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CANADIAN THESES ON MICROFICHE / THÈSES CANADIENNES SUR MICROFICHE

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TITLE OF THESIS/*TITRE DE LA THÈSE* The Effects of Performance in a Motor Ability Skills Test on the Athletic Self-Concepts of Elementary School Boys Aged Six, Seven and Eight

UNIVERSITY/*UNIVERSITÉ* U. of Alberta, Edmonton.

DEGREE FOR WHICH THESIS WAS PRESENTED/ *GRADE POUR LEQUEL CETTE THÈSE FUT PRÉSENTÉE* M.A.

YEAR THIS DEGREE CONFERRED/*ANNÉE D'OBTENTION DE CE GRADE* 1976

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THE UNIVERSITY OF ALBERTA

THE EFFECTS OF PERFORMANCE IN A MOTOR ABILITY SKILLS TEST ON THE ATHLETIC SELF-CONCEPTS OF ELEMENTARY SCHOOL BOYS AGED SIX, SEVEN AND EIGHT

by

© ALLAN JACOB PHOMIN

A THESIS

SUBMITTED TO THE FACULTY OF GRADUATE STUDIES AND RESEARCH IN PARTIAL FULFILLMENT OF THE REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS

DEPARTMENT OF PHYSICAL EDUCATION

EDMONTON, ALBERTA

FALL, 1976

THE UNIVERSITY OF ALBERTA

FACULTY OF GRADUATE STUDIES AND RESEARCH

The undersigned certify that they have read, and recommend to the Faculty of Graduate Studies and Research, for acceptance, a thesis entitled "The Effects of Performance in a Motor Ability Test on the Athletic Self-Concepts of Elementary School Boys Aged Six, Seven and Eight" submitted by Allan Jacob Phomin in partial fulfillment of the requirements for the degree of Master of Arts.

Robert G. Glassford
Supervisor

Murray Smith

Date June 24, 1976

ABSTRACT

There were two main purposes of this study. The first was to construct a conceptual and empirical tool for assessing elementary school children's athletic self-concepts. The second was to utilize the evolved instrument and its accompanying methodological procedures to examine changes in the athletic self-concepts of elementary school boys as a result of their performances in a general motor ability test.

The instrument underwent several changes in its development in order to facilitate its comprehension and administration with young children. When ready for the pilot study, it was administered to thirty male children in grades one to four to assess its validity, reliability and objectivity.

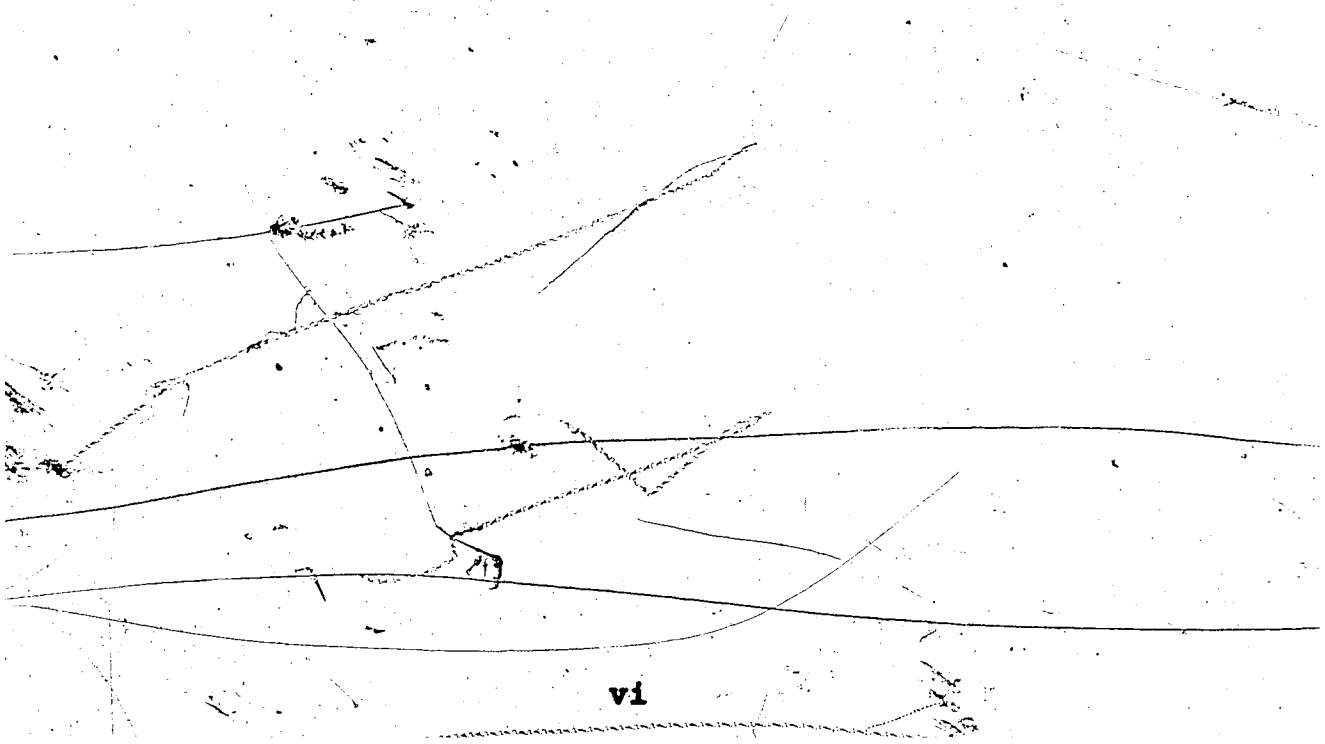
The experimental sample was limited to forty-five male children in grades one and two. The One Group Pre-test Post-test Design was utilized, and the subjects were interviewed individually by the experimenter to obtain a measure of their expressed athletic self-concept with the evolved instrument. Following the interviews, each class of boys was administered a motor ability skills battery examining the children in catching, jumping, balancing, running, throwing and kicking. Each child performed individually in the presence of his classmates. After each test the children were told their times or distances achieved and their rank in the class.

After all four classes were tested each child was reinterviewed to obtain a second measure of his athletic self-concept. Two weeks after the tests the children were reinterviewed again to obtain a third measure of their athletic self-concepts.

The qualitative data collected in the pilot study were subjected to Pearson's product-moment correlation to determine the instrument's validity, reliability and objectivity. The data collected in the experimental study was subjected to a two-way analysis of variance and t-tests for significant differences between the three measures of athletic self-concept taken and Spearman's rank-order correlation for determining the relationship between the children's skill levels and their athletic concepts. Frequency distributions and percentage breakdowns of the subjects with respect to age, grade, class and occurrence of the social comparison process were also computed.

The results from the pilot study indicated that the instrument was valid, reliable and objective. The results of the experimental study revealed that there was a highly significant relationship between the children's rank in their performances in the skills test and their expressed athletic self-concepts: the children as a group exhibited a significant downward shift in their athletic self-concepts as a result of their performances and the feedback given: the lower skilled children displayed a significant downward shift while the highly skilled children exhibited a slight upward

shift and that after a period of two weeks from the performance tests the children displayed an upward shift in their expressed athletic self-concepts towards its previous level prior to the performance tests.



ACKNOWLEDGEMENTS

The author wishes to express his great appreciation of the children who participated in this study. Their enthusiasm made the task of data collection an extremely enjoyable experience. Indebtedness is also acknowledged to the Public School Board of Winnipeg, the Separate School Board of Edmonton, to the principals of Liester Elementary School, Windsor Park Elementary School, St. Boniface Separate School and St. Stanislaus Separate School, Mr. Morican, Mr. Zapatch, Mr. Owens and Mr. Steblyk and to the teachers of the classes which were involved in this study, Mrs. Carston, Mrs. Zielinski, Mrs. Shaw, Mrs. Duncan, Mrs. Kozens, Mrs. Blanjaar, Miss Laing, Mrs. Magnan and Mrs. Player. Their cooperation was always of the highest degree.

I would also like to thank Dr. G. Glassford, chairman of the thesis committee, for his encouragement and advice. In addition, Dr. D. Sande and Dr. M. F. R. Smith served on the thesis committee and my sincere gratitude is extended to them for their insightful and constructive criticism.

Finally, I would like to extend my thanks to Miss Sue Seaborn for her help in the drawing of the cartoon characters for the instrument.

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CHAPTER I

STATEMENT OF THE PROBLEM

INTRODUCTION

In physical education the underlying objective may be seen as the promotion and encouragement of participation in physical activity. While the greater part of the activity is manifested by the physical, the interpersonal forms of behavior within the realm of the activity are social in nature. Physical Education, as a discipline, has made significant progress in the development of a conceptual and empirical basis of sport and physical activity, yet a scientifically based insight into its behavioral and social basis is just beginning.

Sport for children has become increasingly popular as evidenced by the number of "Little League" and other community organized programs available for children. Smith (1975) has discussed the positive contributions of physical activity to the child's social and psychological development but he noted the negative dimensions which emerge when these "adult organized environments" are not developed on the basis of the objectives of the participants (Smith, 1973). He stressed concern for the child's self-concept or self-image as an important factor in a child-centered approach to

planning and developing programs for children with optimal growth through physical activity as the primary goal.

In recent years the area of self-concept has been the focus of much research in an effort to greater understand the socio-psychological basis of physical activity (Orlick, 1972; Craig, 1975; Smith, 1975). With children becoming more involved in organized competitive sport this construct can play a vital role in understanding how competitive sport and other physical activity programs with their inherent pressures, successes and failures can affect the internal evaluation mechanisms of young children.

Unfortunately, one of the main problems in examining the construct of self-concept with young children is the lack of adequate instruments. The following study was conducted in recognition of the need for research in this important area.

The Problem

The central purpose of this study was to construct (partly through modifying and synthesising pre-existing instruments) a conceptual and empirical tool for assessing changes in the athletic self-concept of elementary school boys as a result of their performance in a motor ability skills test.

The achievement of this objective included several stages:

1. The development of a conceptual framework for examining:
   (a) The self-concept of young children with respect to general self-concept theory.
   (b) The measurement of children's self-concept.
   (c) The relationship of athletic self-concept to total self-concept.
   (d) Changes in athletic self-concept as a result of various experiences.
2. The development of an instrument appropriate for the assessment of elementary school boys' athletic self-concepts.
3. The utilization of the evolved instrument for the assessment of athletic self-concept and the methodological procedures that accompany it in an exploratory case study examining changes in the athletic self-concepts of elementary school boys as a result of their performance in a motor ability skills test.

Justification of the Study

In recent years there has been increasing criticism of the structure of games and sports regarding their potential adverse effects on children (Ellis, 1973; Glassford, 1973; Orlick, 1974; Orlick and Botterill, 1975; Duthie and Guillmette, 1975). Orlick and Botterill's Every Kid Can Win epitomizes this concern and stresses the importance of "positive" sports and physical activity environments for children. When these environments are not present Orlick

(1972) has shown that in most cases children develop low self-perception of their athletic ability and choose to drop out of sport entirely. Smith elaborated on the pressure of competition on the self-concept of children:

> While it is reasonably easy to see how sport might have a positive effect on self-image it will be useful to ask how sport or physical activity might contribute to a negative self-image. We could begin by examining carefully the effects of excessive use of competition which is characterized by external comparisons. It is great to be a winner but unfortunately there can be only one and the rest are, by definition, losers (1975:3).

However, this contention is not a commonly accepted one as competition is prevalent in the games played in the majority of elementary school physical education programs. Smith also feels that:

> . . . if we employ methods of teaching that run the risk of branding the majority of participants as losers . . . we are creating conditions that turn people off activity and contributing to the development of a negative self-image (1975:4).

With such concern for the well-being of the child in physical activity, the child's self-concept or self-image has become one of the most widely used constructs to assess social and psychological changes. Most studies which have used these constructs have been directed toward the young adolescent and the adult but little has been done to investigate the status of self-image or self-concept and shifts in these phenomena amongst elementary school children, particularly with reference to physical activity

and the impact that physical activity programs have upon such shifts. Wylie (1974) and Simon and Smoll (1974) suggested that lack of inadequate instruments could be the reason for this dearth of research with young children.

In most cases the self-concept of elementary school age children has been measured with a holistic approach examining those factors making up the total self such as satisfaction and happiness, home and family relationships, ability in games, recreation and sports, personality traits and emotional tendencies and behavioral and social characteristics in school. Among those tests which are most widely used are the Piers-Harris Children's Self-Concept Scale (Piers, 1964), the Thomas Self-Concept Values Test (Thomas, 1971) and the Lipsitt Children's Self-Concept Scale (Lipsitt, 1958). These tests and most self-concept inventories consist of statements or words to which the child responds either positively or negatively. Generally a number of these statements or words will relate to the child's acceptance of his physical appearance, his body, his strength and other physical attributes and his attitudes and ability in physical activity, games and recreation. This sub-self can be identified as the athletic self-concept (ASC).

Recently there has been a trend in the literature to segregate and examine specifically ASC as to the activity in which the individual is participating. Scott (1973), in examining teenagers' candidacy into football teams, based

his analysis of "football-selves" on the boys' self-ratings in addition to their perceived coach's rating in various football skills. Craig (1975) measured elementary school children's self-concepts relative to their ability to play games by their self-ratings and their perceived teacher and classmates ratings in the skills used in two modified games. Zaichowsky (1975) combined a general self-concept test with a test designed to determine a youngster's attitude toward physical activity. The underlying purpose was to assess the impact of a childs' participation in a physical education program upon his general self-concept and his expressed attitude toward physical activity. He found a significant increase in both self-concept and attitude toward physical activity of children involved in the program compared to the control group which was not. Theoretically this separation of the self attitude into its cognitive and affective components is valid, however, the development of an athletic self-concept index would include the presence of an inherent attitude as a result of prior experience.

The purpose of developing an athletic self-concept scale would be to obtain a means of objectively measuring how a child and his referent others perceive him in the athletic role. Currently, no standardized instrument exists to assess the athletic self-concept per se of elementary school children. The instrument, having been developed, would be useful as a diagnostic tool in assessing present or new

physical education programs in the schools and adult organized children's sports programs in the community and their impact on children's athletic self-concepts.

Theoretical Assumptions

Assumption 1. Since self-concept is the outcome of a series of central person-related environmental experiences which effect the individual and since physical activity, sports participation and physical skill acquisition are a part of the social milieu, it was assumed that where children have had negative experiences in these latter domains (which may have varied in degree and magnitude), such negative experiences will function to reduce the child's athletic self-concept.

Assumption 2. It was assumed that where children have had positive experiences in physical activity, sports participation and physical skill acquisition such positive experiences will function to increase the child's atheltic self-concept.

Assumption 3. Self-concept was assumed to be a fairly stable and pervasive social-psychological phenomenon.

Theoretical Hypotheses

Hypothesis 1. Children who performed poorly on the motor ability tests would score low on the athletic self-concept

index.

Hypothesis 2. Children who performed well on the motor ability tests would score high on the athletic self-concept index.

Hypothesis 3. Children would, as a result of their performance in the motor ability tests and the feedback received, exhibit a shift in their expressed athletic self-concepts toward the rank they achieved in the skills tests.

Hypothesis 4. After a period of two weeks from the performance tests the children would exhibit a shift in their expressed atheltic self-concepts towards its position prior to the tests.

Statistical Hypotheses

In all cases the statistical analysis was carried out through the application of the null hypothesis.

Definition of Terms

Athletic Performance. The perceived merit of one's athletic endeavors in relation to standards set by the individual, his referent others, or some external criterion.

Self-Concept. "The person's total appraisal of his appearance, background, origins, abilities and resources, and attitudes and feelings which culminate as a directing force

in behavior" (LaBenne and Greene, 1969: 10).

Athletic Self-Concept. The person's appraisal of that aspect of his self which encompasses the role he assumes in physical activity, sports and recreation. It is a product of his experiences--successes and failures in this physical domain and the impact of the evaluations given by his significant others.

Significant Others. "The people who most intimately administer the 'rewards' and 'punishments' in a person's life" (LaBenne and Greene, 1969: 14).

Socialization. "The process by which persons acquire the skills, knowledge and dispositions that make them more or less able members of their society" (Brim and Wheeler, 1966: 3).

Social Role. "The pattern of customary behavior that is defined and expected by members of the social group . . . within its own recognized patterns of behavior" (Gale, 1969: 255).

Social Comparison. The process whereby an individual in his drive for self-evaluation compares his opinions, abilities and emotions to his significant others and others in his presence.

Operational Definitions

Theoretical definitions were defined operationally as

follows:

Athletic Self-Concept. In this study athletic self-concept was operationally defined as the rank value which a child assigned himself in the Phomin Athletic Self-Concept Index (PASCI). The higher the value, the more positive the athletic self-concept of the child.

Athletic Ability. Athletic ability in this study was defined operationally as the scores (times and distances achieved) and rank orders that were presented to the children upon the completion of the motor ability performance skill tests. These skills were comprised of running, jumping, Catching, balancing, throwing and kicking. A complete description of the skills battery appears in Appendix E.

Self-Concept. Self-concept in this study was operationally defined as the score an individual received in the Piers-Harris Children's Self-Concept Scale (PH). The higher the score, the more positive the self-concept of the individual.

Delimitations and Limitations

Delimitations

1. The sampling of subjects was delimited to forty-five grade one and two male children in the Edmonton Separate School System. The subjects ranged from six to eight years of age.

2. The study examined children's expressed athletic self-concepts as measured by their self evaluation and their perceived teacher and classmate's ratings in the six motor skills in the evolved instrument. Other skills and activities comprising of children's varying athletic experiences would perhaps have contributed to a greater definitiveness and desparity of their atheltic self-concepts.

Limitations

1. The social comparison process in the experiment was limited to only one performance by the children in the motor ability test battery.
2. Owing to the fact that this study was limited to the examination of grade one and two male children in Edmonton, any generalization arising from this study will not be applicable to other areas or age groups.
3. In a 'quasi' experiment of this nature it is not possible to control all variables which could affect the results. However, in this study an effort was made to identify and clarify the social comparison process by restricting each child to his activities at school with his classmates. In addition, the Child Sports Environment Interview yielded valuable information concerning each child's activity

patterns, athletic aspirations and expectations from participation that contributed to a greater understanding of his athletic self-concept.

4. The evolved instrument was environment specific in that it measured the children's expressed athletic self-concepts in the social context of his class at school.
5. The reliability of the PASCI was based on the administration of the instrument in two settings--one, an individual interview session and one, a group structure.

CHAPTER II

REVIEW OF THE LITERATURE

INTRODUCTION

The review of literature has been broadly divided into four main areas: the first section is focused upon general self-concept theory as it relates to child development, the second upon the measurement of children's self-concept, the third upon the relationship of athletic self-concept to the total self-concept and the fourth upon changes in the self-concept as a result of various experiences.

Self-Concept Theory and Child Development

One of the major developments in the life of any child is the emergence and formation of his self-concept. Mead (1934), Cooley (1902) and Sullivan (1947) have provided a theoretical framework whereby reality can be examined in theoretical terms which lead to explanation and understanding of this process in which an individual may gain insight into his behavior from the "reflected appraisal" of people. Underlying this process is the understanding that human behavior involves the mediation of physical stimuli with "significant others" in the individual's reference groups by socially learned symbolic meaning (Rose, 1962: 5).

This social learning of words, norms, meanings, values and rewards follows the same laws of reinforcement and facilitation as other forms of behavior (Bandura, 1963). Thus, self-perception involves the child learning and interpreting from the behavior of others towards himself whether they accept or reject such aspects of his being as his appearance, abilities, ideas, attitudes and feelings. Thus, the development of the child's self-concept involves learning the perceptions of his personal self as an object in his various roles and situations (Brim and Wheeler: 1966). In a child's world those people who form the "significant others" include his parents, peers and teacher. The perceived evaluations of these significant others form the basis of an individual's self-concept (which develops in the early years) and determines whether a person's view of himself is essentially negative or positive.

The development of the self-concept has its beginnings in self-awareness where a child gains a sense of self primarily through differentiation (Jersild, 1960) interacting with his physical environment through movement exploration. Havighurst (1953) included "building a wholesome concept of self" as an important developmental task of early childhood while Corey and Herrick (1963) emphasized the need for achieving competence in motor control and coordination through basic motor movement. The relationship between early movement experiences and self-discovery is evident at this

level. These first two years of exploration have been called "the sensorimotor stage" by Piaget (1969) which in turn encompasses this sensory exploration of the environment by the child.

The child's expanding awareness grows to include the significant others in his immediate world--his mother, father and siblings. A further task at this level of development is the child's adjustment to a social group and the development of the skills necessary for him to become a functioning member of such a group. From a social learning perspective, parents and older siblings are important factors in providing models for imitation and reinforcement (McNeil, 969). Indeed, models are used in all cultures to promote the acquisition of socially sanctioned behavior (Bandura and Walters, 1963).

> To the extent that the models give satisfactory rewards (sence of security) for the appropriate behavior the child will structuralize acquiescence (identification). However, if the rewards are not satisfactory or the demands tax his limited capacity, he will structuralize rebellion or acquisition with resentment (Anderson, 1952: 230)

In this manner the child is continually taking the attitudes and emulating the behavior of his significant others who supply the mirror from which he learns to see himself and from their responses he constructs his self-image.

Prior to the time a child enters school he has examined his social self in relation to his family and small play groups. With his entrance into the school sphere

the self-image is accentuated by the child's increased involvement with other children. In school he is forced to expand his social consciousness to a group of twenty to thirty children organized much more formally and impersonally. The child is now faced with the task of establishing and maintaining a role in the peer group. In conjunction with this is the need to further develop physical and social skills necessary for ordinary games and other social activities found in the school setting. In the school environment the teacher, with the authority invested in her, has a great deal of influence and control over the learning environment created and maintained in her classroom. "If the self develops through transactions with the environment it would certainly follow that most children learn to behave and view themselves in the way in which their teachers expect" (Gordon, 1969: 161). Several studies (Brookover, Thomas and Patterson, 1964; Rosenthal, 1968; LaBenne, 1965; Davidson and Lang, 1960; Buckley and Scanlon, 1956; Wesson, 1973) clearly indicate a direct relationship between the child's self-concept and his manifest behavior, perceptions and academic performance. Although each child perceives the school in his own way, the school situation that is provided for him plays a tremendous and often overlooked role in determining the final outcome of his self-concept.

As soon as a child begins to play with other children, he ceases to be a member solely of his family group, and enters the society of his peers. In the early years of

elementary school parental influences are still present, but little by little the standards of age-mates come to the fore. Actions and opinions of play associates increasingly occupy the child's attention and there is a growing desire for identification with the peer group (Bienestock, 1954).

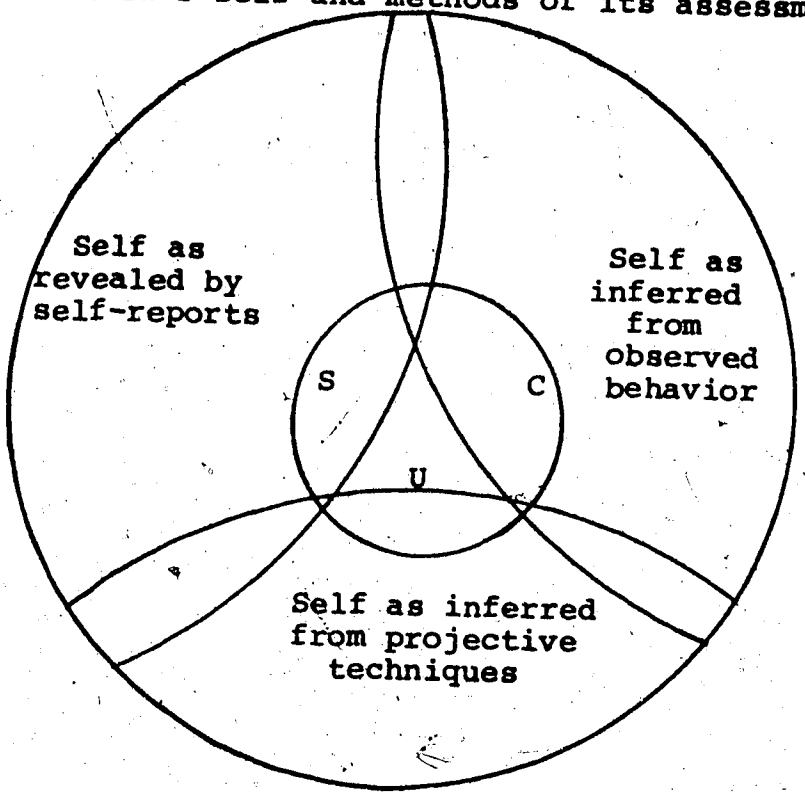
> Through social experience with the peer group a child has to learn whether he is brave or cowardly, handsome or homely, quick-witted or deliberate, leader or follower. This process works in a fairly open fashion as children are not backward in calling each other names and classifying each others behavior (White, 1952: 132).

According to Festinger (1954) and Schacter (1959), a child's evaluation of his playmates is termed social comparison. Children, by actually judging the reactions of their peers to their own performances and behavior, receive external feedback as to whether they are displaying the socially accepted behavior or not and to what degree. Thus, the self-concept, central and integrative in personality is formulated largely by the social interactions of the child within his play group.

The Measurement of Children's Self-Concept

> The organization of the child's self is conceived as the total integration of his biology and life experiences as he has organized and interpreted them into one system. It is a product at any given moment in time, of all his transactions. The self-concept is only one portion of the totality of his self-system: it is that portion that is more highly integrated, more consistent and perhaps under certain conditions that portion of which the child is most aware (Gordon, 1966: 53).

Gordon (1966) presents a paradigm depicting the three facets of the child's self and methods of its assessment.



Key:

- S-C is the self-concept
- U is the part of the self unavailable to public study

(Gordon, 1966: 53)

Wylie (1974), in a critical review of the self-concept research, divided self-concept measures into two categories: those mostly aimed at measuring total or global self-concept and those intended to measure self-concepts of more specific or limited dimensions. Although in both categories the formats may vary including Q-sorts, rating scales, adjective checklists, semantic differentials or

non-verbal approaches to elicit the subject's response, the most crucial aspects to consider with any psychological measuring device is its validity, reliability and objectivity. As Fitts has noted:

> . . . the measurement problem in self-concept research (is) critical. Scores of devices . . . being utilized in hundreds of self-concept studies being reported (are) hastily devised, poorly developed, unstandardized and unrelated to each other (1972: 1).

Examples of tests which attempt to measure self-concept for children at ages five to eight which have been rejected for a variety of reasons include the following: the Children's Self-Conception Test (Creelman, 1955) offers no data on reliability or validity and is lengthy (two and one-half hours) to administer; the Elementary School Index of Adjustment and Values (Bills, 1951) has low reliability and the author himself cautions against using any of the indices as individual measures; the Perception Score Sheet (Combs and Soper, 1963) requires specially trained personnel to perform observations and ratings; and the Measurement of Self-Concept in Kindergarten Children (Levin and Lafferty, 1967) is a projective drawing technique which requires sixteen administrations and its interpretation requires specially trained personnel.

In the sub-sections to follow the Piers-Harris Children's Self-Concept Scale (PH) (Piers, 1964), the most widely accepted global self-concept scale for elementary school-aged children, will be scrutinized in terms of its

development, validity, reliability and objectivity. Other scales stemming from the PH and those relating to physical activity will also be examined. The reasons for this review were to make the reader cognizant of test development procedures and aware of the formats used in these instruments. Furthermore it was intended to promote a greater understanding of the evolvement of the instrument developed in the present study.

Global Measures of Children's Self-Concept

Piers and Harris (1964) developed and standardized a general self-concept scale which can be used with children over a wide age range. The original item pool was derived from Jersild's (1952) collection of children's statements about themselves. These were grouped into the following categories: (a) Physical characteristics and appearance; (b) Clothing and grooming; (c) Health and physical soundness; (d) Home and family; (e) Enjoyment of recreation; (f) Ability in sports; (g) Ability in school and attitudes towards school; (h) Intellectual abilities; (i) Special talents (music, arts); (j) Just me, myself; and (k) Personality characteristics. The original form of the PH comprised of 164 statements to which the child would answer "yes" or "no". The scale, entitled "The Way I Feel About Myself" was administered to ninety children in grades three, four and six, in a small school district. Items answered in one direction by

fewer than 10 per cent or more than 90 per cent were inspected, and in most cases, dropped. One hundred and forty items remained. These were administered to four classes each of grades three, four and six in a large school system. As a preliminary approach to scoring, statements were classified by three judges as reflecting adequate (high) or inadequate (low) self-concept, and repititious items originally included to estimate consistency were discarded. One hundred items remained of which ninety-five could be classified leaving five which were retained but whose direction was not determined. Using the grade six sample, the thirty highest and thirty lowest scores were identified and on each item Cureton's chi test (Lindquist, 1951) was applied to determine whether the item significantly discriminated between the high and low self-concept groups at the .05 level of significance or better. In addition, only those items answered in the expected direction by half or over half of the high group were used. Eighty items met these two criteria and constitute the present scale. Reliability data from Pennsylvania and Oregon public schools yielded coefficients ranging from .77 to .93 using the Kuder-Richardson Formula 21 and Spearman-Brown odd-even formula.

Non-Verbal Global Self-Concept Scales

In reviewing the self-concept literature, Martinek and Zaichowsky (1975) saw the need for a non-verbal,

culture-free instrument designed to measure global self-concept of children. Since the Piers-Harris Scale (Piers, 1964) was considered to be one of the better validated instruments and was the most widely used verbal self-concept instrument (Wylie, 1974; Robinson and Shaver, 1974), those items which had high factor loadings were selected as the initial items for the Martinek-Zaichowsky Self-Concept Scale (MZSCS). Twenty-five items which represented six factors as well as items from the Jersild (1952) collection were selected for non-verbal portrayal. The selection was done in part by the authors as well as by a panel of experts in psychometrics and personality theory.

The MZSCS was validated via internal consistency measures which ranged from .75 to .92, with an overall Hoyt coefficient of .88. Concurrent validity was also obtained through comparison with the Piers-Harris Scale, Coopersmith Scale (1967) and a teacher's rating. A correlation of .49 was obtained with PH scores from a sample of 120 elementary school-age children, 6 through 10 years of age. A correlation of .06 was found with scores from the MZSCS and teachers' ratings. This low correlation between teachers' perceptions and student self-concept has been previously reported (Piers, 1969). It appears that this procedure for determining concurrent validity is questionable. A correlation of .56 was obtained with the Coopersmith scores from a sample of 86 children aged 7, 8, 9 and 10 years of age. Although the

authors feel that the MZSCS can be used as an objective measure of children's self-concept in the schools they provide no objectivity measures for the instrument. This is a criticism of numerous self-concept scales available.

Specific Self-Concept Scales which relate to Physical Activity. Orlick et al., (1975) developed a children's psycho-social inventory to assess the effects of the Territorial Experimental Ski Training Program (TEST) in the MacKenzie Delta of the Western Canadian Arctic. One specific objective of TEST was to motivate northern youth to greater general achievement in life through an achievement-oriented ski program. The inventory was unique in that it had to accommodate the nuances of the Northern culture. In developing this specific measure the researchers included six items which were directly related to the cooperation/competition domain. These items attempted to tap the importance of sharing, helping others, man vs. nature, teamwork, winning and being humble in victory. Other items attempting to measure major self dimensions were construed from Rosenberg's Self-Esteem Test, Piers-Harris Children's Self-Concept Scale and Rosen's Achievement Motivation Inventory. Other items which were of specific relevance to the traditional northern way of life were included to form the final twenty-two items.

The Skimetric Differential Inventory format was a series of bipolar personality/value dimensions each anchored by cartoon-like stick figures accompanying verbal statements. The cartoon-like stick figures accompanying each pole on each variable were introduced partially as a motivational device and partially strengthen the simple verbalization presented. On each of the twenty-two cartoon-like items, subjects were requested to place themselves anywhere along an eight centimeter line which extended from one extreme to another, as is the case with the semantic differential.

Recent Instrumentation

Recent instruments used by researchers have been developed on the basis of the subject's perception of his ability in the specific activity in question. Following this Scott (1973) had junior football candidates rate themselves on a ten point scale in all of the skills they deemed important for football ability. This, in addition to their perceived coach's rating comprised their 'football self'. Craig (1975) assessed grade three children's perception of sports ability by their self and significant others (teacher's and classmates') scores on a ten point scale rating the skills they developed in two modified games.

Zaichowsky (1975), in a recent study, examined children's self-concepts and attitudes towards physical activity by using the Piers-Harris Children's Self-Concept

Scale (Piers, 1964) and the Cheffers and Mancini Human Movement Attitude Scale CAMHM) (Mancini, Cheffers and Zaichoswky, 1976). The CAMHM used a non-verbal medium of artists' pictures depicitng different aspects of the physical activity program they conducted. Subjects responded to each picture on a three point scale of like to dislike. Possible responses were indicated by a face with a smile (like), an expressionless face (neutral), or a face with a frown (dislike). The highest attainable raw score was eighty-one. Test-retest and split-half reliability measures were .97 and .87 respectively. Again it should be noted that no objectivity measure was stated.

The Relationship of Athletic Self to Total Self

The athletic self may be viewed as one possible self-image in a child's total self or "self-other system" (Brim, 1966: 7). As such, the total self is a cognitive-affective structure representing the entirety of the child's perception of himself. Physical activity and the child's image of himself with respect to it may form a more or less dominant part of that total self.

The idea of situational self-image as a part of the person's total self has long been central to the cognitive perspective in social psychology. One of the earliest statements in this perspective was that of James, who suggested that:

> . . . we may practically say that he has as many social selves as there are distinct groups of persons about whose opinions he cares. He generally shows a different side of himself to each of these groups . . . From this there results what practically is a division of the man into several selves (1890: 190-191).

Mills (1953) and Brim (1960) have since elaborated and further substantiated this theoretical conception of self comprised of situational selves.

Through socialization the child learns many roles, modifying his behavior according to each situat n (Brim, 1966). Mead (1934) and Cooley (1902) have described in detail the stages and processes a child experiences in becoming an accepted member of society. Mead (1934) emphasized the importance of being able to attach meanings and behaviors to gestures and words and to develop a social conscience--the ability to see ourselves as objects in the world. The total self, then, is the conglomerate of all the various roles and situations in which we are involved in our society. Modern society, because of the many subcultures and interest groups, often necessitates a highly complex and often seemingly inconsistent composite of selves.

Scott (1973) was the first to apply this perspective to a sporting situation when he examined high school junior football candidates. Sporting self was construed as the person's perception of himself in a sporting role. "It is comprised of aspirations, descriptions, and evaluations of himself on attributes seen as related to the role" (Scott,

1973: iv). Sporting self or football self was seen as one of a number of more or less valued subselves and self-attributes the person may use in perceiving himself as a total person or self. Scott used a football player self rating inventory based on a ten point ordinal scale after that used by Sherwood (1962) and Haas and Maehr (1965) to operationalize the interactionist self. Subjects were asked to list their interests, the importance attributed to each and a self rating in each activity. While the football self ranked first or second in total self value for both participant and drop-out groups, it ranked significantly lower for the non-participant group.

Changes in the Self-Concept as a Result of Various Experiences

In this section the social comparison process will be discussed as an important factor in participation in physical activity and its implications for the self-congruency process. Studies examining psychological differences amongst participants and non-participants will then be presented. Thirdly, studies will be presented examining the status associated with skill proficiency in children and their self-concepts.

The Social Comparison Process and the Self-Concept.

Festinger's (1954) theory of social comparison processes allows for greater insight into the psychological basis of

participation in physical activity. Social comparison yields the drive for self evaluation whereby ". . . there exists in the human organism the drive to evaluate his opinions, abilities and emotions" (1954: 117). Therefore, by participating in physical activity programs relative standards of performance and conduct are made available to the participants for self evaluation. Alderman summarized this process with respect to children at play:

> When young children play they are engaging in social comparison, because no objective standards of how competent they are, are available to them. They can, by accurately judging the reactions of their playmates to their own performances and behavior, receive external feedback as to whether they are doing the right or wrong thing, and to what degree. Such feedback establishes for them a framework within which they can evaluate how competent they are in the "real" world (1974: 253).

When a child compares himself to his friends he is striving to maintain the stability of his image of himself. This process follows that purported by Rogers (1959) whereby an individual strives for self-congruency between his self and his experiential or "phenomenal field". In this process the self constantly shifts with each new experience. Each change carries with it the impulse to resist change as the individual tries to maintain his self-concept. The child may attempt to like his image, as perceived by others, or his self-concept may be changed in an effort to be like his "ideal self". Secord and Backman (1968) have discussed the "strategies" the self may take to maintain self-congruency with emphasis on the maintenance of a stable self-concept.

In some instances there may be a great discrepancy between a child's self-concept and what he would ideally like to be. It must be understood that children tend to judge themselves as they feel judged, a form of the "self-fulfilling prophecy" of Rosenthal (1968). Therefore a child's evaluation of himself in a given situation will be a product of his past similar experiences and already established views.

Psychological Differences Amongst Participants and Non-Participants in Physical Activity. The literature is replete with studies examining the psychological bases of participation in physical activity. Rosenburg (1965) found that adolescents with negative self-concepts tended to be shy, anxious, docile, awkward and neurotic. The lower the individual's self-concept or self-esteem, the less likely he was found to be a highly active participant in extracurricular activities. People with low self-concepts were described as inactive, inordinately subdued, apathetic and outstanding in their social invisibility. Contrarily, people with positive self-concepts or high self-esteem were much more often found to be members of school clubs, athletic teams and other extracurricular activities. In this context it is interesting to note the contention held by Rosen and Ross (1968) that feeling about the body are commensurate with feelings about the self. Schendel (1970), in a three year long study of the psychological characteristics of participants in atheltics, concluded

that the athletic group had a higher sense of personal worth and self-acceptance in both grade nine and twelve. Schendel postulated that whatever produced these differences between athletes and non-athletes had their major influence prior to high school. Orlick's (1972) work yields evidence to this postulation in showing a high significant relationship between the quality of an individual's initial exposures to physical activity and whether or not he will choose to continue to participate in later life. Schendel (1965), in an earlier study, found that both junior and senior high school athletes were significantly different from non-participants with respect to self-acceptance and self-worth. Wilkin (1964) also found participants in interschool athletics to have higher self-concepts than non-participants. Therefore, it would appear from the literature examined that participation in sport and physical activity will contribute to a greater sense of self-esteem and the development of a positive self-concept.

Proficiency in Motor Skills--Peer Acceptance and Status. Hellison (1973) believes that ". . . physical education has a unique, although limited potential for providing significant others who can influence the self-esteem of the participants in certain physical education programs" (1973: 12). Although the evidence is far from conclusive several studies have shown that in some cases improvement in motor skills by participation in motor development programs or other forms of physical

activity has resulted in increased peer acceptance and self-concept (Buell et al., 1968; Lewis, 1972; Carey, 1963). Fretz and Johnson (1968) and Haley (1969) found positive changes in the self-concept of exceptional children who participated in developmental programs of physical activity.

As children grow older, proficiency in gross motor activity assumes a greater importance as evidenced by the prestige value placed on skillful performance by the child's peers. This is supported by the studies of Biddulph (1954), Brace (1954) and Bhurmann and Jarvis (1971) which indicate that the self-confidence and social approval gained by the child in motor activities may be a valuable asset in personality development and social adjustment. Studies by Clarke and Peterson (1961), Clarke and Wickens (1962) and Hartup (1969) have shown the social advantages of the faster and earlier maturing boy for physical activity and for the peer popularity associated with that early superiority as well as "maleness" as culturally stereotyped. Sherif and Rattray pointed out:

> The slow or late maturing boy suffers the slings of an outrageous fortune created by an adult society rewarding physical maturity because of its advantage in athletic and male competitions, which is also mirrored in the status criterion of boys. By age 12, the slow or late maturer begins to experience the blows to achievement efforts and self-esteem which may, indeed, transform him from a happy well-adjusted child to an unhappy teenage pre-pubescent (1973: 5).

CHAPTER III

METHODS AND PROCEDURES

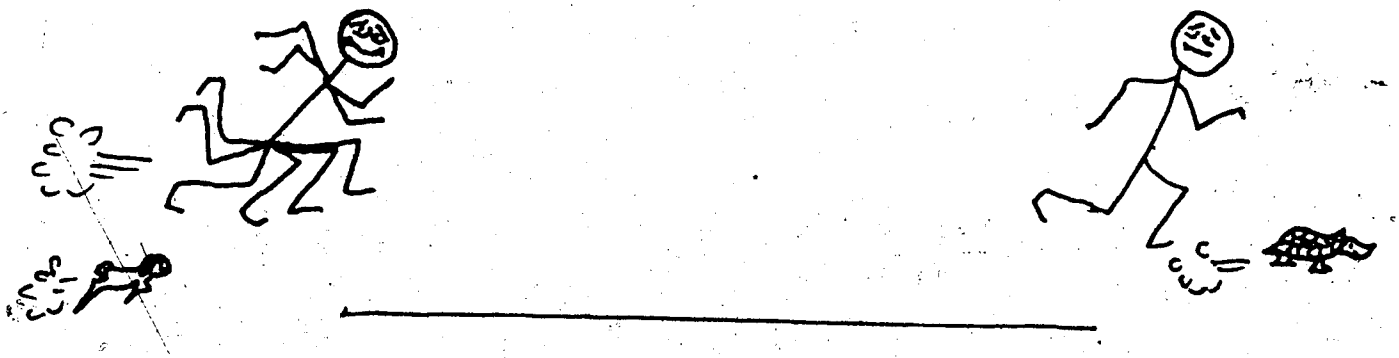
INSTRUMENTATION

Development

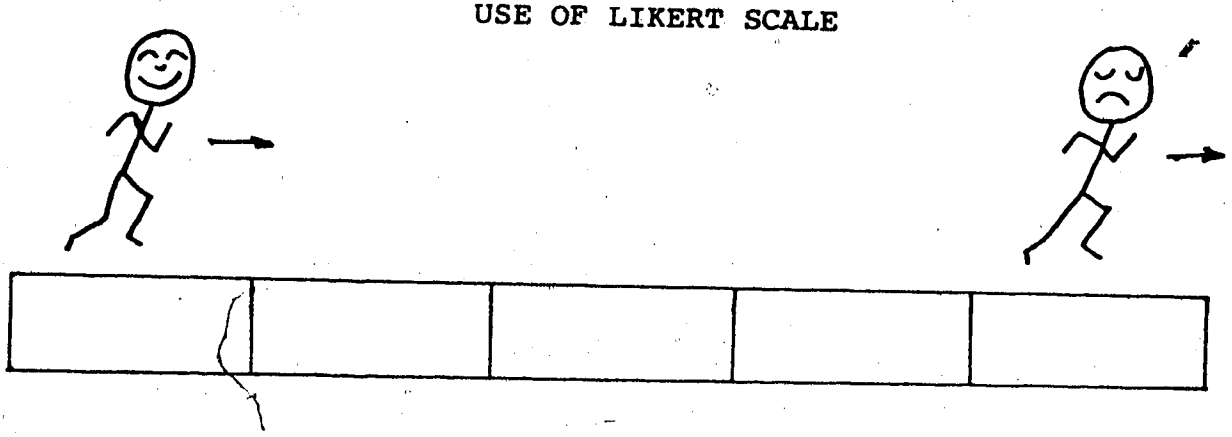
A review of the literature concerning available research tools revealed that no standardized instruments existed which could be directly utilized in the experiment. However, it was evident that the formats of certain instruments could be used in the development of the instrument modified to deal with the specific problem. The instrument, in its development underwent several changes as a result of pre-testing with young children to facilitate its comprehension and administration. The initial instrument was based on cartoon-like stick figures engaged in six basic motor skills with no apparent discrepancies in skill level. The figures were set upon a five-point Likert Scale background, the only difference in the figures was different facial expressions depicting happiness and sadness. The connection of a child's feelings being congruent with his skill level was inherent in the instructions as the child was asked to place himself in one of the boxes depicting his skill level. The original PASCI can be found in Appendix A. After discussion with several experts in the field it was decided to delete the previous

connotation and the accompanying extreme facial (happy-sad) expressions. At this time several additional skills were added to the instrument prior to its first pre-test. During February 26 and 27, 1976, seven boys aged six and seven from Liester Elementary School in Winnipeg, Manitoba were administered the revised PASCI. This revised form of the PASCI may be found in Appendix B. From the varying reactions from these children it was decided to further modify the instrument making several changes. These modifications included the differentiation of skill level as depicted by the cartoon-like stick figures, the delimitation of skills, utilizing only the six original basic motor skills, and the usage of a ten centimeter line similar to that employed by Orlick et. al., (1975) over a Likert Scale to measure the cognitive aspect of the self-attitude.

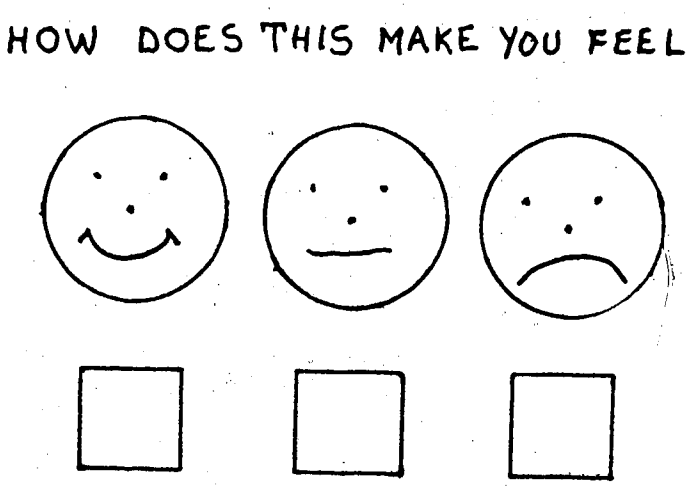
USE OF 10 CENTIMETER LINE



USE OF LIKERT SCALE



In addition, three facial expressions (happy, neutral and sad) were added to measure the affective component of the self-attitude after the work of Ekman and Frieser [illegible] 5).



Use of Three Facial Expressions to Measure Affective Component

These modifications complete, the final form of the PASCI (found in Appendix C) was administered to eight boys in grade one and two from Windsor Park Elementary School in Edmonton, Alberta, March 19, 1976. The reactions of the children were favourable and so no further alterations were made.

As recent instruments had measured the athletic self specific to the skills employed in the activity, it was felt that at the early elementary school level those skills found in basic motor movement should be examined: running, jumping, catching, balancing, throwing and kicking. Although several children have a wider range of experience as a result of organized community sports league participation, these six basic skills were felt to act as a common denominator amongst all children.

The Pilot Study

Objectives. The purpose of the pilot study was to assess the evolved instrument (PASCI) as to the administrative problems associated with it, its validity, reliability and objectivity. In addition, the development of the apparatus and the administrative procedures to be used in the catching skills tests were attempted with the varying age groups of children.

Subjects and Setting. The subjects in the pilot study were thirty male grade one, two, three and four children from St. Boniface Separate School of the Separate School Board in Edmonton, Alberta. Each grade had five, four, fifteen and six boys respectively who participated in the study. Owing to absence from school one day during the week of the study, one of the boys missed the administration of the

reliability assessment and, as a result could not be included in the final analysis. The children ranged from six to ten years of age with a mean age of 8.1.

Methods

The instrument was assessed in the following manner:

Administration--The Phomin Athletic Self-Concept Index (PASCI) was first administered to all children individually during an interview. In the re-test for reliability and the test for objectivity it was administered to the children in their class groups.

Concurrent Validity I--Concurrent validity was obtained by correlating the results gained by the PASCI with an independent criterion. Children were interviewed to obtain information on selected aspects of their history and present involvement in physical activity and sports using Orlick's (1972) Children's Sport Environment Interview (CSE). CSE scores acted as the independent criterion.

Concurrent Validity II--The children were administered the Piers-Harris Children's Self-Concept Scale (PH) (Piers, 1964) in their respective class groups. One of the factors within the PH examines the child's acceptance of his physical appearance, ability in sports, physical characteristics and enjoyment of recreation. These factor scores of the PH acted as the independent criterion which was correlated to

PASCI scores.

Content Validity--In the present study the PASCI was scrutinized by three experts in the field of Physical Education in terms of its relationship to the socio-psychological aspects of participation in physical activity at an elementary level and was examined in order to determine whether the new athletic self-concept index possessed content validity.

Reliability--A test-retest situation was used to determine the reliability of the instrument. The tests were given three days apart. However, the first test was administered individually during the CSE interview while the second was in a group setting with the children in each of their class groups.

Objectivity--This was ascertained by each class group being administered the PASCI by the experimenter and re-tested the following day by the principal of the school.

The Experimental Study

Subjects and Setting. The subjects in the experimental study were forty-five male grade one and two children from St. Stanislaus Separate School of the Separate School Board of Edmonton, Alberta. Each grade one and two classes had thirteen, twelve, eleven and nine boys respectively. The mean age of the grade one's was 6.6 while the grade two's was 7.8.

Experimental Design. The One Group Pre-test-Post-test Experimental Design (Campbell and Stanley, 1966: 7) was utilized in this study. In the experiment it was essential that each subject be thoroughly familiar with every male member of their class group. It was for this reason that the experiment was conducted towards the end of the school year and that each class remained intact so as to maintain the interaction that had occurred up to the time of the experiment and to represent that specific group for social comparison purposes.

Procedure. Prior to the study the experimenter was introduced to each class and briefly led a discussion about physical activity and sports to make himself familiar with the children. At the same time the boys were told that the experimenter was interested in finding out the extent of their participation and how they viewed themselves as athletes. In addition, they were told that they would be talking individually with the experimenter as part of the research project. In this manner it was felt that the children would feel more relaxed and be motivated to respond with greater honesty and sincerity in the interview sessions. During the first week every boy was interviewed individually using Orlick's (1972) CSE to obtain information on selected aspects of his history and present involvement in physical activity and sports including his athletic aspirations, expectations from participation and his perception of his parental expectations (the CSE can be found in Appendix D), and to measure his athletic

self-concept using the PASCI.

Following the interviews, each class of boys were administered a general motor ability performance test battery. For ease of administration the tests were subdivided into indoor and outdoor sections. The indoor events were catching, jumping and balancing while the outdoor section comprised of running, throwing and kicking. A complete description of the skills tests, including instructions can be found in Appendix E. Each child performed individually in the presence of his classmates while as a group, all children received knowledge of their results after having completed each item. The feedback was given to each class group in terms of the actual distance achieved or time taken in the event as well as a rank order. In this manner the children assessed their achievement with reference to their classmates, accentuating the social comparison process. Following the completion of the performance tests all children were reinterviewed individually to obtain a second measure of their athletic self-concept. Prior to each child completing the PASCI he was again informed of his performance results and associated ranks. Two weeks later, two of the classes; a grade one and a grade two were reinterviewed to obtain a third measure of atheltic self-concept by the PASCI for reminiscence purposes.

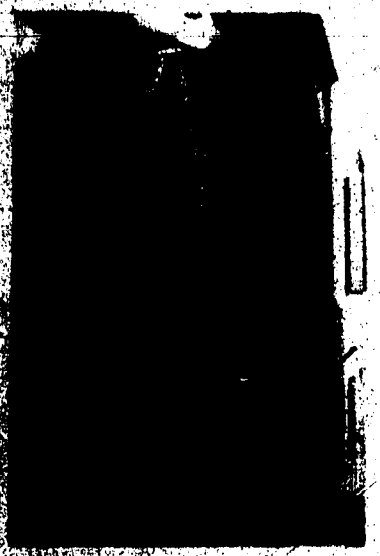
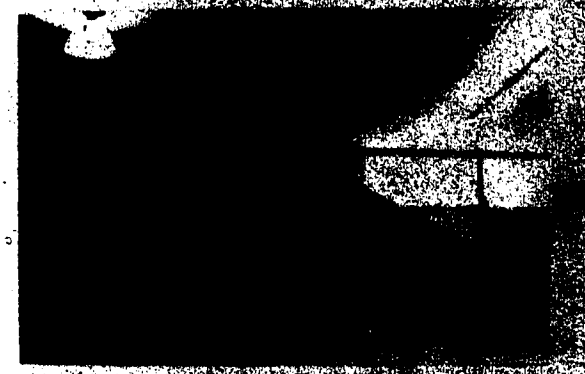


Illustration 1: [illegible]



[illegible] Illustration 2: Details of Ball Check Apparatus for Standardizat of Sowers

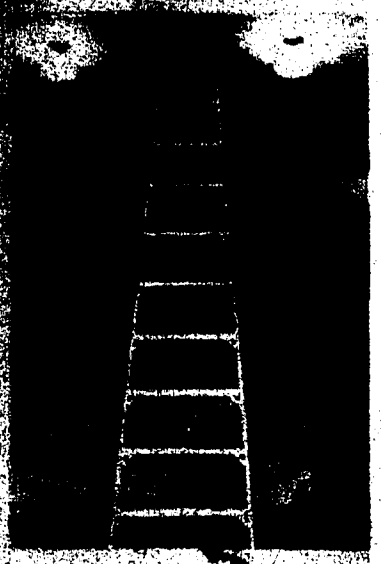


Illustration 3: [illegible]

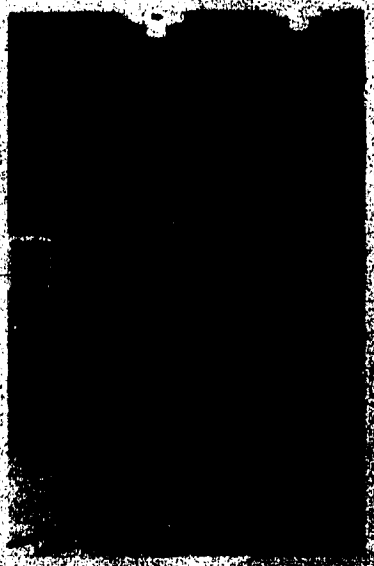
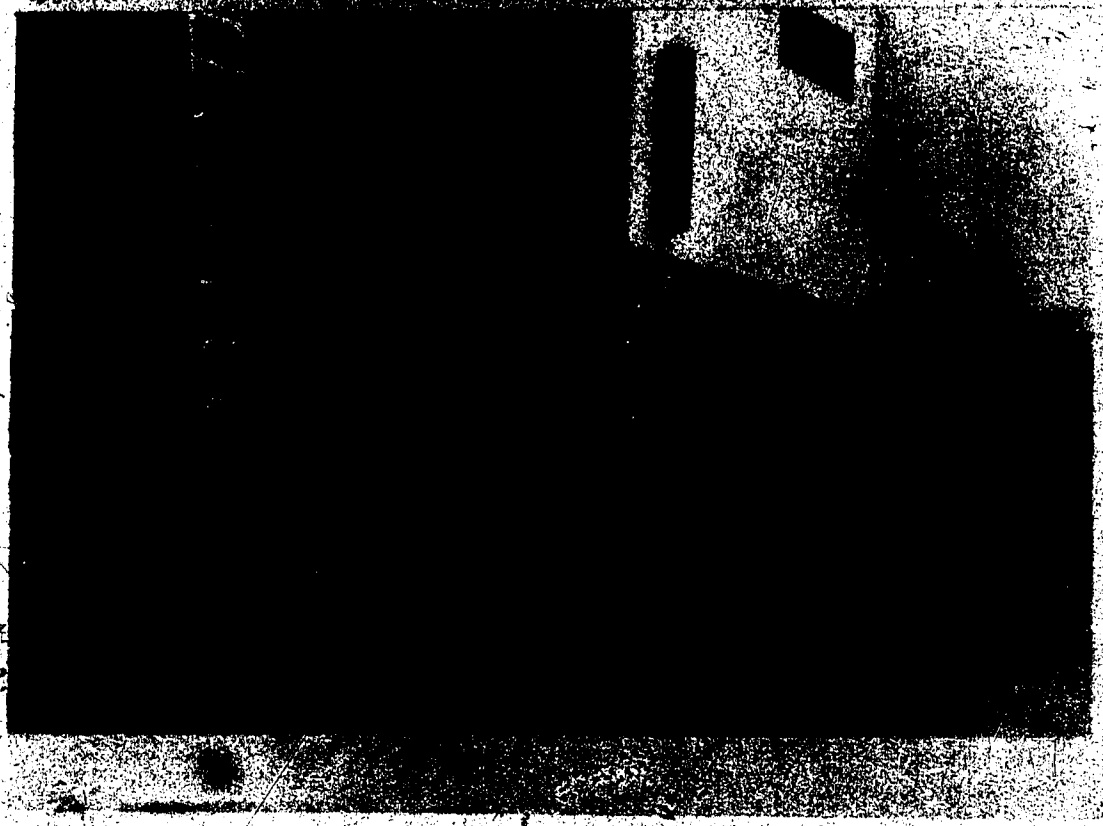


Illustration 41 Subject Prepared to Catch Ball

Illustration 42 Subject Throwing Baseball



[redacted]

Illustration 4: Reference Beam [redacted] Apparatus.

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Illustration 5: [redacted]

[redacted]

Illustration 9: Approach for Soft Ball Throw for Distance

Illustration 10: Release Throwing Soft Ball for Distance

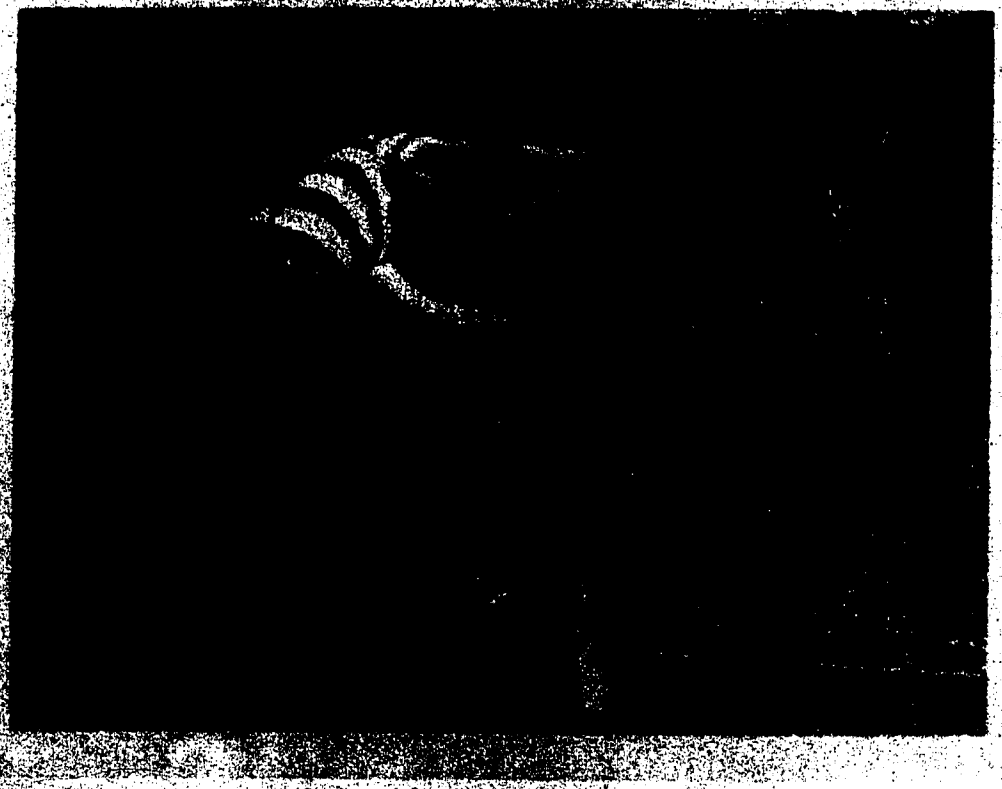
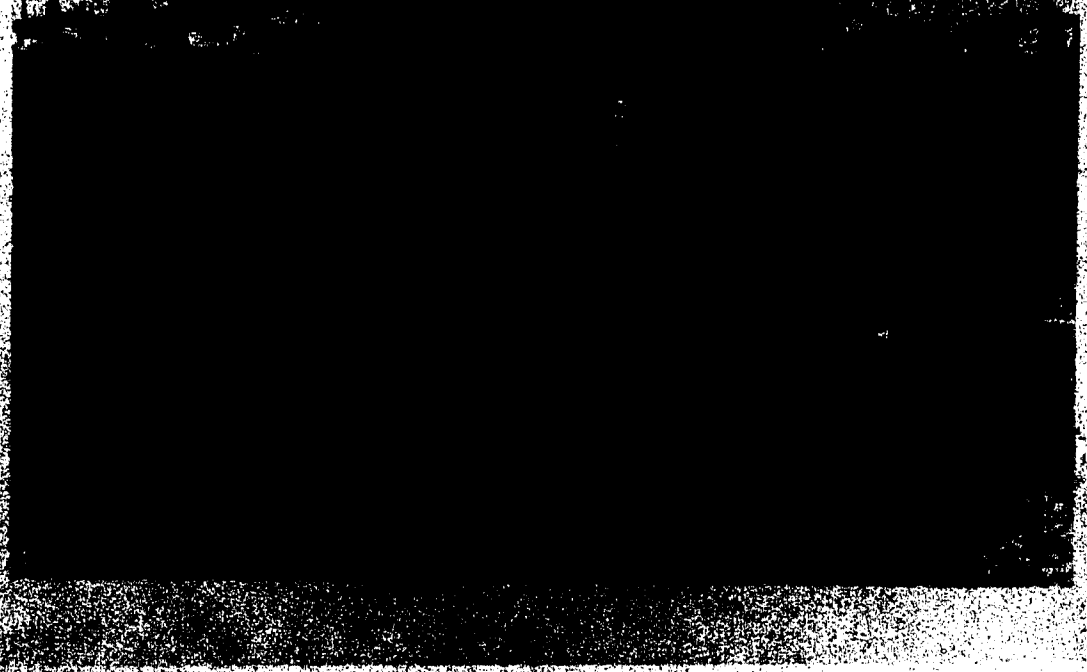
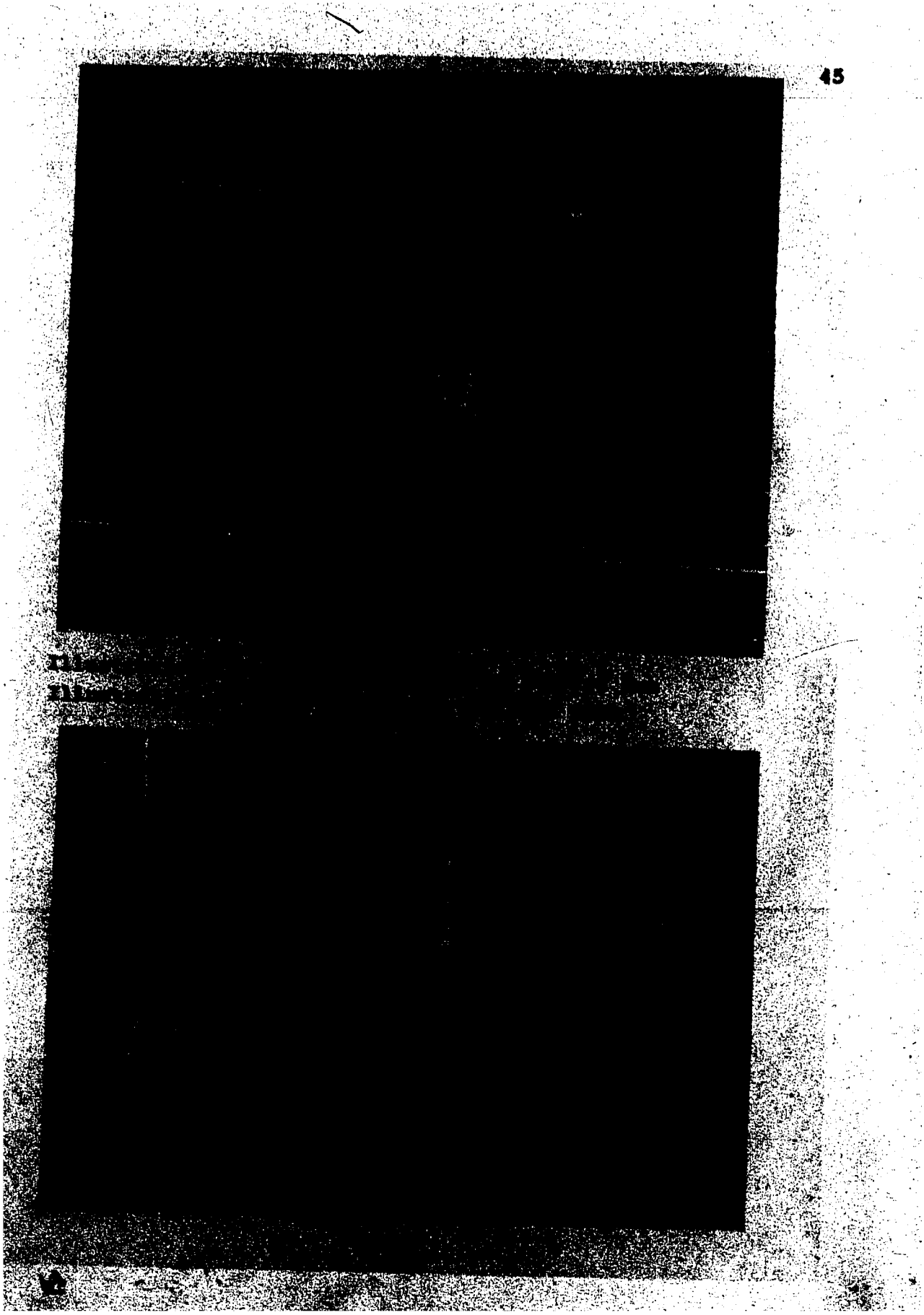


Illustration [illegible] Aerial

Illustration [illegible]





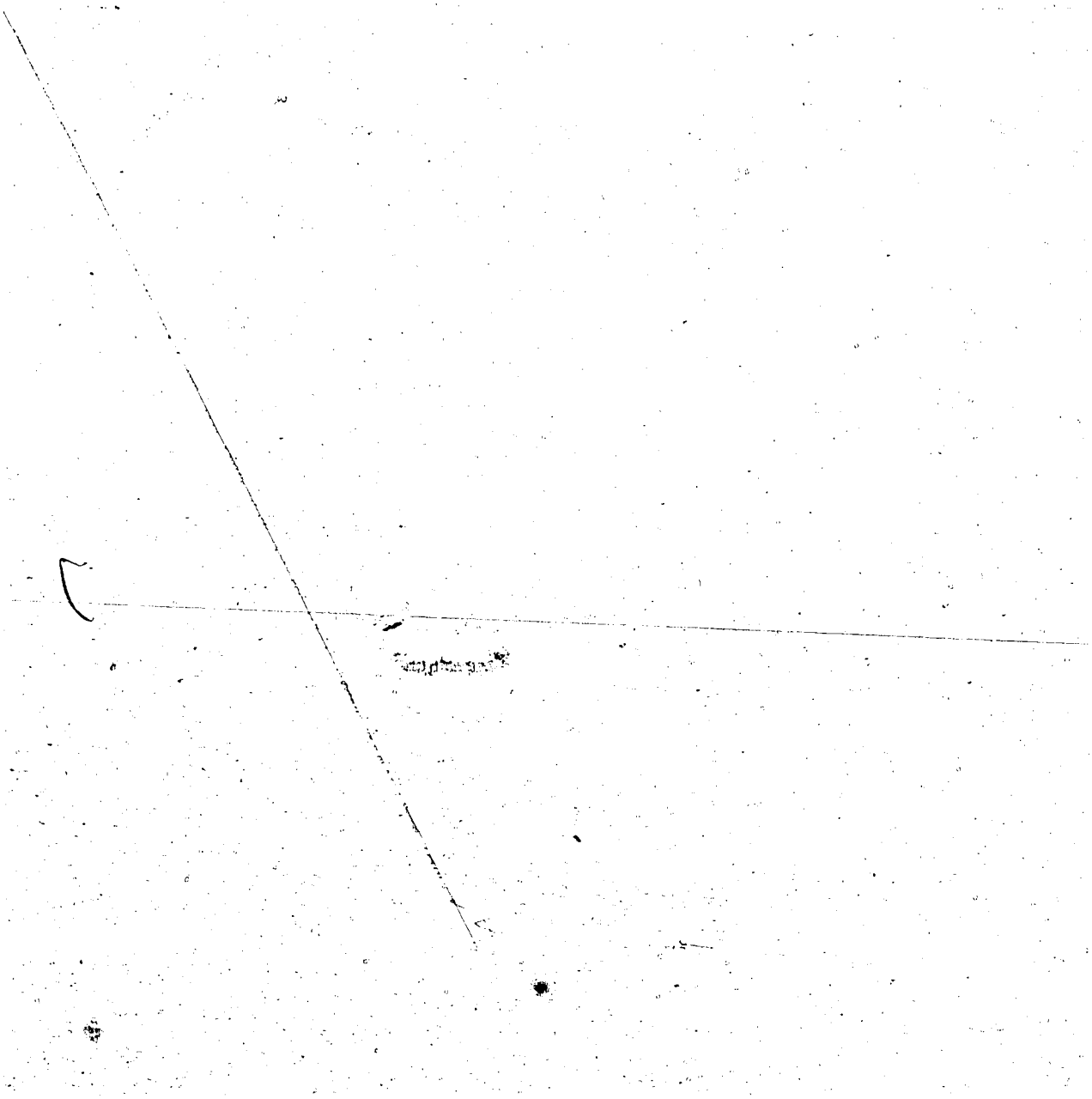
Collection of the Data

The interview method of gathering data was used exclusively in this study. The decision to interview each subject individually rather than to have the subject complete their own CSE questionnaire and PASCI was arrived at primarily through the consideration of the following factors: first, the age of the subjects, second, the different reactions of the children to the PASCI's group administration in the pilot study, third, the teachers involved reported highly disparate reading and comprehension abilities with their classes and fourth, the fact that the preponderance of literature concerned with data collection stated that there are a number of decided advantages in having a questionnaire administered by an interviewer than by the respondent himself (Babbie, 1973; Moser and Kalton, 1971; Oppenhiem, 1966). These advantages included the ability of the interviewer to clarify items which might confuse a particular respondent, the fact that oral responses provide for a higher degree of qualitative information and the fact that there exists an opportunity to ask the respondent supplementary questions when the need arose.

Data Analysis

The data collected in the pilot study was subjected to Pearson's product-moment correlation to compute the instrument's reliability, validity and objectivity. The data collected in the experimental study was subjected to Spearman's

coefficient rank correlation and t-tests for significant differences amongst means. In addition a two-way analysis of variance was employed to determine significant differences amongst the means of the high and low skill level groups and possible interaction.



CHAPTER IV

RESULTS AND DISCUSSION

INTRODUCTION

This chapter consists of a presentation and discussion of the findings. The chapter begins with the validity, reliability and objectivity scores of the research instrument. Frequency breakdowns of the subjects by class and age are then included. Results pertaining to the hypotheses tested are presented next. An analysis of the subjects' social comparison processes from the Child Sports Environment Interview follows. The chapter concludes with a discussion of the major findings.

RESULTS

Instrument Validity, Reliability and Objectivity

Validity. Two measures of concurrent validity were made to assess the validity of the Phomin Athletic Self-Concept Index (PASCI). In the first measure, PASCI scores were correlated with the Children's Sport Environment (CSE) scores using the Pearson product-moment correlation technique. The coefficient found was 0.54, significant at the .01 level. In the second measure, PASCI scores were correlated with the factor scores in the Piers-Harris Children's

Self-Concept Scale which related to the child's acceptance of his appearance, his body, physical attributes and abilities and enjoyment of recreation and sports. The correlation between the two sets of scores was 0.64 which was significant at the .001 level of significance.

Content Validity. Content validity was assessed by the pooled judgement of three recognized experts in the area of self-concept as it relates to the field of Physical Education. These three judges (Dr. Terry Orlick - University of Ottawa, Dr. Harvey Scott - University of Alberta and Dr. Leonard Zaichowsky - Boston University), familiar with the body of knowledge, examined the instrument and in their estimation, felt it to be valid for the purpose intended.

Reliability and Objectivity. A test-retest situation was used to determine the reliability of the PASCI. The tests were administered three days apart to an N of 29. The first test was given individually during the CSE interview while the second was conducted in a group setting. The objectivity of the instrument was assessed by its administration to the children in their class groups by the experimenter and then by the principal of the school the following day. The test-retest reliability coefficient for the PASCI was 0.80 while the objectivity coefficient was 0.87, both significant at the .001 level of significance. Thus, the instrument was found to be highly reliable and objective.

As Wylie (1974) and Fitts (1972) pointed out, the most crucial aspects of any self-concept measuring device is its validity, reliability and objectivity. The results of the pilot study [illegible]n in Table I and clearly show the instrument to be [illegible]liable and objective.

TABLE I

VALIDITY, RELIABILITY AND OBJECTIVITY OF THE PHOMIN ATHLETIC SELF-CONCEPT INDEX

Measure	Pearson r coefficient
Validity:	
Concurrent Validity I	0.54 **
Concurrent Validity II	0.64 ***
Reliability	0.80 ***
Objectivity	0.87 ***

** $p \leq .01$, *** $p \leq .001$

Frequency Breakdown of Subjects by Class and Age

A total of forty-five children participated in the experimental study. Each grade one and two classes had thirteen, twelve, eleven and nine boys respectively. The distribution of the subjects in terms of age and grade is presented in Table II.

TABLE II

DISTRIBUTION OF SUBJECTS BY CLASS AND AGE

Class Group	Age			Mean Age	Total N
	Six	Seven	Eight		
1A	9	3	7	6.6	13
1B	8	3	1		12
2A		5	6	7.8	11
2B		6	3		9

Results Pertaining to the Hypotheses Tested

Hypothesis 1. Children who performed poorly on the motor ability tests would score low on the athletic self-concept index.

Hypothesis 2. Children who performed well on the motor ability tests would score high on the athletic self-concept index.

To test these hypotheses the children's raw scores in the motor ability tests were converted to standard (Z) scores. In this manner the top one-third of the children as determined by their Z scores were able to be compared in terms of their athletic self-concepts to the lower one-third after a method developed by Kelly (1939). Table III revealed that the children who performed well in the motor ability tests

(top one-third) scored significantly (t = 5.634) higher in the athletic self-concept index compared to those who performed poorly (lower one-third).

TABLE III

COMPARISON OF MEAN ATHLETIC SELF-CONCEPTS OF THE UPPER AND LOWER SKILL GROUPS OF CHILDREN AS DETERMINED THEIR STANDARD SKILL SCORES

Skill Group	N		Mean		S.D.	Variance
Upper 1/3		Pre	45.8		± 8.433	71.119
(High Skill) Scores	15	Post	46.5	***	± 7.185	51.630
Lower 1/3		Pre	39.3	*	±10.489	110.030
(Low Skill) Scores	15	Post	31.2		± 7.155	51.187

* Difference between means statistically significant at the .05 level of significance.

*** Difference between means statistically significant at the .001 level of significance.

Pre - Pre-Test Post - Post-Test

These results confirmed the assumption that a child's experiences in physical acitivity, sports participation and skill acquisition will act to reduce or enhance the child's athletic self-concept depending on the negative or positive nature of these experiences. This was reflected in Orlick's (1972) study which examined the socio-physiological basis of early sports participation. As a result of negative sport

experiences he found that the non-participants had already developed negative athletic self-concepts.

Additional support of hypotheses 1 and 2 can be found in the correlation between the children's rank's on the skills tests and their associated ranks on athletic self-concept with respect to their class, grade and the total group. Table IV revealed a significant correlation between the children's ranks on the skills and the rank of their post-test athletic self-concepts. However, this trend was not consistent with respect to class and grade in the pre-test athletic self-concept. Although this correlation existed significantly with the total group the inconsistancy at the grade and class level can be attributed to children's unrealistic estimates of their abilities due to a lack of experience.

Hypothesis 3. Children would, as a result of their performance in the motor ability tests and the feedback received, exhibit a shift in their expressed athletic self-concepts toward the rank they achieved in the skills tests.

To test this hypothesis each class of children was examined and the means of their pre-test and post-test athletic self-concepts were compared. Table V revealed that in all classes there appeared a trend to devaluate the athletic self-concept as a result of the performance tests. As a total group, this shift was significant ($t = 2.107$) at the .05 level of significance.

TABLE IV

CORRELATION BETWEEN CHILDREN'S RANK ON SKILLS AND RANK ON ATHLETIC SELF-CONCEPT

Class	Pre-test/Skills (ρ) ASC	Post-test/Skills (ρ) ASC
1A	.18	.73 **
1B	.96 ***	.99 ***
2A	.14	.89 ***
2B	.41	.88 ***
Gr. 1	.91 ***	.86 ***
Gr. 2	.25	.80 ***
Total Group	.31 *	.75 ***

* $p \leq .05$, ** $p \leq .01$, *** $p \leq .001$

TABLE V

COMPARISON OF MEANS OF ATHLETIC SELF-CONCEPT AMONG CLASSES PRIOR TO AND AFTER THE PERFORMANCE TESTS

Class	N	Mean	S.D.	Variance
1A	13	Pre 45.7	7.010	49.143
		Post 39.4	6.632	43.977
1B	12	Pre 42.6	12.417	154.187
		Post 36.7	12.192	148.647
2A	11	Pre 42.7	9.184	84.348
		Post 41.0	9.591	91.991
2B	9	Pre 41.6	7.749	60.053
		Post 39.4	8.023	64.370
Total Group Mean Score	45	Pre 44.3	9.557	91.340
		Post 39.1	9.498	90.208

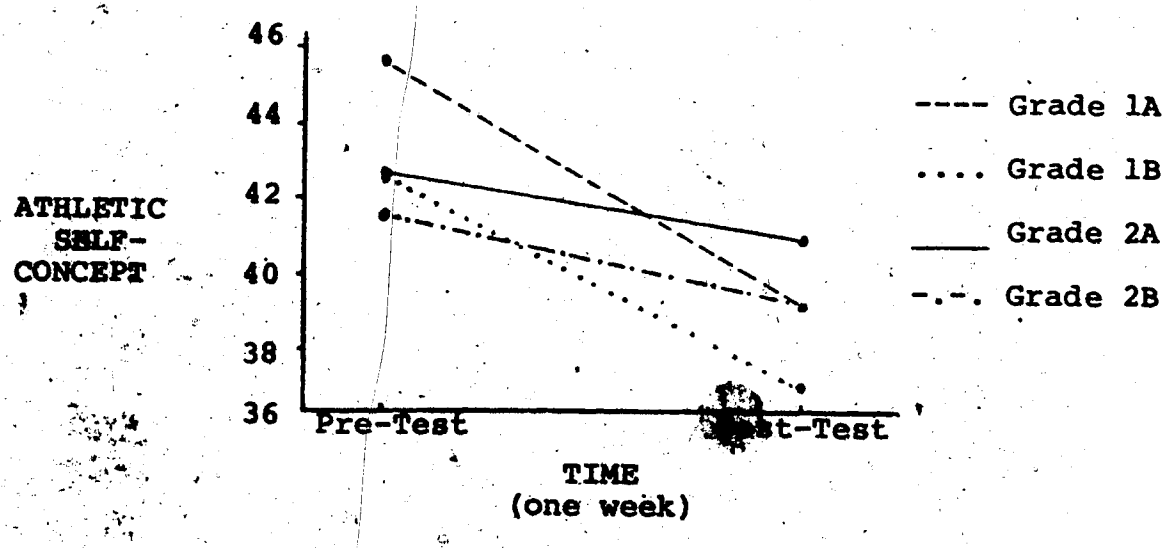
*Difference between means statistically significant at the .05 level of significance.

These results confirm Festinger's (1954) theory of social comparison proce and the drive for self-evaluation. As a result of their performance in the skills tests and the feedback given (reality of their abilities) children, who were perhaps, slightly unrealistic in their athletic self-concept, altered their view of themselves in a significant devaluation.

Figure I graphically illustrated this trend and further revealed a greater deprecation of expressed athletic self-concept in the grade ones compared to the grade twos. This can be attributed to the fact that as a child grows and acquires more experience in an increasing number of activities he tends to become more realistic of his abilities and capabilities. In addition, with growth the child has more opportunity for social comparison with other children and hence acquires a greater accuracy of his abilities.

FIGURE I

IMPACT OF SKILLS TEST ON CHILDREN'S ATHLETIC SELF-CONCEPTS



Utilizing Kelly's (1939) format of dividing the children into high and low skill groups (refer to Table III) and utilizing their associated atheltic self-concept scores, a two-way analysis of variance was conducted to further examine the (i) differences in the entire group, pre-test and post-test, (ii) differences between high and low skill groups in athletic self-concepts as an entire group and (iii) interactions, Table VI revealed that (i) there were no significant differences between the pre-test and post-test athletic self-concepts of the entire group, (ii) there were no significant differences in athletic self-concepts of the high and low skill groups overall and (iii) there were no interactions.

Upon further analysis of the athletic self-concept scores of the high and low skill groups (refer to Table III) by way of t-tests for comparison of the means revealed that (i) there was no significant differences in the pre and post-test athletic self-concept scores of the high skill group and (ii) there was a significant difference ($t = 2.375$) in the pre and post-test athletic self-concept scores of the low skill group at the .05 level of significance, (iii) there were no

TABLE VI

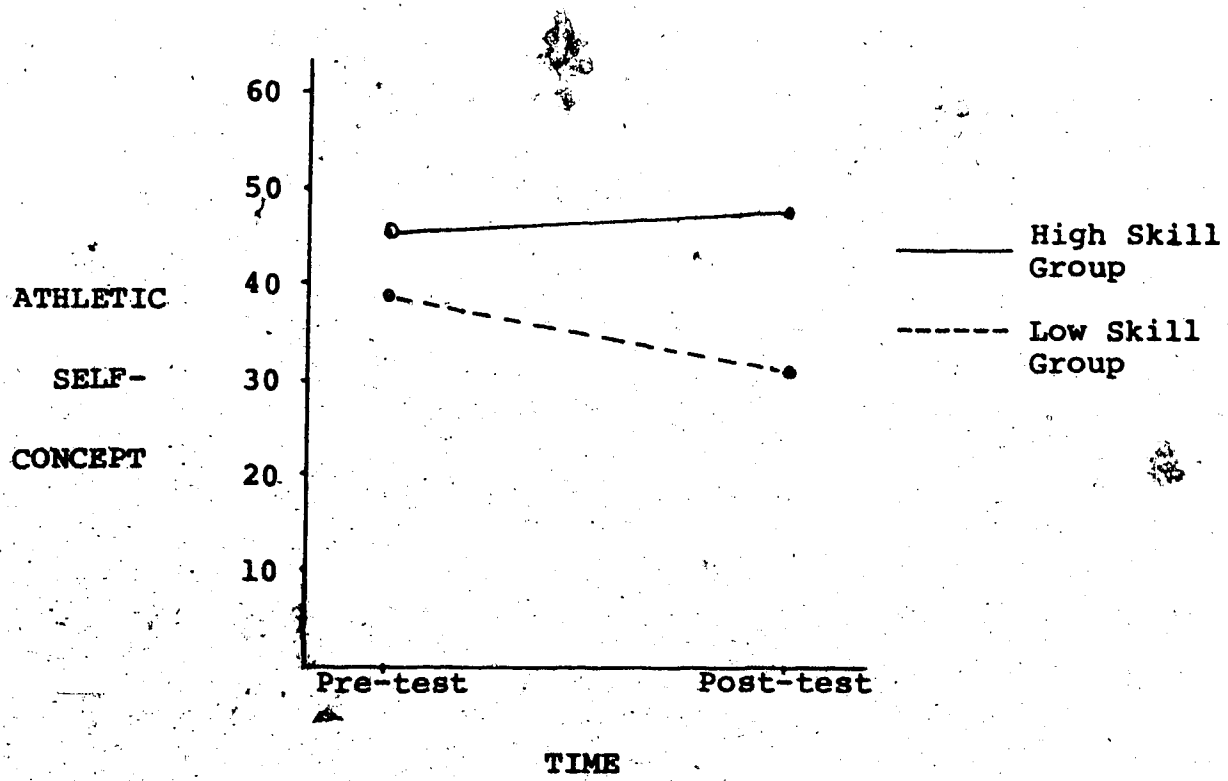
SUMMARY OF TWO-WAY ANALYSIS OF VARIANCE OF THE PRE-TEST AND POST-TEST ATHLETIC SELF-CONCEPT SCORES BETWEEN THE HIGH AND LOW SKILL GROUPS

Source of Variation	Degrees of Freedom	Sum of Squares	Mean Squares	F
Rows (Time)	1	.2128	.2128	1.969
Columns (Skill)	1	.2773	.2773	2.566
Interaction	1	.1042	.1042	0.096
Within Cells	56	.6054	.1081	
TOTAL	59	1.1997	.7024	

significant differences in the athletic self-concept pretest scores. between the high and low skill groups, however, (iv) there was a significant difference (t = 5.634) in the post-test athletic self-concept scores of the low skilled group at the .001 level of significance. These results, illustrated in Figure II clearly showed the shift in athletic self-concept by both skill groups.

FIGURE II

IMPACT OF SKILLS TEST ON ATHLETIC SELF-CONCEPTS OF CHILDREN IN HIGH AND LOW SKILL GROUPS



The athletic self-concept as measured by the PASCI consisted of the child's expressed self-evaluation coupled with the way that he perceived his teacher to evaluate his athletic ability as well as the way he perceived that his classmates perceived this ability. Table VII showed this breakdown with respect to these evaluations by the children in each class prior to and after the performance tests. Table VI yielded greater insight into the devaluative trend of the children in their athletic self-concepts. This shifting trend supported the work of Rosenthal (1968) who explained how children tend to judge themselves as they feel judged--the "self-fulfilling prophecy". As most children overestimated their abilities, their performances and the feedback given placed them in the "light" of this new judgement. They, in turn, judged themsevles accordingly. Thus, their self-evaluation suffered the greatest devaluation of the three components and was significant at the .01 level confirming the change in self as a result of new experiences (Rogers, 1959). As a result of the children's decrement in self-evaluation and their performing in the presence of their classmates accentuating the social comparison process this contributed to the deprecation of their perceived classmates' evaluation which was significant at the .05 level. Although the child's perceived teacher's evaluation experienced a decrement, this was not significant. This can be attributed to her limited association in the child's realm of physical

TABLE VII

COMPARISON OF MEANS OF ATHLETIC SELF-CONCEPT AMONG THE CLASSES BY SELF-EVALUATION, PERCEIVED TEACHER'S EVALUATION AND PERCEIVED CLASSMATES' EVALUATION

Evaluation	Class		Mean		S.D.	Variance
SELF-EVALUATION	1A	Pre	47.8	±	6.311	39.827
		Post	37.9	±	6.257	39.153
	1B	Pre	43.3	±	11.684	136.521
		Post	36.1	±	11.586	134.245
	2A	Pre	42.5	±	9.605	92.250
		Post	39.6	±	10.289	105.872
	2B	Pre	41.8	±	7.131	50.845
		Post	40.3	±	7.273	52.892
	Total Group	Pre	44.1 **	±	9.307	86.613
		Post	38.3	±	9.293	86.176
PERCEIVED TEACHER'S EVALUATION	1A	Pre	44.7	±	7.321	52.289
		Post	40.3	±	6.018	36.219
	1B	Pre	41.2	±	13.077	170.997
		Post	38.6	±	13.798	190.409
	2A	Pre	43.8	±	8.779	77.064
		Post	43.0	±	9.844	96.908
	2B	Pre	42.2	±	7.983	63.729
		Post	36.0	±	8.485	71.998
	Total Group	Pre	43.0	±	9.727	94.618
		Post	40.4	±	10.094	101.890
PERCEIVED CLASSMATES' EVALUATION	1A	Pre	41.1	±	9.671	93.519
		Post	39.8	±	8.513	72.486
	1B	Pre	42.4	±	13.631	185.810
		Post	35.3	±	12.919	166.890
	2A	Pre	41.7	±	9.910	98.204
		Post	40.5	±	11.356	128.976
	2B	Pre	40.9	±	9.219	84.994
		Post	37.8	±	9.438	89.066
	Total Group	Pre	42.9 *	±	11.016	121.359
		Post	38.4	±	10.905	118.938

*Difference between means statistically significant at the .05 level of significance.

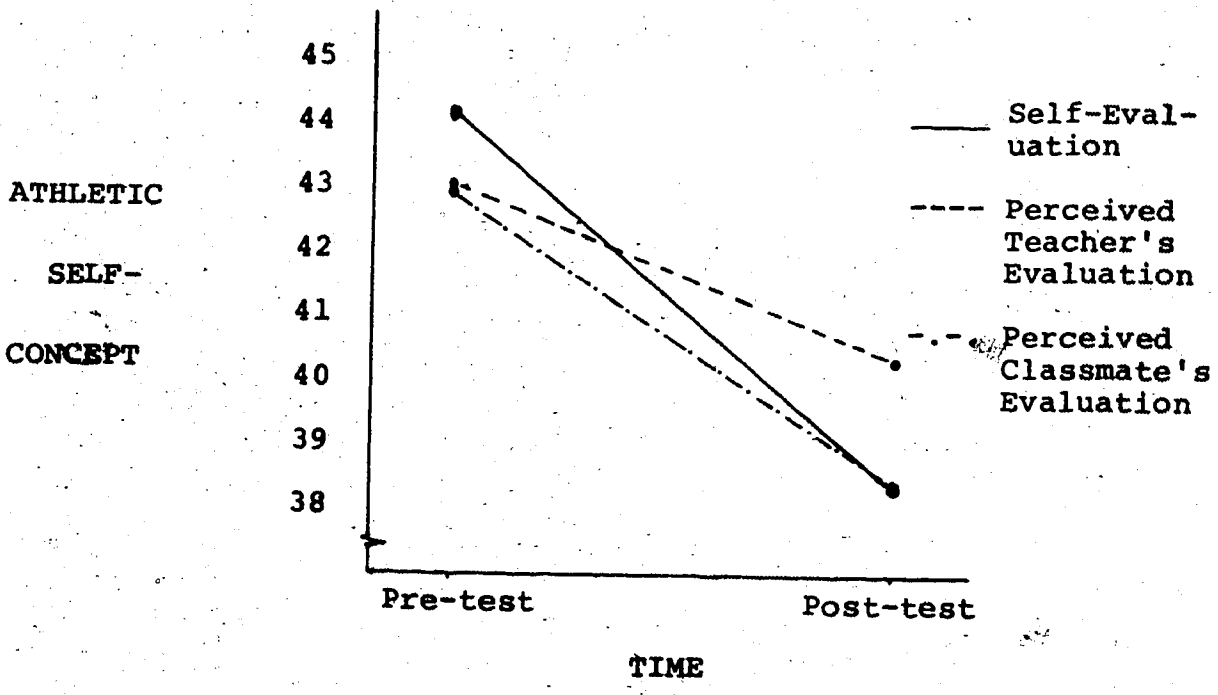
** Difference between means statistically significant at the .01 level of significance.

activity (physical education once a week) and her absence during the motor ability testing.

Figure III further illustrated this phenomenon with each evaluative component of the expressed athletic self-concept.

FIGURE III

IMPACT OF SKILLS TEST ON EVALUATIVE COMPONENTS OF CHILDREN'S ATHLETIC SELF-CONCEPT



Hypothesis 4. After a period of two weeks from the performance tests the children would exhibit a shift in their expressed athletic self-concepts towards its position prior to the performance tests.

In order to test this hypothesis the means of the athletic self-concept scores of the children in the two classes tested for reminiscence were compared to those computed from the pre and post-tests. As Table VIII revealed, both classes exhibited an upward shift in expressed athletic self-concept towards the pre-test mean. Although apparent in both classes, this shift was not statistically significant.

TABLE VIII

COMPARISON OF MEANS OF ATHLETIC SELF-CONCEPTS AMONG TWO CLASSES OVER TIME

Class	N	Mean		S.D.	Variance
1A	13	Pre	45.7	± 7.010	49.143
		Post	39.4	± 6.632	43.977
		Remin	42.3	± 8.778	77.053
2A	11	Pre	42.7	± 9.184	84.348
		Post	41.0	± 9.591	91.991
		Remin	44.2	± 8.983	80.694
Total Group	24	Pre	44.3	± 8.285	68.638
		Post	40.1	± 8.166	66.680
		Remin	43.2	± 8.919	79.556

* Difference between means statistically significant at the .05 level of significance.

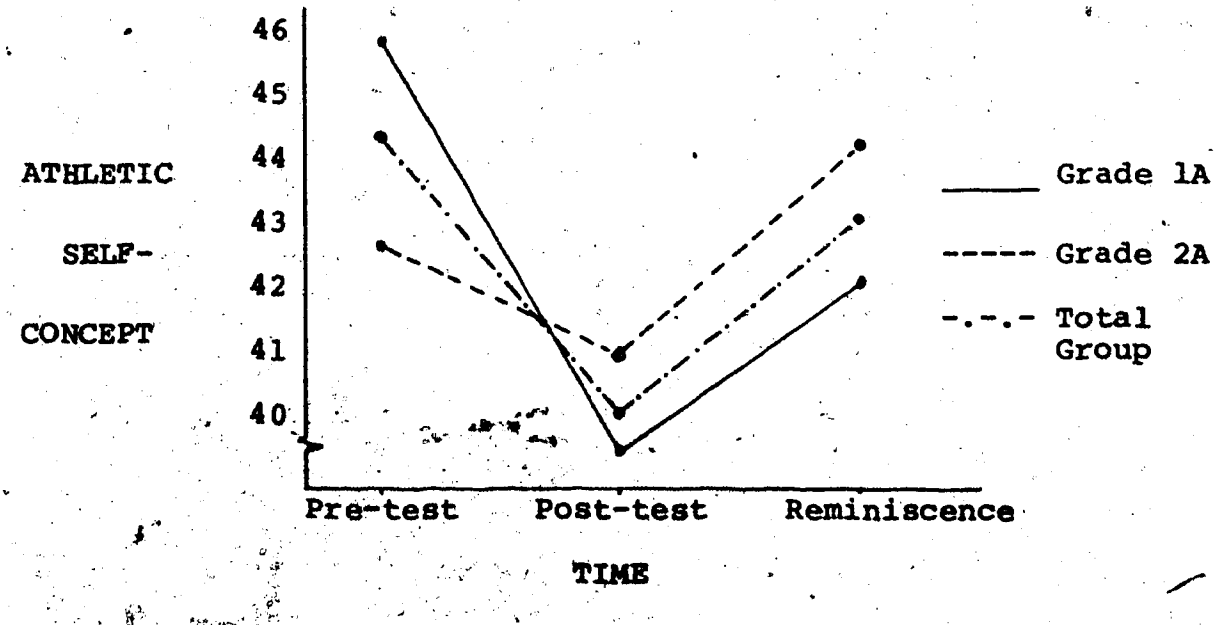
Pre- Pre-test Post- Post-test Remin - Reminiscence

These results supported the self-congruency process as purported by Rodgers (1959) and illustrated the stable nature of the self-concept as discussed extensively by Secord and Backman (1968). The children as a group devaluated their athletic self-concepts initially as a result of the testing experience maintaining congruency with that experience with its impact on the reality of their abilities. However, with time (and other experiences during the interim) the children's athletic self-concepts approached its previous level exemplifying the stability of this social psychological phenomenon.

Figure IV further illustrated these shifts and the stable nature of the children's athletic self-concepts examined in the two classes over the duration of the experiment.

FIGURE IV

IMPACT OF SKILLS TEST AND TIME ON CHILDREN'S ATHLETIC SELF-CONCEPTS



Additional support confirming the maintenance of congruency and stability of the self-concept can be gained from Table VIII. Children's post-test and reminiscent athletic self-concept scores in the two classes having both been assigned an associated rank order were correlated. The results shown in Table IX revealed breakdowns between the two sets of rank order scores at the .05 and .001 levels.

TABLE IX

RANK CORRELATION BETWEEN POST-TEST AND REMINISCENT ATHLETIC SELF-CONCEPT RANK ORDER SCORES AMONG THE TWO CLASSES

Grade	Rank Correlation (ρ)
1A	.56*
2A	.85***

* $p \leq .05$, *** $p \leq .001$

It should be noted that although the children's reminiscent athletic self-concepts approached the pre-test established level the rank order of their reminiscent athletic self-concept scores remained unchanged as a result of the initial feedback and their performance in the motor ability tests. Therefore, although the athletic self-concept changed to maintain stability the children were more realistic in the perception of their abiliites as seen in their reminiscent athletic self-concept

rank order scores. In this manner, they were in fact, maintaining self-congruency with the feedback they received.

Analysis of Children's Social Comparison Processes

As part of the Children's Sport Environment Interview the children were asked several questions which confirmed the occurrence of the social comparison process. These questions and the children's responses are presented in Tables X - XV. Each table represented the total number of responses to each particular question. Each table contained frequency and percentage breakdowns of the number of occasions a particular response occurred.

TABLE X

Question 2a.

Do you ever notice when you are playing with your friends that some kids are better than others? Do you compare yourself to see how you are compared to them?

# Subjects	% Subjects	Responses
5	11.1	No
1	2.2	Don't think so
2	4.4	Not really
3	6.7	Think so, sometimes
34	75.6	Yes

TABLE XI

Question 3a.

When playing with your classmates at recess do you compare yourself to see how you are compared to them?

# Subjects	% Subject	Responses
6	13.3	No, just watch
2	4.4	don't think so
5	11.1	Not really
7	15.6	Think so, sometimes
25	55.6	Yes

TABLE XII

Question 4a.

When playing in the gym do you compare yourself to the other kids to see how you are compared to them?

# Subjects	% Subjects	Responses
4	8.9	No
2	4.4	No, don't think so
5	11.1	No, not really
5	11.1	Think so, sometimes
29	64.5	Yes

TABLE XIII

Question 5a.

Now we just talked about the things you do after school, at recess and during gym. Which do you enjoy the most?

# Subjects	% Subjects	Responses
34	75.6	After school
7	15.5	Gym
3	6.7	Recess
1	2.2	All the same

TABLE XIV

Question 5b.

Why?

	# Subjects	% Subjects	Responses
AFTER SCHOOL	3	6.6	Can ride bikes and have drag races
	3	6.6	Can do anything you want
	7	15.5	More things to do
	1	2.2	Can play in friend's house
	15	33.3	More time to play
	1	2.2	Less people around to 'bug' you
	3	6.6	Can play with family
	3	6.6	Can visit your friends
GYM	3	6.6	Teacher teaches you things
	1	2.2	Get to play games
	1	2.2	Do more in gym than after school
	1	2.2	Get in shape
RECESS	1	2.2	Fool around
	1	2.2	Play games
	1	2.2	More room to play than at home

TABLE XV

Question 6a.

Is it important for you to be good in sports and "stuff" like that?

# Subjects	% Subjects	Responses
8	17.8	No
4	8.9	No, don't think so
6	13.3	Not really, not too important
5	11.1	Yes, think so, sometimes
22	48.9	Yes (emphatic)

DISCUSSION

INTRODUCTION

There were basically two main aims of this study. The first aim was to develop the means by which children's athletic self-concepts could be measured. The second was to use the evolved instrument to measure shifts in athletic self-concept as a result of children's performance and subsequent feedback in a motor ability test battery. The results of this experiment will be discussed in relation to these two major objectives.

Instrument Validity, Reliability and Objectivity

The degree to which the first objective was achieved was dependent upon the validity, reliability and objectivity of the instrument utilized in the experiment.

The validity of the Phomin Athletic Self-Concept Index (PASCI) was assessed by the use of two other criterion indices: The Children's Sport Environment Interview Questionnaire (CSE) (Orlick, 1972), and The Piers-Harris Children's Self-Concept Scale (PH) (Piers, 1964). The CSE had been previously validated to measure differences in twenty items between participants and non-participants in sport and physical activity. Although PASCI scores correlated to CSE

scores with a coefficient of .054 it was felt that CSE was sensitive to detect differences amongst participants and non-participants but perhaps not sensitive enough to detect differences amongst children who varied in their levels of participation. This could possibly account for the obtained correlation coefficient. The second measure of concurrent validity was obtained by correlating PASCI scores with a factor within the PH which measured the child's acceptance of his appearance, bodily characteristics and abilities and his enjoyment of sports and recreation. These factor scores correlated to PASCI scores with a coefficient of 0.64. It was felt that this PH factor in its convergence with the PASCI added substantially to the validity of the instrument since they both measured athletic self-concept. The results of Table III showing that children who performed better in the skills tests scored significantly higher on the athletic self-concept index than their less-skilled classmates added additional support to the validity of the instrument. Further support could be found in the results of Table IV which revealed a significant correlation between children's ranks in the skills test and their associated athletic self-concept rank order scores.

It was felt that item analysis for the discrimination of each skill contributing to the athletic self-concept was not required. This procedure as purported by Flanagan (1939) for curricular validity was not followed, since recognized

motor development and movement education experts, (Espenchade and Eckert, 1967; Mauldon and Layson, 1965; Gardner, 1973; Cratty, 1970; Havighurst, 1953) have noted the importance of all basic motor skills in contributing to the child's total development and in particular his awareness of his body and its potential within the movement sphere.

The result of the test-retest reliability study provided strong confirmation of the reliability (0.80) of the instrument. Although the two administrative forms varied (individual and group) it was felt that the reliability coefficient would have been higher had the second administration been on an individual basis. This would be due to the children's greater attention span, and honesty of response in the individual setting compared to the children's different reactions and lower attention span with their classmates apparent in the group administration.

The objectivity of the instrument was strongly confirmed in the pilot study by the principal of the school administering the PASCI to the children in their class groups the day after the experimenter's administration and the subsequent correlation coefficient (0.87) obtained.

Thus the instrument utilized in this experiment can be considered valid, reliable and objective. This is crucial since as was pointed out previously by Fitts (1972) and Wylie (1974) most self-concept instruments have been considered inadequate as they have not met these criteria. Therefore,

it can be stated that the first major objective of this study was, to a great extent, achieved.

Shifts in Athletic Self-Concept as a Result of Children's Performance and Subsequent Feedback in a Motor Ability Test Battery

This section contains the discussion of the results pertaining to the second of the two major aims of the study. Herein will be discussed the results relevant to the hypotheses tested and the analysis of the children's social comparison processes.

The results of the hypotheses revealed that:

1. There was a highly significant relationship between the children's rank in performance and their expressed athletic self-concepts ($p \leq .01$, $p \leq .001$).

2. The children, as a result of their performance in the motor ability tests and the feedback received, exhibited a significant shift in their expressed athletic self-concepts ($p \leq .05$); the lower skilled children displayed a significant downward shift ($p \leq .05$) while the higher skilled children exhibited a slight upward shift in their expressed self-concepts.

3. The children, after a period of two weeks from the performance tests, exhibited an upward shift in their expressed athletic self-concepts towards its position prior to the skills test.

The first result confirmed the adequacy of the evolved instrument and that children, as a result of their previous

experience in physical activity, sports participation and in particular, physical skill acquisition will reflect the quality of these experiences in their expressed athletic self-concept. This supported Orlick's (1972) study which examined the socio-psychological basis of early sports participation. As a result of negative sport experiences he found that non-participants had developed significantly lower perceptions of their ability in sports compared to their participant counterparts.

The second result further demonstrated this phenomenon as the motor ability test and the feedback given acted as an additional experience which enhanced the high skilled children's athletic self-concepts whereas it reduced the lower skilled children's athletic self-concepts. Inherent in this re-evaluation was the process of reality therapy. As Glasser (1965) has pointed out, in this process the self will change as a result of confronting it with its behavior. This process is quite similar to Roger's (1959) self-congruency process wherein the children strived to be congruent with their experiential field (results of their performances). Thus, the feedback given to the children acted as an agent for this realistic change in their athletic self-concepts in their striving for self-congruency. Hence, the children were unrealistic in the perceptions of their abilities. Unfortunately this is a characteristic typical of young children, however, with increased experience and growth they become

not only more aware of their abilities but also more realistic in these perceptions. This trend was apparent in this study as was revealed in Figure 1 where the children in grade one exhibited a greater deprecation in their athletic self-concepts by the realistic impact of the skills test compared to the grade two children.

The third result illustrated the stable nature of the self-concept as discussed by Seaford and Backman (1968). Although the initial devaluation exemplified the self-congruency process with the children striving to be congruent with their most recent experience, with time (two weeks) and other experiences in the interim, the children's re-evaluation of their athletic self-concepts upward towards the level of their first assessment demonstrated the stability of the self-concept. In other words the experiences during the two weeks acted to reinforce and provide a basis for the children's re-evaluation of their athletic self-concept towards more positive dimensions compared to their previous experience. The motor ability test served to provide the children with a standard of comparison encompassing all of the boys in their class whereas the self-other system of a young child does not take into account that large a number. Their standards of comparisons are usually based on two to four close playmates.

An examination of the subject's responses to several questions in the Children's Sport Environment Interview confirmed the occurrence of the social comparison process.

(Festinger, 1954) and the drive for self-evaluation. It was interesting to note that social comparison occurred most frequently during the children's play after school with their friends, second in their play during gym classes with their classmates and third at play with their classmates at recess as evidenced by the number and percentage of positive responses to each situation. By the percentage of positive responses by the children the social comparison process was seen to occur most frequently in an unstructured situation with the peer group as the children expressed more enjoyment in this situation compared to the others due to a greater variation in the choice of activities and the longer period of time in which to play.

Having presented the statistical results and reviewed the occurrence and analysis of the children's social comparison processes the results will now be discussed in light of existing physical education programs for young children.

Although one of the major criticisms of most physical education programs is their stress upon competition we cannot degrade existing programs in total or advocate that these programs cease to include competitive elements. As Bula (1971) has stated, "The primary concern that the child receives a positive experience while competing. Let's not kid ourselves, he is going to compete" (1971: 46). The present study scrutinized children's use of their friends as referent others through

social comparison process and showed the effects of such comparison in a motor ability test on the athletic self-concepts of the children. As a result of this experiment it would seem appropriate that in planning and coordinating children's physical activities to be more sensitive to the environments created and to ensure that every child receives a positive self-enhancing personal experience through his participation. Indeed, participation and skill development should be stressed in these environments rather than competition. Smith has written:

> By always comparing every boy to the best boy on the team we often discourage them and even prevent progress. In any team sport there are plenty of times when one must compare himself to the others, when he must think about others but to always be doing so hurts his own chances to improve (1968: 6).

In addition, Smith (1975), in recognizing the prevalence and often over-emphasis of competition in children's sports environments, has cited four factors which serve as recommendations in coordinating activities which have competitive elements inherent in their structure:

1. Competition will motivate people who believe they have a chance of winning but that restricts its value to the top 20% or 25% at most.
2. Competition during periods when people are trying to learn difficult things has been shown repeatedly to interfere with learning.
3. A constructive alternative is to rely more heavily on motivational devices that depend on self-improvement. The best comparison for any person is his previous self.
4. We must create environments where fewer individuals are forced into competition (1975: 4).

Realizing these factors one can easily envision how competition out of its context, especially with children's sports, is value-less. As Sande (1976) in a recent paper examining competition and cooperation has stated, "Misuse is Abuse".

In attempts to rectify this situation much has been done to stress the nature of these activity environments and their effects in the socio-psychological outcomes on the participants. Smith (1973) has analyzed existing sports environments and has proposed criteria by which these may be classified in terms of the objectives of the participants involved. An underlying purpose of Smith's paper was to increase the awareness of adults acting in leadership positions in children's sports programs of the need to examine the environments they are creating "through the child's eyes". It is important that adults create "positive" activity environments as purported by Orlick and Botterill (1975) in which children may develop or achieve ". . . friends, respect, trust, satisfaction, knowledge, skills, health, fitness, personal well-being, and above all else, happiness" (1975: 27). Scott has shown the effects when these environments ". . . appear to function . . . as elimination systems" (Scott, 1974: 6) discouraging participation and contributing to the development of a negative athletic self-concept. The authors of Every Kid Can Win have advocated the use of modifications in children's sports in the scaling-down of facilities and equipment and rule modifications and have

emphasized the use of creativity and imagination in practice and teaching sessions and above all, the inclusion of fun in every aspect of the activity in contributing towards the development of "positive" environments. Craig (1975) has shown that modified, cooperative-orientated games can have a positive effect on the socio-psychological outcomes of children's participation when compared with the outcomes of more traditional adult-oriented game structures. In recognizing the value of this research the National Coaching Developments Program (1975), recently developed, has given the athletic self-concept a high priority in its theory course: The Psychology of Coaching: Level I. These and other efforts all have focused on the child in sport and physical activity and the importance of these environments on his social and psychological development--the central component being the child's athletic self-concept. With the incorporation of these outlines, methods and programs teacher-coaches will be more adequately prepared to bring enthusiasm (or the lack of it), attitudes (positive or negative) and preconceived ideas about winning and losing into children's sport and physical activity in an effort to develop those "positive environments" where children will find enjoyment through their participation and develop positive realistic athletic self-concepts.

CHAPTER V

SUMMARY AND CONCLUSIONS

Summary

There were two main objectives of this study. The first was to construct a conceptual and empirical tool by which children's atheltic self-concepts could be measured. The second objective was to utilize the evolved instrument and the methodological procedures that accompanied it in an exploratory case study examining changes in the atheltic self-concepts of elementary school boys as a result of their performances in a motor ability skills test.

The instrument underwent several changes in its development prior to the pilot study in order to facilitate its comprehension and administration with young children. When ready for the pilot study, it was administered to thirty male children in grades one to four to assess its validity, reliability and objectivity.

The experimental study sample was limited to forty-five male children in grades one and two. The experimental design utilized was the One Group Pre-test Post-test Design. It was essential that every subject be thoroughly conversant with every other male member of their class group. Each class group remained intact so as to maintain the interaction that had occurred up to the point of the experiment and to represent

that specific group for social comparison purposes.

The subjects were interviewed individually to obtain a measure of their athletic self-concept with the evolved instrument (PASCI) and to obtain information on selected aspects of their history and present involvement in sport and physical activity including their athletic aspirations, expectations from participation and their perceptions of their parental expectations using a modified form of Orlick's (1972) Children's Sport Environment Interview schedule.

Following the interviews, each class of boys were administered a general motor ability performance test battery consisting of a 40 yard run, standing broad jump, catching the best out of 6 bounced balls, a balancing test, a softball throw for distance and a soccer ball kick for aerial distance. Each child performed individually in the presence of his classmates. After each item the children were told the results of their performances in terms of the distance or time achieved and their rank in the class. After the four classes had been tested, each child was reinterviewed individually to obtain a second measure of his athletic self-concept. Two weeks after this time the children were interviewed again to obtain a third measure of their athletic self-concepts.

The qualitative data collected in the pilot study was subjected to Pearson's product-moment correlation to determine the instrument's validity, reliability and objectivity. The data collected in the experimental study was subjected to a

two-way analysis of variance, Spearman's rank-order correlation and t-tests for significant differences between the three measures of athletic self-concept taken. Frequency and percentage breakdowns of the subjects with respect to age, class and occurrence of the social comparison process were also computed.

The results from the pilot study indicated that the instrument used in the study was valid, reliable and objective. The results of the experimental study revealed that:

1. There was a highly significant relationship between the children's rank in performance and their expressed athletic self-concepts ($p \leq .01$, $p \leq .001$).

2. As a result of their performances in the motor ability tests and the feedback given, the children, as a group exhibited a significant downward shift in their expressed athletic self-concepts ($p \leq .05$): the lower skilled children displayed a significant downward shift ($p \leq .05$) while the highly skilled children exhibited a slight upward shift.

3. After a period of two weeks from the performance tests, the children exhibited an upward shift in their expressed athletic self-concepts towards its position prior to the tests.

Conclusions

The main conclusions to be drawn from this research are directly related to the two major aims of the study. The

first aim was to develop a conceptual and empirical tool for assessing the athletic self-concepts of elementary school children. The second was to use the evolved instrument and the methodological procedures accompanying it to examine changes in the athletic self-concepts of elementary school boys as a result of their performances in a motor ability skills test.

The first conclusion is that the evolved instrument is a valid, reliable and objective measuring index of children's athletic self-concepts. The instrument although based on the social comparison process within the social context of the child's classroom, can be used in the context of other peer groups such as sports teams utilizing other more specific skills in the instrument. The instrument in its present form can serve as a diagnostic tool assisting teachers in identifying those underachievers in physical education classes with low athletic self-concepts. Once identified, the teacher should be sensitive to the situations imposed on these children and the reinforcement contingencies that are present in these situations.

As a result of the noted changes in the children's athletic self-concepts the second conclusion is that physical activities which use external comparisons as standards of achievement can be deleterious to the athletic self-concepts of the children involved. This conclusion is extremely pertinent to the teaching and coordinating of physical activities

for young children. The objective of these programs has been said to be the promotion of the total growth of the child: physically, mentally and socially. This being so, standards of achievement and measures of improvement should be related to the child's abilities and previous performances rather than external comparisons.

The present study has confirmed the basic premise held by many physical educators that external comparisons do, in fact, present unrealistic dimensions for children and contribute to the development of negative athletic self-concepts.

Recommendations for Further Research

The following are possibilities for future research which have been suggested as a result of the present study:

1. The use of the evolved instrument and methods with girls in elementary school.

2. The use of the evolved instrument with children over a greater range of ages in elementary school.

3. The application of the evolved instrument in the development of scales particular to children's sports programs existing at the community level.

4. Develop an alternative basis for athletic self-concept scales other than social comparison.

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APPENDICES

APPENDIX A

PASCI #1

BHOMIN ATHLETIC SELF-CONCEPT INDEX (PASCI #1)

Instructions:

Today I would like for us to look at some pictures together. Each set of pictures shows some boys just like you playing games and doing different things that you do in games. But some boys are happier because they can play well while the others are sad because they can't play as well. Let us look at the first group of pictures.

(1) RUNS FAST: Here are two boys running. This boy is smiling and is happy because he can run <u>really</u> fast- the fastest of all his friends in his class. This boy is sad and unhappy because he runs slow - the slowest of all his friends in his class. Now I am going to tell you about the boxes underneath and in between the two boys. What I would like you to do is take a star, lick it, and stick it in one of the boxes where you are between these two boys. If you put your star over here (under the 'happy' boy) that means you think you are like him - a <u>really</u> fast runner - the fastest of all your friends in your class. If you put your star over here (under the 'sad' boy) that means you think you are like him - a slow runner - the slowest of all your friends in your class. But you can put your star anywhere in between in one of the boxes depending where you think you are. (Now in an informal manner the examiner ascertains if the child, in fact, understands the principle of the five-point rating scale. The child places his star

in one of the boxes but is allowed to make changes in his decision if he wants to.)

(2) JUMPS AND FAR: Repeat with corresponding skill.

(3) CATCHES BALL WELL.

(4) BALANCES WELL ON BENCH.

(5) THROWS BALL (FAR).

(6) KICKS BALL FAR.

Good, now let us go over the pictures again and this time I want you to make believe that your teacher had to put a star where she/he/they think you are between the two boys playing. Where would you think she/he/they would place the star? Let us begin with the two boys running.

(1) RUNS FAST: Repeat instructions only with teacher, classmates.

(2) JUMPS, FAR.

(3) CATCHES WELL.

(4) BALANCES WELL.

(5) THROWS FAR.

(6) KICKS FAR.

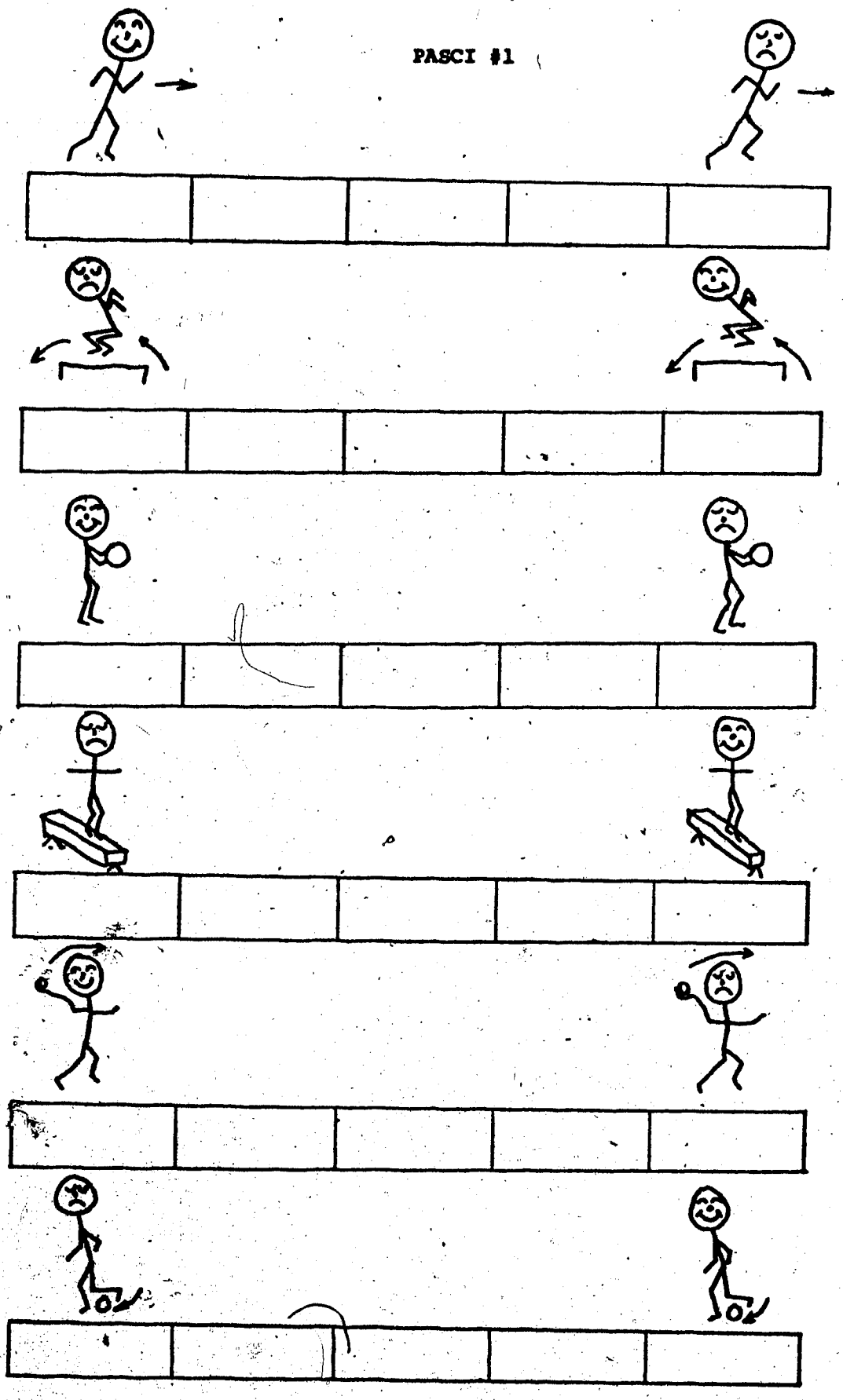
Test has three sections: (1) self-evaluation

(2) perceived teacher's evaluation

(3) perceived classmate's evaluation

Athletic Self-Concept score is average of the three scores.

PASCI #1



APPENDIX B

PASCI #2 (REVISED VERSION)

PHOMIN ATHLETIC SELF-CONCEPT INDEX

(PASCI #2 REVISED VERSION)

Instructions:

Today I would like for us to look at some pictures together. Each set of pictures shows some boys just like you playing games and doing different things that you do in games. But some boys are happier because they can play well while the others are sad because they can't play as well. Let us look at the first group of pictures.

(1) RUNS FAST: Here are two boys running. This boy is smiling and is happy because he can run <u>really</u> fast - the fastest of all his friends in his class. This boy is sad and unhappy because he runs slwo - the slowest of all his friends in his class. Now I am going to tell you about the boxes underneath and in between the two boys. What I would like you to do is take a star, lick it, and stick it in one of the boxes where you are between these two boys. If you put your star over here (under the 'happy' boy) that means you think you are like him - a <u>really</u> fast runner - the fastest of all your friends in your class. If you put your star over here (under the 'sad' boy) that means you think you are like him - a slow runner - the slowest of all your friends in your class. But you can put your star anywhere in between in one of the boxes depending where you think you are. (Now in an informal manner the examiner

ascertains if the child in fact, understands the principle of the five-point rating scale. The child places his star in one of the boxes but is allowed to make changes in his decision if he wants to.)

(2) JUMPS FAR.

(3) IS STRONG

(4) CATCHES WELL.

(5) BALANCES WELL.

(6) KICKS FAR.

(7) IS NOT AFRAID TO DIVE.

(8) IS GOOD AT HOPPING.

(9) THROWS FAR.

(10) SHOOTS WELL.

Good, now let us go over the pictures again and this time I want you to make believe that your teacher had to put a star where she/he/they think you are between the two boys playing. Where would you think she/he/they would place the star? Let us begin with the two boys running.

(1) RUNS FAST: Repeat instructions only with teacher, and classmates.

(2) JUMPS FAR.

(3) IS STRONG.

(4) CATCHES WELL.

(5) BALANCES WELL.

(6) KICKS FAR.

(8) IS GOOD AT HOPPING.

(9) THROWS FAR.

(10) SHOOTS WELL.

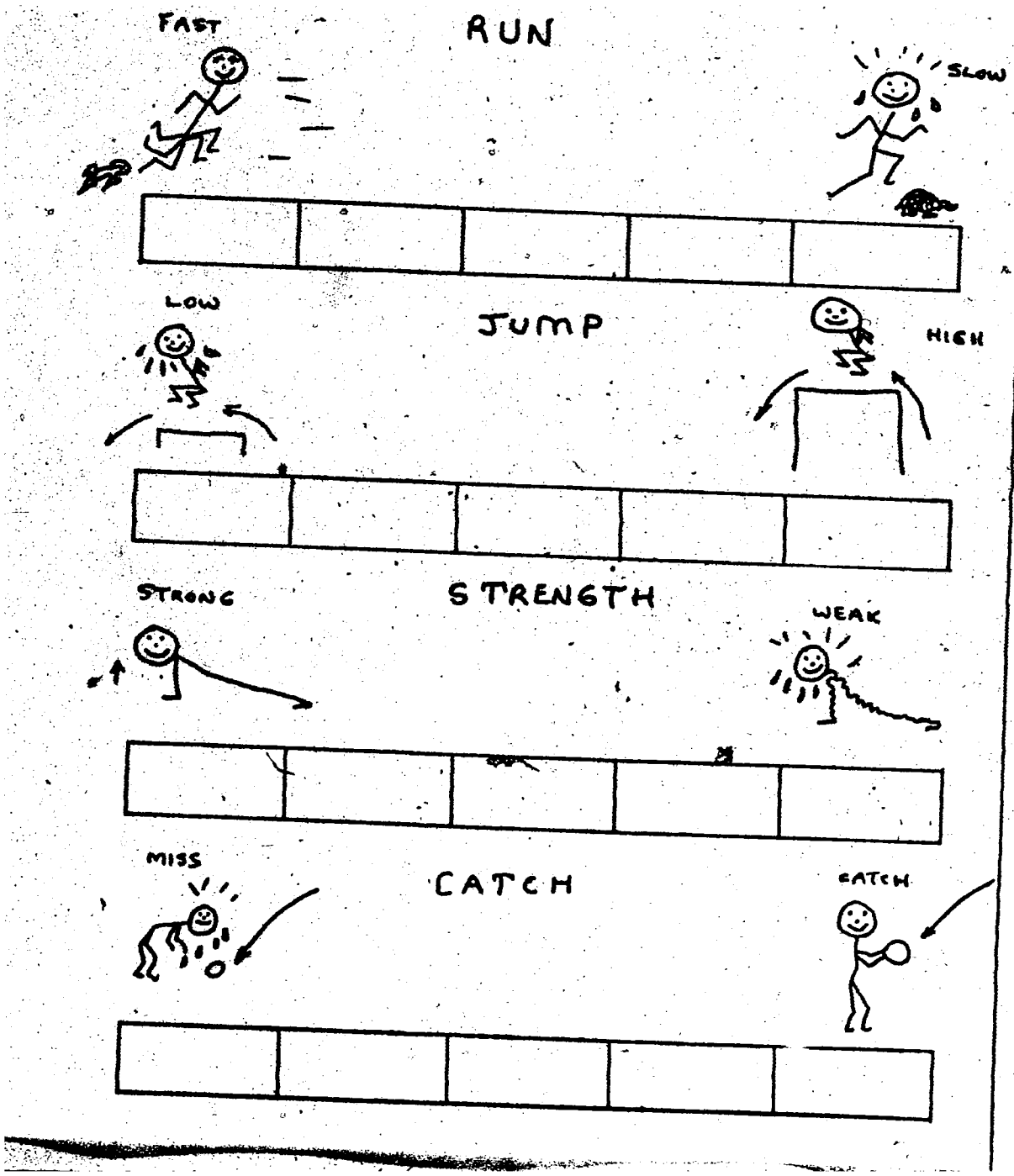
Test has three sections:

(1) self-evaluation.

(2) perceived teacher's evaluation.

(3) perceived classmates' evaluation.

Athletic Self-concept score is the average of the three scores.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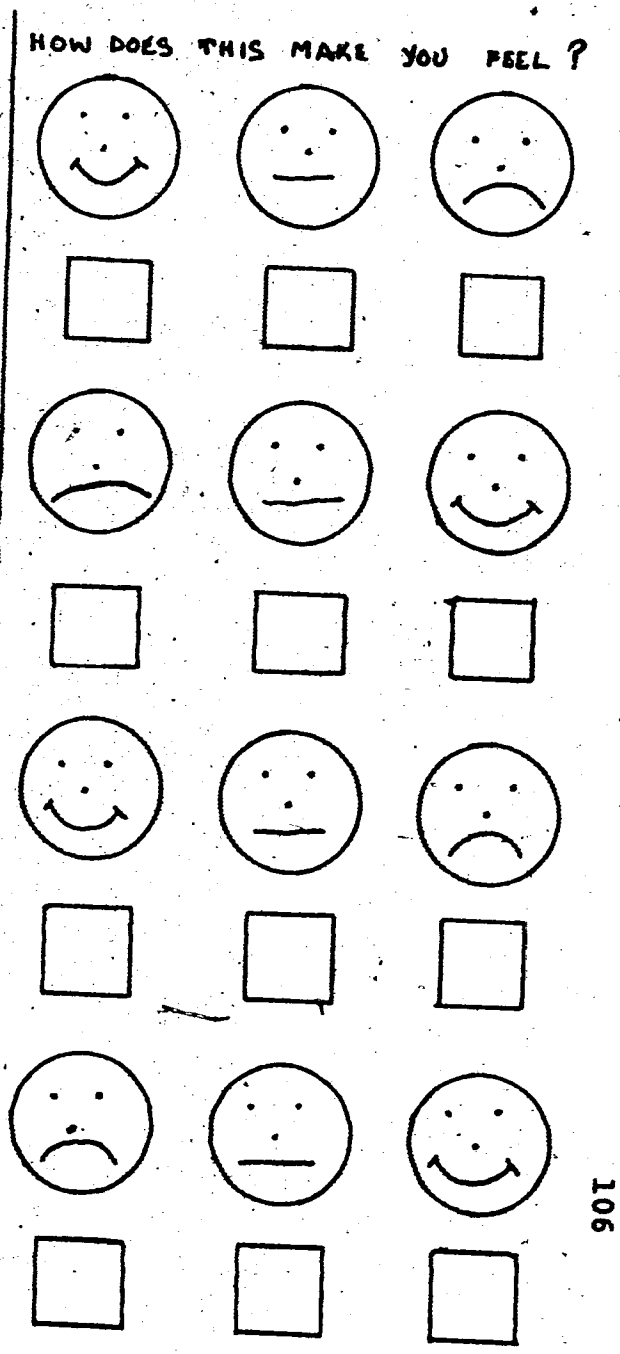
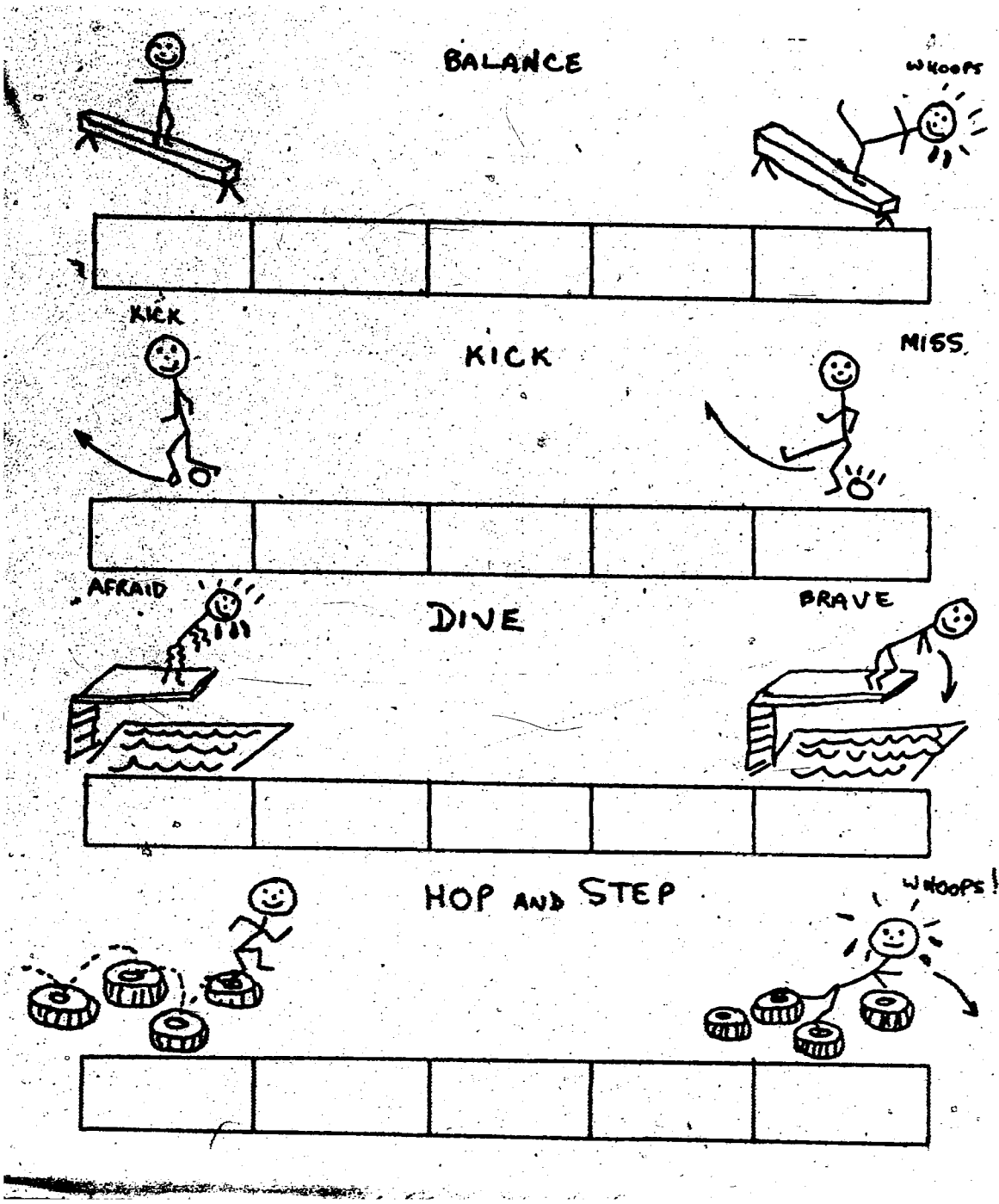
CATCH
CATCH


HOW DOES THIS MAKE YOU FEEL ?



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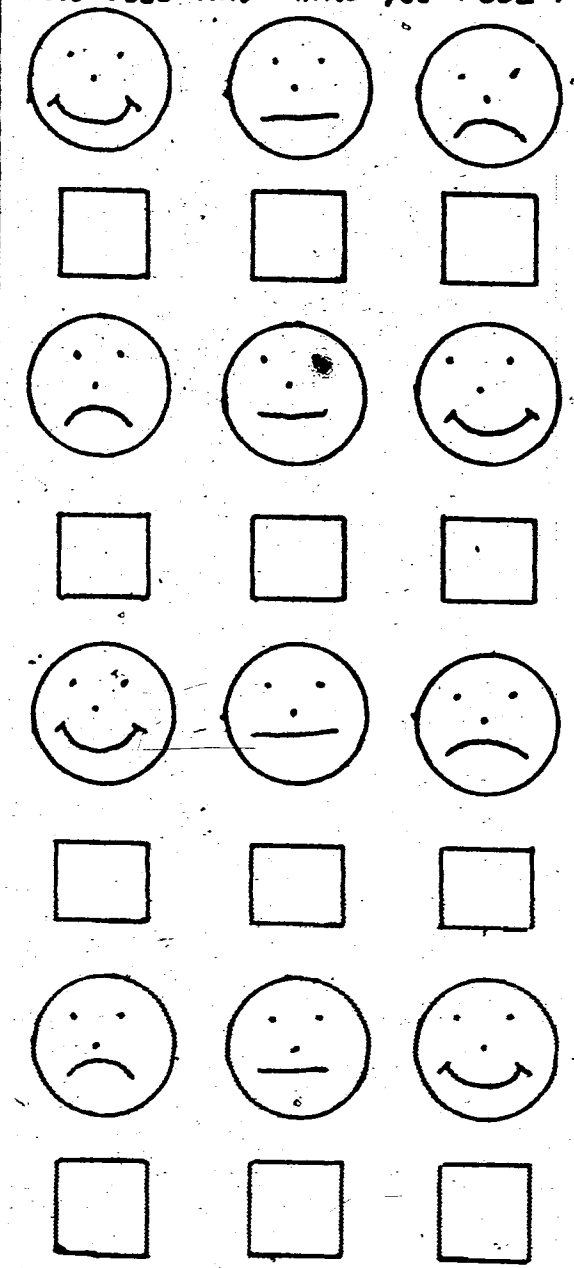

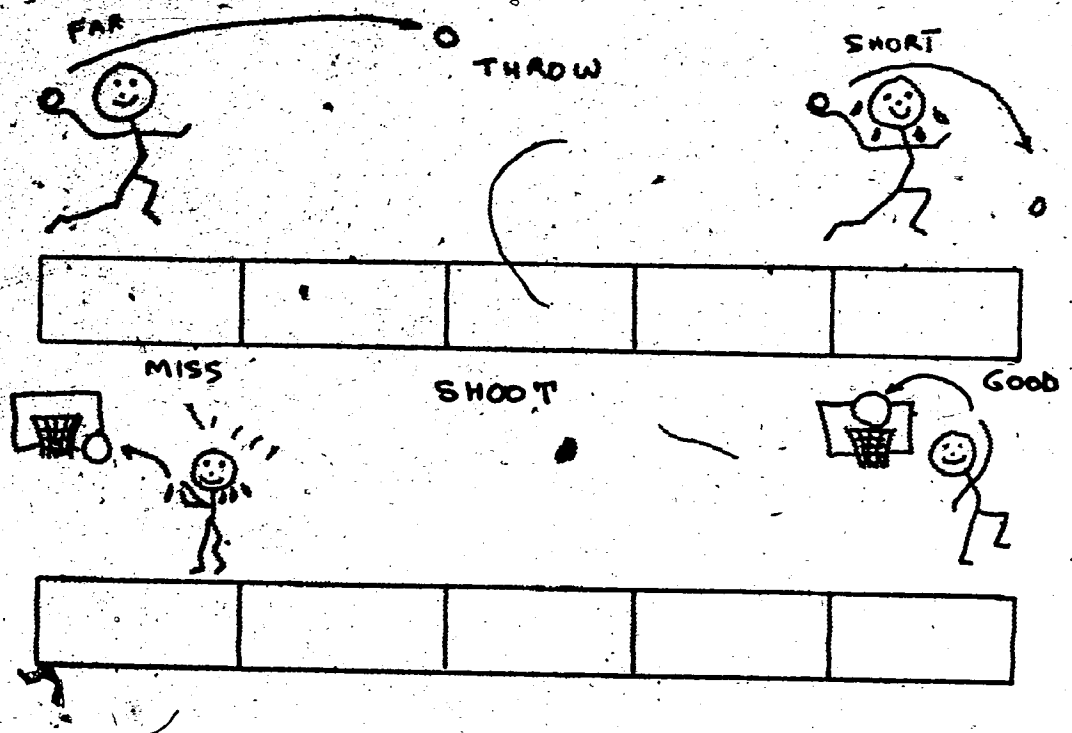

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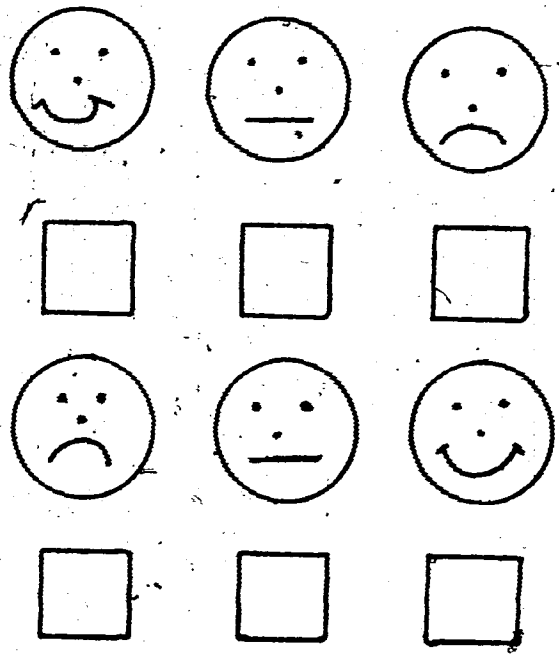


APPENDIX C

PASCI #3 (FINAL VERSION)

THE PHOMIN ATHLETIC SELF-CONCEPT INDEX

PASCI #3 (FINAL VERSION)

Instructions:

Let's look at some pictures I think you will find interesting. Let's have a look at these two boys (points to the two boys running). What are they doing? What is the difference between them in what they are doing? Very good! (or make corrections if the child misunderstands). Now let's make believe that this boy (pointing to the fast runner) is the fastest runner in his class and this boy (points to the slow runner) is the slowest runner in his class. Now if the line in between them represents all the boys in your class, where would you be on that line? (experimenter goes over various parts of the line to ascertain whether the child understands the principle of the line rating scale). Mark it with an X. Now that you have told me where you see yourself how does that make you feel? Put an X in the box under the face which shows how you feel. (Experimenter goes over the meaning of each of the faces). Repeat with boy -

- jumping far
- catching well
- balances well
- throws far
- kicks far

Good! Now on the next two sheets (takes another copy of the index). Let's go over it again only this time I want you to make believe that your teacher (mention teacher's name) had to put an X on the line showing where she thinks you are. Where do you think she would put it? Let's start with running. (Briefly go over explanations if required.) Mark it with an X. How does that make you feel? How about - (other 5 skills)? How does that make you feel? etc.

Repeat with - all the other kids in the class had to get together and had to put an X on the line showing where they think you are. Where do you think they would put it? etc.

Self Score

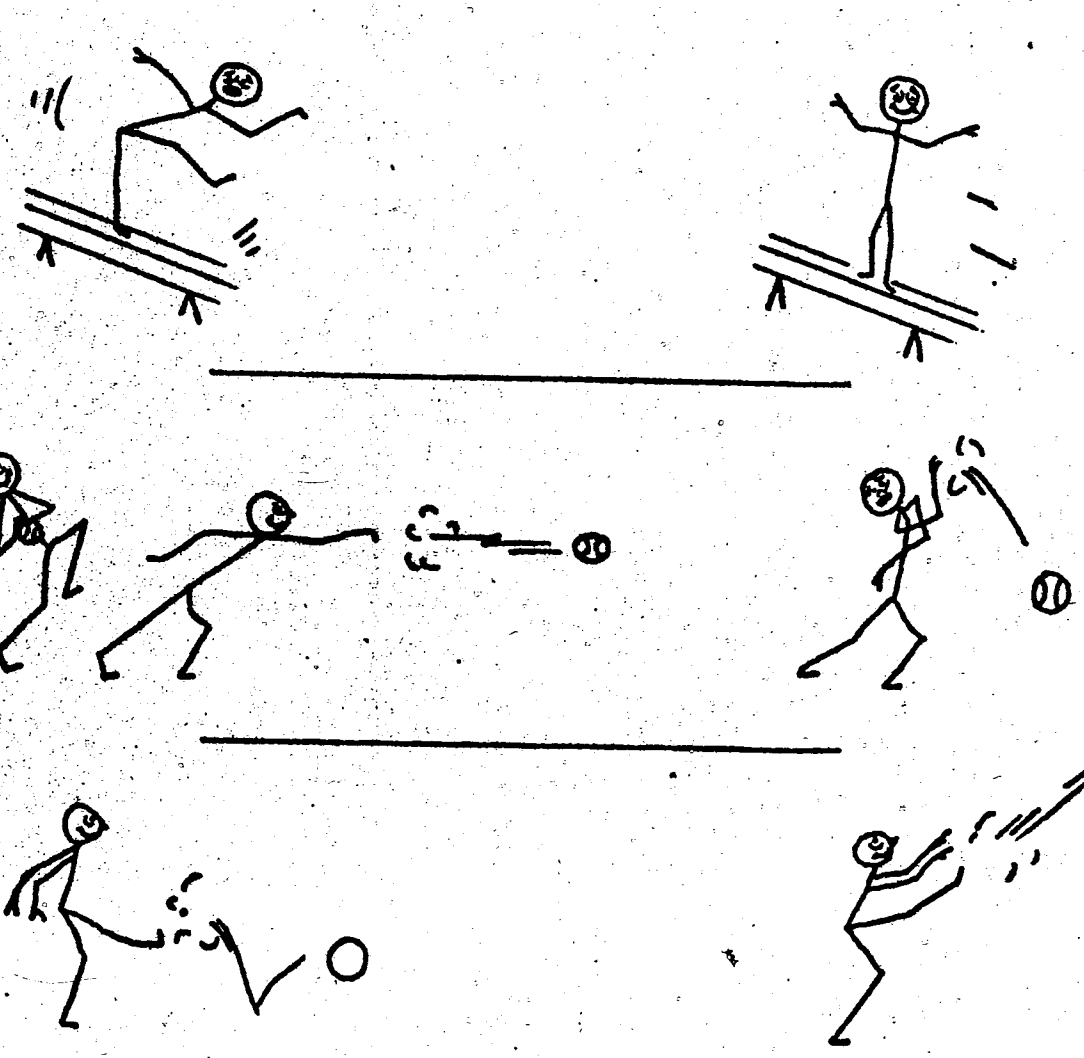
Total test has three sections Perceived Teacher's score.

Perceived Classmate's Scores

Child's Athletic Self-Concept score is the average of the three.

HOW DOES THIS MAKE YOU FEEL?

HOW DOES THIS MAKE YOU FEEL ?



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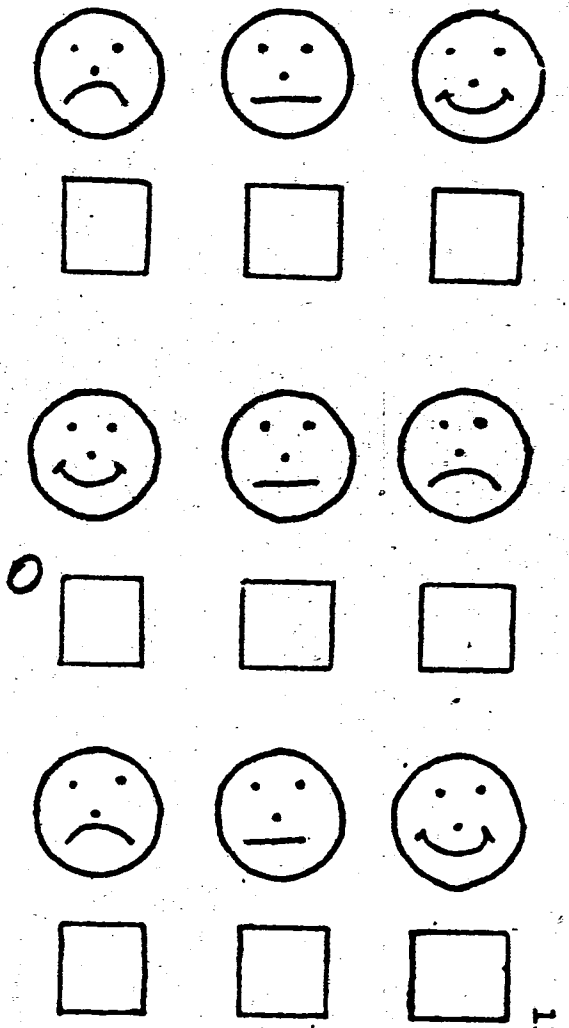

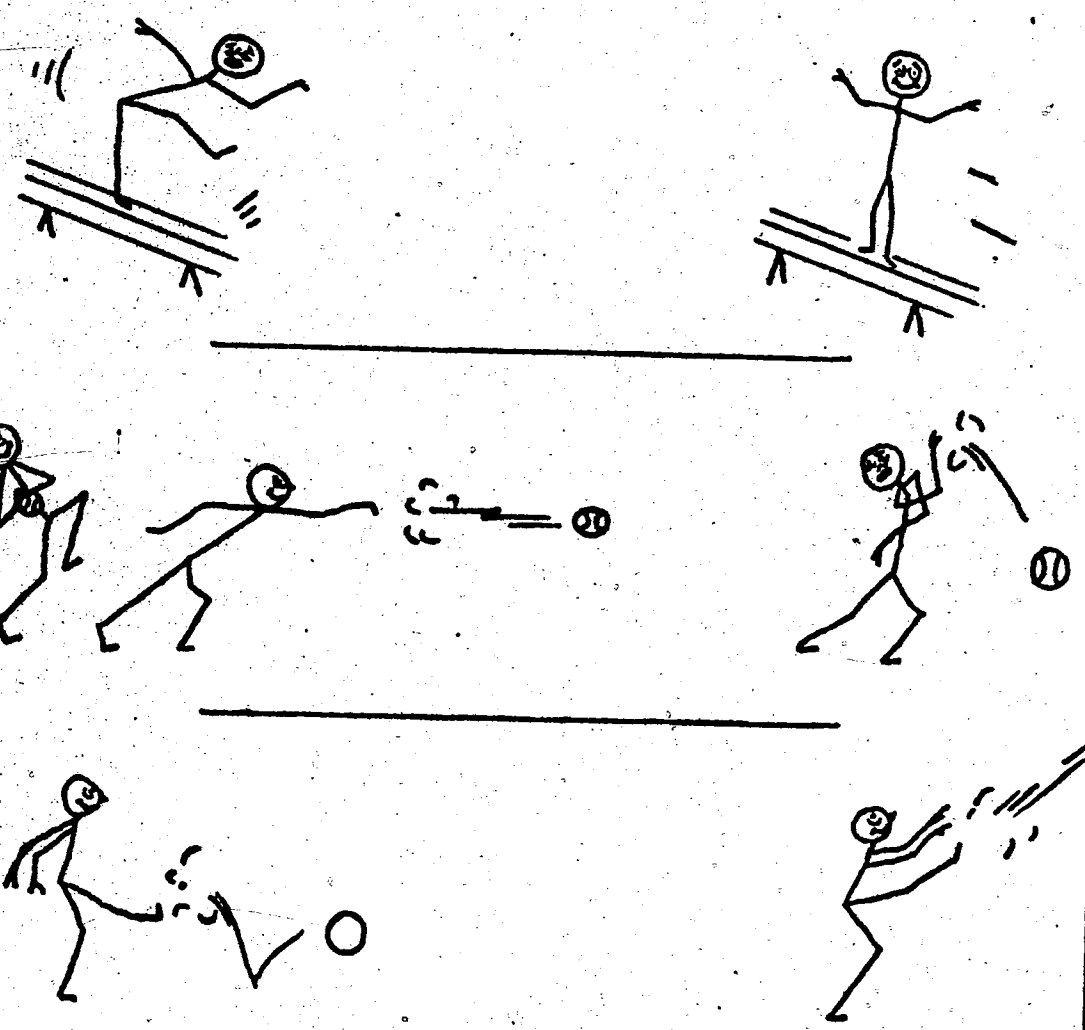

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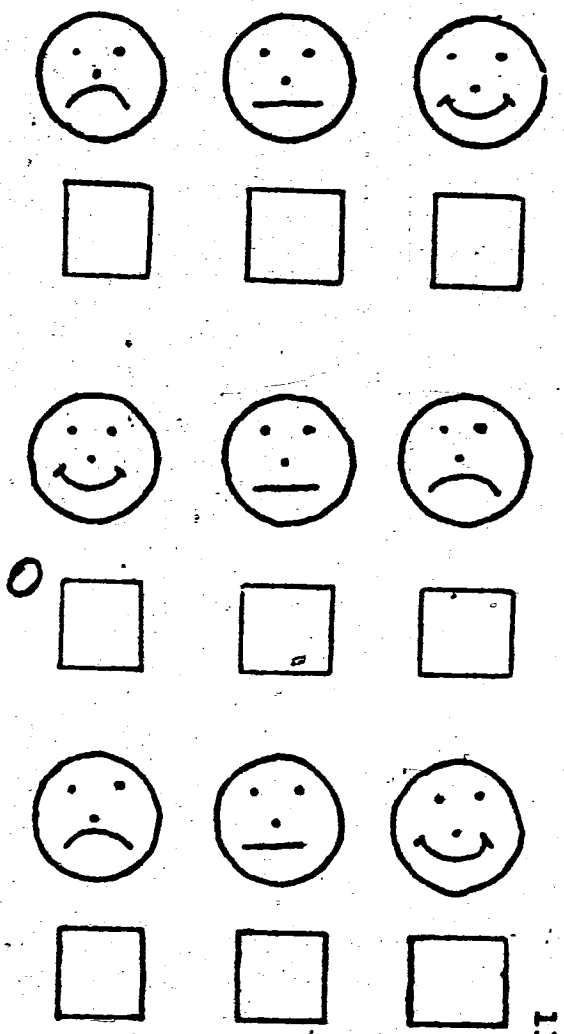
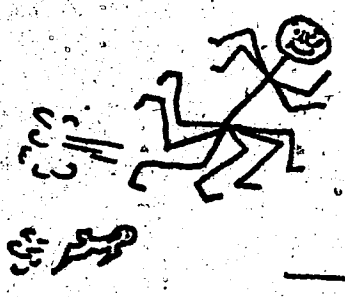
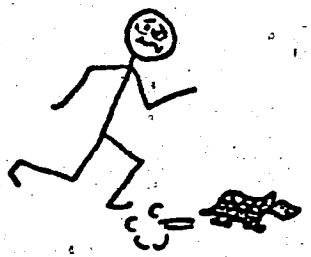
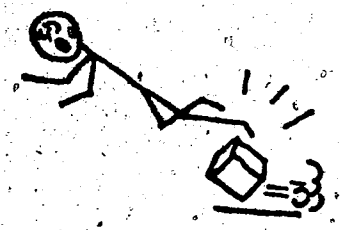
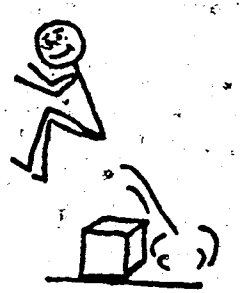
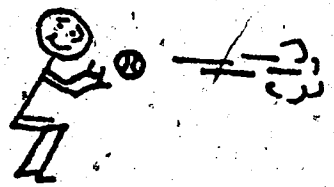




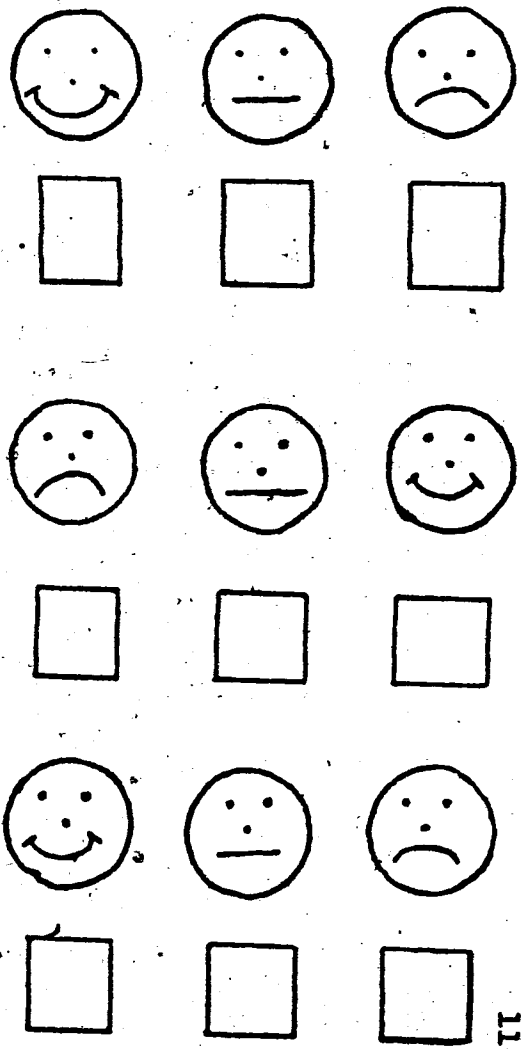


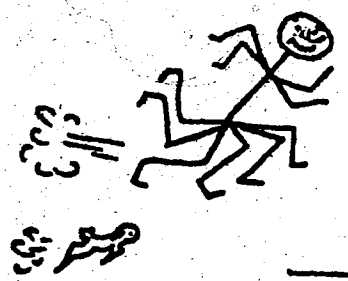


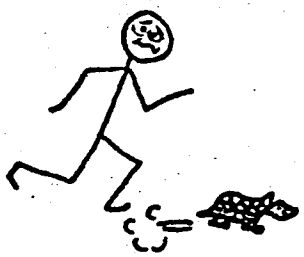


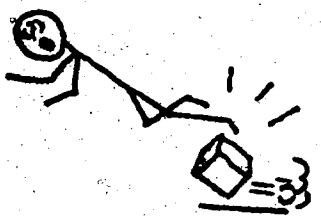


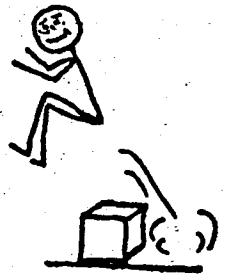
HOW DOES THIS MAKE YOU FEEL ?

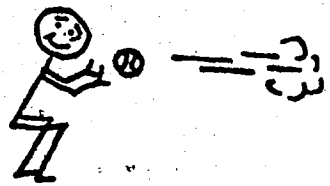


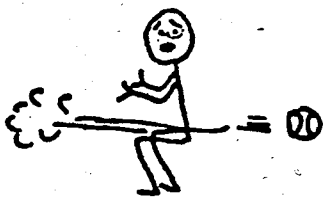




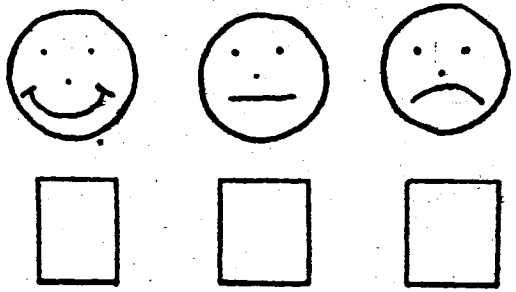


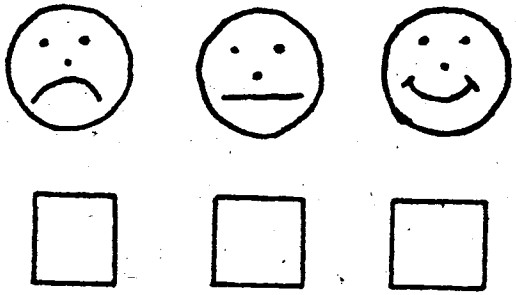


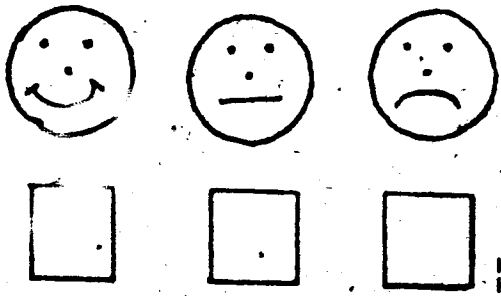




HOW DOES THIS MAKE YOU FEEL ?







APPENDIX D

MODIFIED CHILDREN'S SPORTS ENVIRONMENT INTERVIEW SCHEDULE

MODIFIED CHILDREN'S SPORT ENVIRONMENT INTERVIEW

A. Primary Sports Involvement of Child and Social Comparison Processes.

1. Do you play any games or sports (like hockey, soccer, basecall, swimming, etc.) with your friends?

   1a. After school? If yes, how often (how many times a week or month)?

1	2	3	4	5
no, don't play sports after school	once or twice a month	once a week	two or three times a week	every day

   1b. In the summer? If yes, how often?

1	2	3	4	5
no, don't play sports in summer	once or twice a month	once a week	two or three times a week	every day

2. What kind of games or sports do you play?

   2a. Do you ever notice when you are playing that some kids are better than others? Do you compare yourself to them to see how you are compared to them (elaborate using specific sports)?

1	2	3	4	5
no, never	no, don't think so	not really	yes, think so, sometimes	yes (emphatic)

3. What kinds of things do you do at recess?

   3a. When playing at recess with your classmates do you compare yourself to them to see how you are compared to them (elaborate using child's activities)?

1	2	3	4	5
no, never	no, don't think so	not really	yes, think so, sometimes	yes (emphatic)

4. What kinds of things do you do when you have gym?

4a. When playing in the gym do you compare yourself with the other kids to see how you are compared to them (elaborate using gymnasium activities cited)?

1	2	3	4	5
no, never	no, don't think so	not really	yes, think so, sometimes	yes (emphatic)

5a. Now we just talked about the things you do after school, at recess and during gym. Which do you enjoy the most?

5b. Why?

6a. Is it important for you to be good in sports and "stuff" like that?

1				
no	not really, don't think so	sometimes, a little don't know	yes, think pretty well	yes (emphatic)

6b. Why?

7a. Are you going to play on a regular (organized league) team (i.e. hockey, soccer, baseball) or compte in any sports (i.e., swimming, gymnastics) this year?

1	2	3	4	5
no	don't think so	don't know	think so	yes

7b. It yes, in what sport?

8a. Have you ever played on any regular teams (or competed in any sports before?

1	2	3	4	5
no	not really	don't know	yes, one year	yes, 2-3 years

8b. If yes, when and in what sport?

9. Do your <u>best</u> friends play a lot of sports?

1	2	3	4	5
no	don't think so most don't, not that much	some do and some don't, don't know	most do, think so, usually	yes

B. Secondary Sports Involvement of Child

1a. Did you actually go to watch any live games or sporting events in the last year? (any sport) If yes, how often or how many times?

1	2	3	4	5
no, never went	don't think so	yes, once	two or three times	four times or more

1b. If yes, who did you go with and what did you see?

2a. Do you watch sports on television? If yes, how often per month or per week?

1	2	3	4	5
no, not really	once a month	twice a month	once or twice a week	three or four times a week or more, watch everything that comes on

2b. If yes, what do you watch?

3a. Do you root for or cheer for any sports team?

1	2	3	4	5
no	not really	don't know	yes, a little	yes, definitely, names teams

3b. If yes, which ones?

C. General Sports Information

1. What is your favourite hobby or sport or activity?

2a. What is your father's favourite hobby or sport or activity?

2b. What is your mother's favourite hobby or sport or activity?

3. Are sports important to you?

1	2	3	4	5
no	not really, don't think so	sometimes a little, don't know	yes, think so, pretty well	yes (emphatic)

4. Do you like to play sports?

1	2	3	4	5
no, not that much, not really	not usually, just a few, depends how I feel	some sports sometimes, don't know	yes, most of the time	yes

5a. Do you like to watch sports?

1	2	3	4	5
no, not much, not really	just a few, not usually	some sports sometimes	yes, most of the time	yes

6a. What subject do you like best in school (i.e., math, art, reading, gym, science, etc.)?

6b. What subject do you like least in school?

7. Is there anything you like to do more than anything else? If yes, what?

1	2	3	4	5
non-sport activities i.e., science, play with chemistry set, sleep	non-sport related i.e., go with family member, walk dog, see grandma, go someplace	no, not really	names sport related activity i.e., ride bike, hike, hunting, fishing	sports i.e., play hockey, skate, play football, skiing, swimming

D. Child's Athletic Aspirations

1a. Would you like to be an athlete (or a member of a little league team)?

1	2	3	4	5
no	don't think	don't know, maybe	yes, guess so	yes, (emphatic)

1b. Why would you or wouldn't you?

2a. Would you like to be good at sports? If yes, how good?

1	2	3	4	5
no	don't think so	don't know, medium, yes, average	yes, pretty good, fairly good	yes, very good, perfect, real good, the best

2b. Why?

3a. Do you think you would like to be a star on the team?

1	2	3	4	5
no	don't think so	don't know	yes, guess so	yes, (emphatic)

3b. Why or why not?

4. If you could be anybody in the world, who would you want to be?

1	2	3	4	5
non-athlete		don't know, nobody, me		athlete

5. Non-Participant - Do you think you will ever want to go out for a sports team?

Participant - Do you think you will always want to go out for a sports team?

E. Child's Expectations From Participation

1a. Non-Participant - Do you think you would make the team (or be chosen to be on the team) this year, if you decided to go out for it?

Participant - Do you think you will make the team (or be chosen to be on the team) this year?

1	2	3	4	5
no	don't think so, probably not	don't know, maybe	yes, think so	yes, (emphatic)

1b. Non-Participant - If you thought you would surely make the team, would you go out for it?

2. How good do you think you could be in sports?

1	2	3	4	5
not too good	not too good, but not real bad	normal, average, medium, don't know, in between	pretty good, quite good, fairly good	very good, real good

3. Do you think the kids would like you better if you were really good at sports?

1	2	3	4	5
no	don't think so	don't know	yes, think so	yes, (emphatic)

4a. What makes you think that?

5. Non-Participant - What do you think it would be like for you if you went out for a team this year?

Participant - What do you think it will be like for you when you go out for the team this year?

1	2	3	4	5
wouldn't like it, be scared, wouldn't make it, probably not make it	not so good, don't know if I'd be any good	don't know not sure, pretty cold	pretty fun, pretty good quite good	fun, rea good, ea I'll be good

F. Child's Perception of Parental Expectations

1. Do you think your father or mother would like you to take part in sports?

1	2	3	4	5
no	don't think so	don't know, want me to do what I want	think so	yes

2a. Is there anyone else who you like a lot who would like you to take part in sports?

1	2	3	4	5
no	don't think	don't know	think so	yes

2b. If yes, who?

3. Do you think that either your father or mother expect you to be an athlete or expect you to take part in sport?

1	2	3	4	5
no	don't think so, not really, not that much	don't know, not sure	yes, think so	yes (emphatic)

APPENDIX E

DESCRIPTION OF MOTOR ABILITY SKILLS TEST

GENERAL MOTOR ABILITY PERFORMANCE TEST

Test Items:

1. Catching
2. Jumping — Indoor Events
3. Balancing
4. Running
5. Throwing — Outdoor Events
6. Kicking

A. Indoor Events

Catching: In this test a ball-chute apparatus was developed for the purpose of standardizing the bounce of balls and was used with a twelve foot high ladder which was placed on a stage overlooking the gymnasium floor. In this manner, every child was assured of the same bounce in tracking the ball prior to catching it. Three different balls were used to discriminate in the children's catching ability: a number five rubber playground ball, an "Indian" rubber or lacrosse ball and a golf ball. Each ball was rolled down the chute and allowed to bounce freely while the children in each group were instructed to observe the height and distance that each ball travelled. In this manner the children judged where they should stand to receive the balls as each varied in their rebound. Then each child in turn, attempted to catch the balls one at a time while the rest of

the children observed. The entire group attempted to catch the lacrosse ball, followed by the golf and then the playground ball. Once complete, the ball-chute was placed out further on the ladder altering the trajectory of each ball. Again the children watched each ball roll down the chute and observed the distance the ball travelled in approximating where they should stand in order to receive the ball. Once the ball bounced the child was allowed to move in order to catch it. The only instructional directions pertaining to catching that were offered to each child prior to his attempt were, "Get ready" and "Watch the ball (child's name)". The child's score was the number of caught balls out of six attempts.

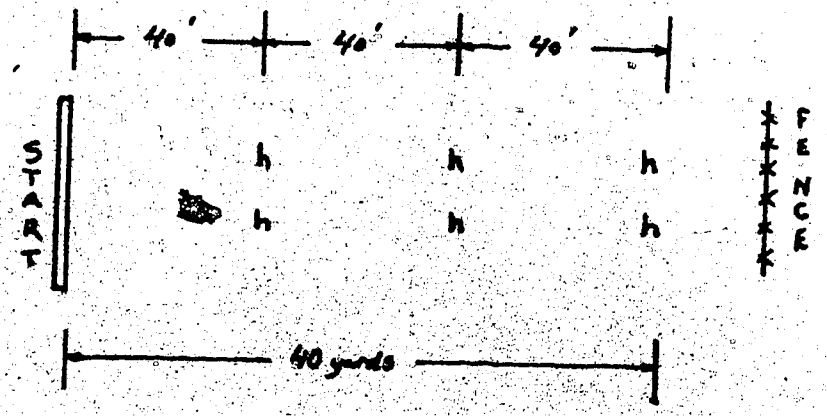
Jumping: For this test a gym mat and metric cloth tape were used. Prior to the test the children were instructed in how to jump forward far "like a leap-frog" emphasizing the use of the arms in a forward swinging motion, the bending of the knees and a two foot landing. All children did this several times on the gym floor and were reinforced for displaying the proper technique. For the test all children were barefooted and were allowed two practice trials and two performance trials, the farthest jump recorded. For the test each child placed his heels flush to the end of the gym mat prior to jumping. This was checked by the experimenter. In the event of one foot landing behind the other the distance from that point to the

beginning of the mat was recorded. All distances were recorded in meters.

Balancing: The Seashore Beam-Walking Test (Seashore, 1949) was modified for examining the children's dynamic balance. For this test all children were again barefooted. The instructions emphasized the walking to be of a heel-toe manner and that each foot be placed directly in front of the other for ten steps only. In the event of a loss of balance the children were instructed to place one foot down on the mat (which was on the floor beneath the beam) while keeping one foot on the beam, and then continue. The elapsed time taken for the ten steps and the number of falls made up the score.

B. Outdoor Events

Running: Three sets of chairs were placed equi-distance apart along the length of the running course in the following manner:



This was to insure that the children ran in a straight line from start to finish. Prior to the test the children were instructed in the proper starting technique to the commands "On your marks", "Get set" and "Go" from the starting line which was a piece of wood. The children were instructed to run to the fence, which was 15 feet beyond the last set of chiars. This was done as children have a tendency to slow down as they reach their perceived destination. Each child ran the 40 yard dash individually only once and their times acted as their scores.

Throwing: A junior-sized softball was used due to the size of young children's hands. A piece of wood was placed on the ground as the foul line. The children were instructed in the use of a few lateral sliding steps to increase their momentum and subsequent distance and in the proper overhand throwing technique. Each child had two throws with the further distance being recorded in meters by a plastic tape.

Kicking: A number 4 soccer ball, scaled-down for younger children was used for the test. Prior to the test the children were instructed in the proper soccer kicking technique emphasizing the placement of the non-kicking foot close to the ball, the point of contact--the instep of the foot and the use of an angled approach. For the test all children wore running shoes as the ball was kicked from a point in line

with a piece of wood, acting as the starting point for measurement. Each child had two attempts as the further aerial distance was recorded in meters with a plastic tape.

APPENDIX F

CHILDREN'S SCORES ON THE PASCI AND ON THE MOTOR ABILITY SKILLS TEST

PRE - TEST

Child	Age	Self	AFF	Teacher	AFF	Friends	AFF	PASCI #1	Rank	CSE
1) K.B.	(6.7)	53	18	58	18	60	18	57.0	2	73
2) J.C.	(6.8)	46	16	38	14	37	14	40.3	10	83
3) R.D.	(6.8)	55	17	50	14	52	17	52.3	3	86
4) G.K.	(6.9)	34	13	44	16	27	14	35.0	13	82
5) M.L.	(7.2)	42	17	41	18	37	18	40.0	11	105
6) J.K.	(6.3)	43	13	37	12	38	12	39.3	12	89
7) B.H.	(6.7)	51	15	37	15	41	16	43.0	8	94
8) D.F.	(6.9)	44	12	41	12	41	12	42.0	9	104
9) T.B.	(6.9)	49	18	42	18	56	18	49.0	5	108
10) D.M.	(6.8)	46	18	41	18	51	18	46.0	7	110
11) M.R.	(7.2)	48	17	50	17	51	18	49.7	4	101
12) J.S.	(7.2)	60	18	60	18	60	18	60.0	1	106
13) B.P.	(8)	39	16	42	14	42	18	46.7	6	102

Mrs. Blanjaar - Grade I (a) $\bar{X}$ 45.7

PRE - TEST (Continued)

Child	Age	Self	AFF	Teacher	AFF	Friends	AFF	PASCI #1	Rank	CSE
14) B.O.	(6.5)	51	18	44	16	45	18	46.0	8	117
15) D.P.	(6.9)	44	17	46	18	55	17	48.3	5	91
16) G.R.	(6.5)	35	17	35	14	37	15	35.7	10	92
17) C.E.	(6.5)	45	13	33	13	27	14	35.0	11	92
18) J.S.	(6.5)	56	16	50	13	56	17	54.0	2	93
19) T.G.	(7)	36	13	36	15	38	15	36.7	9	90
20) A.P.	(6.5)	12	12	6	7	6	10	8.0	12	88
21) J.N.	(7)	50	18	49	16	48	17	49.0	4	109
22) S.M.	(6.5)	47	16	40	14	50	14	45.7	6	108
23) S.P.	(7.5)	52	15	54	15	47	14	51.0	3	93
24) M.L.	(6.5)	45	17	41	17	45	18	43.7	7	75
25) J.S.	(8)	58	18	60	18	55	18	57.7	1	106
Mrs. Laing - Grade I (b)								$\bar{X}$42.6		

PRE - TEST (Continued)

Child	Age	Self	AFF	Teacher	AFF	Friends	AFF	PASCI #1	Rank	CSE
26) M.T.	(7.6)	43	17	47	15	40	17	43.3	4	106
27) D.K.	(8)	39	14	46	17	39	15	41.3	5	83
28) R.S.	(8.6)	60	18	55	17	57	18	57.3	2	114
29) D.B.	(7.9)	41	17	41	1[illegible]	37	17	39.7	6	111
30) D.Y.	(7.8)	60	14	60	14	60	17	60.0	1	116
31) B.A.	(8)	33	10	42	15	34	15	36.3	8	88
32) J.L.	(8)	34	14	30	14	34	15	32.7	11	80
33) D.C.	(8)	33	15	38	18	32	15	34.3	9	109
34) T.C.	(7.5)	34	14	34	15	33	14	33.7	10	92
35) R.P.	(7.5)	40	14	37	15	38	13	38.3	7	81
36) B.F.	(8)	50	17	52	18	55	18	52.3	3	105

Mrs. Player - Grade II (a) $\bar{X}$ 42.7

PRE - TEST (Continued)

Child	Age	Self	AFF	Teacher	AFF	Friends	AFF	PASCI #1	Rank	CSE
37) D.K.	(7)	39	15	35	16	36	15	36.7	6	104
38) J.C.	(8)	44	18	44	18	42	18	43.3	3	110
39) M.M.	(7.9)	30	16	33	15	33	16	32.0	9	91
40) S.P.	(8)	42	18	43	18	44	18	43.0	4.5	106
41) N.W.	(7.4)	37	12	33	13	31	11	33.7	8	85
42) P.D.	(7.7)	47	15	41	14	41	15	43.0	4.5	102
43) B.S.	(7.9)	43	14	52	14	52	17	49.0	2	112
44) J.C.	(7.5)	37	13	41	14	30	11	36.0	7	110
45) B.B.	(8)	57	18	58	18	59	18	58.0	1	112
Mrs. Magnan - Grade II (b)						Total Group		$\bar{X}$ 41.6 $\bar{X}$ 44.3		

ATHLETIC SKILLS

	Child	Catch x/6 /Rank	Balancing Time/Fall/Rank	Long Jump Dist/Rank	Throw Dist/Rank	Dash Time/Rank	Kick Dist/Rank	Average Rank in Skills
1)	K.B.	4/6.5	19.6-0/8	1.42/12	15.50/10	7.25/6	390/13	12
2)	J.C.	5/3.5	54.4+3/13	1.56/1	18.15/8	7.45/9.5	6.97/6	6.5
3)	R.D.	4/6.5	13.3+1/3	1.44/10	19.29/6	7.5/11.5	8.37/4	6.5
4)	G.K.	1/12	32.1+/12	1.40/13	10.78/13	7.2/5	6.72/8	13
5)	M.L.	1/12	29.1+2/10	1.48/8	12.83/12	7.1/3	5.72/10	11
6)	J.K.	4/6.5	15.3+1/5	1.52/3	16.81/9	7.5/11.5	8.89/3	5
7)	B.H.	2/9.5	30.7+1/11	1.49/6.5	22.00/2	6.9/2	9.90/1	4
8)	D.F.	6/1.5	12.8-0/1	1.51/4	21.17/3	7.45/9.5	7.58/5	1
9)	T.B.	1/12	13.0-0/2	1.44/10	18.46/7	7.15/4	4.89/12	9
10)	D.M.	4/6.5	16.3+3/7	1.50/5	19.35/5	7.4/8	5.51/11	8
11)	M.R.	6/1.5	22.8-0/9	1.44/10	14.92/11	7.9/13	6.93/7	10
12)	J.S.	5/3.5	16.94/6	1.49/6.5	22.96/1	7.3/7	9.06/2	3
13)	B.P.	2/9.5	12.7+2/4	1.54/2	21.05/4	6.85/1	5.88/9	2

Mrs. Blanjaar - Grade I (a)

ATHLETIC SKILLS (Continued)

	Child	Catch x/6/Rank	Balancing Time/Fall/Rank	Long Jump Dist/Rank	Throw Dist/Rank	Dash Time/Rank	Kick Dist/Rank	Average Rank in Skills
14)	B.O.	0/9.5	30-9/12	1m-4cm/10	9.42/8	7.0/12	3m/10	11
15)	D.P.	3/4.5	7.7-0/7	1m-22cm/7	11.54/4	6.4/6.5	6.55m/3	3
16)	G.R.	2/6	20.3+2/8	1.19m/9	9.19/9	6.7/9.5	3.26/8	9
17)	C.E.	1/7	9.5-0/2	1.45/3	9.70/7	6.2/3.5	3.04/9	5
18)	J.S.	4/2	15.2+1/5	1.31/6	13.12½/3	6.3/5	8.75/1	2
19)	T.G.	0/9.5	11.2+1/4	1.32/5	10.02/6	6.1/2	3.80/6	6
20)	A.P.	0/9.5	27+5/10	1.02/11	6.66/12	6.9/10	2.11/11	12
21)	J.N.	0/9.5	29.2+4/11	1.41/4	15.95/1	6.0/1	3.47/7	7
22)	S.M.	0/9.5	11.0-0/3	1.20/8	8.60/11	6.7/2.5	1.72/12	10
23)	S.P.	4/2	23.2+2/9	1.51/1	15.66/2	6.4/6.6	6.70/2	1
24)	M.L.	3/4.5	19.3+0/7	1.31/6	11.4./5	6.5/7	4.50/5	8
25)	J.S.	4/2	15.4+1/6	1.46/2	9.07/10	6.2/3.5	4.69/4	4

Mrs. Laing - Grade I (b)

ATHLETIC SKILLS (CONTINUED)

	Child	Catch x/6/Rank	Balancing Time/Fall/Rank	Long Jump Dist/Rank	Throw Dist/Rank	Dash Time/Rank	Kick Dist/Rank	Average Rank in Skills
26)	M.T.	3/7.5	22-4/9	1.34/9	15.90/7	8.3/11	7.67/6	8.5
27)	D.K.	2/10	12.4-2/4	1.30/11	14.85/8	7.9/9	4.52/10	10
28)	R.S.	4/5.5	15-31/5	1.64/1	18.18/3	6.21/1	7.76/5	2
29)	D.B.	6/1.5	8.3-0/2	1.45/6	16.29/6	7.5/7	7.94/4	5
30)	D.Y.	2/10	26.2-2/10	1.36/8	14.03/9	7.3/4.5	9.65/2	7
31)	B.A.	3/7.5	10.6-11/3	1.48/5	18.51/2	7.7/8	7.30/7	6
32)	J.L.	6/1.5	17-4/8	1.33/10	12.23/11	8.0/10	5.39/9	8.5
33)	D.C.	5/3.5	17.5-2/7	1.60/3	17.79/4	7.0/3	8.57/3	3
34)	T.C.	4/5.5	17-2/6	1.58/4	17.77/5	7.3/4.5	12.02/1	4
35)	R.P.	2/10	36.8-2/11	1.38/7	13.24/10	7.4/6	4.44/11	11
36)	B.F.	5/3.5	7.9-0/1	1.61/2	22.43/1	6.6/2	5.64/8	1

Mrs. Player - Grade II (a)

ATHLETIC SKILLS (Continued)

	Child	Catch x/6/Rank	Balancing Time/Fall/Rank	Long Jump Dist/Rank	Throw Dist/Rank	Dash Time/Rank	Kick Dist/Rank	Average Rank in Skills
37)	D.K.	5/4.5	18.1+1/6	1.35/8	8.69/9	7.9/9	5.00/9	9
38)	J.C.	6/2	23.9+3/8	1.70/3	18.96/3	6.9/3	10.33/4	3
39)	M.M.	3/8	14.0+1/4	1.67/4	8.70/8	7.0/4	5.04/8	8
40)	S.P.	6/2	20.8-0/7	1.71/2	21.22/1	6.7/1	10.44/3	1
41)	N.W.	4/6	25.64/9	1.91/1	14.36/6	6.8/2	9.10/6	4
42)	P.H.	3/8	14.4-0/2	1.43/7	15.18/5	7.4/6	6.95/7	7
43)	B.S.	3/8	16.2+1/5	1.59/6	17.20/4	7.2/5	10.32/5	6
44)	J.C.	5/4.5	7.3-0/1	1.31/9	13.23/7	8.4/8	11.00/2	5
45)	B.B.	6/2	14.6/3	1.60/5	20.36/2	7.8/7	11.98/1	2

Mrs. Magnan - Grade II (b)

POST - TEST

Child	Age	Self	AFF	Teacher	AFF	Friends	AFF	PASCI #2	Rank
1) K.B.	(6.7)	41	15	47	16	44	15	44.0	4
2) J.C.	(6.8)	35	15	35	15	37	14	35.7	9
3) R.D.	(6.8)	39	15	40	16	43	18	40.7	6
4) G.K.	(6.9)	33	13	32	13	27	13	30.7	13
5) M.L.	(7.2)	30	14	35	18	33	18	32.7	11
6) J.K.	(6.3)	35	13	32	14	37	13	35.7	8
7) B.H.	(6.7)	44	15	41	15	44	15	43.0	5
8) D.F.	(6.9)	47	15	46	15	54	14	49.0	2
9) T.B.	(6.9)	32	17	36	17	27	16	31.7	12
10) D.M.	(6.8)	32	18	42	18	38	18	37.3	7
11) M.R.	(7.2)	33	16	35	16	32	16	33.3	10
12) J.S.	(7.2)	51	18	51	18	53	18	51.7	1
13) B.P.	(8)	41	16	49	18	48	18	46.0	3

Mrs. Blanjaar - Grade I (a) $\bar{X}$ 39.4

POST - TEST (Continued)

Child	Age	Self	AFF	Teacher	AFF	Friends	AFF	PASCI #2	Rank
14) B.O.	(6.5)	14	14	28	14	12	11	18.0	11
15) D.P.	(6.9)	46	18	51	17	53	18	50.0	2
16) G.R.	(6.5)	31	14	27	12	26	12	28.0	10
17) C.E.	(6.5)	43	13	27	12	40	14	36.7	7
18) J.S.	(6.5)	45	18	55	18	48	18	49.3	3
19) T.G.	(7)	36	14	44	15	36	14	38.7	5
20) A.P.	(6.5)	13	16	11	16	12	17	12.0	12
21) J.N.	(7)	37	14	35	14	33	14	35.0	8
22) S.M.	(6.5)	32	13	33	12	36	13	33.7	9
23) S.P.	(7.5)	50	16	58	15	53	17	53.7	1
24) M.L.	(6.5)	39	18	39	18	36	18	38.0	6
25) J.S.	(8)	47	18	55	18	39	18	47.0	4
Mrs. Laing - Grade I (b)								$\bar{X}$36.7	

POST- TEST (Continued)

Child	Age	Self	AFF	Teacher	AFF	Friends	AFF	PASCI #2	Rank
26)	M.T.	(7.6)	26	13	45	16	39	15	36.7	6
27)	D.K.	(8)	31	14	33	14	38	15	34.0	8
28)	R.S.	(8.6)	55	18	57	16	59	18	57.0	1
29)	D.B.	(7.9)	44	18	57	18	55	18	52.0	3
30)	D.Y.	(7.8)	41	8	33	8	20	8	31.3	10
31)	B.A.	(8)	33	14	38	15	37	14	36.0	1
32)	J.L.	(8)	32	15	34	13	36	12	34.0	9
33)	D.C.	(8)	53	18	48	18	39	12	46.7	4
34)	T.C.	(7.5)	40	17	42	16	38	15	40.0	5
35)	R.P.	(7.5)	27	13	30	13	28	13	28.3	11
36)	B.F.	(8)	54	16	56	17	56	17	55.3	2

Mrs. Player - Grade II (a) $\bar{X}$ 41.0

POST - TEST (Continued)

Child	Age	Self	AFF	Teacher	AFF	Friends	AFF	PASCI #2	Rank
37) D.K.	(7)	35	15	36	15	33	15	34.7	7
38) J.C.	(8)	45	17	44	17	42	17	43.7	3
39) M.M.	(7.9)	36	16	23	15	24	16	27.7	9
40) S.P.	(8)	51	18	50	18	51	18	50.7	2
41) N.W.	(7.4)	38	13	39	16	35	10	37.3	5
42) P.D.	(7.7)	35	13	35	14	34	11	34.7	6
43) B.S.	(7.9)	36	13	36	15	29	16	33.7	8
44) J.C.	(7.5)	33	14	44	16	37	14	38.0	4
45) B.B.	(8)	54	18	53	16	55	18	54.0	1

Mrs. Magnan - Grade II (b) $\bar{X}$ 39.4

Total Group $\bar{X}$ 39.1

REMINISCENCE

Child	Age	Self	AFF	Teacher	AFF	Friends	AFF	PASCI #3	Rank
1) K.B.	(6.7)	43	17	44	17	48	18	45.0	5
2) J.C.	(6.8)	37	15	33	14	29	12	33.0	12
3) R.D.	(6.8)	46	17	37	16	42	16	41.7	6
4) G.K.	(6.9)	42	17	32	17	33	16	35.7	9
5) M.L.	(7.2)	29	18	41	18	37	18	35.7	9
6) J.K.	(6.3)	43	16	40	18	41	18	41.3	7
7) B.H.	(6.7)	37	13	34	13	35	14	35.3	11
8) D.F.	(6.9)	51	18	54	18	54	18	53.0	2
9) T.B.	(6.9)	53	18	50	18	53	18	52.0	3
10) D.M.	(6.8)	34	18	34	18	39	18	35.7	9
11) M.R.	(7.2)	31	13	34	14	27	14	30.7	13
12) J.S.	(7.2)	60	18	59	18	60	18	59.7	1
13) B.P.	(8)	51	18	53	18	50	18	51.3	4

Mrs. Blanjaar - Grade I (a) $\bar{X}$ 42.3

REMINISCENCE (Continued)

Child	Age	Self	AFF	Teacher	AFF	Friends	AFF	PASCI #3	Rank
26) M.T.	(7.6)	45	17	44	16	50	18	46.3	5
27) D.K.	(8)	31	13	34	15	35	16	33.3	10
28) R.S.	(8.6)	59	18	60	18	59	16	59.3	1
29) D.B.	(7.9)	56	18	55	18	47	18	52.7	3
30) D.Y.	(7.9)	50	16	40	10	40	12	43.3	6
31) B.A.	(8)	39	15	40	15	38	15	39.0	8
32) J.L.	(8)	30	11	37	15	35	14	34.0	9
33) D.C.	(8)	45	18	36	18	39	18	40.0	7
34) T.C.	(7.5)	51	18	47	18	52	17	50.0	4
35) R.P.	(7.5)	30	13	31	13	35	12	32.0	11
36) B.F.	(8)	56	17	56	17	55	17	55.7	2

Mrs. Player - Grade II (b) $\bar{X}$ 44.2

Group Total $\bar{X}$ 43.2

APPENDIX G

THE PIERS-HARRIS CHILDREN'S SELF-CONCEPT SCALE

I FEEL ABOUT MYSELF

NAME .....

AGE ..... GIRL OR BOY.....

GRADE..... SCHOOL.....

DATE.....

WHAT DOES YOUR FATHER DO FOR A LIVING?.....

.....

WRITE HERE THE NUMBER OF BROTHERS AND SISTERS YOU HAVE WHO ARE OLDER THAN YOU ARE.....

WRITE HERE THE NUMBER OF BROTHERS AND SISTERS YOU HAVE WHO ARE YOUNGER THAN YOU ARE.....

Ellen V. Piers and Dale B. Harris
The Pennsylvania State University

For Research Use Only

Here are a set of statements. Some of them are true of you and so you will circle the YES. Some are not true of you and so you will circle the NO. Answer every question even if some are hard to decide. There are no right or wrong answers. Only you can tell us how you feel about yourself, so we hope you will mark the way you really feel inside.

1. My classmates make fun of me YES NO
2. I am a happy person YES NO
3. It is hard for me to make friends YES NO
4. I am often sad YES NO
5. I am smart YES NO
6. I am shy YES NO
7. I get nervous when the teacher calls on me YES NO
8. My looks bother me YES NO
9. When I grow up I will be an important person YES NO
10. I get worried when we have tests in school YES NO
11. I am unpopular YES NO
12. I am well behaved in school YES NO
13. It is usually my fault when something goes wrong YES NO
14. I cause trouble to my family YES NO
15. I am strong YES NO
16. I have good ideas YES NO
17. I am an important member of my family YES NO
18. I like being the way I am YES NO
19. I am good at making things with my hands YES NO
20. I give up easily YES NO
21. I am good in my schoolwork YES NO
22. I do many bad things YES NO
23. I can draw well YES NO
24. I am good in music YES NO
25. I behave badly at home YES NO
26. I am slow in finishing my schoolwork YES NO

27. I am an important member of my class YES NO

28. I am nervous YES NO

29. I have pretty eyes YES NO

30. I can give a good report in front of the class YES NO

31. In school I am a dreamer YES NO

32. I pick on my brother(s) and sister(s) YES NO

33. My friends like my ideas YES NO

34. I often get into trouble YES NO

35. I am disobedient at home YES NO

36. I am unlucky YES NO

37. I worry a lot YES NO

38. My parents expect too much of me YES NO

39. I usually want my own way YES NO

40. I feel left out of things YES NO

41. I have nice hair YES NO

42. I often volunteer in school YES NO

43. I have a pleasant face YES NO

44. I sleep well at night YES NO

45. I hate school YES NO

46. I am among the last to be chosen for games YES NO

47. I am sick a lot YES NO

48. I am often mean to other people YES NO

49. My classmates in school think I have good ideas YES NO

50. I am unhappy YES NO

51. I have many friends YES NO

52. I am cheerful YES NO

53. I am dumb about most things YES NO

54. I am goodlooking YES NO

55. I have lots of pep YES NO

56. I get into a lot of fights YES NO

57. I am popular with boys YES NO

58. People pick on me YES NO

59. My family is disappointed in me YES NO

60. I wish I were different YES NO

61. When I try to make something, everything seems to go wrong YES NO

62. I am picked on at home YES NO

63. I am a leader in games and sports YES NO

64. I am clumsy YES NO

65. In games and sports I watch instead of play YES NO

66. I forget what I learn YES NO

67. I am easy to get along with YES NO

68. I lose my temper easily YES NO

69. I am popular with girls YES NO

70. I am a good reader YES NO

71. I would rather work alone than with a group YES NO

72. I dislike my brother (sister) YES NO

73. I have a bad figure YES NO

74. I am often afraid YES NO

75. I am always dropping or breaking things YES NO

76. I cry easily YES NO

77. I am different from other people YES NO

78. I think bad thoughts YES NO

79. I can be trusted YES NO

80. I am a good person YES NO