boys and girls amongst various sections.

Many authors have reported that movement education is conducive to the development of positive attitudes towards physical activity. It has also been reported that the physical

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education programme with a variety of sports develops positive attitude towards physical activity. Teacher behaviour has also been reported to influence student attitudes towards physical activity.

Movement has been identified as the genesis of self-concept formation. The findings of research with regard to the comparative effects of movement education and physical education on self-concept are rather conflicting. It has been suggested that children must be intrinsically motivated if positive changes in self-concept are desired.