

## **Influence of the “Off the Street, On the Ball” Midnight Football Program on Physical Fitness, Self-Esteem and Quality of Life in Youth-at-Risk**

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### **Abstract**

*The main aim of this study was to investigate the influence of the “Off the Street, On the Ball” Midnight Football Program on physical fitness components, self-esteem and perception on quality of life between baseline and post-program in youth-at-risk. A total of 58 male participants in the pilot project “Off the Street, On the Ball” Midnight Football Program organized by the Social Responsibility Department, Asian Football Confederation (AFC) were recruited as the subjects of this study. They were aged 14-19 years, with a mean age of 16.72 (SD= 1.24) years. Instrumentations employed in this study were Yo-Yo Intermittent Test, Single Sprint Test, and Balsom Agility Test to measure aerobic endurance, speed and agility of the subjects on baseline and post-program. Two questionnaires were administered, the Influence on Quality of Life Scale (IQLS) and Rosenberg Self-Esteem Scale (RSES) to collect perception on quality of life and self-esteem on baseline and post-program. Between the baseline and post-program, all subjects were divided into eight groups followed four weeks of soccer-specific periodized training programme and controlled by certified coach assigned to them. Results of present study revealed that all physical fitness components (aerobic endurance, speed and agility) were significant difference between baseline and post-program at  $p < .05$ . For the self-esteem, results indicated significant differences favouring the post-program ( $t=-19.82$ ,  $df=91$ ,  $p<.05$ ). An analysis of the individual items on the IQLS indicated that vast majority of the subjects either agreed or strongly agreed that involvement in the midnight football program positively influenced their perception on quality of life. Overall, the results of the current study lend additional support to the use of football program to develop positive self-esteem and creating opportunities to experience positive perception on quality of life. Thus, positive self-esteem and positive perception on quality of life are significantly more likely to reduce social risk factors for juvenile delinquency and serious antisocial behaviour in youth-at-risk in Asia, especially in Malaysia.*

**Key Words:** *midnight football program, physical fitness components, self-esteem, perception on quality of life*

## **Introduction**

It is commonly believed that time youth spend engaging in physical activity is timeless available for involvement in risk-taking behaviours and delinquency although the health benefits of participation in physical activity are well documented. Increased time in sport is likely to increase one's exposure to various identity alternatives available through sport and afford individuals additional opportunity to change their self-perceptions (Stryker, 1987).

Based on the association between sports participation and elements of quality of life, Zabriskie, Lundberg, & Groff (2005) explored the relationship between an individual's athletic identity and the influence of sports participation on quality of life. They reported a strong correlation between athletic identity and influence on quality of life for a group of 129 recreational athletes. The majority of participants either agreed or strongly agreed that participation in sports program positively influenced their overall health (79%), quality of life (84.2%), quality of family life (70%), and quality of social life (69.4%).

Today, physical conditioning is a key element for success in football competition (Wang, 1995). Without it, regardless of what skills and talents the players have, they cannot perform the sport efficiently (Wang, 1995). The physiological demands of football require players to be competent in several aspects of fitness, which include aerobic and anaerobic power, muscle strength, flexibility and agility (Reilly & Doran, 2003).

A good aerobic endurance base is critical because it improves performance by increasing the distance covered, enhancing work intensity, and increasing the number of sprints and involvements with the ball during a match (Helgerud, Engen, Wisloff, & Hoff, 2001). A greater endurance capacity can lead to more work performed during a match, as well as a faster pace throughout (Bangsbo, Norregaard, Thorso, 1991). Appropriate aerobic conditioning plays a significant part in allowing players to repeatedly perform high-intensity activity.

Anaerobic power refers to the ability of the neuromuscular system to produce the greatest possible impulse in a given time period (Cometri, Maffiuletti, Pousson, Chatard, & Maffulli, 2001). The emphasis in training should be mainly on the short distance sprints of 10-15 m, because these distances are more indicative of performance and match-winning actions than longer sprints of 30-40 m (Cometti et al., 2001).

Agility is the ability to change the direction of the body rapidly and is a result of a combination of strength, speed, balance and coordination (Draper & Lancaster, 1985). Agility performance is an important component of physiological assessment in football. The results from such evaluations should be used in conjunction with data from single sprints to provide an overall indication of a player's ability to sprint and change direction rapidly (Little & Williams, 2003).

Self-esteem is a synthesis of descriptive valuation assessment concerning one's own personality and one's own actions. Self-esteem changes during life depending on the stage of the person's development and situations and events that occur during their life. Self-esteem has a significant influence on human emotions and behaviour. A large deal of empirical research has focused on personality and social risk factors for juvenile delinquency and serious antisocial behaviour (Burton & Marshall, 2005; Donnellan, Trzesniewski, Robins,

Moffitt, & Caspi, 2005; Matsuura, Hashimoto, & Toichi, 2009b; Penney, Moretti, & Da Silva, 2008).

A number of such studies have pointed out low self-esteem, aggression, inattention, and impulsivity as strong risk factors (Brame, Nagin, & Tremblay, 2001; Del Bove, Caprara, Pastorelli, & Paciello, 2008; Frick, Cornell, Barry, Bodin, & Dane, 2003). In particular, low self-esteem has been implicated in a variety of youth-related problems such as deviant behaviour, social withdrawal, and bullying (Gardner, Dishion, & Connell, 2008; Menon et al., 2007; Rice, Lifford, Thomas, & Thapar, 2007). Adolescents with low self-esteem are significantly more likely to have development of mental illness, suffer poor physical health, risk more criminal convictions, and have fewer economic prospects in adult life when compared with adolescents with high self-esteem (Trzesniewski et al., 2006).

Research regarding the association between self-esteem and physical activity has suggested that participation in sports teams is positively associated with higher self-esteem (Keane, 2004; Pedersen & Seidman, 2004). Although physical activity has been associated with improvements in self-esteem (Alfermann & Stoll, 2000; Fox, 2000). There is little evidence to suggest that any one mode of activity is better than another, although most studies have focused on aerobic activity (Fox, 2000). Therefore, the main aim of the present study was to investigate the influence of the “Off the Street, On the Ball” Midnight Football Program on physical fitness components, quality of life and self-esteem in youth-at-risk and make comparisons between the baseline data and the post-program data.

Our review of existing literature on the subject showed that only a few researches, one of that could find explored the impact of swimming on self-esteem (Coatsworth & Conroy, 2006; Mummery, 2008). Also, given the popularity of football game in Malaysia and the differential value this might have in different segments of the population (Martin & Sinden, 2001), exploring self-esteem and its relationship to other forms of exercise or activity would also be advantageous.

There has been little empirical research to determine whether participation in the sporting program able to change the perception on the quality of life, particularly with the youth-at-risk. We postulated that there would be significant differences between the baseline and post-program data on the physical fitness components, self-esteem and quality of life.

## **Objectives**

The main aim of this study was to investigate the influence of the “Off the Street, On the Ball” Midnight Football Program on physical fitness components, self-esteem and perception on quality of life between baseline and post-program in youth-at-risk. Other specific objectives are:

1. To compare the significance differences on the physical fitness components (cardiovascular endurance, speed and agility) between baseline and post- program data with specific tests.
2. To examine the perception on quality of life with the sub-scale of the Influence on Quality of Life Scale (IQLS) between baseline and post-program.
3. To compare the significance differences on self-esteem with the Rosenberg Self Esteem Scale (RSES) between baseline and post-program.

## **Subjects**

A total of 58 male participants in the pilot project “Off the Street, On the Ball” Midnight Football Program organized by the Social Welfare Department, Asian Football Confederation (AFC) were recruited as the subjects of this study. They were aged 14-19 years, with a mean age of 16.72 (SD= 1.24) years. The participants of this program were selected through referrals from the member association of AFC, government, NGOs, sponsors and youth outreach organizations in Kuala Lumpur, Malaysia. They came from all walks of life and were generally unguided in the way they lived their lives, ie. School drop-out (36.21%), Juvenile school (39.66%), Disciplinary problems in school (22.41%) and others (1.72%) and majority of them came from the low income family (93.10%) and middle income family (6.90%).

All subjects were fully informed verbally and in writing about the nature and demands of the study. They completed a health history questionnaire and were informed that they could withdraw from the study at any time, even after giving their written consent.

## **Instrumentations**

In order to measure the physical fitness components (aerobic endurance, speed and agility), three tests were carried out. These three field tests were used to evaluate the aerobic endurance, speed and agility of soccer players because these tests are the most commonly represented in the literature base. Fitness tests performed in the field may provide less accurate measurements than laboratory tests but they have greater specificity (Balsom, 1994; MacDougall & Wenger, 1991). Moreover, the field tests require minimal equipment and can be carried out anywhere. Also, results from field tests provide information on specific performance changes related to the sport and are less time consuming. Thus, three field tests chosen for current study were:

### **1. The Yo-Yo tests**

The concept of shuttle running was used by Bangsbo (1993b) to devise a more football-specific assessment. The Yo-Yo tests were designed to measure the ability to perform bouts of repeated intense intermittent exercise (Yo-Yo intermittent endurance test) and the ability to recover from intense exercise (Yo-Yo intermittent recovery test) (Bangsbo, 1993b). The Yo-Yo tests have been used extensively in the assessment of the football-specific endurance capacity of players and referees (Krustrup & Bangsbo, 2001; Krustrup et al., 2003; Mohr et al., 2003a). The intermittent endurance test and the intermittent recovery test have also been used to differentiate playing positions (Bangsbo & Michalsik, 2002) and to differentiate between top-class and moderate ability football players (Mohr et al., 2003a). Due to the football-specific nature and easy administration of the Yo-Yo test, it would be a useful form of evaluation throughout the season to monitor changes in football-specific fitness. The Yo-yo Intermittent Recovery Test Level 1 (YYIRTL1) has been both externally and internally validated (Krustrup et al., 2001; Krustrup et al., 2003; Mohr et al., 2003a).

## **2. Single-sprint test**

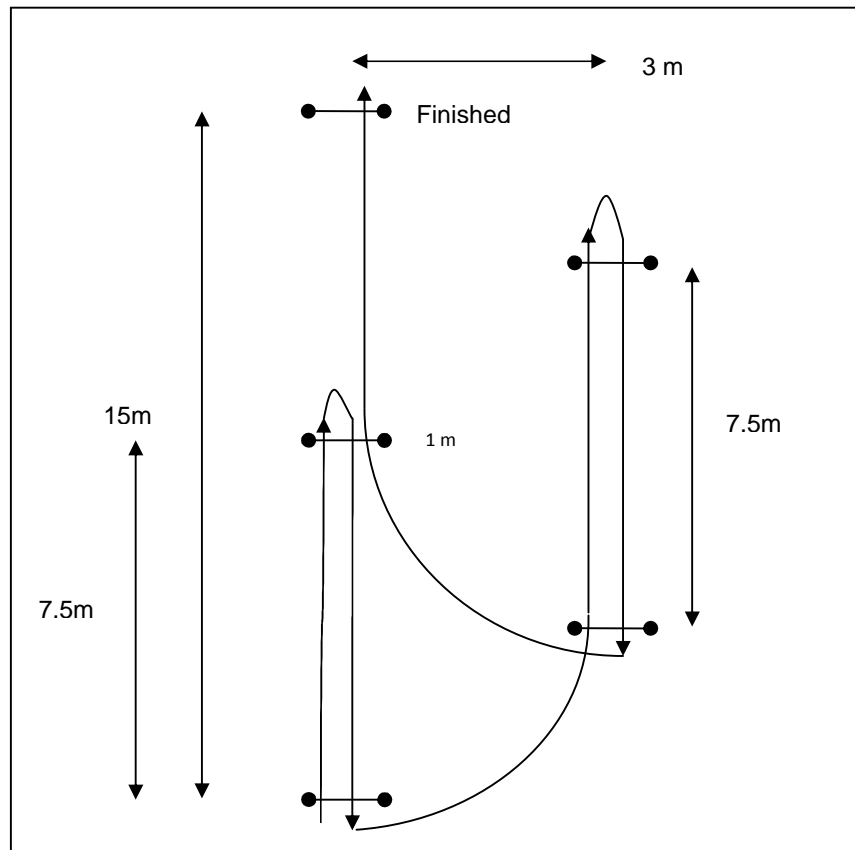
Speed is a very important component in football, as the ability to accelerate can decide important outcomes of the game. Players have to possess the ability to accelerate to meet the physical, tactical and technical demands of the game. During a match, players sprint over distances of 10 – 30 m for average durations of less than 6 s (Reilly & Thomas, 1976). Typically, 10-, 20- or 30-m sprints are used in the assessment of a player's ability to sprint (Kollath & Quade, 1993; Strudwick, Reilly, & Doran, 2002).

10-m Sprint Time was measured using an electronic photo cells connected to a Lafayette 63501 timer (Lafayette Instrument Co. Systems, Lafayette, IN). A photocell was placed at the start, and 10 m. The first photocell was positioned at a height of 50 cm from the ground and the photocells of 10 m was placed at the height of the head of the boys, in an attempt to standardize the part of the body breaking the photocell (Balsom et al., 1992a). The boys started on a visual signal from a standing position and ran the 10-m distance as fast as possible on the soccer field. After 1 practice trial, 2 sprints were performed, separated by a 5-minute recovery period, and the fastest was used for subsequent analysis. All performance times were recorded with an accuracy of 0.001 seconds, and the time from 0 to 10 m recorded. This sprint distance was selected because this is the most common during soccer games (Bangsbo et al., 1991).

## **3. Test for the determination of agility**

A good example of an agility test was described by Balsom (1994) and is illustrated in Figure 1. The test requires a player to perform two turns and several changes in direction. Performance on the test is determined by the time taken to complete the test course, with faster times signifying better performances. Time measured using an electronic photo cells connected to a Lafayette 63501 timer (Lafayette Instrument Co. Systems, Lafayette, IN). A photocell was placed at the start and finishing point.

Figure 1. Test course of the agility test. Players start at A, sprint to the cones at B, turn at B, back through A, through C and turn at D, then through C and B to finish (Balsom, 1994).



#### 4. Influence on Quality of Life Scale (IQLS)

The perception on quality of life between baseline and post-program from the subjects were collected with the Influence on Quality of Life Scale (IQLS: Zabriskie, Lundberg, & Groff, 2005) in this study. The IQLS (Zabriskie et al., 2005) was developed in an effort to measure an individuals' perception of the influence of participation in a particular sport program, or experience on their quality of life. The IQLS asks respondents to agree or disagree with five statements regarding the influence of Midnight Football Program on their perception on quality of life. Items include the perceived influence of the "Off the Street, On the Ball" Midnight Football Program on overall health, quality of life, quality of family life, quality of social life, and family participation on the meaning of the experience for respondents. Items are scored on a 7-point Likert scale with responses ranging from 'Strongly disagree' to 'strongly agree'. Total scores for the instrument can range from 5 – 35 with higher scores indicating that the "Off the Street, On the Ball" Midnight Football Program had a more significant impact on perceived quality of life. The IQLS has acceptable internal consistency ( $\alpha = 0.87$ ). Initial evidence of construct validity for its use with elite and recreational athletes has been reported (Zabriskie et al., 2005).

## **5. Rosenberg Self-Esteem Scale (RSES)**

To measure self-esteem at the global level between baseline and post-program from the subjects, the Rosenberg Self-Esteem Scale (RSES: Rosenberg, 1965) was administered. The RSES is perhaps the most widely used self-esteem measure in social science research. The questionnaire has 10 items and all items were rated on a four-point Likert scale with verbal anchors of: Strongly Disagree (1), Disagree (2), Agree (3), and Strongly Agree (4) with the higher scores representing more positive self-esteem (Rosenberg, 1986). The RSES has good internal consistency, test-retest reliability, and convergent and discriminate validity (Blascovich & Tomaka, 1991). RSES was used in this study because it has shown the presence of method effects with negatively worded items in previous studies (Horan, DiStefano, & Motl, 2003; Motl & DiStefano, 2002; Tomás & Oliver, 1999). The current study revealed a Cronbach alpha of 0.81 for both baseline and post-program tests.

### **Procedures**

The baseline data were collected on September, 2010, two days before the program kicks-off at the Padang Sri Johor, Taman Ikan Emas, Cheras, Kuala Lumpur. Immediately after a short briefing, the subjects were asked to response to the IQLS and the RSES questionnaires. These questionnaires took approximately 10 minutes to complete by the subjects. Trained project staff administered questionnaires to subjects at the competition venue following a standardized protocol that emphasized the confidentiality of participant reports. Approval by the Sports Centre, University of Malaya review board was obtained before initiating this study.

After completed the questionnaires, the subjects were divided into 3 groups to carry out the physical fitness tests (aerobic endurance, single-sprint and agility). The groups moved from one station to another after completed the test which stipulated for that station.

Post-program test for the program was held on October, 2010 when the subjects were completed the training sessions and competition program for four-week continuity, the same procedures in the baseline were applied in the post-program test. During the training period, the subjects were divided into eight groups to carry out the schedule training program based on their team coach, a few motivation and educational talks also were conducted by the PROSTAR CLUB, current National Football Players (from Malaysian Team), Social Welfare Department and AFC Officer. Topics covered related to effective way to quit smoking, mental health, how to be a good footballer, future career and technical issues pertaining football referee and coach.

### **Statistical Analysis**

Descriptive statistic (mean and standard deviation) of the physical fitness components and sub-scales in IQLS between baseline and post-program were reported. To compare the variables between baseline and post-program, dependent samples t-test was used. The level of statistical significance is set at  $p < .05$ . Data were analyzed with SPSS 16.

## Results

### Physical Fitness Components

Results of present study revealed that all physical fitness components (aerobic endurance, speed and agility) were significant difference between baseline and post-program test at  $p < .05$  as presented in Table 1.

Table 1: Comparison of Physical Fitness Components between Baseline and Post-program Test

Test	Time-frame	Mean	SD	t-value	df	P-value
Yo-Yo Intermittent (Level)	Baseline	13.75	.83	-2.56	90	.012
	Post-program	14.27	1.11			
10m Single Sprint (Second)	Baseline	2.56	.16	1.99	90	.049
	Post-program	2.49	.16			
Balsom Agility (Second)	Baseline	14.60	1.11	6.23	90	.001
	Post-program	13.36	.74			



## Global Self-Esteem

Table 2 shows results for the self-esteem for the subjects. Results indicated significant differences favouring the Post-program test ( $t=-19.82$ ,  $df=91$ ,  $p<.05$ ).

Table 2: Comparison of Self-Esteem between Baseline and Post-program Test with Rosenberg Self-Esteem Scale

Time-Frame	Mean	SD	t-value	df	P-value
Baseline	17.43	1.69			
			-19.82	91	.001
Post-program Test	24.06	1.33			

## Quality of Life Responses

An analysis of the individual items on the IQLS indicated that the majority of participants thought that the “Off the Street, On the Ball” Midnight Football Program had a positive influence on several aspects of their quality of life. The vast majority of the subjects either agreed or strongly agreed that involvement in the midnight football program positively influenced their overall health (98%) from the base line (6.9%). Perception on other aspects on quality of life also had a positive influenced as presented in Table 3.

Table 3: Comparison on Perception Quality of Life between Baseline and Post-program-Test with Influence on Quality of Life Scale (IQLS)

I Feel Good on my Current.../	Strongly Disagree	Disagree	Some what disagree	Neither agree nor disagree	Some what agree	Agree	Strongly agree	% of agreed and strongly agreed								
The Mid-Night Football Program have had a positive	Baseline (%)	Post-program-Test (%)	Baseline (%)	Post-program-Test (%)	Baseline (%)	Post-program-Test (%)	Baseline (%)	Post-program-Test (%)	Baseline (%)	Post-program-Test (%)	Baseline (%)	Post-program-Test (%)	Baseline (%)	Post-program-Test (%)	Baseline (%)	Post-program-Test (%)
Quality of Overall Health	0	0	6.9	0	34.5	0	29.3	0	22.4	0	6.9	23.7	0	74.3	6.9	98
Quality of Life	1.7	0	8.6	0	3.4	0	6.9	0	19.0	1.4	41.4	42.9	19.0	45.7	60.4	88.6
Quality of Family Life	5.2	0	3.4	5.7	1.7	3.9	5.2	2.9	19.0	5.7	29.3	31.4	36.2	51.4	65.5	82.8
Quality of Social Life	3.4	0	10.3	8.6	6.9	0	8.6	0	10.3	8.6	29.3	28.6	31.0	54.3	60.3	82.9
Family Participation	5.2	2.9	10.3	5.7	6.9	2.9	3.4	2.9	3.4	5.7	29.3	28.6	41.4	51.4	70.7	80

## Discussions

Results of the present study revealed that all the physical fitness components chosen had significant differences between baseline and post-program in the subjects as a consequence of training. Football training drills and games involved continuous running, speeding and changes of direction. Thus, aerobic capacity, speed and agility performances improved with this type of training. Aerobic capacity was significant differences at baseline and post-program performance ( $t=-2.56$ ,  $df=90$ ,  $p<.05$ ) with Yo-Yo Intermittent test; speed was significantly difference between baseline and post-program ( $t=1.99$ ,  $df=90$ ,  $p<.05$ ) with 10m Single Sprint and agility also showed significant difference between baseline and post-program ( $t=6.23$ ,  $df=90$ ,  $p<.05$ ) with Balsom Agility test.

Findings of current study was consistent with previous study that training-induced changes in aerobic fitness have been extensively studied in young athletes, it seems that aerobic training (interval or continuous) leads to a mean improvement of 5-10% of VO<sub>2</sub>max in active children and adolescents as compared to improvement magnitude of 20% or more in adult athletes (Baquet, Van Praagh, & Berthoin, 2003). The results of this study supported that the aerobic system is the main source of energy provision (Reilly, Bangsbo, & Franks, 2000) and about 75-90% of the total body's energy expenditure and consumption come from the aerobic system (Hoff, Wisloff, Engen, Kemi, & Helgerud, 2002). Findings of this study confirmed that all the physical fitness components were trainable in adolescent.

The “Off the Street, On the Ball” Midnight Football Program resulted in significant changes in self-esteem between baseline and post-program ( $t=-19.82$ ,  $df=91$ ,  $p<.05$ ). More specifically, these findings suggest that following the 4-week programs, participants had significant gains in self-esteem which support the suggestion that the “Off the Street, On the Ball” Midnight Football Program foster positive self-worth (Danish & Petitpas, 1993). Our findings are consistent with a cross-sectional study of 92 children between the ages of 10 and 16 years, Strauss, Rodzilsky, & Burack, (2001) found that self-efficacy was associated with physical activity, and concluded that high level physical activity was important in the development of self-esteem in children (Strauss et al., 2001).

Based upon the findings reported herein, it is consistent with a comprehensive review on the effects of exercise interventions on self-esteem, Fox (2000a) identified two studies did assess these effects, and revealed an increase in self-esteem after a Tai Chi and a walking intervention respectively (Li, Harmer, Chaumeton, Duncan, & Duncan, 2002; McAuley, Blissmer, Katula, Duncan, & Mihalko, 2000). It is supported that adolescents with low self-esteem are significantly more likely to have development of mental illness, suffer poor physical health, risk more criminal convictions, and have fewer economic prospects in adult life when compared with adolescents with high self-esteem (Trzesniewski et al., 2006).

It is interesting to note that a vast majority of participants reported that their participation in “Off the Street, On the Ball” Midnight Football Program had a significant factor in influencing the quality of their overall health, quality of life, quality of their family life, and quality of their social life. The findings of this study support previous research that illustrates the influence of participation in physical activity and sport on perceived quality of life (Blinde & McClung, 1997). Thus, creating opportunities to experience well-being and quality of life are particularly important because of their relationship to overall health and happiness (Carr, 2004).

In the present study we found that for individuals who choose to involve their family members in sport, this study provided some additional support for the notion that this shared experience will influence the quality of family life (Zabriskie et al., 2005). Encouraging family involvement in sport may therefore; positively impact the overall meaning that sport has on the individual and the quality of family life (Zabriskie et al., 2005).

The majority of participants either agreed or strongly agreed that participation in this program positively influenced their quality of social life (82.9%) from the baseline (60.3%). It appears that the adolescence participation in sport has influenced individuals become identified with particular groups of peers. Being a member of a particular peer network reflects an individual's values, while influencing an individual's attitudes and the norms to which they are exposed (Brown, Dolcini, & Leventhal, 1997).

Youth living in low income socially stigmatized communities face a number of issues such as poverty, the stress of living in "war zones", and the influence of gangs and drug trafficking. Programs that do exist tend to "blame the victim" by attempting to "keep them off the street" or remedy their perceived deficiencies, rather than placing the blame where it belongs, on unresponsive educational, social and political institutions (McLaughlin & Heath, 1993).

The "Off the Street, On the Ball" Midnight Football Program initiated by AFC is consistent to a unique type of physical activity programming called developmentally focused youth sports programs (DYS) which has accumulated over the past decade (Fraser-Thomas et al., 2005; Perkins & Noam, 2007, & Petitpas et al., 2005). DYS programs teach sport and life skills concurrently (Petitpas et al., 2005) using sport as a medium for providing youth with opportunities for psychological, emotional, social, and intellectual growth (Fraser-Thomas et al., 2005; Perkins & Noam, 2007). Sport programs provide the opportunity for life skills instruction because of parallels that exist between life and sport including problem solving, goal setting, teamwork, communication, management of success and failure, and receiving and applying constructive feedback (Goudas & Giannoudis, 2008). In addition, sport and life skills have similar learning modes such as demonstration, modelling, and practice (Orlick & McCaffrey, 1991).

The obtained results confirm the positive influence of the "Off the Street, On the Ball" Midnight Football Program on quality of life and self-esteem, which complies with the findings of other researchers (Bottomley, 1997).

To our knowledge, the current study is the first to demonstrate the beneficial effects of the Football Program on Physical Fitness Components, Self-Esteem and Quality of Life in youth-at-risk in Asia. Overall, the results of the current study lend additional support to the use of Football Program to reduce social risk factors for juvenile delinquency and serious antisocial behaviour, especially in Malaysia.

### **Limitations**

The main limitation in this study was, all questionnaires were self-administered. Self administered questionnaires have the disadvantage of a strong possibility of bias, but are reliable in that information known only to the respondents can be obtained, and such information can be collected at a low cost.

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## References

- Alfermann, D., & Stoll, O. (2000). Effects of physical exercise on self-concept and wellbeing. *International Journal of Sport Psychology, 31*, 47–65.
- Balsom, P. D. (1994). Evaluation of physical performance. In B. Ekblom (Ed.), *Football (soccer)* (pp. 102 – 123). London: Blackwell.
- Balsom, P. D., Seger, J. Y., Sjoˆ din, B., & Ekblom, B. (1992a). Physiological responses to maximal intermittent exercise. *European Journal of Applied Physiology, 65*, 144 – 149.
- Bangsbo, J. (1993b). Yo-Yo testene. Broˆ ndby: Danmarks Idrætsfoˆ rbund.
- Bangsbo, J., & Michalsik, L. (2002). Assessment of the physiological capacity of elite soccer players. In W. Spinks, T. Reilly, & A. Murphy (Eds.), *Science and football IV* (pp. 53 – 62). London: Routledge.
- Bangsbo, J., Norregaard, L., & Thorso, K. (1991). Activity profile of competition football. *Can. f. Sport Sci. 16*(2): 10-116.
- Baquet G., E.Van Praagh, S.Berthoin (2003) Endurance training and aerobic fitness in young people. *Sports Med. 33*:1127-1143
- Blascovich, J. & Tomaka, J. (1991). Measures of self-esteem. In: Robinson JP, Shaver PR, Wrightsman LS, eds. *Measures of Personality and Social Psychological Attitudes. Volume One of Measures of Social Psychological Attitudes*. San Diego, CA: Academic Press: 115–160.
- Blinde, E.M, & McClung, L. (1997). Enhancing the physical and social self through recreational activity: Accounts of individuals with physical disabilities. *Adapt Phys Act Q. 14*: 327 – 344.
- Bottomley, A. (1997). Synthesizing cancer group interventions – a cancer group intervention in need of testing. *Clin Psychol Psychother. 4*: 51–61
- Brame, B., Nagin, D. S., & Tremblay, R. E. (2001). Developmental trajectories of physical aggression from school entry to late adolescence. *Journal of Child Psychology and Psychiatry, and Allied Disciplines, 42*, 503–512.
- Brown, B. B., Dolcini, M. M., & Leventhal, A. (1997). Transformations in peer relationships at adolescence: Implications for health-related behavior. In J. Schulenberg, J. L. Maggs, & K. Hurrelmann (Eds.), *Health risks and developmental transitions during adolescence* (pp. 161–189). New York: Cambridge University Press.

- Burton, J. M., & Marshall, L. A. (2005). Protective factors for youth considered at risk of criminal behaviour: Does participation in extracurricular activities help? *Criminal Behaviour and Mental Health*, 15, 46–64.
- Carr, A. (2004). *Positive psychology: The science of happiness and human strengths*. New York: Brunner-Routledge.
- Coatsworth, J.D., & Conroy, D.E. (2006). Enhancing the self-esteem of youth swimmers through coach training: Gender and age effects. *Psycho Sport Exerc.* 7:173–192.
- Cometti, CI., Maffiuletti, N., Pousson, M., Chatard, J., & Maffulli, N. (2001). Isokinetic strength and anaerobic power of elite, sub-elite and amateur French football players. *Int Sports Med.* 22(1):45-51.
- Danish, S., Petitpas, A., & Hale, B. (1993). Life development intervention for athletes: life skills through sports. *Couns Psychol.* 21: 352–385.
- Del Bove, G., Caprara, G. V., Pastorelli, C., & Paciello, M. (2008). Juvenile firesetting in Italy: Relationship to aggression, psychopathology, personality, self-efficacy, and school functioning. *European Child & Adolescent Psychiatry*, 17, 235–244.
- Donnellan, M. B., Trzesniewski, K. H., Robins, R. W., Moffitt, T. E., & Caspi, A. (2005). Low self-esteem is related to aggression, antisocial behavior, and delinquency. *Psychological Science*, 16, 328–335.
- Draper, J. A., & Lancaster, M. G. (1985). The 505 test: A test for agility in the horizontal plane. *Australian Journal of Science and Medicine in Sport*, 17, 15 – 18.
- Fox, K.R. (2000a). The effects of exercise on self-perceptions and self-esteem. In S.J.H. Biddle, K.R. Fox, & S.H. Boutcher (Eds.), *Physical activity and psychological wellbeing* (pp. 88–117). London: Routledge.
- Fraser-Thomas, J., Cote, J., & Deakin, J. (2005). Youth sport programs: an avenue to foster positive youth development. *Phys Educ Sport Pedagog.* 10(1):19–40.
- Frick, P. J., Cornell, A. H., Barry, C. T., Bodin, S. D., & Dane, H. E. (2003). Callous-unemotional traits and conduct problems in the prediction of conduct problem severity, aggression, and self-report of delinquency. *Journal of Abnormal Child Psychology*, 31, 457–470.
- Gardner, T. W., Dishion, T. J., & Connell, A. M. (2008). Adolescent self-regulation as resilience: Resistance to antisocial behavior within the deviant peer context. *Journal of Abnormal Child Psychology*, 36, 273–284.
- Goudas, M., & Giannoudis, G. (2008). A team-sports-based life-skills program in a physical education context. *Learn Instr.* 18(6): 528–53.

- Helgerud, J., Engen, U., Wisloff, U., & Hoff, J. (2001). Aerobic endurance training improves football performance. *Med Sci Sports Exerc.* 33(11):1925-1931
- Hoff, J., Wisloff, U., Engen, L.C., et al. (2002). Soccer specific aerobic endurance training. *Br J Sports Med.* 36: 218-21
- Horan, P. M., DiStefano, C., & Motl, R. W. (2003). Wording effects in self esteem scales: Methodological artifact or response style? *Structural Equation Modeling*, 10, 444–455.
- Keane, S. (2004). Self-silencing behavior among female high school athletes and non-athletes. *Diss Abstr Int.* 64(12):6332B.
- Kollath, F., & Quade, K. (1993). Measurement of sprinting speed of professional and amateur soccer players. In T. Reilly, J. Clarys, & A. Stibbe (Eds.), *Science and soccer II* (pp. 31 – 36). London: E & FN Spon
- Krustrup, P., & Bangsbo, J. (2001). Physiological demands of top class refereeing in relation to physical capacity: Effect of intense intermittent exercise training. *Journal of Sports Sciences*, 19, 881 – 891.
- Krustrup, P., Mohr, M., Amstrup, T., Rysgaard, T., Johansen, J., Steensberg, A., Pedersen, P. K., & Bangsbo, J. (2003). The Yo-Yo intermittent recovery test: Physiological response, reliability and validity. *Medicine and Science in Sports and Exercise*, 35, 697 – 705.
- Li, F.Z., Harmer, P., Chaumeton, N.R., Duncan, T.E., & Duncan, S.C. (2002). Tai Chi as a means to enhance self-esteem: A randomized controlled trial. *Journal of Applied Gerontology*, 21, 70–89.
- Little, T., & Williams, A. (2003). Specificity of acceleration, maximum speed and agility in professional soccer players. Communication to the Fifth World Congress of Science and Football, pp. 144 – 145. Madrid: Editorial Gymnos.
- MacDougall, J. D., & Wenger, H. A. (1991). The purpose of physiological testing. In J. D. MacDougall, H. A. Wenger, & H. J. Green (Eds.), *Physiological testing of the high-performance athlete* (2nd edn., pp. 1 – 5). Champaign, IL: Human Kinetics.
- Martin, K.A., & Sinden, A.R. (2001). Who will stay and who will go? A review of older adults' adherence to randomized controlled trials of exercise. *Journal of Aging and Physical Activity*, 9, 91-114.
- Matsuura, N., Hashimoto, T., & Toichi, M. (2009). Correlations among self-esteem, aggression, adverse childhood experiences and depression in inmates of a female juvenile correctional facility in Japan. *Psychiatry and Clinical Neurosciences*, 63, 478–485.
- McAuley, E., Blissmer, B., Katula, J., Duncan, T.E., & Mihalko, S.L. (2000). Physical activity, self-esteem, and self-efficacy relationships in older adults: a randomized controlled trial. *Annals of Behavioral Medicine*, 22, 131–139.

- McLaughlin, M.W., & Heath, S.B. (1993). Casting the self: Frames for identity and dilemmas for policy. In: Heath, S.B., & McLaughlin, M.W. (Eds.). *Identity and Inner-city Youth: Beyond Ethnicity and Gender* (pp. 210-239). New York: Teachers College Press.
- Menon, M., Tobin, D. D., Corby, B. C., Menon, M., Hodges, E. V., & Perry, D. G. (2007). The developmental costs of high self-esteem for antisocial children. *Child Development*, 78, 1627–1639.
- Mohr, M., Krstrup, P., & Bangsbo, J. (2003a). Match performance of high standard soccer players with special reference to development of fatigue. *Journal of Sports Sciences*, 21, 519 – 528.
- Motl, R. W., & DiStefano, C. (2002). Longitudinal invariance of self-esteem and method effects associated with negatively worded items. *Structural Equation Modeling*, 9, 562–578.
- Mummery, W.K. (2008). The role of coping style, social support and self-concept in resilience of sport performance: athletic insight. Available at: <http://www.athleticinsight.com/Vol3Iss3/ExplanationDevelopment.htm>.
- Orlick, T., & McCaffrey, N. (1991). Mental training with children for sport and life. *Sport Psychol.* 5: 322–334.
- Pedersen, S, & Seidman, E. (2004). Team sports achievement and self-esteem development among urban adolescent girls. *Psychol Women Q.* 38:412–422.
- Penney, S. R., Moretti, M. M., & Da Silva, K. S. (2008). Structural validity of the MACI psychopathy and narcissism scales: Evidence of multidimensionality and implications for use in research and screening. *Journal of Clinical Child and Adolescent Psychology*, 37, 422–433.
- Perkins, D., & Noam, G. (2007). Characteristics of sports-based youth development programs. *New Dir Youth Dev.* 115: 75–84.
- Petitpas, A., Cornelius, A., & Raalte, J.V., Jones, T. (2005). A framework for planning youth sport programs that foster psychosocial development. *Sport Psychol.* 19: 63–80.
- Reilly, T. J., Bangsbo, & Franks, A. (2000). Anthropometric and physiological predispositions for elite football. *Sports Sci.* 18:669-683.
- Reilly, T., & Doran, D. (2003). Fitness assessment. In T. Reilly & A. M. Williams (Eds.), *Science and soccer* (2nd edn., pp. 21 – 46). London: Routledge.
- Reilly, T., & Thomas, V. (1976). A motion analysis of work rate in different positional roles in professional soccer match-play. *Journal of Human Movement Studies*, 2, 87 – 97.
- Rice, F., Lifford, K. J., Thomas, H. V., & Thapar, A. (2007). Mental health and functional outcomes of maternal and adolescent reports of adolescent depressive symptoms. *Journal of the American Academy of Child and Adolescent Psychiatry*, 46, 1162–1170.



- Rosenberg, M. (1965). *Society and adolescent self-image*. Princeton: Princeton University.
- Strauss, R.S., Rodzilsky, D., & Burack, G. (2001). Psychosocial correlates of physical activity in healthy children. *Arch Pediatr Adolesc Med.* 155: 897–902.
- Strudwick, A., Reilly, T., & Doran, D. (2002). Anthropometric and fitness characteristics of elite players in two football codes. *Journal of Sports Medicine and Physical Fitness*, 42, 239 – 242.
- Stryker, S. (1987). Identity theory: Developments and extensions. In: Yardley K, Honess T, editors. *Self and identity: Psychological perspectives*. Chichester, UK: John Wiley & Sons Ltd; pp 89 – 103.
- Tomás, J. M., & Oliver, A. (1999). Rosenberg's self-esteem scale: Two factors or method effects. *Structural Equation Modeling*, 6, 84–98.
- Trzesniewski, K. H., Donnellan, M. B., Moffitt, T. E., Robins, R. W., Poulton, R., & Caspi, A. (2006). Low self-esteem during adolescence predicts poor health, criminal behavior, and limited economic prospects during adulthood. *Developmental Psychology*, 42, 381–390.
- Wang, J. (1995). Physiological overview of conditioning training for college football athletes. *Strength Cond.* 17(4):62-65.
- Zabriskie, R., Lundberg, N., & Groff, D. (2005). Quality of life and identity: The benefits of a community-based therapeutic recreation and adaptive sports program. *Therapeutic Recreation J.* 39(3):176 – 191