

The Relationship between the Development of Motor Skills on the Self-Concept of At-Risk Children

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Declaration

I, the undersigned, hereby declare that the work contained in this thesis is my own original work and that I have not previously in its entirety or in part, submitted it to any university for a degree.

ABSTRACT

The purpose of this study was to investigate the influence of participation in a sport development programme on the sport skills and self-concept of 28 at-risk primary school children from a disadvantaged community. All 28 participants were pre-tested, then received a six-week (12 lesson) intervention programme, after which all children were post-tested. Data collection for the dependent variables was completed using the Latchaw Motor Achievement Test and the Catty Self-Concept Scale.

Results of this study revealed that at-risk children realised the following outcomes of participation in a sport skill development programme:

- Four of six components of motor achievement improved significantly.
- The self-concept of the children did not show a significant improvement.
- Three of six components of motor achievement showed a significant correlation with self-concept.

Based on the results, it was concluded that participation in a sport skill development programme could not make a significant contribution to the motor development of at-risk primary school children. However more research is needed in this specific area in order to determine how skill development can be implemented to enhance the self-concept of at-risk children.

OFSOMMING

Die doel van hierdie studie was om die invloed van deelname aan 'n sport ontwikkelings program op die sportvaardighede en self-konsep van 28 hoë-risiko laerskool kinders vanuit 'n minderbevoorregte gemeenskap te ondersoek. Al 28 deelnemers was gepre-toets en daarna 'n intervensie program van ses weke (12 lesse) gevolg, waarna die kinders weer almal gepost-toets is. Dataversameling vir al die afhanklike veranderlikes is voltooi deur die gebruik van die Latchaw Motoriese toets vir die toetsing van motoriese vaardighede en die Cratty Selfkonsep toets.

Resultate van hierdie studie het aangetoon dat die hoë-risiko kinders die volgende uitkomst met betrekking tot deelname aan die sport ontwikkelings program, behaal het:

- Vier van die ses motoriese prestasie komponente het beduidend verbeter
- Die selfkonsep van die kinders het nie 'n betekenisvolle verbetering getoon nie.
- Drie van die ses motoriese prestasie komponente het 'n betekenisvolle korrelasie getoon met selfkonsep.

Gebaseer op hierdie resultate, is daar tot die gevolgtrekking gekom dat deelname aan 'n sport vaardigheid ontwikkelings program geen definitiewe bydrae gelewer het tot die motoriese ontwikkeling van hoë-risiko laerskool kinders nie. Verdere navorsing word benodig in hierdie spesifieke area om vas te stel hoe 'n vaardigheids ontwikkeling program geïmplimenteer kan word om selfkonsep van hoë-risiko kinders te verbeter.

To my Parents

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Chapter 1

Setting the problem

One group in need of help and recently the target of a number of social service campaigns is at-risk youth - those kids either involved or at risk of becoming involved in a variety of behaviors such as delinquency, gang membership, teen pregnancy, and drug abuse. At-risk youth are seemingly everywhere these days, but they are disproportionately represented among the urban poor (Hellison, 1990a: 37).

The problems created by the behaviours of at-risk youth are of increasing concern throughout the world. Traditionally, law enforcement agencies and courts have been expected to cope with juvenile crime and deal with the problem of at-risk youth. Rising levels of juvenile crime and the escalating costs of juvenile correction programmes and facilities have challenged the government to seek additional approaches to cost-effective methods of juvenile crime prevention (McCann & Peters, 1996).

Lifestyle, habits and the surrounding environment are major contributing factors in the increase in numbers of youth who can be categorised as “at risk” (Witt & Crompton, 1997b). Children are too often left with no safe, constructive places to play (Schultz, Crompton & Witt, 1995). According to Fairfax, Wright and Maupin (1988), “We need to provide leisure activities to fill young people’s time wisely.” A physical activity programme, for example, can temporarily divert their attention and “keep them off the streets” so that they are not engaged in deviant behaviour (Witt & Crompton 1997a).

According to Collingwood (1997), a general underlying problem of at-risk youth is a kind of developmental deficit. He suggested that many at-risk youth have not developed a responsible and health-enhancing life-style. He proposed that the development of physical fitness through physical training could be a major component in the rehabilitation of at-risk youth. A formal physical training programme, for example, is one that stresses organised exercise classes within a disciplined environment. Physical training can be used to develop positive values and life skills such as goal setting and planning.

Participation in physical activities and sport also is regarded as an effective medium for the development of a responsible and health enhancing life-style. Sport appeals to large

segments of youth in general, including at-risk youth, and thus offers a vehicle for assessing and positively influencing behaviour.

(Participation) is a process that is a very concrete and honest process which makes distortions difficult. It is, therefore, not easy to fake an effort. It requires that the participant be active as opposed too inactive, and the process can be demanding and uncomfortable. All of these characteristics can be capitalized on to use the physical domain for teaching life-style habits, life skills, and values (Collingwood, 1997: 73).

Positive self-esteem has been identified as a factor that can protect adolescents from engaging in at-risk behaviours (Rutter, 1979). In Sonstroem's psychological model for physical activity, successful involvement in physical activity leads to increased physical ability which in turn raises one's estimate of one's physical ability, which can have a positive influence on self-esteem and attraction to physical activity (Young, 1985). The activity must be structured to ensure incremental gains in performance competence in order to promote a positive self-concept. For individuals with low self-esteem, even small improvements can mean significant changes in how they view themselves. According to Wright, Harwell and Allen (1998:110) "Recreation possesses an unrealised potential for enhancing positive perceived competence."

Purpose of the study

The purpose of this study was to determine if participation, in a sport skill development programme, could have a positive influence on the self-concept of children categorised as "at-risk." A specific target group of boys and girls between ages 8-11 was selected from a disadvantaged community in the Western Cape. The programme was presented as a 6-week programme (two lessons per week).

Both the content and the methods of instruction in the sport programme were specifically selected to promote the development of a positive self-concept through improvements in motor skills. Following a review of research completed on the development of self-concept through participation in sport and physical activity, a special format for the presentation of lessons as well as selected coaching strategies was identified. This approach to determining programme content and methods of instruction was followed in order to maximise the potential impact of the sport skill development programme on the self-concept of the children. "The focus (was) on developing the individual rather than just

providing diversionary activities and experiences” (Allen, Paisley, Stevens & Harwell, 1998: 81).

Significance of the study

There has been sustained interest in studying the potential benefits of participation in physical activities on at-risk youth. In the United States and Canada, “at-risk youth” is an official term and a substantial amount of research, time and money has been spent on a variety of at-risk youth projects. In South Africa, at-risk youth form a substantial part of many communities. According to statistics (www.statssa.gov.za) “the underdevelopment that the African population endured under apartheid is clear when we look at the age distribution of the South African population by race and gender.” This pattern of underdevelopment has produced a disproportionately high number of at-risk youth among the non-white population in South Africa.

The distribution by age among South Africans resembles the typical pyramid with a largest proportion of people being infants and young children, while among those aged 15 years or more, the proportion of people in each category steadily decreases (www.statsa.gov.za). Additional statistics reveal:

- Approximately 14% of all black males and 13% of all black females are between the ages of 5-9 years.
- Approximately 13% of black males and 12% of black females are aged between 10 and 14 years.
- Among so-called coloured and Indian South Africans, approximately 1 in 10 people are ages 0 to 24 years old; after the age of 25 this ratio shows a steady decrease with increasing age.

Because youth from the largest segment of the South African population, programmes to develop their potential are critical to the future development of the country. In post-apartheid South Africa, sport has been identified as an important medium through which individuals, communities and the nation can progress.

According to Danish, Petipas & Hale (1990), “There is nothing magical about a ball, or for that matter, any sport object or sport venue. It is sport experiences that is designed in such a fashion that its participants can transfer what is learned to other domains such as school, home, and/or the workplace” (in Danish & Nellen, 1997: 103).

Accepting the importance of self-concept as an outcome for sport participation may encourage physical education teachers and coaches to adopt an educational approach to sport. This in turn may contribute to the development of additional programmes aimed specifically at facilitating the development of self-concept among at-risk youth. By working with at-risk youth through a carefully designed sport programme, this study may help define specific content and methods that are effective in South African contexts. By striving to improve the self-concept of the at-risk youth who participated in this study, it is hoped that this research has also made a contribution to their lives and the future of their community.

Of all of the factors that influence the development of South African youth, poverty has been identified as one of the most powerful. Poverty also has been related to low self-concept, depression and social isolation. Statistics describing the annual income in South African households indicate that black South African households tend to be poorest in the country: 26% have incomes between R0 and R6 839 per annum, compared with 12% of coloured households and 2% of both Indian and white households (www.statssa.gov.za). It could be argued that unless the issues surrounding poverty are addressed, no real changes can be sustained in the future of at-risk youth in South African. While it is acknowledged within this study that issues related to poverty are urgent and must be addressed, it is also recognised that the problems of at-risk youth are multi-dimensional. With the discipline of Human Movement Science, it is important to determine to what extent participation in physical education, sport, exercise and recreational programmes can contribute to the positive development of at-risk youth.

Research Questions

The following research questions guided this research:

1. Will participation in a sport development programme have a positive affect on the sport skills of at-risk children?
2. Will participation in a sport development programme have a positive affect on the self-concept of at-risk children?
3. Is there a relationship between sport skills development and the self-concept of at-risk children?

Methodology

This study followed a one-group experimental design in a field setting. The experimental group (N = 28) was composed of children ages 7-13 years old from a primary school in a disadvantaged community in the Western Cape. The children were categorised as “at-risk” by their teachers according to criteria identified by the author of this study in a review of research. The study was organised according to following sequence:

Pilot Study

A pilot study was completed in a similar primary school in the same community to explore what content and instructional strategies might be effective in working with at-risk children from this community. Assessment instruments to measure sport skill improvements as well as self-concept were also applied. Context-specific decisions about lesson content, format and teaching strategies were based upon what transpired during the pilot study. Insight into the selection of assessment instruments was also derived.

Identification of subjects

Teachers at the selected primary school were asked to identify those children in their classes between the ages of 7 and 13 who could be categorised as at-risk according to criteria provided to them. These children were invited to participate on a voluntary basis in an after-school sport programme, with the consent of their parents or guardians.

Pre-test

Prior to the start of the programme, all subjects completed Cratty's Self-Concept Scale for Children (Longhurst, 1995) which measured feelings about the self specifically in movement contexts. All children also completed the Latchaw Motor Achievement Test, which measured performance of a variety of fundamental sport skills (Barrow & McGee, 1968).

Intervention

The children participated in a specially designed six-week sport skill development programme (sessions of one hour, twice per week).

Post-test

The children completed the identical assessment instruments as in the pre-test.

Analysis of data and interpretation of results

The data was analysed to identify any changes in the children's skill development and/or self-concept. Any changes noted in the pre- to post-test scores were discussed and interpreted in relation to the purpose of this study.

Limitations

The following limitations may have had an impact on one or more aspects of this investigation:

1. The children who participated in this study were from a single ethnic group in a specific township, and were from one geographical location. This may limit the generalisability of the results of this study.
2. There are many instruments available that measure motor skills and self-concept. Although the selection of the measurement instruments was made carefully, other results may have been produced if other instruments had been used to collect data.
3. The length of the programme was restricted to six weeks. Different results might be produced if participation is extended to a longer programme.
4. It was not possible to use many different kind of sport content or some potentially effective coaching strategies. The outcome of the study might have been different if a different combination of content and methods of instruction had been pursued.

Definitions

The following terms were defined in the following ways for use in this research.

At-Risk

For the sake of this study at-risk youth will be defined as youth who live in a negative environment and/or lack the skills and values that help them becoming responsible members of society. Their environment and deficits place them at-risk for developing serious problem behaviours. These behaviours can be defined as violence, emotional disturbances, educational difficulties and substance abuse.

Self-Concept

According to Shavelson, Hubner, and Stanton (1976) self-concept is generally viewed as what an individual thinks of himself or herself, and these perceptions influence behaviour. Self-concept is formulated with reference to social interaction with significant others, such as parents, teachers and peers.

Summary

The seeming lack of sufficient physical activity programmes for at-risk children in South Africa is a tragedy. A pressing need exists for research pertaining to the movement performance of at-risk children from disadvantaged backgrounds in South Africa in order to establish an expanded knowledge base for future support. It was the purpose of this investigation to:

- Design a skill development programme which could be implemented after-school for at-risk youth, stimulating fundamental motor skill components such as: agility, balance, upper body endurance, eye-hand coordination, leg power, body coordination, eye-foot coordination and eye-hand coordination
- Determine the effects of such a programme on the motor skill components and the self-concept of at-risk youth from a disadvantaged community.

Chapter Two

Review of Literature

The term “at-risk youth” is relatively new in educational research. It has been used interchangeably with terms such as “disadvantaged youth,” “alienated youth,” “problem youth,” “troubled youth” and “underserved youth.” Collingwood (1997) defined at-risk youth as youth who live in a negative environment and/or lack the skills and values that could help them become responsible members of society. Their environment and/or their personal characteristics place them “at risk” of developing serious behavioural problems. These problems can include substance abuse, delinquency, violence, emotional disturbances and educational/vocational difficulties.

Hanson (1984) identified prenatal or perinatal history as well as social and general environmental situations as factors that put youth “at risk” of developing learning and emotional problems. Premature infants and infants from environments conducive to the development of “at risk” behaviours, are easily over aroused, frequently do not have effective ways of calming themselves and may experience prolonged autonomic effects when overstressed by events, or people in their environments (Als, 1989). Fairfax, Wright and Maupin (1988) referred to at-risk youth as characteristically poor, born to teenage mothers or single parent households or into unstable families, unable to communicate effectively and are sometimes illiterate, low academic achievers and potential substance abusers.

According to Wright, Owen, McGuire and Backman (1994), at-risk youth is the product of a situation where developmental disadvantages such as abuse, neglect, or poverty make the experience of self-enhancement almost impossible. Martinek (1997) agreed that at-risk youth are most often associated with conditions of poverty that result in a lack of opportunity for them to grow socially, cognitively and emotionally. Fairfax, Wright and Maupin (1988) associated “at risk” with low self-esteem and youths who have been in trouble with the police because of their delinquency or criminal activity.

It is important to note that at-risk youth does not automatically mean delinquent youth. Lutz (1981) defined juvenile delinquency as the behaviour of youth between the ages of seven and eighteen, that violates the rules and norms of society. Prinsloo, Vorster

and Sibaya (1996) defined the juvenile delinquent as a young person under 18 years of age, who engages in behaviour that is punishable by law. According to Straub and Felock (1974) the causes of delinquency include emotional instability, broken homes, poverty, parental neglect, and heredity. The difference between delinquents and at-risk youth is that delinquents have engaged, or are engaging in behaviours that are punishable by law while at-risk youth are living in a negative environment where they lack the skills and values needed to become productive members of society. At-risk youth are “at risk” of becoming involved in a variety of destructive behaviours, including delinquency, gang membership, substance abuse, etc.

At-Risk Youth

An overview of Jessor’s framework (in Witt & Crompton, 1997b) for understanding adolescent risk behaviour is presented in Table 1. In column A is a list of some risk factors to which an individual may be exposed. Through exposure to these risk factors, the individual becomes “at risk” of engaging in one or more risk behaviours, such as those identified in column B. Risk behaviours can, in turn, lead to negative outcomes such as those listed in column C.

Table 1

Possible relationship between risk factors, risk behaviours, and negative outcomes (adapted from Jessor in Witt and Crompton [1997b]).

A: Risk Factors	B: Risk Behaviours	C: Negative Outcomes
Poverty Lack of opportunity Models for deviant behaviour Low self-esteem Inadequate schools Latchkey situations (no adult at home, usually due to single-parent families or two wage earner families)	Substance abuse Drunk driving Tobacco use Delinquency Truancy Unprotected sex	School failure Trouble with the police Unemployability Disease/illness Early childbearing Social isolation Depression and suicide Lack of motivation

According to a national survey, Schultz, Crompton and Witt (1995) identified the following factors as characteristics of at-risk youth:

- Behavioural problems (65,8% of the respondents identified this factor)

This included displaying anti-social behaviour, considering gang membership, responding to peer pressure and engaging in juvenile delinquency, as well as possessing low self-esteem, low feelings of self-worth, and a lack of social skills.

- Family risk factors (64,2% of the respondents identified this factor)

This included coming from dysfunctional family units, a single parent family unit, or being a latch-key child, as well as becoming pregnant during the teenage years. Family risk factors include the general lack of positive role models.

- Economic environmental factors (47,3% of the respondents identified this factor)

This included living in the inner city, living in low-income areas, having transportation problems, living in over-crowded conditions, as well as coming from a family where the adults are unemployed.

- Educational factors (23,0% of the respondents identified this factor)

This included experiencing academic failure as well as being an underachiever at school.

- Leisure factors (13,2%)

This included being an underachiever in sports, participating in negative leisure activities, pursuing no constructive activities in spare or free time, as well as not participating in mainstream recreational activities.

The 1991 Children's Defence Fund Report (Wright et al. 1994), categorised those who are "at risk" according to at least one of the following characteristics:

- Have performed poorly or dropped out of school
- Have had problems at home
- Have been involved in criminal behaviour
- Have experimented with drugs or alcohol
- Have challenged the local community structure.

Garbarino, Dubrow, Kostelny and Pardo (in Posner & Vandell, 1994) stated that poverty, community violence, and family distress are significant risk factors for children growing up in inner city neighbourhoods, which explains why there is often an association between the term "at risk" and youth from these backgrounds. Collingwood (1997) provided support for this earlier research by identifying the following factors as predictors of "at risk" behaviours:

- Antisocial behaviour
- Lack of self-esteem and low self-concept
- Maladjustment
- Anxiety and depression
- Poor school attendance and performance
- Lack of or poor parental and peer relationships
- Early substance use and sensation seeking
- Peer and parental substance use.

Collingwood (1997) chose to view the problems of “at-risk” youth as a kind of developmental problem. In other words, these youth may lack certain skills and values that should be developed as a part of their maturation. He presented four different categories for these so-called developmental deficits:

- Life skills

Basic skills, for example, observation, goal-setting and planning skills

- Values behaviour

Values that consistently appear to be lacking are respect, responsibility and self-discipline

- Lifestyle

The lack of physical fitness and a health-enhancing lifestyle.

Perry and Jessor (1985) noted that the issue of health revolves around the dimensions of physical health, psychological health, social health (social effectiveness), and personal health (individual health).

- Traits

A behavioural predisposition that contributes to a health-compromising lifestyle, for example difficulty in delaying gratification, self-indulgence, irresponsibility, and low self-esteem.

According to Collingwood (1997), the degree to which youth can overcome these kinds of developmental deficits will determine the extent to which negative and destructive behaviours will occur. This position provides an incentive for the delivery of intervention programmes for at-risk youth, because it suggests that something can be done to assist youths who are living in "high risk" environments. For the purpose of this research, at-risk youth will be defined as youth who live in a negative environment and/or who lack the skills and values needed to help them become responsible members of society. Their environment is “at risk” of developing serious behavioural problems. These potential future behaviours include violence, emotional disturbances, educational difficulties and

substance abuse. A programme of motor skill learning will be utilised as the medium for the delivery of skills and values to a group of “at-risk youth.”

Research on At-Risk Youth and Physical Activity

A significant number of today's youth are technologically overstimulated, undernourished, spiritually bankrupted and emotionally isolated from any system that could help them understand today's problems (Calloway, 1991: 57).

Martinek and Hellison (1997) argued that physical activity is an excellent medium for providing the types of activities, that could develop the resiliency, youth needs to cope with some of “today’s problems”. According to their research, social competence, autonomy, optimism and hope are all potential outcomes of participation in a properly structured physical activity programme. If these kinds of benefits can be created for at-risk youth through the delivery of physical activity programmes, then such programmes could become a key element in efforts to rescue them from a personally negative and socially destructive future.

At-Risk Youth and Physical Fitness

The effects of participation in physical fitness programmes has been studied in a variety of educational, recreational, therapeutic, correctional, or substance abuse prevention settings. “Physical fitness training shows the importance of physical fitness, as well as helps develop a pattern of daily activity to keep youth physically active” (Jones, Winn & Dooley, 1995, p.46). According to Collingwood (1997) the physical domain is a valuable medium, because physical activities can be structured to assist youth to develop in many of the “deficit areas” he defined as risk factors. He contended that because physical activity is a very concrete process, distortions are difficult. It is not easy, for example, to fake physical effort. Participation requires visible physical activity which can be observed and monitored. Physical fitness training in particular is a process that has specific measurable goals with delayed results. He concluded that all of these characteristics could be capitalised on to use the physical domain to teach life-style habits, life skills and values.

Collinwood's (1997) position on the value of participation in physical fitness activities was summarised as a seven-step sequence of development that he believes supports the use of physical fitness programmes as an intervention strategy for work with at-risk youth:

1. Exercise promotes the development of a health-enhancing lifestyle.
2. Exercise plus a health-enhancing lifestyle lead to increased physical fitness.
3. Increased physical fitness leads to increased self-confidence.
4. Increased self-confidence leads to increased self-discipline.
5. Increased self-discipline leads to an increased ability to set goals and to make systematic plans to reach goals.
6. Increased skills in goal-setting and planning lead to increased feelings of self-responsibility.
7. Increased self-responsibility leads to an individual's readiness to address the "at risk" factors in his/her life.

To support his position, Collingwood (1997) identified research that has specifically documented the benefits of physical training for at-risk youth. A summary of this research is presented in Table 2.

At-Risk Youth and Physical Education

Physical education has been conceptualised as a helping profession (Hellison, 1990a). It can be organised to deliver benefits according to the needs of specific "clients". According to Hellison one group of "clients" who can receive benefits from participation in physical education is at-risk youth. He described a humanistic approach to physical education that focused more on the development of the person than on the subject matter (Hellison, 1978).

Table 2

Collingwood's summary of the research identifying the benefits of participation in physical fitness programmes for at-risk youth (1997, p.73).

Reduced delinquent behaviour and re-arrest recidivism	Collingwood & Englesjgerd, 1997; Collingwood & et al. 1979; Collingwood & Genthner, 1980; Hilyar et al. 1982; MacMahon & Gross, 1988.
Reduced substance abuse behaviour and increased abstinence	Collingwood, 1992, 1996a, 1996b; Collingwood et al. 1991; Collingwood et al. 1992; Collingwood et al. 1994; Gary & Guthrie, 1982; Murphy et al., 1986; Palmer, 1994; Romig, 1987; Winnail et al. 1995.
Reduced symptomology and emotionally disturbed behaviour	Collingwood, 1992; Doyne et al. 1982; Kugler et al. 1994; Martinsen, 1990.

He argued that this orientation placed participants' self-esteem, self-actualisation, self-understanding and interpersonal relations at the centre of the physical education teaching-learning process.

Martinek (1997) stated that the field of physical education has done too little in terms of providing programmes that deliver benefits to traditionally underserved populations – including at-risk youth. According to him this is unfortunate because physical education has the potential to teach life values and effective decision-making through physical activity. The multidisciplinary nature of physical education also provides potential resources for cultural, physical, educational, and social enrichment. This diversity, he claims, enhances the capacity of physical education programmes to help address the problems of at-risk youth.

Hellison (1990b) presented a programme for urban at-risk youth in which he showed how physical education might be utilised as a medium. The programme consisted of participation in general physical education activities (basketball, martial arts, physical education). The outcomes of this study showed that the students like the programme, learned skills, learned how to get along with each other and learned how to work on their own. Problems that occurred with the programme included attendance and the attractiveness of alternative activities available to the students.

Other programmes (Hellison, 1986a; Lifka, 1990; Georgiadis, 1990) also have shown promise in providing “at-risk” youth with some depth and breadth of experiences. Hellison found that children who participated in a martial arts programme did make progress in terms of learning to control their intensity, becoming more involved in an activity, and following up on their commitments more than they did in the past. Lifka found that many students had self-control problems. Motivation was a big problem for many of the girls and there were times when the girls in the study actually needed protection from the boys. According to Lifka, trying to educate the boys was a tremendous challenge. The strategies of setting goals and focusing on the development of self-responsibility seemed the most effective. Georgiadis reported improvements in his subjects' technical skills, self-control and teamwork.

At-Risk Youth and Sport and Recreation

“Sport would be a key component to motivate our target group (underserved youth) to participate in a broad range of activities”(Pitter & Andrews, 1997, p.88). According to these authors, sport can be used by physical education and recreation professionals to build character, create model citizens and deter people from using their free time to engage in destructive pursuits.

Fairfax, Wright and Maupin (1988) highlighted the importance of providing leisure activities to fill young people's time wisely. They described a programme for at-risk youth that included competitive athletic events complemented by educational activities. They believe that the way to communicate with at-risk youth was to work with them in environments that were less restrictive than the classroom. Sport and recreation activities were identified as inherently appealing to large segments of youth in general, including at-risk youth, and thus offer a vehicle for assessing and positively influencing pro-social behaviour (Witt & Crompton, 1996). Jones, Winn and Dooley (1995) stated that recreation programmes could be highly effective as an educational medium if they included components of physical and health education. They felt that there were strong links between physical well-being, drug awareness, nutrition, health and safety that could be capitalised on in an educationally-oriented recreation programme.

There is evidence that sport-specific programmes can also be of benefit to at-risk youth. Tennis, canoeing, rock-climbing, camping, soccer, volleyball and gymnastics were included in a special summer programme called the STRIDE Project (Wright, Harwell & Allen, 1998). In this programme, activities were provided in an atmosphere of equality where the at-risk youth participants spent most of their time and energy learning how to play the sport, rather than actually competing with one another. The outcome of this focus was that increases in athletic competence were achieved and reinforced. Athletic competence has been identified as a major factor in the development of positive personal competence (Wright, Harwell & Allen, 1998).

Self-Concept and At-Risk Youth

Children experiencing major problems often suffer from some degree of low self-esteem, even if only during a temporary crisis period (Dennison, 1989). Youth can develop a low self-concept through a number of different life experiences. The negative environment associated with at-risk youth in particular, is conducive to the kinds of experiences that contribute to low self-concept. Until recently, however, little attention has been given to helping at-risk youth develop a more positive self-perception as an integral part of intervention programmes.

According to Burns (1982) a study of the variable of self-concept provides an important perspective for understanding delinquent behaviour. He believed that the feedback a delinquent individual receives from the people in his/her environment, is part of a labelling process where future expectations are created for the individual. The self-concept and social identity are in part shaped by the labels and expectations experienced by the individual. The self-concepts of at-risk children, for example, could be increasingly modified by the negative interactions in their environment, until they see themselves as delinquents.

Research has been conducted to determine what variables predict at-risk behaviours such as substance abuse (Mayer, 1988) One variable that has been identified is a low self-concept/lack of self-esteem (Rutter, 1979; Garmezy & Rutter, 1988; Collingwood, 1997). Several studies provide data that support a positive relationship between a positive self-

concept/self-esteem and the ability to overcome the risk factors associated with youth at risk (Doan & Scherman, 1987; Folkins & Sime, 1981). In an exploratory study Grossman et al. (1992) found that lower risk-related behaviours were associated with higher self-esteem. Poverty and factors associated with poverty have been documented to have a negative effect on children's capacity for adaption (Egeland, Carlson, & Sroufe, 1993). Poor children also have a higher risk of experiencing low self-confidence, behavioural problems, depression, peer conflict, physical abuse and neglect (Baker & Witt, 1996).

Dennison (1989) provided a summary of the symptoms that are often associated with low self-esteem. It can be noted that many of these symptoms can also be associated with at-risk youth:

Shyness	Low academic performance
Lack of friends	Teased by other children
Stuttering	Lack of verbalisation
Limited eye contact	Aggressive
Need to be in control	Likely to be a follower
Need to be right all the time	Loud
Unable to share	Tends to be anxious
Wants others' attention all the time	Needs to be the centre of attention
Bored with most things	Immature
Delayed developmentally	Dislikes school/classes
Lack of motivation	Overly active/short attention span

In their research on school dropouts, Wehlage & Rutter (1986) concluded that early experiences of failure and negative encounters with the school's discipline system by at-risk youth, lead to a spiral of increased negative attitudes, poor self-concept, and the belief that they do not fit in at school. Antisocial behaviour, proneness to gang membership and susceptibility to peer pressure has been associated with low self-esteem, low self-worth and/or lack of social skills among at-risk youth (Schultz, Crompton & Witt, 1995). As a result, it has been recommended that programmes for at-risk youth be designed to increase feelings of general well being, including increasing self-concept, reducing self-depreciation, fostering self-confidence and/or fostering positive self-image.

Self-Concept

The development of self-concept requires attention as part of any intervention programme designed to assist at-risk youth therefore, a working definition of the terms is needed. In this investigation self-concept will be used as an umbrella term under which several concepts about the self are included. Self-concept is broadly defined as that which an individual thinks of himself/herself and how this self-perception influences behaviour. (Shavelson, Hubner, & Stanton, 1976). Self-esteem represents the evaluative component of self-concept - the qualitative judgments and feelings attached to the description one assigns to the self (Gould & Weiss, 1987). In this investigation the terms self-concept and self-esteem will be used interchangeably.

Pangrazi (1982) viewed self-concept as a system of ideas, attitudes, values, and commitments that constitute a person's inner world. According to Pangrazi, self-concept is learned. Youth define themselves in terms of the ways in which they have been treated by others. Youth develop feelings that they are liked, wanted, acceptable and able from having been liked, wanted, accepted and successful. Burns (1982) stated that self-concept is composed of all beliefs and evaluations an individual has about the self. Hulya Asci, Gokmen, Tiryaki and Asci (1997) concluded that self-concept is an indicator of an individual's behaviour and emotional and mental well-being. They continued to describe the many factors, such as age, sex, academic achievement, as a socio-economic status that influence self-concept.

Fox (1988) described self-concept as a series of self-descriptive statements, for example "I am female," "I am black," "I am a student," that produce an awareness of the self. He also differentiated between self-concept and self-esteem. He considered self-esteem to be more situation-specific than evaluations such as "I am the best runner in the class". According to Smith (1986) social comparison is an important aspect of children's self-concept development where the judging of personal competencies, abilities, and self-worth takes place largely in reference to the peer group. As children continue to develop toward adulthood, self-concept becomes more complex and is categorized, multifaceted, and hierarchical (Shavelson & Bolus, 1982).

Models of Self-concept

The search for heuristic models of self-concept to guide educational practices has been pursued by psychologists and educators as they have become more aware of the degree to which an individual's self-concept is intimately related to how he/she learns and behaves. Evidence suggests that low performance in school work, poor motivation, misbehaviour and academic disengagement – all behaviours associated with underachievers, school drop outs, and disadvantaged and delinquent children - are due in part to negative self-attitudes and perceptions (Burns, 1982). Self-concept is now considered to be a major outcome of education, childhood socialization, and child-rearing practices. Self-concept is also one of the psychological constructs that have been extensively studied in the field of sports.

Marsh, Richards & Barnes (1986) explained that although self-concept is a complex and multifaceted variable, “everybody [thinks they know] what it is”. Shavelson, Hubner and Stanton (1976) presented a hierarchical model in which self-concept was conceived to be based upon self-evaluation in the academic, social and physical domains. The strength of their model was:

- a) Self-concept was multifaceted.
- b) Self-concept was conceived to be hierarchically organized.
- c) Self-concept was recognised as becoming increasingly differentiated with age.

Harter's (1978) Perceived Competence Theory was another multidimensional approach to understanding self-esteem. It was based on the premise that task mastery is the key to development of positive self-esteem. If an individual experiences success in meeting challenges, an internalised self-reward system will begin to develop. External reactions in the form of reinforcement/non-reinforcement, approval and disapproval will also have a powerful influence on perceptions of competence and control. Feelings of perceived competence and control will continue to increase with recurring successful experiences. This model can serve as a framework for understanding the relationship between success and failure in mastery attempts, perceptions of competence and control and the development of intrinsic and/or extrinsic motivation (see Figure 1).

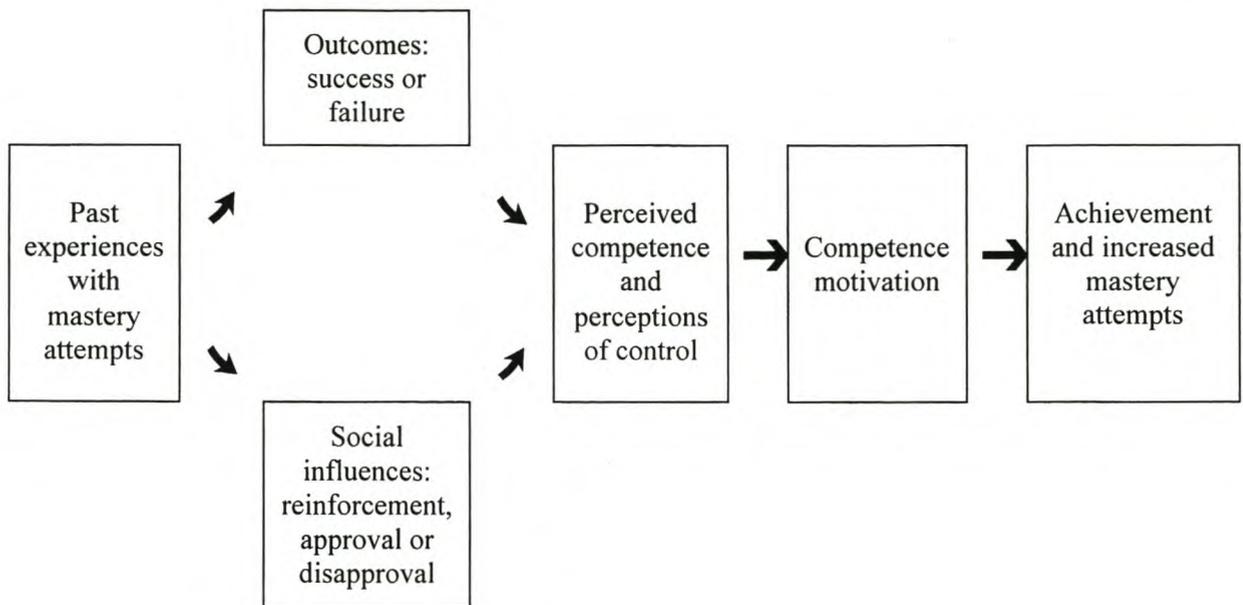


Figure 1

Lirgg's (1992) Interpretation of Harter's Perceived Competence Model (p. 162).

It is based on performance in achievement settings, which have been used by many sport psychologists to study how success in sport skill performance can contribute to increased self-esteem, including increased feelings of internal control and intrinsic motivation.

Harter's (1978) model included the multidimensional nature of self-evaluative judgements as well as the individual's overall sense of self-worth. She defined global self-worth as an overall judgement about one's worth as a person. By separating judgements about domain-specific competence from the more global judgements of one's worth as a person, she made examining the relationship between domain-specific mastery attempts and the development of self-esteem possible.

The constructs of intrinsic and extrinsic control were also important in Harter's model. Weiss stated that the construct of perceived control is a measure of the child's understanding of who or what is responsible for behavioural outcomes in each of the three competence domains (Gould & Weiss, 1987). Younger children are most likely to display a lack of understanding about the cause of successful or unsuccessful outcomes. Children begin to attribute either internal or external factors to master attempts with age (Gould &

Weiss, 1987). According to Harter (in Gould & Weiss, 1987), perceptions of competence and control are both influenced by performance outcomes and the reactions of significant others to mastery attempts. Thus game outcomes, coaching style and parental, or peer reactions to a child's performance attempts, can be important factors in the development of children's self-esteem in the physical domain.

According to Harter (in Sternberg & Kolligian, 1990), psychological systems change during the life-span regarding to both differentiation and integration. For example, Harter & Pike (1984) demonstrated that four- to seven-year old children could make reliable judgements about their cognitive and, physical competence, social acceptance and behavioural conduct. In other words, the children can perceive each of these dimensions as separate aspects of the self. During middle childhood, the structure of the self-concept changes continues to grow/develop in sophistication. The ability to make judgements about self-worth emerges and more domains are differentiated. During adolescence there is further integration and differentiation. Harter (in Sternberg & Kolligian, 1990) proposed a pattern of change that she believes continues throughout the lifespan (See Table 3).

Table 3

Harter's domains of the self-concept at each period of the lifespan (in Sternberg & Kolligian, 1990, p.73).

Early childhood	Middle/late childhood	Adolescence	Young adult	Adult
Cognitive competence	Scholastic competence	Scholastic competence	Scholastic competence	
			Intellectual ability	Intelligence
			Creativity	
		Job competence	Job competence	Job competence
Physical competence	Athletic competence	Athletic competence	Athletic competence	Athletic competence
	Physical appearance	Physical appearance	Physical appearance	Physical appearance
Peer acceptance	Peer acceptance	Peer acceptance	Peer acceptance	Sociability
		Close friendship	Close friendship	Close friendship
		Romantic relationships	Romantic relationships	Intimate relationships
			Relationships with parents	
Behavioural conduct	Behavioural conduct	Conduct/Morality	Morality	Morality
			Sense of humour	Sense of humour
				Nurturance
				Household management
				Adequacy as provider
	Global self-worth	Global self-worth	Global self-worth	Global self-worth

Measurements of Self-Concept

The understanding that individuals can have very different evaluative perceptions of themselves in separate aspects of their lives, such as their social relationships, academic abilities and their physical appearance, has led to the widespread acceptance of the self-concept as multidimensional. This has resulted in an approach to assessment in which separate subscales are used to measure self-perceptions in each identifiable dimension. Harter's (1982) instrument included subscales for the cognitive, social and physical domains. Sport scientists, for example, have tended to focus primarily on results from the physical domain when it comes to measuring competence motivation related to physical activities (Lirgg, 1992). From a developmental perspective, Harter (1982) found that children older than eight could clearly distinguish between their perceptions of their competence in the cognitive, social and physical domains. However, she found that four to seven year old children could not clearly distinguish perceptions about their competence in these domains.

Self-Concept and Movement Performance

Combs (1965) stated that people discover their self-concepts from the kind of experiences they have had with life. The ingredients of a positive self-concept development and good feelings include a sense of belonging, personal competence, a sense of worth, feelings of adequacy and achievement (Salokun, 1990a). These multiple sources of a positive self-concept have contributed to the belief that there is a positive relationship between ability in physical activity, sports and the development of positive self-concept (Hellison, 1970; Kay et al., 1972; Wiggins, 1987). According to Salokun (1990a), skill training programmes as well as other physical education programmes, can offer a variety of situations for acquiring these qualities. Sonstroem (1982) simply stated, "Exercise programmes can change self-esteem in a positive direction" (p. 129).

Self-Concept and Physical Fitness

Fox (1988) identified the improvement of fitness-related abilities as popular targets for achievement or competence-motivated behaviour. He associated success in achieving great levels of fitness with the enhancement of self-esteem. According to Fox there are four dimensions of physical perceptions that contribute to feelings of physical self-worth, which, in turn, contribute to the global self-esteem (see Figure 2).

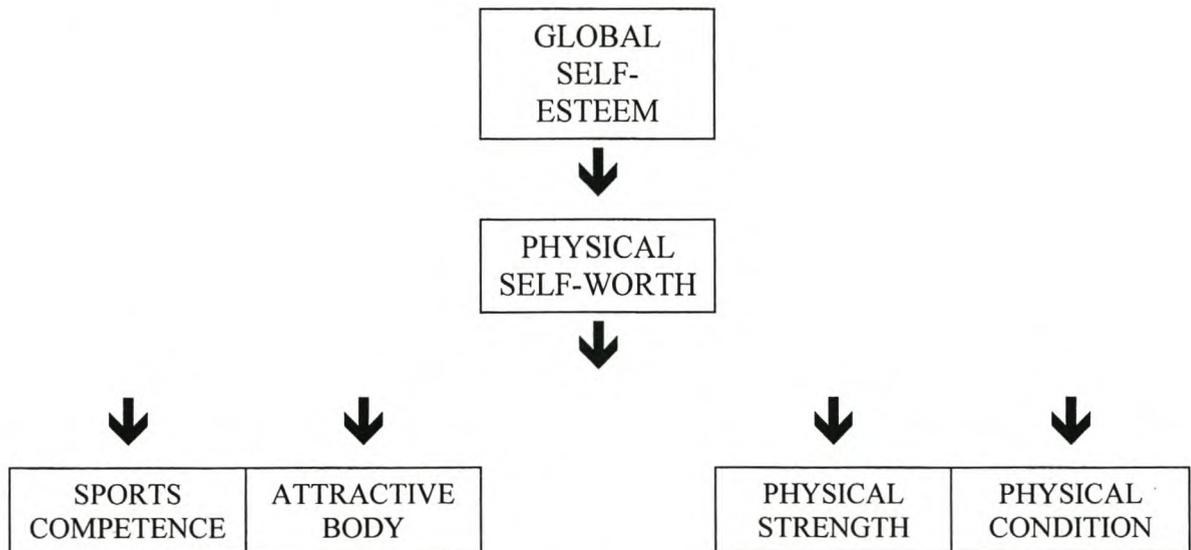


Figure 2

Content and structure of the physical self for college males and females
(adapted from Fox [1988])

According to Fox and Corbin (1988), many females may perceive low sports competence, but if they attach a low importance value to sport the effect of the low perceived competence in sports will be minimised in terms of the overall perceptions of physical self-worth. Those dimensions on which society has a powerful impact - for example physical attractiveness for females – were found to be difficult for females to discount low self-perceptions. This would explain why a perceived lack of physical attractiveness is closely associated with poor physical and global self-esteem in some cultures.

“It is understandable that a person’s body (e.g. its dimensions, appearance, condition, activity etc.) can influence his feelings about himself by affecting the reactions of other people to him” (Guyot, Fairchild & Hill, 1981, p.105).

Hulya Asci et al. (1997) found body image an important element of self-concept development. The way people feel about themselves is often related to the way they feel about their body. Ibrahim and Morrison (1976) stated that programmes of physical fitness could enhance body concept. Changes in the body as a result of fitness training, have been predicted to contribute to a positive self-concept (Goldberg & Folkins, 1974).

A review of physical fitness literature reported a significant positive correlation between measures of physical fitness and self-concept (Balogun, 1987; Magill & Ash, 1979; Marsh, Richards & Barnes, 1986; Tucker, 1982; Tucker, 1983). Guyot et al. (1981) discovered that both boys and girls in a high physical fitness group scored significantly higher on self-concept measurements than did boys and girls in a low physical fitness group.

Mauser and Reynolds (1977), however, found that participation in a physical activity programme had no effect on the self-concepts of 4-12 year-old children. According to Balogun (1987) many of the studies with only a weak correlation between measures of physical fitness and global self-esteem, were using test batteries that evaluated only cardio respiratory endurance, dexterity and muscular strength. He recommended that assessment include muscular endurance, flexibility and body fat composition. He claimed that when a more comprehensive measurement of fitness is made, the positive correlation between increased physical fitness and improvements in self-concept is supported.

Self-Concept and Physical Education

Hellison (1970) stated that physical education could play a significant role in developing an individual's awareness of his/her true self, because the body and the self are intimately related. He took the position that physical education programmes that are designed to meet specific individual needs have the capacity to modify self-esteem. Pangrazi (1982) supported this point of view by stating that physical education offers a setting to help youngsters develop a positive self-concept. According to Pangrazi (1982) there are four important features of a school physical education programme that establish it's potential to have an influence on the development of self concept.

1. Achievement: A strong relationship has been established between self-concept and achievement (Purkey, 1970). People with low self-concepts expect to fail or

to do poorly. It is therefore important that physical education experiences be presented in a way that increases the probability of participant's success.

Pangrazi (1982) commented that in no other school subject is success and failure as open to immediate observation as it is in the achievement situations in physical education and sport. This makes the careful presentation of optimal challenges extremely important.

2. Fitness and appearance: Physical appearance, regardless of skill or fitness level, can negatively influence a person's self-concept. When looking at somatotypes, the muscular body receives the highest rating from students and the obese body the lowest (Caskey & Felker, 1971). The only area in the school curriculum devoted to the development of physical fitness and appearance is physical education.
3. Risk taking and anxiety: Students with a high anxiety level are often unwilling to take risks. When students with low self-concept are asked to perform, their anxiety level can increase which, in turn, makes it more difficult for them to perform successfully. If physical education teachers can arrange learning experiences that allow students to work individually and find success, students can learn to overcome their anxiety in achievement situations.
4. Personal responsibility: There is evidence that boys and girls deal with success and failure in different ways. Boys tend to blame others for their failures, while girls tend to place responsibility for success on themselves (Felker & Thomas, 1971). This might make it possible for boys to maintain a positive self-concept by denying responsibility for failures, but it also leaves them vulnerable to external control. This might also mean that by taking responsibility for success, girls have the opportunity to develop a more internal sense of control through achievement in physical education and sport.

Self-Concept and Sport

Ibrahim and Morrison (1976) stated that the acquisition of skills in sports enhances self-concept. Salokun (1990b) discovered in his project that skill training and ability in sports had an influence on the development of a positive self-concept. Other research

findings also support a positive relationship between sport participation and self-concept. Guyot, Fairchild, & Hill (1981) reported a significant relationship between physical self-concept and sport participation for fourth-, fifth-, and sixth-grade level children. Harter (1982) showed that sixth graders who participated in sports and games saw themselves as more physically competent than did non-participants. Bolsby and Iso-Ahola (1980) provided data that youth who have an interest in or who participate in sport have a more positive self-concept than those who do not. Hawkins and Gruber (1982) documented the self-esteem ratings of junior high school boys as increasing over the course of a baseball season. Vincent (1976) found that female college athletes had higher self-concept scores than non-athletes. In another study Schumaker et al. (1986) found that athletes scored significantly higher on a measurement of general self-concept than did non-athletes.

Not all studies have been supportive of such a relationship. Sonstroem (1978) reported finding no significant relationships between self-esteem and physical ability of boys ranging from grades 7-12 in three different studies, using three different measures of self-esteem. Lewko and Ewing (1980) found a significant relationship between perceived competence and level of participation in sports for 9 - 11 year old girls, but not boys. Maul and Thomas (1975) did not find a significant difference in self-concept of ability to perform gross motor movements between third-grade level girls who participated in a gymnastics programme and those girls who did not. However, according to Ulrich (1987) the instrument used, in each of these studies to assess perceived competence may have affected the results.

The results of studies investigating the psychological and therapeutic effects of skills training in sport such as field hockey, baseball, soccer, and swimming, are equivocal (Hawkins et al. 1982; Hopper et al., 1991; Miller, 1989; Schempp et al., 1983). Marsh and Jackson (1986) and Jackson and Marsh (1986) demonstrated that sports participation by high school and young adult women had a positive effect on their physical ability self-concept, but had little or no effect on any other areas of self-concept. It could be that the acquisition or mastery of a new skill may contribute to the enhancement of self-concept (Miller, 1989). Rehearsing a skill that has already been mastered can help retain the present self-concept, but may not significantly improve it. This means that novices are most likely to gain in self-concept through participation in a sports programme.

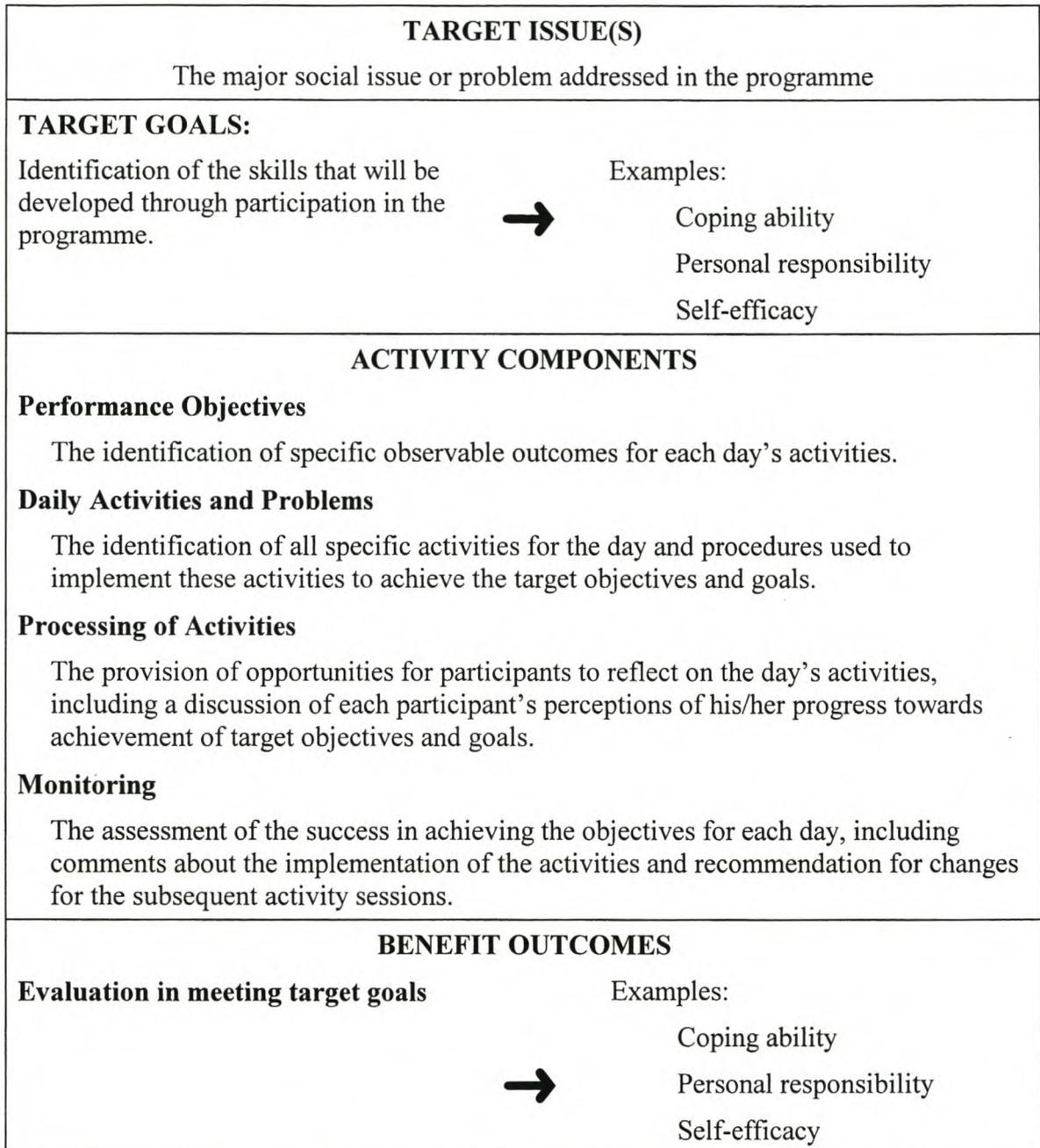
Programmes for At-Risk Youth

A number of models have been proposed to guide the planning and implementation of programmes for at-risk youth. Since so many programmes /projects for at-risk youth exist only a few will be discussed. A summary has been included (Appendix G). One of the most specific in terms of physical activity programmes was Allen's (1996) Benefits-Based Management (BBM) model. This model was revised by Allen, Stevens and Harwell (1996) to focus specifically on the procedures and details of developing recreation experiences to assist at-risk youth (see Figure 3).

The first component of the BBM addresses the identification of clear and measurable outcomes. Allen et al. (1996) suggested that each activity, or series of activities focus on a target issue, for example crime, pregnancy, substance abuse or gang violence. The target goal should be developed directly relating to the target issue. An example of a target goal is "to reduce drug abuse."

The second component involves the development of the activities - purposive recreation experiences. The content and experiences must be specific to the stated target goals and target issues. In creating each experience, performance objectives must be stated clearly, indicating the behaviour to be displayed and the criteria for determining successful achievement of the objectives.

The third component of the BBM model involves the assessment of benefit outcomes that relate to both the target issue and the target goals. A comprehensive evaluation plan needs to be established for assessing the types of outcomes. In conducting the evaluation sampling plans and data collection procedures must be developed.



Final Product: Individual develops RESILIENCY

Figure 3

The BBM Activity Planning Model (Allen, Stevens & Harwell, 1996)

After implementing the BBM planning activity model supplemental programme, evaluations from participants, parents and supervisors have provided additional insights into the critical components of the BBM process (Allen, Paisley, Stevens & Harwell, 1998).

The top 10 principles for successful programming:

1. Provide opportunities for participants to feel competent by providing consistent opportunities to accomplish tasks successfully.
2. Provide opportunities for participants to develop a close bond with at least one adult who gives them the attention and support that they need.
3. Provide opportunities for participants to socialise with peers and adults who can serve as positive role models.
4. Provide opportunities for participants to be helpful to others.
5. Create opportunities for problem solving and group decision-making, including initiative and co-operative types of games.
6. Create opportunities for participants to deal with setbacks.
7. Provide a high degree of participant responsibility.
8. Provide consistent encouragement.
9. Provide discipline without criticism.
10. Provide unconditional support and universal acceptance.

The top 10 ways to make an impact with a programme:

1. Base the programme on anticipated outcomes and impacts.
2. Focus on building resiliency in participants.
3. Plan the programme and activities well ahead of time.
4. Encourage and allow participants to be involved in the planning process.
5. Involve parents or guardians in as many different ways as possible.

6. Understand that recreation programmes can be adapted to address real-life issues and that recreation can be developmental, rather than simply diversionary.
7. Identify and use those “teachable moments.”
8. Conduct a programme evaluation as a general part of the programming process.
9. Remember that the impacts of a programme may be found where you least expect them.
10. Use the programming principles every day.

It is apparent that the focus of designing physical activity programmes for at-risk youth shifts away from providing fitness, or skill, or leisure development activities toward the development of the individual. According to Danish and Nellen (1997) it is critical that participants in these kinds of programmes develop skills and behaviours that will be of value in other settings.

Programme Content

There does not seem to be too many restrictions in terms of the kind of content utilised in programmes for at-risk youth. In a Boston Inner City Youth Program, (Cheffers, 1997) implemented a physical education programme using basic movement education and games. The programme content included:

Movement awareness

Basic motor skills

Self-discovery activities/make it up game

Partner activities

Obstacle courses, circuit training and relays

Rhythmic movements, dance and aerobics

Stunts, tumbling and gymnastics

Co-operative games (new games)

*Problem-solving activities**Sports/games*

Cutforth (1997) began each lesson of his programme lessons with stretching and fitness exercises, then included tag games and cooperative games, skill practises in volleyball, soccer, or basketball, and modified small-sided games.

The GOAL programme (Danish & Nellen, 1997) was a 10-hour, 10-session programme that taught life skills through sport. Each of the 10 sessions had a special topic.

1. Dare to dream.
2. Setting goals.
3. Making your goal reachable.
4. Making a goal ladder.
5. Roadblocks to reaching goals.
6. Overcoming roadblocks.
7. Seeking help from others.
8. Rebounds and rewards.
9. Identifying and building on your strengths.
10. Going for your goal.

Collingwood (1997) stated that there should be basic “core” elements that should be provided for at-risk youth fitness programmes.

1. The basic programme should consist of a core of four activities:
 - Structured group-exercise class activities.
 - Educational sessions to teach fitness life skills.
 - Discussion sessions to interact with the learning from the other activities.

- Special events or game and sport-play activities.
2. There should be an attempt to build in a parent-involvement programme.
 3. There should be a peer-fitness leader programme focused toward leadership responsibilities within the programme.
 4. There should be an attempt to establish a neighbourhood-fitness council that can provide ongoing programme support.

According to Collingwood (1997) there are five major programme activities that can be structured to teach values through physical training.

1. Initial participant orientation

The first meeting with participants sets the stage for what will occur throughout the programme. This meeting provides the first opportunity to define the expectations and responsibilities for participants.

2. Participation incentives

Incentives can be used as a major vehicle toward developing individual responsibility for behaviour. The incentive system needs to be designed around participating value behaviours.

3. Physical exercise activities

A standard class structure and process should be established so the youth get used to structure and they know what is expected.

- The exercise class should be broken down into squads or teams with team leaders.
- Homework assignments can be given at the end of the class.
- Decision-making opportunities can be provided, but only if the group has demonstrated expected behaviour.
- During exercise, immediate feedback regarding “doing it right or doing it wrong” should be provided.
- Seek opportunities to reinforce youth behaviour during an exercise programme that is reflects the desired values.

4. Fitness educational sessions

- Fitness testing and assessment

- Fitness goal setting can be used to focus responsibility and self-discipline and self-respect.
- Exercise prescription and planning can be used to focus the self-discipline value.

5. Interactions with participants:

- Focus interactions with praise on positive behaviour.
- Confront negative behaviour in terms of not meeting the agreed initial obligations.
- There should be time for discussion during the course of the physical training programme preferably during each lesson.
- During discussion times the recent learning experience is discussed.

Project Stride (Wright, Harwell & Allen, 1998) successfully incorporated small group experiences, which provided participants the opportunity to participate in a variety of sports and physical activities. The uniqueness of Project STRIDE stemmed from the incorporation of eight key programme components.

1. Activity processing:

On completing each activity all participants were encouraged to discuss the experience. Discussion was focused in terms of feelings, emotions, goals, successes, failures and expectations.

2. Problem solving:

To enable children to see themselves in terms of success as opposed to failure. Each task was designed so that the group had to employ some physical and mental effort to gain a solution.

3. Journal keeping:

Participants were asked to keep a daily journal.

4. Motivational speakers:

Participants were provided the opportunity to meet with different motivational speakers. For the most part these speakers tended to be collegiate or professional athletes.

5. Sports clinics and aquatics programme:
Athletics was a major focus of the programme, but new activities for example canoeing, camping, soccer, gymnastics etc. was made available to them These activities provided an atmosphere of learning, rather than competing with one another.
6. Programme ownership:
The programme was operated and maintained by the participants. The director and the two leaders acted largely as facilitators, allowing the group to participate in the decision-making process as much as possible.
7. Original experiences:
An additional focus of the programme was to provide as many new and original experiences and opportunities as possible.
8. Awards and opportunities for positive recognition:
Since the children felt they were achieving success, their interest was maintained. Each activity in the programme was accompanied by an awards or proficiency scheme.

Strategies for Teaching At-Risk Youth

Parker, Kallusky & Hellison, (1999) listed guidelines for teachers in order to help students develop responsibility through participation in physical education. These extraordinary practical methods can also be implemented with at-risk youth:

1. Design a hall pass similar to the key tags used at petrol stations for restroom use. If the student has the pass he/she is free to use the restroom. If not, he or she must wait until the pass is returned.
2. Spread equipment along the edges of the play area and have students pick up the equipment instead of waiting for the teacher to organise distribution. On given a signal, the students walk and pick up equipment and carry it back to their space.
3. Announce the initial class activity and encourage students to begin practising on their own.
4. Allow students to adjust tasks to fit their needs, including choosing the size or type of equipment used, the complexity of a task, or the competitive focus of a task.
5. Include peer teaching in lessons.
6. Include peer-assessment strategies in the lessons.

7. Encourage students to reflect on their work, behaviours, and attitudes. This way they can discover what they really do in class, and in encourages them to begin to take responsibility for themselves.
8. Use “time-outs” to deal with misbehaviours. The first time a teacher needs to speak to a student regarding behaviour, he or she asks the student whether a time-out is needed. At this point, allow the student to decide whether or not to take a time-out. The second time a teacher needs to speak to the student, the teacher asks him or her to take a time-out. The student can return to the lesson anytime he or she feels ready. When ready, the student simply re-enters the lesson. If there is a third incident within the same lesson, the teacher asks the student to remain out until he or she and student can develop a plan to help him or her to participate appropriately.
9. Have students perform small service projects. Students should be encouraged to choose projects that benefit others and to do so without receiving any external rewards.

In a review article of successful recreation programmes, Witt & Crompton (1997a) described the following strategies as important when working with at-risk youth.

- Provide opportunities for mentoring.
- Provide intensive and individualised attention.
- Provide programmes that are responsive to youth’s needs and interests.
- Provide participation incentives that are relevant to youths.
- Adopt and enforce rules for behaviour that students support.

The Hellison Model

Hellison (1978, 1985, 1986a, 1990b, 1990c) designed a model on which most of his projects with “at-risk” youth have been based. It is frequently used in sport and physical education programmes for at-risk youth. Within this model, self and social responsibility is learned through the processes of awareness, experience, decision-making and self-reflection. According to Hellison (1990b) a holistic educational perspective is required which emphasises human values. It includes a broad conceptualisation of health education

that prioritises social, emotional and spiritual health in relation to physical health. The model attempts to put these perspectives into practice by capitalizing on the highly interactive and emotional character of what Hellison calls “life in the gym”.

Hellison (1985) recommended following a developmental sequence in implementing programmes for at-risk youth. He conceived of five levels of development and encouraged teachers to meet students at whatever level their development demanded. The idea was to design progressions that would help students grow from one level to the next higher level in sequence.

Level zero: Irresponsibility

Students appear to be unmotivated and undisciplined. This means that control will have to come from external forces.

Level one: Self-control

This level deals with students learning to control their behaviour. This means there will be a shifting of responsibility from external forces (e.g. authority figures) to the student.

Level two: Involvement

This level focuses on the need to provide students with experiences in physical activities that can become a regular part of their lives.

Level three: Self-responsibility

This level emphasises the need for students to learn to take more responsibility for their choices. Students should learn to work without direct supervision, eventually taking responsibility for their actions.

Level four: Caring

This level encourages students to reach out beyond themselves to others. Students at Level IV are motivated to extend their sense of responsibility by cooperating, giving support, showing concern and helping.

Masser (1990) provided practical descriptions of the kinds of behaviour evident at each of the five levels of development (see Table 4).

Hellison (1985) recommended various kinds of interaction strategies that can help students realize progress through each of the levels until they can achieve self-responsibility. Examples of those strategies include the following:

Teacher talk

This involves explaining the different development levels to the students and referring to them on a regular basis.

Modelling

This involves the way which teachers behave and interact with the students in the class. Students are more likely to learn how to behave in a responsible manner when the teacher is an example of this attitude.

Reinforcement

Give clear responses to student's behaviours. Verbal or nonverbal feedback can be a comment or nod. Awards can be considered as reinforcement as well as introducing a formal reward system.

Reflection time

Give students time to think about their attitudes and behaviours. This includes asking students to keep journals, diaries or logs.

Student sharing

Ask students to express their opinion about certain aspects of the programme.

Table 4

Masser's (1990: p.19) description of sample behaviours at the different levels of Hellison's hierarchy.

Level	Level 0 Irresponsi- bility	Level 1 Self-control	Level 2 Involvement	Level 3 Self- responsi- bility	Level 4 Caring
In Physical education class	Pushing and shoving when selecting equipment. Laughing at others. Talking to friends when the teacher is giving directions	Not getting angry with others, because they did something to upset you. Having control over yourself and not letting behaviour of other bother you	Trying new things without complaining or saying "I can't". Participating even when you may dislike an activity.	Practising a new skill learned in PE without being told. Being a good person-following directions	Willing to work with anyone in the class. Helping someone who is having difficulty.
In the home	Blaming others for problems. Lying to your parents	Keeping yourself from hitting your brother even though you're really mad at him	Helping clean up after supper	Cleaning your room without being asked	Helping take care of a younger child or pet. Understanding that other people really matter.

Both Lifka (1990) & Georgiadis (1990) implemented the Hellison model in their respective projects. Lifka stated, "It is harder to teach this way, but so much more rewarding. I'll never go back" (1990, p.41). Georgiadis agreed, stating "this experience has changed my life. I not only learned a new way to coach but I have become committed to helping at-risk youth" (Georgiadis, 1990, p.43).

The Paterson's Model

Paterson (1997) proposed a model of 10 instructional strategies to enhance self-esteem through sport, based on an extensive study of literature on self-esteem development in sport. He tested the model during a 10-week school-cricket season with boys ages 13-15. All strategies were confirmed as productive methods to use when targeting the development of self-esteem. Although these strategies were not specifically developed for use with at-risk youth, they provide options for teachers seeking to develop self-esteem or self-concept through sport. The strategies defined in the model were as follows.

Assume the role of significant other

Coaches should find ways to become a positive role models for the players.

Individualise coaching by attending to the player and his/her personal ability, not the norm

Coaches should try to modify each session to address each player's needs and to allow each player to experience some success.

Provide optimal challenges for all players

Coaches should work with the players to set goals for them to accomplish. The goals should be set at a realistic level with sufficient difficulty to ensure that players are neither bored (challenge too easy) or anxious (challenge too difficult).

View mistakes as natural part of the learning and playing process

When students make mistakes and have difficulty in meeting goals, coaches should give constructive feedback and encourage them to continue striving to meet the performance goals.

Promote mutual respect by exhibiting democratic leadership and using indirect coaching styles

Coaches should find ways to include players in the decision making. Using guided discovery problem-solving styles of teaching will help create a climate of shared responsibility for learning and performance.

Take responsibility for the adherence of both coaches and players to a code of sportsmanship

Coaches should maintain a code of sportsmanship that promotes fairness and emphasises mutual respect for all. This implies that the coach will both enforce a code of behaviour as well as model the behaviours.

Help players realise that they are ultimately in control of their own progress and their own success

Coaches should reward effort and persistence. Feedback should not be given continuously in order to prevent players' becoming dependant on coaches.

Be supportive of player's attempts to master skills

Coaches should concentrate on the quality rather than the quantity of players' performances.

Coach for mastery of skills (task orientation) in preference to coaching for the outcome/results of the game

Coaches should encourage players to work towards specific process-oriented goals and to focus on their own performance rather than comparing themselves to other players.

Coach for player enjoyment and pleasure and for the reduction of anxiety and pressure

Coaches should find ways to encourage a sense of belonging, fun and joy in their sporting activities.

Summary

Allen, Stevens & Harwell (1996) have identified key programming principles to guide the selection of content for programmes with at-risk youth:

1. Provide opportunities to create significant relationships with others.
2. Provide opportunities to feel competent.
3. Provide constant encouragement.
4. Provide opportunities for participants to be involved in the planning and creation of experiences.
5. Hold high expectations.
6. Provide opportunities to be helpful to others.
7. Provide opportunities to socialise with peers and adults who can serve as role models.
8. Provide recognition.
9. Provide unconditional support and universal acceptance.

Witt & Crompton (1997a) generated a list of the programme content from successful at-risk recreation programmes that added the following two principles:

- Create programmes that are culturally appropriate.
- Serve the participants on-site if possible.

Another characteristic of at-risk programmes is that often teen mentors are used in successful programmes (Cutforth, 1997; Danish & Nellen, 1997; Jones, Winn & Dooley, 1995).

Martinek and Hellison (1997) identified four programme characteristics to avoid when working with at-risk youth. They found that programmes with the following characteristics were not attractive to at-risk youth:

- Programmes that “blame the victim” e.g. programmes that attribute behaviour and attitude problems to the youth themselves rather than to the current system.
- Programmes that focus on fixing participants’ deficiencies instead of building on their strengths.
- Programmes that attempt to control deviant behaviour, instead of helping the youths change, e.g. programmes designed simply to keep youth off the streets.
- Programmes that promote white, middle-class nuclear family values.

In terms of the intervention programme to be applied in this study, it would be impossible to apply every guideline and every recommendation for working with at-risk youth to a single programme. Fortunately, there was a common pattern found in the literature that was best summarized in a review completed by McLaughlin et al. (1994), which will be used to guide programme decisions during this study. After investigating more than 60 programmes designed to address the needs of underserved youth, McLaughlin et al. identified the following set of principles that were subsequently endorsed by Martinek and Hellison (1997):

1. Work from their strengths rather than their weaknesses. Emphasize their competence and mastery while building their self-confidence self-worth and ability to contribute.
2. Focus on their emotional, social, educational and economic needs - in other words, on the whole person rather than on a single issue.
3. Respect their individuality, including cultural differences, developmental needs and behavioural inconsistencies.

4. Empower them by encouraging them to become independent and to take control of their lives through active participation. Give them a voice in the programme and leadership responsibilities.
5. Build a strong, explicit set of values with clear expectations into the programme.
6. Help them to envision future vocational and avocational possibilities which they may not see as relevant to their current situation. Suggest ways to get them there.
7. Provide a psychologically and physically safe environment.
8. Keep programme participant numbers small and encourage participation.
9. Maintain a local (e.g. community) connection.
10. Provide the kind of courageous and persistent leadership that makes the programme work.
11. Provide them with significant contact with an adult who cares and offers support.

In addition to making decisions about the programme, some guidelines that would provide structure to the choice of teaching strategies also had to be drawn from the literature. To this end it was decided to adopt Hellison's five levels as a framework and to apply where possible the coaching strategies identified by Paterson. The rationale for adopting these strategies is that they were based on Harter's Perceived Competence Theory (1982). This theory predicts that increases in self-esteem will occur when youths become increasingly competent in meeting challenges in an environment where they have an internal sense of control and where they are rewarded for their persistence and effort. The development of self-concept has been identified as a critical element in any programme dealing with at-risk youth. These coaching strategies offer a practical framework for presenting the content of the intervention programme applied in this study.

Chapter Three

Methodology

This investigation explored the influence of participation in a movement programme on the self-concept of at risk youth. The investigation was initiated with a pilot study to determine effective instructional strategies to use when implementing a programme of this kind in the South-African context. Included in this chapter is a description of the design of the study, the procedures followed and how the data were analysed.

Design

This study followed a one-group pre-test-post-test research design (Borg & Gall, 1989). This involved the administration of a pre-test measuring the dependent variables, the provision of an intervention programme, and the administration of a post-test measuring the dependent variables again. The independent variable in this study was a movement programme. The subjects participated in an after-school movement programme over a six-week period (60 minute lessons, twice a week). Pre- and post-intervention measurements were taken on the two dependent variables in this study: motor competence and self-concept.

This design does not include a control group. The design is considered appropriate when the dependent variables under investigation are fairly stable and unlikely to change due to extraneous factors during the duration of the intervention programme (Borg & Gall, 1989). It is considered especially appropriate for short-term intervention programmes. Because there were no other kinds of sport/movement or self-concept development programmes available for any of the subjects during the period of this study, it was considered unlikely that any changes in their skills or self-concept could be attributed to an external influence. For that reason, the one group pre-test-post-test design was chosen.

Procedures

The following section provides a description of the procedures that were followed in this study.

Pilot Study

The purpose of the pilot study was to explore the assessment strategies and the variety of instructional strategies identified in the literature about at-risk youth in terms of their effectiveness within the context of a township in South Africa. A checklist of “at risk” factors was distributed to teachers in a township primary school (see Appendix A). Eighteen children (N=18) between the ages of 8-12 were identified by these teachers to be “at risk” according to the criteria. These children were pre-tested using the Latchchaw Motor Skill Test Battery (Barrow & McGee, 1968) and Harter’s Self-Perception Profile (in Alexander, 1998). They then participated in a six-week programme (two sessions per week, one hour per session). The subjects in this pilot study came from the same demographic area in which the experimental study was to take place.

Decisions about the assessment and instructional strategies to be used in the intervention programme were made based on the experience of the investigator during this pilot study. The following is a summary of the decisions made about the assessment strategies (see Table 5) and the instructional strategies (see Table 6).

Table 5

Influence of the pilot study on the selection of assessment strategies.

Strategy	Conclusion
Latchchaw Motor Achievement Test	<p>The test battery was easy to administer and the children appeared to understand all the tests quite well.</p> <p>In terms of this study, it was decided to delete the skill test for the volleyball wall volley from the pre- and post-test of motor competence because there would be no opportunity to work on this skill during the intervention programme.</p>
Harters Self-Perception Profile	<p>The profile was very difficult to administer, even though it was done on an individual basis. The children did not seem to understand the questions despite the careful translation into their first language. After considering several other assessment instruments, it was decided to use the simpler Cratty’s Self-Concept Scale (Longhurst, 1995) as a measure of self-concept.</p>

Table 6

Influence of the pilot study on the selection of instructional strategies.

Strategy	Description
Use a smaller playing/activity area than usual	At the beginning of the pilot study, the investigator had real problems controlling the class. It was then decided to use a smaller playing area in order to be closer to the children. This had a positive effect on group control.
Use role models/students in helping roles	At the beginning of the pilot study, the children had difficulty following directions and remaining on task. They became much more successful when teaching assistants were introduced who could serve as positive role models.
Divide the children into small groups	The children in the pilot study became more task oriented when they were divided into small groups and each group had at least one student working with them.
Minimise choices regarding equipment	The children in the pilot study were very excited and had trouble remaining on task during those lessons where they could choose among a variety of types of equipment. Minimising the choice of equipment used during a lesson and making strict rules concerning the handling of equipment during the lesson resulted in a more focussed learning environment.
Use an extrinsic reward system	<p>This strategy was confirmed. The investigator started to apply the reward system during Lesson 5 of the pilot programme. It seemed to produce an improvement in the children's conduct. It was important to be very strict regarding the receiving of the rewards, however, so the reward kept its value and did not become routine.</p> <p>The reward was in the form of a star chart. There were 3 criteria for receiving stars for a lesson: children who started the lesson on time; children who listened to directions and who took part in all the activities; and children who refrained from violent behaviour.</p>
Use a time-out/sit out for problems with self-control	Children who did not behave according to the rules of the class were first given a warning, then asked to "sit-out" if they did not change. After a period of time to think about what they have done, they were given the opportunity to apologise to the investigator. If this was done, he/she was allowed to join the activities again.
Present group activities rather than individual activities at the beginning of lesson	It was easier to control the lessons when group activities were presented first. When individual activities were presented first, the children could misbehave more easily because it was difficult to immediately detect when and where their misbehaviour started. It was possible to present individual activities in the second half of lessons, although specific and strict rules and regulations had to be explained to them first.

Selection of Subjects

The investigator approached the principal from a primary school located in a historically disadvantaged township in the Western Cape. A full discussion took place which included an explanation of the purpose of the research project and a description of what the study entailed and what was hoped to be achieved. Because he felt that the study could benefit his pupils, he arranged for the investigator to meet with the teachers to explain the study to them and to ask their help in identifying the at risk youth who could benefit from the programme.

A presentation was made to the teachers. They indicated their enthusiasm for the project. They were asked to evaluate the children in their classes who were between the ages of 7 and 13 according to a checklist of at risk factors identified by the investigator (see Appendix A). The children who were identified as at-risk youth were given letters which contained details of the study and appropriate consent forms for their parents/guardians to sign and return to their teacher before the pre-testing was to take place (see Appendix B). It was clearly stated that the after-school programme was a voluntary extramural activity and that at any stage a child could withdraw from participation. Before the pre-testing took place, the investigator met with the identified children who had been given permission to participate by their parents/guardians and explained the programme to them. The details of the pre- and post-intervention assessments also were explained. All of the children who had been given permission to participate in the programme were given the option to volunteer for the programme or to decline. All of the children volunteered to join the after-school programme.

The subjects (N=28) were all between the ages of 7 and 13 years. After completing a pre-test of motor skills and self-concept, they participated in the movement programme of two sessions each week, for six weeks, one hour per session. All subjects completed the post-test at the end of the intervention period.

Selection of the Measurement Instruments

Two measurement instruments were needed to determine pre-test to post-test changes in children's motor competence and in their self-concept.

Latchaw Motor Achievement Test

There are many different tests to assess motor skills development or motor competence. One instrument is the Latchaw Motor Achievement Test which was designed to measure general motor achievement related to a variety of popular sports (Barrow & McGee, 1968 and Johnson & Nelson, 1986). The test consists of a battery of items designed for fourth, fifth and sixth grade boys and girls. It is an instrument that assesses seven different proficiency factors that influence motor skill performance in sport contexts.

1. Basketball wall pass.
2. Volleyball wall volley.
3. Vertical jump.
4. Standing broad jump.
5. Shuttle run.
6. Soccer wall volley.
7. Softball repeated throws.

For practical reasons, only six items of the Latchaw Motor Achievement test were used in the study. The volleyball wall volley was dropped from the protocol because there would be no opportunity during the intervention programme to learn/practice the skills or underlying abilities assessed by this test item.

It took approximately one hour for a team of five test administrators to pre-test the children in this study using the six-item Latchaw Achievement Test. Face validity is accepted for each test and the reliability coefficients for the individual test items range from .77 to .97. A copy of the Latchaw Motor Achievement Test appears in Appendix C.

Assessment of Self-Concept

There are a variety of assessment instruments for measuring self-concept. Several of the most commonly employed instruments were reviewed. The initial intention to use Harter's Self-Perception Profile (Alexander, 1998) was based on its compatibility with achievement motivation theory. Since one outcome of the intervention programme was proposed to be an increase in skill level, this seemed a logical choice. This instrument included one subscale (global self worth) which is a measure of the individual's general like or dislike for him/herself; three subscales which measure self-perceptions of

competency (athletic competence, scholastic competence, and peer acceptance), and two subscales which measured self-adequacy (physical appearance and behavioural conduct). This instrument reflects the multidimensional theme, which characterizes current research on self-esteem. The structured alternative format questionnaire was designed by Harter to reduce social desirability effects.

When it was discovered in the pilot study that the Self-Perception Profile (Alexander, 1998) was not practical for use in this particular South African context, other self-esteem and self-concept instruments were reviewed. One widely used instrument is the Coopersmith Self-Esteem Inventory (Coopersmith, 1959, 1967). On this self-report instrument, a total score is calculated across items representing a variety of content, and this total score is considered a reflection of a child's global self-esteem. Coopersmith (1959) initially identified four potential domains across which self-evaluations might differ, namely, school, peers, parents and general references to self. He concluded that children between 10-13 years of age do not differentiate among these dimensions. The score is interpreted as an index of the child's global feeling of self-esteem, which could then be generalised to any domain. Subsequent studies (Kokenes, 1974) demonstrated that this conclusion was not accurate and that children can make clear distinctions between domains, as is assessed, for example, in the Perceived Competence scale for children (Harter, 1982).

The "How I Perceive Myself" self-esteem assessment (Kosmoski, Pollack and Estep, 1994) and the "Piers-Harris Children's Self-Concept Scale (Piers & Harris, 1969) are two other self-esteem assessment scales that are used often. The "How I Perceive Myself" scale is designed for screening children, ages 5 through 13 years old. The instrument has 18 items which can be administered to a class of 25 children in less than 10 minutes. According to Kosmoski, Pollack and Estep (1994), "How I Perceive Myself" has excellent test-retest reliability for young children and may be used with elementary school children through Grade 5. The "Piers-Harris children's Self-Concept Scale" (Piers & Harris, 1969) is a standardised, 80-item self-report measure of children's feelings about themselves. The Piers-Harris scale measures children's assessment of their own behaviour, intellectual and social status, physical appearance, anxiety, popularity and satisfaction. Within this instrument, self-concept is defined and used interchangeably with such terms as self-esteem and self-regard. In a study by Katragadda & Tidwell (1998) the Piers-Harris scale was used to determine if factors like level self-esteem, level of stress etc. can determine depression in Hispanic adolescents.

The Cratty Self-Concept Scale (Longhurst, 1995) measures dimensions of self-concept specifically in movement contexts. It consists of 20 questions, each of which is

answered with a “yes” or a “no” answer, thus making it easy to administer to children. It is a screening instrument that is recommended for identifying children with low self-concept about themselves as movers (Sherrill, 1993), a typical characteristic of at risk children. For this reason, as well as the quick administration time that ensured that even children with short attention spans could participate, the Cratty Self-Concept Scale was chosen for this study. A copy of the original Cratty Self-Concept Scale as well as its translation into the Afrikaans version used in this study appears in Appendix D.

Pre-test

All subjects (N = 28) completed Cratty’s Self-Concept Scale for Children (Longhurst, 1995), five days prior to the initiation of the intervention programme. The investigator supervised the testing with the help of two assistants. The investigator read the question out loud and gave the children time to reply with a negative or positive answer on their individual score sheets. Any questions the children had during the session were answered individually by the investigator or one of the assistants. The completion of the inventory took the children approximately 10 minutes. After completing their self-concept assessment, the children were all tested on the Latchchaw Motor Skill Test. Once again the investigator supervised the testing while six assistants all whom were familiar with the test, administered the individual test items.

Intervention Programme

The movement programme used as the intervention in this study began the week following the pre-test. The programme took place for six weeks, with two sixty-minute lessons each week. These lessons were presented out-of-doors on the open school grounds, which was shared regularly with other extra-mural activities. The details of the intervention programme, including the content and the instructional strategies, are presented in Appendix E and Appendix F.

It was decided to adopt Hellison's five developmental levels in implementing the intervention programme. The idea was to design progressions that would help students grow from one level to the next level. The levels are:

Level zero: Irresponsibility

Level one: Self-control

Level two: Involvement

Level three: Self-responsibility

Level four: Caring

Post-test

The subjects (N = 28) completed the post-test two days after the end of the intervention programme. The identical procedures followed for the pre-test were repeated for the post-test.

Data Analysis

Means and standard deviations were calculated to reveal differences between the children's pre- and post-test motor competence and self-concept. The Wilcoxon Signed Rank Test was completed to determine the significance of those changes. A Spearman Correlation was calculated to determine if improvements in motor competence were linked to improvements in self-concept.

Summary

This study focused on determining the effect of participation in a sport skill development programme on at-risk children's motor skill development and self-concept. A one-group pre-test-post-test design was employed. Following the selection of the subjects, all subjects took part in a pre-test of their motor proficiency and self-concept. A 6-week (12 lessons) movement programme then followed, where after all subjects were post-tested on their motor proficiency and self-concept. The results of the statistical treatment of the data gathered are presented in Chapter 4.

Chapter Four

Results

The purpose of this study was to explore the potential of participation in sport as a means to help address the problems associated with at-risk youth in South Africa. The specific focus of this study was on determining if there is a relationship between improvements in sport skill proficiency and changes in self-concept among at risk children. Collingwood (1997) proposed that because at-risk youth have not developed a responsible and health-enhancing life-style, the development of their physical fitness through participation in a physical training programme could be a major component in their rehabilitation. Sonstroem's (1978) model predicts that successful involvement in physical activity leads to increased physical ability, which in turns raises perceptions of physical ability. Perceptions of the "self as competent" are proposed to have a positive influence on self-esteem/self-concept as well as increase attraction to physical activity. Because an increase in skilfulness theoretically also could bring an increase in perception of the "self as competent," it was considered reasonable to investigate whether a relationship could be documented between positive changes in skill and positive changes in self-concept.

Data related to the research questions that guided this investigation were gathered from 28 children during the pre-test. A six-week (12 lesson) sport skill development programme, which was provided for the children as the intervention. After the programme, the children were post-tested and the data were processed to describe the impact of the programme on:

- Skill development (components like leg power, eye-hand coordination, eye-foot coordination, agility and balance, upper body endurance).
- Self-concept
- Relationship between changes in self-concept and skills components.

The results will be presented and discussed according to the stated research questions.

Sport Skill Development

Research Question 1: Will participation in a sport skill development programme have a positive affect on the sport skills of at-risk children?

The answer to Research Question 1 is yes. The post-test scores for all six components of motor skill achievement as measured by the Latchaw Motor Achievement Test (Barrow & McGee, 1968) improved (see Table 7). The Latchaw Motor Achievement Test is comprised of subtests designed to measure the general components of motor achievement for girls and boys (Barrow & McGee, 1968). The test items assess the following components:

Component	Test Item
Upper body endurance & eye-hand coordination	Basketball wall pass
Leg power (vertical) & body coordination	Vertical jump
Leg power (horizontal) & body coordination	Horizontal jump
Agility & balance	Shuttle run
Eye-foot coordination	Soccer wall volley
Eye-hand coordination	Softball repeated throws

Table 7

Comparisons between pre-test and post-test scores of at-risk children (N=28) on the Latchaw Motor Achievement Test.

	Mean Pre-test	SD Pre-test	Mean Post-test	SD Post-test	Difference between Means
Basketball wall pass	13.14	4.26	13.79	4.12	.65
Vertical jump	21.57 cm	6.43 cm	23.96 cm	5.34 cm	2.93 cm
Standing long jump	136.21 cm	21.66 cm	141.46 cm	22.54 cm	5.25 cm
Shuttle run	14.68 sec.	1.37 sec.	14.13 sec.	1.19 sec.	.55 sec.
Soccer wall volley	8.86	2.03	9.64	2.42	.78
Repeated throw and catch	7.75	1.73	8.57	2.13	.82

Application of the Wilcoxon Signed Rank test determined that four of the six components of motor achievement showed significant improvement (see Table 8). The vertical jump, shuttle run, soccer wall volley and softball repeated throws were items on which the children achieved a significant improvement. The basketball wall pass and the standing broad jump were items on which the improvement in score was not statistically significant.

Table 8

Changes in the motor skills of at-risk children (N=28) following participation in a motor skill development programme.

Test Item	Z score	Significance
Basketball wall pass	-1.81	.070
Vertical jump	-2.02	.043*
Standing long jump	-1.74	.081
Shuttle run	-2.25	.024*
Soccer wall volley	-2.01	.045*
Repeated throw and catch	-2.74	.006*

* $p \leq .05$

Self-Concept

Research Question 2: Will participation in a sport development programme have a positive affect on the self-concept of at-risk children?

The answer to Research Question 2 is yes, however the improvement was not statistically significant. The post-test scores showed an overall improvement in self-concept (see Table 9) according to the Cratty Self-Concept Scale (Longhurst, 1995). Literature on self-concept suggests that the children would experience a boost in their self-concept as a result of the positive reinforcement they received about their motor proficiency as part of the skill development programme.

Table 9

Changes in the self-concept of at-risk children after participation in a motor skill development programme.

	Z-score	Significance
Self-Concept	-1.25	0.211

* $p \leq .05$

The distribution of scores on the Cratty Self-Concept Scale (Longhurst, 1995) are presented in Table 10. The distribution of the scores indicates that there was no change in score for five out of the 20 questions. Post-test mean scores were higher on six questions and post-test mean scores were lower on nine questions. The total score of Cratty's Self-Concept scale did improve according to the calculations.

Table 10

Distribution of scores on the Cratty Self-Concept Scale (Longhurst, 1995).

Question	Mean Pre-test	SD Pre-test	Mean Post-test	SD Post-test	Diff between Means
1. Good at making things with your hands	1.25	.46	1.25	.44	0.0
2. Draw well	1.29	.46	1.18	.39	0.11
3. Strong	1.29	.46	1.11	.32	0.18
4. Like the way you look	1.07	.26	1.11	.32	-0.04
5. Friends make fun of you	1.61	.50	1.61	.50	0.0
6. Handsome/pretty	1.14	.36	1.11	.33	0.03
7. Have trouble making friends	1.75	.44	1.71	.46	0.04
8. Like school	1.04	.19	1.04	.19	0.0
9. Wish you were different	1.39	.50	1.32	.48	0.07
10. Sad most of the time	1.57	.50	1.57	.50	0.0
11. Last to be chosen in games	1.54	.51	1.75	.44	-0.21
12. Girls like you	1.29	.46	1.25	.44	0.04
13. Good leader in games/sports	1.32	.48	1.32	.48	0.0
14. Clumsy	1.68	.48	1.71	.46	-0.03
15. Do you watch instead of play	1.36	.49	1.39	.50	-0.03
16. Boys like you	1.07	.26	1.00	.00	0.07
17. Happy most of the time	1.18	1.25	1.14	.36	0.04
18. Have nice hair	1.25	.44	1.21	.48	0.04
19. Play with younger children a lot	1.46	.51	1.39	.50	0.07
20. Reading easy for you	1.18	.39	1.21	.42	-0.03
Total self-concept score	8.36	5.36	9.32	4.47	0.96

Correlation between Sport Skills and Self-Concept

Research Question 3: Is there a relationship between sport skill development and the self-concept of at-risk children?

The answer to Research Question 3 is yes, however a correlation was found only between changes in two of the components of motor achievement and the self-concept of at-risk children. The results of the calculation of a Spearman correlation between changes in the components of motor achievement and changes in self-concept are presented in Table 11). If the level of significance is set at the $*p \leq .05$ level, a correlation was found between the changes in the horizontal leg power/body coordination component and self-concept, and changes in eye-foot coordination and self-concept. If the level of significance is set at the $*p \leq .10$ level, changes in an additional component (vertical leg power/body coordination) also correlates with changes in self-concept (see Table 11). It is interesting to note that although a correlation was found between scores on horizontal leg power/body coordination and self-concept, the children who participated in this study did not achieve a significant improvement in this component.

Table 11

Correlations between changes in the components of sport skill development and the self-concept of at-risk children.

Component	Correlation Coefficient	Significance
Upper body endurance & eye-hand coordination	-.172	.382
Leg power (vertical) & body coordination	.352	.066**
Leg power (horizontal) & body coordination	.380	.046*
Agility & balance	-.185	-.345
Eye-foot coordination	.384	.043*
Eye-hand coordination	.143	.468

* $p \leq .05$

** $p \leq .10$

SUMMARY

Analysis of results revealed significant improvements in four components of motor skill achievement after participation in a six-week movement programme. Although this is not an unexpected finding, it is important in that it provides support for the argument that at-risk youth can benefit from participation in an after-school movement programme.

Although descriptive results indicated enhanced self-concept scores after the intervention programme, statistical analysis approached no significance. This was an unexpected finding, and further research on this issue within the multicultural diverse population in South Africa is deemed necessary.

Analysis of results revealed significant improvement in two of the six components of the Latchaw Motor Achievement Test and changes in self-concept.

Chapter Five

Conclusions and Recommendations

The purpose of this study was to explore the potential of participation in a six-week sport skill development programme for at-risk children. The specific focus was to determine if there is a relationship between improvement in sport skills and the self-concept of at-risk children.

Conclusions

The results of this study lead to three general conclusions:

1. Participation in a sport skill development programme can help at-risk children improve their motor skills. In this study, skill improvement was measured in terms of improvements in the components of motor skill performance. Specific improvement was achieved in agility (the shuttle run test), vertical leg power and body coordination (the vertical jump test), eye-foot coordination (the soccer wall volley test) and eye-hand coordination (the softball repeated throws test).
2. Participation in a sport development programme can have a positive affect on the self-concept of at-risk children. In this study, a positive change in self-concept was achieved, although the change was not statistically significant.
3. There appears to be a correlation between some of the components of motor skill performance and the self-concept of at-risk children. A significant correlation ($p \pm .10$) was found in this study between vertical leg power/body coordination and self-concept; horizontal leg power/body coordination and self-concept; and foot-eye coordination and self-concept.

Each of these general conclusions will be discussed separately in the following sections of this chapter.

Sport Development Programme

The at-risk children who participated in this study achieved a significant improvement in four of six motor skill components tested. These components were agility, vertical leg power, eye-foot coordination and eye-hand coordination. A wide variety of skill development activities were provided during the intervention programme. The improvement in all six skill components should be the result of practice. It may be that not enough attention was given to the two skill components that did not achieve a significant improvement. These components were horizontal leg power and upper body endurance/eye-hand coordination.

Improvements in foot-eye coordination were anticipated. Before each lesson started or when the children had time to do “their own thing,” the boys in the programme usually kicked a ball around or played a soccer game. In South Africa many children in historically disadvantaged communities learn to kick a ball (or any object that may resemble a ball) from an early age. Although the girls tended to use their spare time to play netball or throwing games, they comprised only seven of the 28 subjects in this study. Their performance, therefore, would have a reduced effect on group results.

Self-Concept

It was disappointing that the positive gains in self-concept achieved by the children in this study did not achieve statistical significance. This could be due to the small number of children who participated in this study. However, if the group had been larger, there would have been the possibility that each child would have received less personal attention, which could have had a negative impact on some children’s self-concept. A larger group also presents a greater challenge in terms of presenting lessons and keeping at-risk children on task. Expanding the group size could have had a negative effect on the overall quality of the programme.

The theoretical rationale for this study was based on Harter’s Perceived Competence Theory (1982), which predicts that increases in self-esteem will occur when children become increasingly competent in meeting challenges in an environment where they have an internal sense of control and where they are rewarded for their persistence and effort. The intervention programme in this study provided the children with

encouragement and positive feedback, the opportunity to explore and discover movement possibilities, and maintained a focus on enjoyment through participation. According to the research literature that was reviewed, this kind of programme should produce feelings of belonging, competence, self-worth, acceptance of self, acceptance of personal limits and a perception of the self as unique. All of these outcomes are reported to be critical for healthy affective development in children. There are other factors in addition to the duration of the programme that could limit the potential of a programme to produce these outcomes.

- Attendance to the programme
- Instructional strategies not effective
- Not enough individual attention
- Instructor not somebody with whom they could identify
- Age group (7-13) too broad
- Programme content not effective

The lack of significant change as result of participation in a skill development programme might also be attributed to problems with the measurement of self-concept. It can be noted in the Afrikaans translation of the Cratty Self-Concept Scale, for example, that some of the adjectives of the rating scales have distinct meanings in English, yet in the Afrikaans translation there is no distinction. It is also possible that some of the children from certain cultural backgrounds might not be accustomed to expressing themselves in “degrees” of feeling. In this study, some of the younger children appeared to have difficulty filling in the Cratty Self-Concept Scale. The younger children also had some difficulty with the reading of the questionnaire and needed to have each question read to them. Is it possible that they might not have understood the meaning of some of the questions. The entire question of self-concept and its assessment in a South-African context requires specialised investigation by evaluation experts. Most of the research and current assessment instruments are based on Western populations, which must be seen as a

serious limitation when conducting research among persons from historically disadvantaged backgrounds in South Africa.

The Relationship between Skill Development and Self-Concept

The Latchaw Motor Achievement Test is a measure of performance of a variety of motor components that underlie many specific sport skills. It could be argued that an improvement in these motor components does not necessarily result in an improvement in skill performance in any specific sport.

Rather than implementing a general sport development programme it can be argued that a specific sport programme could have had a greater impact on self-concept. Research has shown that projects using specific sports increased self-concept (Hawkins & Gruber, 1982; Miller, 1989). In this investigation the children participated in a variety of kicking activities during their free time, which suggests that soccer might be more effective for them than a general programme.

A more fitness orientated programme also could have a greater impact in establishing a relationship with self-concept. This idea is based on the fact that two of the three components which showed a significant relationship (vertical leg power, horizontal leg power and foot-eye co-ordination) with self-concept were fitness components. This also might be an indication that improvements in fitness are important when deciding on programme strategies.

This kind of research (Deline, 1991) that suggests that a cooperative approach rather than a competitive approach is effective in developing self-concept. According to Deline the physical education setting is an excellent medium for introducing a variety of cooperative values and skills and cooperative activities.

Recommendations for Future Programmes

Although it was decided to adopt Hellison's (1978, 1985, 1986a, 1986b, 1990b) five levels as a framework for this investigation, it was very difficult to implement these levels. This could be due to the age of the subjects in this study. Hellison's levels were primarily used to guide progressions in projects where most of the subjects were older than the subjects in this investigation. It was not possible to explain the levels to the children in this study, so they would not have had any concept of making progress toward the goals of self-respect and social responsibility (the highest of Hellison's levels). During the pilot study it was decided that within a six-week programme, it would be practical to determine on which level the children were functioning, then implement the necessary strategies to help the children move up to the next level. Masser (1990) stated that she could explain levels 0, 1 and 2 to five-year old children, and levels 0, 1, 2 and 3 to six-year old children. During the first few lessons of this investigation the investigator determined that the children were on level zero, which according to Hellison is the level of irresponsibility. Throughout the programme quite a bit of focus was placed on trying to achieve self-control (level 1). Toward the end of the programme, efforts were made to help the children to strive toward the level of involvement (level 2). Much more research needs to be done regarding the different levels and the use of the levels to guide instruction in the South-African context.

Most of the instructional strategies described in Appendix F were used in this research. A few of the strategies were particularly effective:

- A *code of conduct* was stipulated at the beginning of the programme for the duration of the programme. These rules of behaviour stayed the same throughout the programme and helped the investigator to have more control in the classes. The children came to know the code of conduct very quickly and were reminded of it before each lesson started. The code of conduct was of great help to the investigator and should be taken into consideration for future programmes.
- It was important to have *strict rules regarding the handling of all equipment*. The children enjoyed the wide variety of equipment which was brought to every lesson. Most of the equipment was new to the children and they had great fun playing with it. At the beginning of the programme it was important not to bring

too much of a variety to the lessons. The reasons for this was twofold: Firstly, because most of the equipment was new to them and secondly the children had not had many opportunities to play with a variety of equipment.

- In situations where the code of conduct or class rules were not met, the child was asked whether he/she needed a *time-out*. The child could decide this for him/herself. If the investigator needed to speak to the child during a lesson a second time, the child was told to take a time out, however, the child could return to the lesson anytime he or she felt ready. If there was a third incident within the same lesson the teacher then told the child to remain out until the investigator and child could develop a plan to help the child to participate appropriately. This strategy was derived from Parker, Kallusky and Hellison (1999) as an approach to teaching responsibility through physical education.
- Another strategy, which the investigator applied in every lesson, was the use of focus words. According to Deline (1991) “focus words identify cooperative values and skills (p. 22)”. One focus word was introduced during each lesson and represented the behavioural focus of the movement activities. The focus word was defined for the children and then an example was given. Focus words included concepts such as honesty, trust, communication, respect, sharing, encouragement, fairness, responsibility, leadership, teamwork, sportsmanship and compromise.
- The most effective way for managing the children was *to separate the younger less-skilled children from the older more-skilled children*. This division made it possible to focus the work on each groups’ individual needs according to their different skill levels. A teaching assistant was recruited to support the investigator. This meant that each group was assigned their own “teacher” and equipment. They could then participate in the lesson activities at an appropriate level for their age/skilfulness. This method made it possible to give more individual attention to each child.

The attendance figure during the intervention programme was not optimal. There was never one lesson from the total of 12 lessons when the investigator had the opportunity to work with all 28 subjects. Some of the children were very committed to the programme

and came regularly, but other children came less regularly. On some occasions children could not attend certain lessons because of other commitments. There were some children who just stayed away because they “felt like it.” The investigator did implement an award system, where the children received a reward after each lesson if their behaviour was satisfactory. This strategy was effective and could be taken into consideration for future studies with at-risk youth.

Future Research

The results of this study also lead to recommendations about the focus of future research projects:

- Issues surrounding the assessment of at-risk South African youth, especially in terms of social and psychological variables, require serious attention. To continue to use Western instruments, although translated, is not necessarily satisfactory and may produce inaccurate results. In addition to dealing with cultural-bias, there may be additional problems introduced by the sharp differences between traditional African cultures and the urban cultures.
- It would be interesting to compare the results of participation in a recreational sport programme to determine what unique outcomes may be associated with each programme. There has been some research on recreational programmes that indicates they also could be effective ways of addressing the problems of at-risk youth (Wright, Harwell & Allen, 1998; Fairfax, Wright & Maupin, 1988).
- A study specifically focused on the pro-social behaviour of at-risk youth could be important since it appears that many of these youth operate at Hellison’s (1978, 1985, 1990b) levels 0 and 1. For example, a comparison could be made between the outcomes achieved through a competitive sport programme vs. a cooperative physical activities programme.
- Hanson (1984) defined at-risk youth as infants whose birth, prenatal or perinatal history, or whose social or environmental situation has placed them at risk for developmental, learning, or emotional problems. It would be interesting to compare the results of participation in a movement programme for at-risk youth

whose birth placed them at risk vs. a movement programme for at-risk youth who has been defined as at-risk because of environmental factors.

Gender Considerations

A need exists to compare the results of participation in a sport skill development programme for girls vs. a sport skill development programme for boys to determine what unique outcomes may be associated with each programme for the different gender groups. Although no data was generated during this investigation to explore gender differences a few observations can be made:

- The 28 subjects in the group included 21 boys and 7 girls. The girls and boys did not always appear to enjoy participating together in the programme. The girls and boys kept to themselves most of the time and only joined up together in teams or groups when the investigator requested them to do so. This may be due to the age group (7-13 years old) who participated in the programme.
- Many of the girls did not join in and participate during all of the lessons. For many of the lessons only two or three of the girls arrived and then they stayed in the background of the class for most of the lesson. Because so few girls participated in the programme it was a struggle to get them fully involved. During team activities or games the investigator had to make specific allowances/rules to ensure that the boys and girls played together and considered each other in specific situations.

Concluding Remarks

Factors in their external environment play a huge role in the lives of at-risk children. The investigator had no control over any of these factors when the children left the programme to go home. To have a positive affect on the lives of at-risk children it may be necessary to look at ways in which external factors can be influenced in addition to conducting an intervention programme on a more regular basis carried out over a longer period of time. The limited time period for the intervention programme in this study may have played a role in the absence of significant impact on children's self-concept.

The potential value of a movement programme, however, should not be minimised. Although this investigation did not confirm that a six-week sport skill development programme could have a statistically significant effect on the self-concept of at-risk children, a positive effect was achieved. There are other studies that have achieved significant results and further research is necessary.

Because sport appeals to a large segment of youth in general, sport must be explored in terms of its potential to have a great impact on at-risk children by keeping them off the streets, providing them with a safe environment, helping them to learn responsibility and teaching them life skills. Within this commitment to mobilising sport to address the problems that children from disadvantaged communities experience, it must be acknowledged that their problems are very complex.

“Although sport may provide a means of motivating youth and providing them with a more positive outlook on life, it can not by itself reverse the chronic unemployment, poverty, violent crime, and housing decay impacting their life chances” (Pitter & Andrews, 1997: 96).

Appendix A

Risk Factors

Risk Factors	Signs of risk factors in child	
	Yes	No
1. Severe Poverty		
2. Low Self-esteem		
3. Children that likes taking risks		
4. Poor school work		
5. Drug abuse		
6. Tobacco use		
7. Truancy		
8. School failure		
9. Trouble with the police		
10. Unemployability regarding both parents		
11. Disease/Illness		
12. Social Isolation		
13. Depression		

The Afrikaans translation of the scale appears on the following page.

Afrikaans Translation of the Risk Factors

Geagte Onderwyser/es

Graag vra ek u samewerking om die leerlinge in u klas te evalueer wat tussen die ouderdom van 7-11 is, volgens die onderstaande risikofaktore. Merk asseblief teen elke risikofaktor, óf in die eerste óf in die tweede kolom af.

Elke kind se vorm sal geëvalueer word, waarna ek 'n aantal kinders sal kies om aan by 'n bewegings program in te skakel. Let wel slegs kinders tussen die ouderdom van 7 tot 11 jaar sal gekies word.

Naam van kind : _____

Ouderdom : _____

Geslag van kind : _____

Graad : _____

Risikofaktore	Tekens of risikofaktore bestaan by kind	
	Ja	Nee
1. Erenstige Armoede		
2. Lae selfkonsep		
3. Geneig om kansse te neem		
4. Skool werk is swak		
5. Gebruik dalk dwelms		
6. Rook dalk		
7. Draai stokkies		
8. Het al 'n graad behaal		
9. Het al met die gereg gebots		
10. Beide ouers is werkloos		
11. Gedurig siek/Het 'n erenstige kwaal		
12. Het min vriende		
13. Het dalk depressie		

Dankie vir u tyd en moeite.

Karin Hugo

Appendix B

Letter and Consent form for Parents/Guardians

20 Maart 2000

Geagte Ouers/Voogde

Ek is tans besig met my Meesters graad in Menslike Bewegingskunde aan die Universiteit van Stellenbosch. As deel van my studies gaan ek 'n na-skoolse sportprogram loods en wil ek graag u kind uitnooi om aan hierdie program deel te neem.

Met hierdie program wil ek spesifiek twee doelwitte bereik.

1. Die verbetering van u kind se self-konsep.
2. Verbetering van U kind se fisiese vaardighede en ontwikkeling.

Hierdie sportprogram sal oor 'n periode van 7 weke geskied (12 lesse) en sal twee keer per week op 'n Maandag en 'n Woensdag vir 45 minute aangebied word. Omdat hierdie program deel vorm van my studies, moet ek ook u toestemming kry sodat ek u kind se sportvaardighede kan toets. Die doel hiermee is om te kyk of die leerlinge wel teen die einde van die program verbeter het of nie. Ek sal u kind aan die begin en die einde van die program toets.

Ek verskaf graag aan u die uiteensetting van die program.

Woensdag	12 April :	14:00-16:00	Toetsing
Maandag	17 April :	14:00-15:00	Program
Woensdag	19 April :	14:00-15:00	Program
Maandag	24 April :	VAKANSIE DAG (Geen program)	
Woensdag	26 April :	14:00-15:00	Program
Maandag	1 Mei :	VAKANSIE DAG (Geen program)	
Woensdag	3 Mei :	14:00-15:00	Program
Maandag	8 Mei :	14:00-15:00	Program
Woensdag	10 Mei :	14:00-15:00	Program
Maandag	15 Mei :	14:00-15:00	Program
Woensdag	17 Mei :	14:00-15:00	Program
Maandag	22 Mei :	14:00-15:00	Program
Woensdag	24 Mei :	14:00-15:00	Program
Maandag	29 Mei :	14:00-15:00	Program
Woensdag	1 Junie :	14:00-15:00	Program
Maandag	5 Junie :	14:00-16:00	Toetsing

Asseblief lees die aangehegde toestemmingsvorm wat u kind se regte verduidelik. Ek wil net weer duidelik maak dat die deelname aan die program nie-verplichtend is nie. Stuur asseblief die afskeurstrokie so gou as moontlik terug skool toe.

Baie dankie en indien u enige vrae het kan u my kontak by 808 4719 (universiteit) of 0823787607.

Groete

Karin Hugo

Dr. Bressan
(Studieleier)

✂-----

**TOESTEMMINGSVORM VIR DEELNAME AAN
'N NA-SKOOLSE SPORT PROGRAM**

* Die doel van deelname aan die program is duidelik.

* Ek neem kennis dat deelname aan die program vrywilliglik is en dat resultate gebruik sal word vir Meestersgraad doeleindes.

* Ek neem kennis dat die resultate van die studie as vertroulik hanteer sal word en dat identiteite anoniem sal bly.

* Ek neem kennis dat ek op enige tydstip, as ouer/voog, verdere verduidelikings van die studie mag aanvra.

VAN, VOORLETTERS VAN OUER/VOOG : _____

OUER/VOOG VAN : _____

HANDTEKENING VAN OUER/VOOG : _____

ADRES VAN OUER/VOOG : _____

KONTAKNOMMER : HUIS : _____

WERK : _____

Appendix C

THE LATCHAW MOTOR ACHIEVEMENT TEST

(In Johnson & Nelson, 1986 and Barrow & McGee, 1968)

Objective : To measure general motor achievement

Gender and age : Fourth, fifth and sixth grade boys and girls.

Reliability : The reliability coefficients for the individual test items ranged from .77 to .97. Students from 20 elementary schools in two states were tested.

Validity : Face validity is accepted for each test.

Tests procedure : 7 Motor skill items

Item 1 : Basketball wall pass

Purpose : To measure the ability of the student to throw a basketball accurately

Equipment : A stop watch and a regulation basketball

Procedure : The student stands behind the restraining line and on the signal to begin, passes the ball into the target area as rapidly as possible for 15 seconds. He may use any method of throwing he desires. He may catch the ball on the bounce or volley, but it is not necessary for him to catch it at all for a successful hit. A successful score is a ball that is thrown from behind the restraining line and hits in the target. Line balls do not count as scores. A 10-second practice trial is recommended, followed by two 15-second trials.

Scoring : The score is the number of fair hits in the target for the best of the two trials of 15 seconds.

Reliability : Grade four : Boys .91, girls .94
Grade five : Boys .84, girls .89
Grade six : Boys .78, girls .83

Item 2 : Volleyball Volley

Purpose : To measure the ability of the student to bat or strike a volleyball with accuracy.

Equipment : A regulation volleyball and stop watch.

Procedure : The student stands behind the restraining line in any position he desires. On the signal to begin, he throws the ball against the wall. As it rebounds, he continues to bat or strike it back toward the target area. If the ball gets out of control, the student must retrieve it and return to the position behind the restraining line and put the ball in play again with a toss against the wall. The student may put the ball at any time by tossing it against the wall. A successful score is a rebounded ball that is batted into the target area from behind the restraining line. One 10-second practice trial is permitted, followed by four 15-second trials. A ball pushed or thrown to the wall or one that touches a line bounding the target does not count as a score.

Scoring : The score is the number of times the ball is batted legally into the target area in the best of four trials of 15 seconds.

Reliability : Grade four : Boys .85, girls .88
Grade five : Boys .89, girls .92
Grade six : Boys .91, girls .93

Item 3 : Vertical Jump

Purpose : To measure the ability of the student to jump vertically.

Equipment : Measurement Stick, chalk

Procedure : The student stands with one side toward the wall, heels together, with chalk on the fingers nearest to the wall. Keeping the heels on the floor, the student reaches upward as high as possible and makes a mark on the wall. The performer then jumps as high as possible and makes another mark at the height of the jump. Three trial are allowed.

Scoring : The number of centimetres between the reach and the jump marks in the best trial, measured to the nearest centimetres, is the score.

Reliability : Boys and girls .93

Item 4 : Standing Broad Jump

Purpose : To measure the athletic power of the legs in jumping forward.

Equipment : A tumbling mat which has been calibrated. If the mat has not been lined, a measuring tape is needed.

Procedure : The subject assumes the starting position behind the take-off mark with his feet parallel. He takes a preliminary movement by bending his knees and swinging his arms and jumps outward as far as possible. Three trials are permitted in succession.

Scoring : The final score is the distance of the best jump out of three trials measured.

Reliability : Boys and girls .963

Item 5 : Shuttle Run

Purpose : To measure the ability of the student to make quick stops with changes in direction.

Equipment : A stopwatch and a course laid out with a starting and finishing line.

Procedure : The student stands at the starting line with his front foot at the line. On the signal “Go” he runs to the opposite line and touches it with at least one foot. He then returns to the starting line and continues in this manner until he has made three round trips or has run 120 feet. If the student fails to touch on or beyond one of the lines, he is stopped and after a brief rest is required to run again. If he fails again to execute the run correctly, he is given a score of zero.

Scoring : The score is the elapsed time recorded to the nearest tenth of a second for the better of two trials.

Reliability : Grade four : Boys .89, girls .84
Grade five : Boys .89, girls .85
Grade six : Boys, .89, girls .79

Item 6 : Soccer Wall Volley

Purpose : To test the ability of a student to kick a soccer ball accurately.

Equipment : A stop watch and a regulation soccer ball.

Procedure : The ball is placed at some point behind the restraining line which is desired by the student. On the signal to start the student kicks the ball toward the wall and the target. If he loses control of the ball, he must recover it, return to the position behind the restraining line and continue to kick. In retrieving a ball out of control the student may not use his hands in the 2,5 by 6 feet floor area but he may use them outside his area. A successful score is a ball that is kicked with the foot into the target area from some point behind the restraining line. A 15-second practice trial is permitted, followed by four 15-second trials.

Scoring : The score is the number of times the ball is kicked into the target area from behind the restraining line for the best of the 15-second trials. One point is subtracted from the total for each time the student touches the ball with his hands in the floor area.

Reliability : Grade four : Boys .82, girls .77
Grade five : Boys .89, girls .83
Grade six : Boys .88, girls .85

Item 7 : Softball Repeated Throws

Purpose : To measure the ability of the student to throw ball overhand with accuracy.

Equipment : Stopwatch and a regulation 12-inch inseam softball.

Procedure : The student stands at any point within the throwing area and on the signal “Go,” he throws the ball with an overhand motion into the target area. He catches the ball on the rebound either on the fly or bounce and continues the throw at the target until the signal to stop. If the ball gets out of control, the student must retrieve it, return to the throwing area, and continue his throws. A score is a throw which is made from within the throwing area and which hits within the lines of the target. Line balls do not score points. A 10-second practice trial is permitted, followed by two 15 second trials.

Scoring : The final score is the number of times the ball hits within the target when it is thrown overhand from a position from within the throwing area in the better of the two trials.

Reliability : Grade four : Boys .82, girls .80
Grade five : Boys .81, girls .82
Grade six : Boys .85, girls .85

Appendix D

THE CRATTY SELF-CONCEPT SCALE

(In Longhurst, 1995)

Objective: To estimate how children feel about their physical appearance and their ability to perform physical skills, and to identify children with low self-concept so that they can be helped.

Gender and age: Boys and girls ages 5 to 12

Reliability: Test reliability of .82 for 288 children.

Validity: Content validity with all items. Construct validity by method of known groups with every item discriminating between students with high and low scores on the total test.

Test description: A test of 20 brief questions to which the student responds with a “yes” or a “no”.

Test directions:

“You have a questionnaire that will determine how you feel about yourself. Each question will be read and you should then immediately decide how you feel and circle yes or no to the answer.

The first question is _____. Now, circle “Yes” or “No”. (The questions is repeated and the instruction to circle yes or no given again.) The second question is _____. (Continue through the 20 items.)

The Scale: The original English version of the scale and the Afrikaans translation used in this study appear on the following pages.

Cratty Self-Concept Scale

NAME : _____ GRADE : _____ AGE : _____ M__ V__

Scoring	Question	Yes?	No?
+	1. Are you good at making things with your hands?	Yes	No
+	2. Can you draw well?	Yes	No
+	3. Are you strong?	Yes	No
+	4. Do you like the way you look?	Yes	No
	5. Do your friends make fun of you?	Yes	No
+	6. Are you handsome/pretty?	Yes	No
	7. Do you have trouble making friends?	Yes	No
+	8. Do you like school?	Yes	No
	9. Do you wish you were different?	Yes	No
	10. Are you sad most of the time?	Yes	No
	11. Are you the last to be chosen in games?	Yes	No
+	12. Do girls like you?	Yes	No
+	13. Are you a good leader in games and sports?	Yes	No
	14. Are you clumsy?	Yes	No
	15. In games, do you watch instead of play?	Yes	No
+	16. Do boys like you?	Yes	No
+	17. Are you happy most of the time?	Yes	No
+	18. Do you have nice hair?	Yes	No
	19. Do you play with younger children a lot?	Yes	No
+	20. Is reading easy for you?	Yes	No

Scoring: Do not print the scoring key on any questionnaires given to the children. Score 1 point for each response expected. Deduct 1 point for each positive answer which was circled No and each negative expected answer which was circled Yes. The score is the number of expected responses given for the 20 items.

Afrikaans Translation of the Cratty Self-Concept Scale

CRATTY SELF-KONSEP SKAAL

NAAM : _____ GRAAD : _____ OUDERDOM : _____ M__V__

	VRAAG	JA?	NEE?
	1. Is jy goed om dinge met jou hande te maak?	Ja	Nee
	2. Kan jy goed teken?	Ja	Nee
	3. Is jy sterk?	Ja	Nee
	4. Hou jy van hoe jy lyk?	Ja	Nee
	5. Spot jou vriende jou?	Ja	Nee
	6. Is jy mooi/aantreklik?	Ja	Nee
	7. Is dit vir jou moeilik om vriende te maak?	Ja	Nee
	8. Hou jy van skool?	Ja	Nee
	9. Wens jy soms dat jy anders was?	Ja	Nee
	10. Is jy baie keer hartseer?	Ja	Nee
	11. Is jy die laaste een wat gekies word vir speletjies?	Ja	Nee
	12. Hou meisies van jou?	Ja	Nee
	13. Is jy 'n goeie leier in speletjies en sport?	Ja	Nee
	14. Is jy lomp?	Ja	Nee
	15. Kyk jy liewers na speletjies, as om te speel?	Ja	Nee
	16. Hou seuns van jou?	Ja	Nee
	17. Is jy meestal gelukkig?	Ja	Nee
	18. Het jy mooi hare?	Ja	Nee
	19. Speel jy dikwels met jonger kinders?	Ja	Nee
	20. Is dit vir jou maklik om te lees?	Ja	Nee

Appendix E

The Movement Programme (Lesson Plans)

LESSON 1:

Focus word: Communication

Definition: To exchange or share feelings, thoughts, or information. To make something known. To be understood.

Lesson 1: Group 1 (Older children)

Warm-up	Problem-solving balances	Individual
Activities	Tracking and Trapping (catching using both hands)	Group
	Locomotion (horizontal jump)	Pairs
	Locomotion (running)	Individual and group
	Locomotion (walking blindfolded)	Pairs
Game		Team

Lesson 1 Group 2 (Younger children)

Warm-up	Kicking (kick passing)	Group
Activities	Locomotion (horizontal jump)	Pairs
	Tracking and trapping (catching using both hands)	Group
	Throwing (underarm two hands)	Pairs
	Throwing (overarm) & catching (using both hands)	Group activity (3-4)
Game		Team

LESSON 2

Focus-word: Sportsmanship

Fairplay; being able to abide by the rules of the game. Being able to accept defeat or victory graciously.

Lesson 2: Group 1 (Older children)

Warm-up	Locomotion (Tag game - Running)	Individual and team
Activities	Throwing (underarm & underhand to target)	Individual and relay
	Ball control (with beachbat)	Individual
	Ball control (with beachbat)	Individual
	Striking (one handed with beachbat)	Pairs
Game		Individual and group

Lesson 2: Group 2 (Younger children)

Warm-up	Locomotion (Tag game - Running)	Group
Activities	Locomotion on music (running)	Individual
	Locomotion (Horizontal jump)	Team Relay
	Locomotion (Horizontal jump)	Team Relay
	Throwing (underarm throw)	Individual and relay
Game		Individual and group

LESSON 3**Focus-word: Teamwork**

The co-operative effort on the part of a number of people working together to achieve a common goal.

Lesson 3: Group 1 (older children)

Warm-up	Locomotion (running holding on to each other)	Team
Activities	Balances	Pairs
	Locomotion (hop)	Team
	Ball Control (receiving and passing with speed)	Group
	Throwing (chest past) locomotion (running)	Team
Game		Team

Lesson 3: Group 2 (Younger children)

Warm-up	Ball Control (receiving and passing with speed)	Group
	Locomotion (running holding on to each other)	Group
	Balances	Pairs
	Throwing (Overhead)	Individual and relay
	Ball Control (receiving and passing with speed)	Relay
	Ball Control (receiving and passing with speed)	Relay
Game		Team

LESSON 4 :**Focus-word : Honesty**

Being truthful, fair, and trustworthy. Being able to tell the truth

Lesson 4: Group 1 (Older children)

Warm-up	Locomotion (leaping)	Individual
Activities	Kicking (kick passing)	Pairs
	Ball Control (dribbling and changing direction with feet)	Individual
	Kicking (for accuracy)	Individual
	Kicking (at a target)	Relay team
	Throwing (for accuracy)	Pairs
Game		Team

Lesson 4: Group 2 (Younger children)

Warm-up	Locomotion (leaping)	Individual
Activities	Kicking (kick passing)	Pairs
	Ball Control (dribbling and changing direction with feet)	Individual
	Kicking (for accuracy)	Individual
	Kicking (at a target)	Relay team
	Throwing (for accuracy)	Pairs
Game		Team

LESSON 5:**Focus-word: Compromise**

The settlement of an argument or solving a problem by having each side agree to give up some of his demands. Having to take turns or sharing something

Lesson 5: Group 1 (Older children)

Warm-up	Energiser	Team relay
Activities	Locomotion	Team
	Throwing & tracking and trapping (tennisballs)	Pairs
	Throwing for accuracy (tennisballs)	Individual & relay
	Throwing for accuracy (tennisballs)	Individual & relay
	Throwing and catching (2 tennisballs at a time)	Pairs
Game		Team

Lesson 5: Group 2 (Younger children)

Warm-up	Energiser	Team relay
Activities	Locomotion	Team
	Throwing & tracking and trapping (tennisballs)	Pairs
	Throwing for accuracy (tennisballs)	Individual & relay
	Throwing for accuracy (tennisballs)	Individual & relay
Game		Team

LESSON 6:**Focus-word: Trust**

To have faith in, believe in, to have confidence in, reliance.

Lesson 6: Group 1 (Older children)

Warm-up	Energiser/Problem solver	Group
Activities	Locomotion	Group
	Locomotion (Vertical jump)	Individual and relay
	Locomotion & tracking and trapping (catching)	Group
	Tracking and trapping (receiving a ball)	Group
Games		Team

Lesson 6: Group 2 (Younger children)

Warm-up	Energiser	Group
Activities	Game /locomotion (running)	Group
	Locomotion (Vertical jump)	Individual and relay
	Locomotion & tracking and trapping (catching)	Group
	Tracking and trapping (receiving a ball)	Group
Game		Team

LESSON 7:**Focus-word: Leadership**

Guidance, example, person who leads, person followed by others.

Lesson 7: Group 1 (Older children)

Warm-up	Energiser/Locomotion	Group
Activities	Locomotion (running, backwards running, sliding)	Individual & team relay
	Throwing (overarm, throw for accuracy)	Team game
	Kick Passing/Ball control	Pairs
	Locomotion & Balance	Individual & team relay
Games		Team

Lesson 7: Group 2 (Younger children)

Warm-up	Energiser/Locomotion	Group
Activities	Locomotion (running, backwards running, sliding)	Team relay
	Locomotion & Balance	Individual & team relay
	Locomotion (blindfolded)	Pairs
	Locomotion	Team relay
Game		Team

LESSON 8:**Focus-word: Respect**

Deferential esteem felt or shown towards a person or quality, heed or regard. A persons polite messages or attentions to or considerations of.

Lesson 8: Group 1 (Older children)

Warm-up	Locomotion	Individual
Activities	Rolling (accuracy) & tracking and trapping	Team
	Locomotion (Vertical Jump)	Pairs
	Throwing (Blindfolded)	Individual
	Locomotion with music	Groups
Games		Team

Lesson 8: Group 2 (Younger children)

Warm-up	Locomotion with music	Group
Activities	Rolling (accuracy) & tracking and trapping	Team
	Locomotion (Vertical Jump)	Pairs
	Locomotion (Vertical jump)	Individual
	Throwing (Blindfolded)	Individual
Game		Teams

LESSON 9:**Focus-word: Encouragement**

Act of inspiring someone with confidence, support with stimulus, give courage and hope, to promote or assist.

Lesson 9: Group 1 (Older children)

Warm-up	Locomotion (running) & body control	Relay
	Locomotion & body control	Relay
Activities	Dribbling on the spot	Individual
	Dribbling in a straight line	Pairs
	Dribbling using alternate hands	Pairs
	Throwing (Chest pass, two hands)	Pairs
	Dribbling & Throwing	Relay

Lesson 9: Group 2 (Younger children)

Warm-up	Locomotion (running) & body control	Relay
	Locomotion & body control	Relay
Activities	Dribbling on the spot	Individual
	Dribbling in a straight line	Pairs
	Dribbling using alternate hands	Pairs
	Throwing (chest pass, two hands)	Pairs
	Dribbling & throwing	Relay

LESSON 10:**Focus-word: Fairness**

To be impartial, just, honest, in accordance with rules, unbiased.

Lesson 10: Group 1 (Older group)

Warm-up	Locomotion (running) with music	Group
Activities	Tracking & trapping (moving to catch a ball)	Pairs
	Tracking & trapping(moving to hit and keep ball in air)	Group
	Locomotion (sequencing motion)	Group
	Balancing (with music)	Individual
Games	Locomotion (skip, slide and gallop) with music	Group

Lesson 10: Group 2 (Younger group)

Warm-up	Locomotion (running) with music	Group
Activities	Tracking & trapping (moving to catch a ball)	Pairs
	Tracking & trapping(moving to hit and keep ball in air)	Group
	Locomotion (sequencing motion)	Group
	Balancing (with music)	Individual
Game	Locomotion (skip, slide and gallop) with music	Group

LESSON 11:**Focus-word: Sharing**

A part contributed by an individual to an enterprise or commitment. Giving a way part of or some of.

Lesson 11: Group 1 (Older group)

Warm-up	Locomotion & strength	Relay
Activities	Tracking & trapping	Pairs
	Throwing(two hands) & strength	Pairs
	Throwing & strength	Groups of three
	Locomotion & Body control	Group
	Locomotion & Body control	Group

Lesson 11: Group 2 (Younger group)

Warm-up	Locomotion & strength	Relay
Activities	Tracking & trapping	Pairs
	Throwing(two hands) & strength	Pairs
	Throwing & strength	Groups of three
	Locomotion & Body control	Group
	Locomotion & Body control	Group

LESSON 12:**Focus-word: Responsibility**

Being in charge, having the duty of looking after, trustworthiness, answerability.

Lesson 12: Group 1 (Older children)

Warm-up	Locomotion (leap, horizontal jump, jump, hop)	Group
Activities	Striking (two handed, moving ball)	Individual
	Striking (one-handed) Tracking and Trapping	Pairs
	Striking under pressure	Group
	Striking (two handed, moving ball with obstacles)	Relay
Games		Team

Lesson 12: Group 2 (Younger children)

Warm-up	Locomotion (leap, horizontal jump, jump, hop)	Group
Activities	Striking (two handed, moving ball)	Individual
	Striking (one-handed) Tracking and Trapping	Pairs
	Striking under pressure	Group
	Striking (two handed, moving ball with obstacles)	Relay
Game		Team

Appendix F

Instructional Strategies

Strategy 1 - Set optimal challenges

- Build new skills/experiences and uses progression
- Provide good challenges within reason
- Modify challenges when task is too difficult
- Modify challenges or accelerate progression if task is too easy.
- Modify challenges when task doesn't work

Strategy 2 - Coach for enjoyment

- Make activities an enjoyable experience
- Seem to really enjoy coaching experience
- Set a good example in terms of positive attitude and energy

Strategy 3 - Behavioural Code

- Ensure that the children participate to a set code of behaviour
- Explain to children why code of behaviour is needed
- Make use of a reward system

Strategy 4 - Be supportive in attempts to master skills

- Demonstrate the correct way to do the activities
- Try to make the necessary corrections if the children are on a certain level
- Give praise when the children deserve it

Appendix G

Programmes and Studies for At-Risk Youth

Programmes

Name of the Programme	Description of the programme	Article
Juvenile curfew programme	Individuals younger than 16 off the street by 10:00 and 16 and 17 year olds of the streets by midnight.	McCann & Peters (1996)
Kool kids programme	Free swimming at targeted pools for individuals younger than 17.	McCann & Peters (1996)
City Street Outreach	Variety of late night programmes including teen sports programmes, teen councils, sport tournaments and special events	McCann & Peters (1996)
Homeland Neighbourhood Cultural centre	Homeland provides opportunities in support of artists from traditions centuries old to those who make up contemporary sub-cultures, like those currently arising out of prisons.	Ransom, 1996
(OSAY) Operating services assisting youth. Planned recreational activities.	Character building programme. Learn about resources available to help build a better life and a brighter future.	Fairfax, Wright & Maupin (1988)
(PIE) Partnership in education	Series of seminars on goal setting for careers. Coping strategies for parents. Trauma of teen pregnancy.	Fairfax, Wright & Maupin (1988)
PEP (Peer educators programme)	Educational approach which teens are trained to provide sexuality info to other teenagers.	Fairfax, Wright & Maupin (1988)
Teen Awareness Programme	Teen awareness forums enlisting entertainers, athletes, artists etc. As spokespersons against teenage pregnancy (positive role models)	Fairfax, Wright & Maupin (1988)
Sex education go-go	Combines disco music with educational seminars on sex education	Fairfax, Wright & Maupin (1988)
United States Youth games	Programme including competitive events and educational forums	Fairfax, Wright & Maupin (1988)
SWAT team (Students working together)	Teen to teen model where young people disseminate information on sexuality	Fairfax, Wright & Maupin (1988)
For your baby's sake	Recreation programme assisting mothers on how to reach their children.	Fairfax, Wright & Maupin (1988)

Name of the Programme	Description of the programme	Article
GOAL (Sports-based life skills programme)	A programme designed to teach adolescents a sense of personal control and confidence about their future so that they can make better decisions and ultimately become better citizens.	Danish & Nellen (1997)
SUPER (Sports-based life skills programme)	The goals are for each student to leave the programme with an understanding that a) there are effective and accessible student-athlete role models; b) physical and mental are important for both and sport; c) it is important to set and attain goals in sport and d) life; and e) roadblocks to goals can be overcome.	Danish & Nellen (1997)
Outdoor recreation programme based on the benefits-based management activity planning model.	This model emphasize :a) the need to establish socially relevant target issues and develop outcome-oriented Target goals. b) development of purposive recreation experiences. c) comprehensive evaluation plan for large issues and target goals.	Allen, Stevens, & Harwell (1996)
Family Management programme	The focus is on the strategies that families use to protect adolescents from the risks and dangers and illegitimate opportunities characteristic of disadvantaged neighbourhoods	Jessor (1993)
Middle school intervention programme	The aim of the programme is to create an open and democratic school climate with sensitivity to developmental issues and a strong tie between school and home - an educational environment conducive to learning and positive development that enhances a sense of consonance, rather than contrast between home life and school life.	Jessor (1993)
Rural youth study	Children of the great depression: social change in life experience with the family's adoption to economic hardship mediating between the macro-environmental change and its consequential impact on the adolescent.	Jessor (1993)
Neighbourhood study	The aims were to advance the conceptualisation of the neighbourhood, including black groups and perceived neighbourhoods, and to identify neighbourhood characteristics that may constitute risks for the developing adolescents or may insulate the adolescent from those ecological risks	Jessor (1993)

Name of the Programme	Description of the programme	Article
Martial arts programme, Volleyball programme, Physical education programme	Kids enjoyed the programme, learned skills, learned how to get along with each other, and learned how to work on their own.	Hellison (1990c)
Totally cool, totally art programme	Visual art classes, providing teens with a safe place to participate in constructive activities and developing a sense of belonging.	Witt & Crompton (1997b)
After school programme	Basketball programme for residential boys' home implementing four different levels: self-control, inclusion of everyone, setting individual goals and cooperating as a team.	Georgiadis (1990)
After school programme.	Physical education programme for a low income Hispanic neighbourhood, implementing four different levels: self-control, inclusion of everyone, setting individual goals and cooperating as a team.	Lifka (1990)
Teaching physical education, sex education and history at a school, which serves court-referred youth.	To create a variety of situations in physical education, together with history and sex education, which would promote awareness of an interaction with a loose progression of four levels: self-control, involvement, self-responsibility and caring.	Hellison (1986a)
The Tuesday-Thursday programme	A programme on Tuesdays and Thursdays to integrate Black and White children through sport, physical education and games.	Cheffers (1997)
Sista-2-Sista	Young minority girls, aged 9 to 18, from socio economically disadvantaged families, becomes involved in a year-round programme, concentrating on recreation, sports and life skills.	Cappel (1995)
PALS (Play and learn sessions)	Use school facilities with recreation staff members providing supervision to children and guiding them in programme areas such as arts and crafts, sports and other play activities.	Wong (1998)
PEW (Partnership for civic change)	This project targets school youth, identified by social service agencies for recreational and cultural activities.	Beck, Reynolds & Gavlik (1995)
Project Effort	Project Effort provides on after school physical activity and an in-school mentoring programme for at-risk youth.	Martinek, Mclaughlin, Schilling (1999)
The Concordia University Inner City Youth Project	This project offers free leisure programmes to provide disadvantaged youth with positive recreation experiences.	Ostiguy & Hopp (1995)

Studies

Program Type	Study design	Age Group	Study Period	Study Results	Test sample	Article
Project Yes (Ongoing summer youth program)	Pre - & Post test Control group	5-13 year	5 days a week for 6 weeks 8:00-16:00	Statistically significant positive results in several self-concept and physical domains	100 – 150 scholars	Jones, Winn & Dooley (1995)
Project STRIDE (Summer recreation program)	Pre - & Post test Control group	4th and 5th grade scholars	6 days a week, for 9 weeks, 5 hours a day.	Significant increases in positive self-perception	36 students	Wright, Harwell & Allen (1998)
Older volunteers used as facilitators in helping at-risk youth obtain practical skills in business	Pre - & Post test	6-17 year	3-5 hours a week for 6 months	At-risk youth obtain valuable life and business skills. Older adults found the program meaningful.	120 students	Wright, Owen, McGuire & Backman (1994)
After school recreation programme	Pre-Post test	School A: 3-5 grade School B: 3-6 grade	School A: 4 six week sessions, 1-4 times per week, 45min- 2hr School B: 3 six to 9 week sessions, 1-4 times per week, 45min-2hr.	Results indicate an impact on academic performance and a measure of general self-esteem for those students most involved.	School A: = 135 School B: = 167	Baker & Witt (1996)
School project	Pre and Post test and on-task behaviour	Grade 5	6 week programme	Self-responsibility changes were slight, without profound improvement. The on-task behaviour was 75% better.	4	Compagnone (1999)

Program Type	Study design	Age Group	Study Period	Study Results	Test sample	Article
After school programme	Pre - & Post test Interviews on three occasions	Grade 3 (average age 9,1)	3 days a week	Better grades and conduct. Better peer relations and emotional adjustment.	216	Posner & Vandell (1994)
Exploratory study	Data were collected in two phases Pre - & Post test Interview Self-report measures	Grade 9	3 months	Protective factors were powerful predictors of adaption in their own right independent of risk. This study did not find any significant interactions between protective factors and risk for girls and boys.	179	Grossman et al. (1992)
After school programme (physical activity)	Ongoing program evaluation	Grade 4 & 5	Ongoing program (First year - once a week for an hour)	Programme provides membership in an inclusive persisting group and the programme provides challenging activities which results in real accomplishments as defined by the participant and their teachers.	?	Cutforth (1997)
Therapeutic recreation programme	Community reintegration and independent functioning	Grade 9	2,5 months	Individual failed to return for half of the outpatient treatments. He never returned to school and ended up in juvenile detention for drug possession and sale.	1 male	Armstrong (1991)

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