

**The Effect of Sport Programme on the Inmate's Social Behaviour,
Body Image and the Social Climate in Al-Mwagar
Rehabilitation and Correctional
Center in Amman**

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Abstract

The aim of this study was to investigate the effect of sport participation on the inmates of Al-Mwagar Rehabilitation and Correctional Center in social and psychological aspects. Research in this field is limited in Arabic countries and focuses more on the theoretical side of sports in the rehabilitation centres. This was a experimental quantitative study using a grounded theory approach through closed ended questions, and the subjects were investigated before and after the intervention. The questions focused on experiences and perceived outcomes related to their sport and exercise involvement. The data was collected and analysed with SPSS software. Eighty male inmates were investigated and divided into two groups: 40 inmates as the control group and 40 inmates as the experimental group. They were between 18 and 28 years of age and participated in different kinds of sports three times a week for two months. Changes in social and psychological status were assessed on entry into the Programme (intervention) and after maintaining participation for two months. A pre- and post-test comparison on a variety of social and physiological issues indicated that significant improvements had occurred in the experimental group. The study will be added to the body of literature in the prison population and will be recommended to other rehabilitation and correction centre.

Declaration

This work is original and has not been previously submitted in support of a degree, qualification or other course.

Date

Signature

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1. Introduction and Statement of the Problem

“It seems obvious that sport is a field of compensation for the pressure of work but also an ideal model which promotes the learning of the most important behaviour pattern of a performance-oriented society” (Digel, 1995, p.17).

Sport is one of the most recognised phenomena all over the world, and like most aspects of society, sports are not illogical constructs but, rather, a purposeful social invitation to meet and satisfy human needs (cf. Alosi, 2007). The lasting value of sport experiences lies in the application of the principles learned through participating in other areas of life (cf. Danish & Nellen, p.102). Millions of people participate in sport for different aims (physical, social and psychological). Heffner and colleagues suggest that people participate in sport for various reasons and from different motivations. For example, there are sports for recreation which promote and maintain good health as well as high performance sport and also sport in the form of games and contests (competitive) (cf. Heffner, Janalik & Fleischer, 2003, p.5).

As a matter of fact, sport allows authentic experiences and everyone needs a certain amount of movement, which sport provides by giving meaning to life, animating and stimulating, enabling one to experience tension, excitement and strain (Digel, 1995, p.17). Sport is also considered as a part of world culture, at least a part of many people’s everyday lives. It is global as well as universal, and it is called a “cultural asset” (Digel & Gruppe, 2007, p.5). Schulze (2005), described sport as a property of the whole system of society, and attached it to many subsystems in the one society such as justice, education, arts, welfare, economy, science, politics, intimate relations, and family (cf. Schulze, 2005, p.18).

Therefore, sports make a major contribution to promote health (physically and psychologically), as it is proven scientifically that sport participation is associated with enhanced general and mental health in people who suffer from obesity, high blood pressure, anxiety disorder, depression, body image disorders and several kinds of addictions, for instance, alcohol. However, physical inactivity can be associated with the development of mental disorders such as depression and anxiety (cf. Ströhle, 2008, p 777 & Daley, 2002).

Pavilanis (2011) emphasised that those who exercise report fewer symptoms of anxiety and depression and lower levels of stress and anger (cf. Pavilanis, 2011). In addition, for people who suffer from social anxiety or obsessive compulsive disorders, exercise reduces their fears and related bodily sensations such as heart palpitations and rapid breathing (cf. Pavilanis, 2011).

Another point to be made is the positive impact of sport on person's "body image" (Thiel 1994, Cash, Williams & Thomas 2001). Interestingly enough scientists assumed that the concept of body image is associated with psycho-social functioning (e.g. fear of intimacy and social anxiety) and linked to self esteem, interpersonal confidence, eating and exercise behaviour and emotional stability (cf. Cash and colleagues, 2004, p.89). Body image could be broken down into three dimensions: cognitive, emotional and idealistic, (cf. Probst, Vandereycken & Coppenolle, 1998).

Street and Ray (2008) argued that sports participation in group reaction provides a sense of value and belonging through cooperation and attachment. According to Bandura's social cognitive theory, behaviour is shaped by the interaction between individual and environmental factors. This theory emphasises the influence of social interaction in relation to behaviour. There are both direct and indirect links between participation in group activity and mental health (Street & James 2008). It is noteworthy

thy to mention the importance of playing team sports or individual sports in the individual's development. Corn (2012) assumed that learning to play a team sport enables an individual to develop trust, respect and reliance on others. Even individuals sports have elements of team sports because they practice input, and gauge improvement. Furthermore, Corn emphasised the importance of cooperation within the team (group), as it helps build the bond of trust and support with one's teammates (cf, Corn, 2012).

The Scottish office which examined the benefits associated with sport participation it is claimed that "Arts, sports and leisure activities have a role to play in countering social exclusion. They can help to increase the self-esteem of individuals; build community spirit; increase social interaction; improve health and fitness; create employment and give young people a purposeful activity, reducing the temptation to anti-social behaviour they can also build confidence and encourage strong community groups" (Coalter, 2007, p.15-17). Furthermore, the policy action group in England claimed that "sport can contribute to neighbourhood renewal by improving communities performance on four key indicators, health, crime, employment and education"(Coalter, 2009, p.15).

As a result sport serves multiple functions and is associated with various institutions within the society such as, families, schools and education, politics, economics, religion, rehabilitation and correction process. In the same context, it is important to note that historically formal and informal recreation programmes were discouraged and most forms of play were prohibited. Games were not viewed as consistent with a philosophy of punishment that emphasised harsh, personal deprivation (cf. Frey &, Delaney 1996, p.80).

However, in recent years, it has been proven that sport has an important role to play in youth rehabilitation and it has been encouraged as a means of alleviating the monotony of prison life and as a safety valve to

release built-up emotions and tensions. It is relevant to acknowledge that sport and physical activity in the rehabilitation centres complete and relate directly to treatment and rehabilitation goals. Learning a healthy lifestyle through physical activity can give significant power to the overall rehabilitation process (Williams & Steran, 2004, p.94).

The National Advisory Commission of criminal Justices in the United States of America (1973) acknowledged the significant role of sport in the overall rehabilitation process and therefore, established standard policies and practices for recreational programmes that included recommending that every institution employ a full time director of recreation; that every offender be evaluated for his or her interest in leisure activities; that recreation programmes provide some interaction opportunities with the outside community, and that a wide range of recreational activities be made available to inmates (cf. Fery & Delaney 1996, p.80).

Furthermore, building upon this foundation the Office of the United Nations High Commissioners for Human Rights (OHCHR) requires in their Minimum Standard Rules for the treatment of Prisoners (Rule 21): “first, that every prisoner who is not employed in outdoor work shall have at least a suitable hour of exercise in the open air daily if the weather permits; and second that young Prisoners and others of suitable age and physique shall receive physical and recreational training during the period of exercise, and equipment should be provided”. Also relevant in this context are the European Prison Principles 2006 concerning the treatment of the prisoners concerning movement and recovery:

- Rule 27.1: “The prisoners have the right to freely move in the open air when the weather permits”.
- Rule 27.2: “There are many opportunities enable the inmates to move and be recovered, such as sports, games and social culture activities” (Goedl, Leupold & Dittman, 2007, p.12).

In the same context, Australia is one of the countries which encourages sport and physical activities for young offenders through different type of sport programmes, for example, a programme may offer basketball (team sport), athletics (individual sport), abseiling (individual physical activity) and a camping (outdoors). As has already been noted, programmes are divided into three main types:

- “Sport” programmes offer an activity with an official body recognised by the Australian Sport Commission.
- Other activities are defined as “physical activity”; while
- “Outdoor” describes opportunities for camping, wilderness experiences and learning about different aspects of the environment (Morris and colleagues, 2003).

In Germany, sport in rehabilitation centres is considered as an essential part of the whole rehabilitation process. In fact, there are different global facts to verify that sport has a positive impact on the inmates! Especially on adolescents. (Roessner, 1999, p.453). Scheid and Simen (1999) in their book *Soziale Funktionen des Sports* (The Social Functions of Sport), define the goals of the rehabilitation process as following:

- From the health point of view sport serves as a compensation element for the lack of movement in prison, promoting health and increasing personal well-being.
- By participating in sport inmates will improve their motor skills and competencies.
- Through sport social relationships will be improved, an adequate amount of movement helps the inmates have new social experiences outside of their cells or dormitories.
- Furthermore, sport provides the individual with different morals and rules which can help him to become more disciplined and develop a new level of self control.
- Finally, sport has to have a consistent positive effect on the inmates after they are released (Scheid & Simen 1999, p.169).

Schroeder (1987) mentioned that sport can play a role in the rehabilitation process through three basic functions and prospects which are:

1. "Sport as therapy": by which participation in sport has an adequate positive impact on the physical body and on the psychosocial outlook.
2. "Sport as a medium therapy": meaning, during exercise individual and social behaviours occur to operate as a therapeutic measurement.
3. "Sport as complementary measure of treatment": meaning that improved sport skills contribute to the stabilisation of vegetative the system (Schroeder, 1987, p.30).

According to Knobel (2004), sport in prison has ranked a high level from a medical perspective and it's function in prison is similar to it's function in the leisure time. Sport helps to limit the negative consequences on the inmates caused by imprisonment and the lack of movement, as the primarily role of sport in prison is to help the inmates to endure their imprisonment and to create a healthy atmosphere among the inmates. Also sport can help the individual and social behaviour among the inmates which will – positively – affect the goals of the whole rehabilitation process. Dolling (1992) classified the function of sport in three categories:

1. Compensate for lack of exercise, promote health, reduce mental stress and increase personal well-being.
2. Learn meaningful leisure activities and practicing social behaviour.
3. Strengthening self-esteem and exercise capacity.

The previous classification described by Dolling has been supported by other scientists; Schroeder for example, pointed out that sport can contribute in improving the inmate's physical health according to the institutional conditions and the lack of movement, Dolling added, "by all

means sport helps in developing the inmates mood and physical fitness aspects” (Schroeder, 1987, p.140-143). At the same context, Digeser (1998) mentioned that lacking of movement is a major issue in the prison which can cause health problems; nevertheless, through regular sport programmes the inmates will have the opportunity to develop and better their health and physical issues (cf. Digeser, 1998, p.24).

Interestingly enough, sport can also play a major role in the inmates resocialisation, as the process of re-socialisation in prison is the main idea of the rehabilitation process -as a whole- and sport shall contribute in the re-socialisation of the inmates as well (Digeser, 1998, p.26). Many experts and scientists, such as lawyers, psychologists and sociologists and sport education scholars supported the connection between sport and re-socialisation; for example, teaching the inmates new sport skills, give certificates for the inmates who participate in sport sessions and provide those who are interested to be referees with training sessions and certificates after passing the exams.

Furthermore, Digeser emphasised on a social gathering sports with the inmates and another sport groups from outside the prison, in order to give the inmates the opportunity to be connected to different groups in the society (Digeser, 1998, p.26). In the same context, Walter (1990) mentioned that it is very significant to keep the contact and collaboration between the sport clubs in the local society and the administration of the prison in order to provide the prison with sport trainers and experts also it can help the prison administration in organising sports for the inmates under the consultation and the experience from these sport clubs (cf. Walther, 1990, p.9).

Nickolai and colleagues (1998) asserted, practising sport in prison even for a short time helps the inmates to pass the time of their imprisonment, moreover, and from a social perspective, doing sports among a group (team sports) help in developing the inmate’s social behaviour, it

also helps in developing a better relationship between the inmates and the leaderships in prison, on which Walter emphasised that the better relationship between the two groups will help the inmates in developing positive social behaviour (cf. Nickolai and colleagues, 1998, p.32-33; Walter, 1998, p.11). Frey and Delaney (1996), emphasised the positive role of sports (leisure activities) on the prison life and climate. They assumed that these activities evaluated for their impact on the prison life and climate (cf. Frey & Delaney 1996, p. 82). Guard gets a “feel” for the overall prison mood by observing how prisoners group together during leisure activities. The observation process gives prison administrators and guards the opportunity to detect potential conflict in the prison population (cf. Frey & Delaney 1996).

The Problem

In Jordan (the Hashemite Kingdom of Jordan) the rehabilitation and correction centres' officials are aware of the significant role that sport plays in the rehabilitation process. By providing a wide range of programmes, including sport, in the centres, they believe that the inmates will have a better chance at improving their lives after being released. However, no empirical evidence exists to clarify the role of sport in the rehabilitation process, and there are currently no specialists dedicated to sport training and physical education working in these centres. Moreover, no longitudinal studies have been performed to measure the effectiveness of existing sport programmes by examining behavioural patterns of inmates after release. Therefore, it is uncertain how effective existing programmes are, and whether the daily programmes for inmates include an adequate number of exercises and recreational sports.

In order to investigate the relationship between sports and other variables for the inmates who are sentenced for at least one year in the rehabilitation and correction centre in Amman, this study will answer the major questions.

1.1 Major Questions of the Study

1. Can sport activity reduce the anti-social behaviour of prisoners by developing social skills?
2. Can sport activity play a role in developing a positive body image among the inmates through improving physical fitness components?
3. Can sport activity play a role in creating a better social climate in the prison?

1.2 Structure of the Study

In order to answer these major questions of this doctoral thesis and to clarify some related terms in the current study the second chapter will define the terms of the study. The third chapter will give an overview of related studies previously conducted in different countries (including Australia, Great Britain, USA and Germany) and will discuss the methodology of these studies, the main results, and the relevance of these results for the current project. The fourth chapter will present the contextual framework of this thesis and include a general historical overview of Jordan (the Hashemite Kingdom of Jordan) and its current royal family. It will also contain an overview of sport in Jordanian society. The fifth chapter will present crime as a phenomenon and crime in Jordan with some recent statistics of the crime rate including the types of the crime in the Jordanian society. The sixth chapter will present the theory behind this study and will constitute the major part of the current project including the statement of Hypotheses and the questions raised in the study. The seventh chapter will summarise and present conclusions, while the eighth chapter will provide a list of sources and references.

2. Definitions of the Study

The study will define four major terms:

1. Fitness
2. Health
3. Anti-social Behaviour
4. Body Image

Fitness

Malcolm (2005) defined the term Fitness as “the state of being fit from different aspects, such as diet-health related, spiritual welfare, emotional, social and physical well being, and the ability to meet the daily requirements with having extra energy and power to face urgent circumstances” (Malcolm, 2005). The term Fitness refers to the capability of handling the requirements of daily life as well as one’s actual aptitude for intended activities. In this sense Fitness encompasses all aspects of personality and areas of endeavour.

More specific definitions of the general aim of Fitness depends on an analysis of present living conditions or particular situations as well as the concepts with regard to life held by individuals and society as whole (Roethig & Prohl, 2003, p.200).

Health

Health is a general term, which can range from the purely technical content to the universal moral or philosophical, meaning (Naidoo & Wills, 2010). Before the World Health Organization (WHO), one common adage for health was a “sane mind in a sound body” according to Brock

Christholm (1948-1953), the first general director of the WHO (Chan, 2003, p.6). The World Health Organization 1948, defined health as “a state of complete physical and mental and social well-being, not just the absence of disease or infirmity” (Vogt, 2007).

Naidoo and Wills (2010) present a wider explanation for the definition of health to aid public understanding. They say that a better way for understanding the concept of health leads to the consideration of its various dimensions:

- Physical health, which affects the body, for instance, fitness or the absence of disease.
- Mental health, which concerns a positive way of living, having a good image on oneself and being a good example for the others.
- Emotional health, which refers to the ability to express feelings and to maintain and develop relationships, for instance the feeling of being loved by others.
- Social health, which refers to experiencing social support from family and friends, for instance, having real friends with whom one can speak freely, becoming close instead of keeping a distance from others.
- Spiritual health, which can be seen as the ability to put moral and religious principles and beliefs into practice, being confident of having something useful to do in life.
- Sexual health, which is a state of physical, mental and social well-being in relation to sexuality. It requires a positive and respectful approach to sexuality and sexual relationships, as well as the possibility of having pleasurable and safe sexual experiences, free of coercion, discrimination and violence (Wills, Naidoo, 2010).

It is significant to mention that this present study is going to focus on physical and social health besides taking some of the psychological aspects into account.

Anti-social Behaviour

According to Hillman (2007) anti-social behaviour denotes people or marginal groups of society who do not want or cannot adapt to the generally accepted patterns of behaviour and lifestyles of a society. Theories of anomie, about deviant behaviour and criminal sociology try to explain the causes and the particular manifestation of anti social behaviour (Hillman, 2007). Heinritz, Lautmann, Rammstedt, Wienold (2007) added that the expression anti-social behaviour (“asoziales Verhalten“) is colloquial, and a derogatory term for not conforming to social norms and structures.

A widely used definition of anti-social behaviour is the definition contained in the Crime and Disorder Act, “Anti-social behaviour describes a range of everyday nuisances, disorders and crimes, from graffiti and noisy neighbours to harassment and street drug- dealing. It is sometimes dismissed as trivial, but anti social behaviour has a huge impact on the quality of life of the victims” (McArdle, 2011, p.5).

The American Public Health Act (2002) asserts that the term anti-social behaviour consists of acts that physically or psychologically harm other people or their property. Lying, stealing, assaulting or being cruel to others, being argumentative or sexually promiscuous are all examples of anti-social behaviour (Arriola & Kimberly, 2002). „Anti-social behaviour may also be defined by the types of behaviour it includes. Such behaviours may range from minor socially unacceptable behaviours, for example swearing and noisy behaviour, to quite serious criminal acts such as physical assault or property offences. Some behaviours, such as skipping of ,wagging‘ school may be considered anti-social because of the other behavioural problems that may be associated with it or because it represents a deviation from social norms“ (Morgan & Mc Atamney, 2009).

Body Image

According to Thiel 1994, body image is thus part of the subjective phenomenal range of body experience, all of the emotional affective benefits of the individual's own body (cf. Bielefeld, 1986, p.17; Thiel, 1994, p.13). Thiel added that the term body image includes the attributes which ascribe one's body and the importance which measured these attributes and one's emotional relationship to his/her body especially the dissatisfaction with one's own body (cf. Thiel, 1994, p.13). According to Clement and Loewe body image is the concept which refers to the cognitive, affective and evaluative aspects of physical self-concept. In other words we can understand the whole concept of body image as it consists of perception, cognition, emotions and values (Clement & Loewe, 1996, p.9).

"Aptly illustrated 16 definitions of body image (weight satisfaction, size perception accuracy, body satisfaction, appearance evaluation, appearance orientation, body esteem, body concern, body dysphoria, body dysmorphia, body schema, body percept, body distortion, body image, body image disturbance, and body image disorder)" (Cash & Pruzinsky, 2002,p.7). On the other hand Botta 2003 defined the body image as a multidimensional concept that includes the thoughts, feelings, and attitudes related to one's own body" (Botta, 2003, p.389) whereas Schilder 1930 defines it as "the picture of our own body which we form in our own mind" (Pallan and colleagues, 2011, p.5).

Jones (2002) considers body image as an important aspect of self-representation and self-evaluation during life time and especially through adolescence. The importance of body image is evident in its relationship to risk status for eating disorders, depression and self-esteem (Jones, 2002, p.645-646).

3. Previous Studies

Over the past decade there has been a growth in the evidence based on the topic “sports in prisons and rehabilitation centres” and a number of studies have found an association between sport and reduced levels of crime (Oughton & Tacon, 2007, 3). Furthermore, Schroeder asserts that this topic is not new to this era and sports in prison is by no means a new concept in the field of science as it has captured the attention of researchers several years ago. To properly address the issue of sport participation and its relationship to the rehabilitation process, it is essential to have an overview of the previous studies which are relevant to the current one.

A review of the literature highlights is central to the process. On the one hand some of them expect a positive outcome from applying sport in the rehabilitation process and conclude with the suggestion and recommendation for future effort in the same field. On the other hand some literature indicates that sport participation in the rehabilitation centres is not expected to have a positive impact on the inmates. Two types of literature are reviewed that are relevant: (a) the related and similar studies and (b) the opposed studies.

3.1 Related and Similar Studies.

It is well documented that physical activity and sports are beneficial for the human body, promoting a healthy life style and overall a good quality of life. Accordingly, a study was conducted in 2010 at three prisons in Greece, aimed to develop a valid and reliable instrument to assess the attitudes of Greek prisoners regarding physical activity and sports.

A total of 308 male adult Greek prison inmates participated voluntarily. An exploratory factor analysis of eleven physical activity and sport

items, that explained 51.75% of the total variability, revealed three factors which were named: (1) need for physical activity, (2) Physical activity before and during imprisonment and (3) Non-participation in physical activity.

Results showed that Greek prisoners identified the necessity for physical activity and sport during imprisonment and rated high the respective items. Overall findings showed that the new questionnaire, named “Attitudes towards Physical Activity of Greek prisoners” (ATPA-GP), may be perceived as a reliable and valid instrument to identify the attitude of Greek prison inmates towards physical activity and sport.

The following steps were used in the study: (a) a review of related literature, (b) informal interviews with physical education teachers with specialisation in recreation, (c) the development of a pilot questionnaire from a panel of specialists and (d) field testing of this instrument. Specifically, following a critical review of the literature on measuring physical activities and sports, a pool of 12 items was developed.

Accordingly, five informal interviews with physical education teachers were conducted. The aim of these interviews was to generate attitude items specifically related to inmates. Four items were added, based on these interviews which were related to teaching activities or sports in Greek prisons. The above total pool of sixteen items was subjected to a critical analysis by three specialists in Greece representing prominent academics in physical education, psychology and research methods.

They were asked to comment on the relevance of the items with regard to the concept and to the inmate’s attitudes and the clarity of their statements. This procedure reduced the number of items to eleven. The final instrument was reviewed by a Greek literature teacher in order to ensure comprehension and the appropriate language. Finally, a pilot study was conducted before distributing the questionnaire to the prisoners. The aim of the pilot study was to test the face validity of the instrument.

The final version of the questionnaire incorporated eleven items, where prisoners presented the extent of their agreement or disagreement in a five-point Likert Scale, with responses ranging from (a) 1 as strongly agree, (b) 2 as agree, (c) 3 as undecided, (d) 4 as disagree and (e) 5 as strongly disagree.

The results of the study revealed that Greek prisoners had overall moderate positive attitudes towards the first factor (the need for physical activities and sport). This finding has been well examined and discussed by Garcia and colleagues (2009) through the study which was conducted in the high security Spanish prison. The researchers reported that several dimensions constituted the overall meaning of daily physical activity in the life of Spanish prisons, such as, incorporated factors such as, breaking imprisonment time, therapeutic benefits, practising social control, and performing masculinity.

Concerning factors two and three in this study, the data revealed moderate attitudes of Greek prisoners. It could be argued that the leisure participation in physical activity increased friendships and the social life of the inmates and decreased tension. Also some individual sports are necessary according to status of the prisoners' health and of their security risk.

A study was conducted in Oklahoma Department of Corrections (2009), aimed at examining the role of exercising on the inmate's levels of depression, stress and anxiety. Total 60 male inmates incarcerated volunteered for participation in the study, who had less than 5 years to serve to their sentence divided into control and experimental group. Both groups were demographically similar and the mean age of the experimental group (n=30) was $M=33.46$, $SEM=1.36$ and the control group (n=30), it was $M=40.38$, $SEM=1.87$. The volunteered were various in race; white, black, American, Indian, and Hispanic, and they had current charges such as, theft, drugs, forgery, assault, gun and others. The in-

struments which have been chosen to assess the levels of depression, stress, and anxiety among the inmates were the Beck Inventory II (BDI-II), Life Experience Survey and The Daily Hassels Scale (DHS). The experimental group had to participate in aerobic and anaerobic exercises, three times a day, on morning, afternoon and evening. The exercises were targeted towards improving health, deal with stress and depression. The length of the exercises was various between thirty minutes and two hours.

The results in this study recorded lower levels of depression, stress and anxiety in the experimental group than the control group as measured by the BDI-II and LES and DHS were noticeable despite similarities in the age, racial background and time served. The study suggests that in addition, exercise is helpful regardless of the type of physical activity.

The study recommended the following:

1. The need for additional research into effects of exercise on the emotional distress of low-security inmates.
2. The need for more research examine whether sport participation aid other forms of prison treatment such as, anger management, drug rehabilitation, or continuing education.
3. The need for follow-up studies examine whether the groups, who exercise to decrease levels of depression, stress and anxiety in prison likely to continue to exercise after being released or if they will stop.

Palermo and colleagues (2006) published a pilot study verifying the efficacy of Karate, as complex psychomotor activity that enhances self-regulation and executive skills, as an intervention for externalising behaviour.

Sixteen children who participated in the study were referred to the Federazione Italian di Arti Marziali (FIDIM) project *Dal Dojo alla Famiglia alla Societa* (From the Dojo to the Family Society. 2006). This Karate programme is developed to include in the ordinary *Dojo* in the training hall for participating in karate and other material arts for children with social cognitive disorders and disruptive behaviours.

Their ages ranged from eight to ten years ($M=8.5$); thirteen were male and three were female. The children came from a mixed socio-economic background and were all attending regular elementary school classes. Three children required aid in class for behaviour-management purposes. Eight were randomly assigned to a 10-month *Wa Do Ayu* Karate programme, whereas 8 children received no intervention. The children were assigned to a larger Karate class, composed of normal developing youngsters, with a frequency of three lessons per week.

Oppositional defiant disorder (ODD) consists of a pattern of negativistic, hostile, and defiant behaviour lasting at least six months, during which four or more of the following behaviours are present:

- frequent loss of temper
- frequent arguing with adults
- frequent defiance or refusal to comply with adults' requests and rules
- frequent anger and resentment
- frequent touchiness and easily being annoyed by others (Duff, Behavioural Neurotherapy Clinic, 2009)

In all 16 participants three domains of temperament-intensity, adaptability, and mood regulation were measured at the beginning and at the end of the training period. Statistically, significant differences were noted in all three scales, with evidence of improvement in all scores in the Karate intervention group, as opposed to the control participants.

Karate, when properly taught, can be a useful adjunct in multi-modal programmes aimed at externalising behaviour reduction. From a neuropsychological perspective it is a very sophisticated and complex activity, which when traditionally and methodically taught and practised, leads to improvement in self-regulation, executive skills, goal-directed attention, and the capacity to concentrate. Likewise, it introduces children and adults to effective social skills, fostering self-confidence and mutual respect, primarily through mirroring behaviour (Palermo and colleagues, 2006)

The importance of Karate as a martial art is its main focus on developing the participants' concentration. Most studies on the long-term effects of martial arts show effective positive social and psychological changes. There is usually an inverse relationship between the amount of time someone has been practising, and the level of their aggression, hostility and anxiety (Swiercz, 2009).

Donald (1987) found out through his study which examined the relationship between martial arts and behavioural modification among the inmates that: firstly, the participants had a very realistic view of themselves and their performance. Secondly, the inmates' who felt a greater sense of freedom to participate performed better. Thirdly, the best environment for this training with these subjects is one that is strictly controlled and disciplined and had reinforcement incentives (cf. Donald F., 1987).

Accordingly, the findings of studies of most short and long term psychosocial changes from practising a martial art lead to positive psychosocial changes in the participants. In general, there is an inverse relationship between belt rank and length of time participating a martial art and anxiety, aggression, hostility and neuroticism. There is a positive correlation between length of time practising and self confidence, independence and self reliance (Binder, 1999).

In 2006 Russell conducted an evaluating case study of Wendigo Lake Expeditions (WLE), a continuous intake, and open custody programme for young offenders that used a positive youth development approach. The WLE is a programme using adventure activities and wilderness expeditions to challenge young offenders to try newly learned personal and social skills in a safe and neutral environment. Four objectives guided the case study: (1) to describe and illustrate WLE's approach to working with adjudicated youth, including the use of "The Group" wilderness expedition, challenge activities, community services and school programme, (2) to identify and report perceptions of the programme and process, including lessons that young offenders believed were learned from the experience, (3) to assess changes in their well-being utilising the Youth Outcome Questionnaire (Y-OQ), and (4) to track post programme recidivism rates, which aim to address whether or not the youth had been formally charged with an offence since leaving WLE.

A case study method, which included the use of multiple sources of evidence, was used to address the objective framed study. These resources included student perceptions of the process, objective measures of the outcome, and secondary sources that described the prior youth disposition. Also the Youth Outcome Questionnaire was utilised as a method in this study. According to the sample of the study, 57 youth, with an average age of 15.2 years, sentenced to WLE were evaluated during the time period from 1 June 2002, to 1 June 2003.

Results showed a significant improvement in youth well-being indicated by significant score reductions on the Y-OQ of the 40 youth contacted. At the follow-up assessment 21 (53%) had been charged with a criminal offence during this period, including those charged for administrative offences such as breaching conditions of probation, whereas, 19 (47%) had been charged. Young offenders who participated in WLE scored high on the Y-OQ at admission to the programme, suggesting adven-

ture, and showed improvement during their stay based on significant reduction in Y-OQ scores from participation in the programme.

Two areas in which the sample demonstrated significant improvement were; the Interpersonal relations and the social problems domains of the Y-OQ. When coupled with the analysed open-ended responses, these results suggest quantitatively and qualitatively that WLE participants had learned skills that could help them better manage their anger and get along with others. For example, a key aspect of the interpersonal relations domain relates to how the youth interact with their friends and their level of aggressiveness, propensity to argue with others, and their defiance. This sample demonstrated statistically a significant change in this area, which was corroborated by their qualitative assessment of what they believed they had learned at WLE.

“Also of note is the finding that youth rated WLE high on a number of programme variables, including the school programme, challenge activities, and the staff. This is an important finding that should not be overlooked that the youth also indicated that they felt safe while in custody, an important objective of the Canada Youth Criminal Justice Act of 2003” (Russell, 2006, p.199). These findings suggest that a positive leaning community that focuses on social skill awareness and development allows the youth to focus their energy on making progress and completing their sentence instead of on their safety and well-being. The role that a safe environment plays in facilitating outcomes for young offenders could be an area for future research.

The study concluded with recommendations to provide for the enhancement of favourable outcomes and to increase the likelihood that young offenders participating in WLE will develop more pro-social behaviour and not offend again after release from custody. One of these recommendations is continuing to focus on social skill development and

awareness and to provide opportunities to practise these skills in a variety of environments.

This study is a significant approach in the field of sport in prisons, as the researchers have identified several methods that are appropriate for reducing aggressive behaviour and increasing pro-social behaviour especially for the adjudicated youth. These include pro-social and interpersonal skills, training in social competence, cognitive behaviour instruction, and behaviour modelling or modification techniques. The WLE programme reflects these strategies and promotes the development of the attitudes and skills necessary to become responsible, accountable law-abiding citizens by teaching high core values such as responsibility, effort, attitude, community and honour (Russell, 2006, p.187).

“These core values are woven into a programme that is organised into four developmental phases in which each phase has increasingly higher standards. With the passage of each stage comes community recognition, a ceremony for the achievement, an increasing level of responsibility and the programme components become the medium through which youth passes through these stages” (Russell, 2006, p.187). Furthermore, Russell suggests that an integrated strategy based on behavioural, social, and cognitive approaches is most effective for youth. Based on the results of this study, WLK appears to work with youth in the way that reflect this principle which is based on the results of this study.

Another study which supports the notion that sport plays an important role in the rehabilitation process took place in 2003 in a secure unit located in Southern England. It was registered for a total of 20 male and female youth between the ages of 10 and 17 years old. The study aimed at investigating the intricacies of sports rehabilitation and specifically how youth responds to a range of sports activities and to different teaching styles and emphasis.

The particular method selected meets the current need for qualitative research in rehabilitation studies. Through these methods the research used a quasi-longitudinal observational study and it involved the researcher as an instrument for data collection. Through the analysis of experiences at the unit, the study supports the use of those sporting activities which de-emphasise regulations and winning, and argues for an emphasis on choice for participants, the tailoring of the programmes to suit individual needs, and for positive feedback.

This study concluded that sport evidently has an important role to play in youth rehabilitation. However, it should be used selectively, because if unsuitable activities and programmes are used, they may have a detrimental effect on participants. It is relevant to note that it has been proven scientifically that aggression depends on the type of sport and aggressive behaviour increases when the competitive level rises (Rasclé & Cabagno 2006, p.1).

Sport programmes designed to promote social and physical health should be encouraged and more concentrated actions to combat sport violence are required. According to Scheid and Simen (1999) and Boehnke (1992) the role of sport in the rehabilitation process can only be significant if the offered programme focuses on improving the inmates' social skills, general knowledge, and developing their personal traits (Scheid & Simen, 1999, p.174).

Additionally, in 2000 a study took place in Australia conducted by the Australian Institute of Criminology. Cameron and MacDougall aimed at examining a variety of sporting activities that appear to have had a beneficial effect in helping young people steer away from trouble. It dealt with wilderness programmes in which youth participate and learn skills, and others giving a sense of belonging which reduces vandalism and develops other pro-social behaviour.

One of these programmes which were mentioned in this study was the British Liverpool Football Club, which has had success in anti smoking programmes, coaching and truancy-reduction. Another programme from the United States, known as Spectrum, entails undertaking a two weeks expedition to learn about wilderness survival. It has been evaluated using an experimental and a control group. Participants in the experimental group, aged between fifteen and seventeen, underwent a twenty six day programme. The evaluation found that there was a reduction in arrests in the experimental group over the following year (twenty percent of the programme group had re-offended compared with forty two percent of the control group).

The Major question of this study was: Can sport and physical activities be used as strategies for crime prevention? The evidence is encouraging; it suggests that with careful planning, sport and physical activity have the potential to prevent crime. Young people can personally benefit from these programs. The study outlined some processes by which this may occur, and comes to the following conclusions:

- Sport and physical activity can combine with other interventions to reduce crime in particular groups and communities.
- It appears that sport and physical activity can reduce crime by providing accessible and appropriate activities in a supportive social context. In other words, sport and physical activity must be connected positively within the social fabric of groups and communities.
- Sport and physical activity-based intervention must be conducted in collaboration with a range of other strategies and sectors.
- Elite sporting bodies can be involved in programmes directly aimed at particular crimes or communities.
- It is essential to consider how the design, location, and funding of sporting and recreational infrastructure contribute to social cohesion and avoid taking sport and physical activity out of its social context.

- The cases do not suggest “one size fits all strategies”, instead they represent the value of community development approaches to programmes tailored to particular needs. Nevertheless, this should not prevent us from suggesting common strategies and processes, and collecting examples of good practice.
- Recreation and sport programmes established for the explicit purpose of crime prevention should be subject to rigorous evaluation.

The case studies also demonstrate opportunities for individual young people to engage in behaviour that is valued by society. They also suggest that it is possible to reduce the supply of motivated offenders by diverting young people from offending behaviour to engage in sport and other physical activities and show how the environment and infrastructure in communities can help make up the pro-social choice easier than the anti-social one.

The case studies also suggest that the key ingredients are not competition or the physical aspects of sport alone. On one level sport and physical activity can be used as strategies within a broader context involving for example, development of values, social support and positive role models (Camro, MacDougall, Colin, 2000).

Peterson and Johnstone (1995) made a study on a sample of 43 female offenders, ages 24-63 with a history of polysubstance abuse or dependence. They had volunteered to be part of a resident drug treatment Programme which included exercises and other health related lifestyle modification training.

The Programme was housed in an independent facility (Atwood Hall) within the security-level-two Federal Medical Centre for women, located in Lexington, Kentucky. The Programme consisted of twelve months regimen and included a reduced staff-to-inmate ratio (1.12), for inten-

sive treatment delivery (10.5 hr per day) with individualised treatment plans, a strong emphasis on training in general social skills, relapse prevention techniques and comprehensive transitional services.

Changes in health status and perceived psychological well-being were assessed on entry into the Programme and after maintaining participation for a minimum of nine months at exit. A pre- and post-test comparison on a variety of physiological parameters indicated that significant improvements had occurred in the physical fitness of the group.

This study reports the effectiveness of an experimental wellness programme included as part of a residential treatment unit in a federal correction institute in the United States. The results suggest that the inclusion of health promotion training in drug treatment programmes for incarcerated offenders may have beneficial results.

Accordingly, there is an essential need for the development of effective substance abuse and dependence treatment programmes in prisons and jails. One aspect of treatment provision within this population that has insufficient research attention is the inclusion of health promotion or wellness programmes, including exercise and other health-related lifestyle modification training.

Additionally, in a recent study of 10,000 young people in Scotland, Hendry found a significant relationship between participation in sport and perceived physical and mental health in males. This was an especially strong relationship for males involved in team sports, although the relationship was not so for females.

Hendry concluded: "a considerable body of empirical evidence now exists to support the idea that an active leisure life can improve overall self-esteem and mental and physical health. Put simply leisure has a big part to play in helping young people to make healthy and successful adjustments in this phase of their lives" (Nichols, 1997, p.184).

A study was conducted by Caplan in 1993 on the role of recreational sports in the Federal Prison System. The aim of his study was to explore the nature and consequences of recreational programmes in the federal prisons in Canada. Four federal correctional Institutions at different locations in Canada were the locations of the study.

In conducting this study, multiple methods of research were used. First, there was an investigation of the four federal Institutions mentioned by conducting detailed observations of their recreational sport facilities and Programmes. Second, there was an observation of the inmates' attitudes toward participation in various athletic pursuits. In-depth, face to face and open ended interviews were held with both inmates and staff. The sample for the study consists of the recreation staff (2), the inmates (18) and the prison employees. An analysis of the data shows that recreational sports programmes play an important role in the social control of male prisons.

Other findings show that during their incarceration these programmes are beneficial to inmates in a number of ways. Most respondents claimed that involvement in recreational sports reduced stress and/or frustration, alleviated boredom, increased self-esteem, helped in the establishment of goals and routine and assisted inmates in developing friendships. Both inmates and staff concluded that prison recreational sports did not contribute to additional aggression and were essential components of the prison regime. Recreation can be seen as a fundamental component of any healthy life style and, hence, it is argued that recreational opportunities should be provided for those in prison.

Likewise, Nichols and colleagues (2005) designed the evaluation of the Fairbridge Programme which used sport and other leisure activities to work with disadvantaged and disaffected young people and aimed to increase social and personal skills, and consequently long-term behavioural improvements. They suggested that the extensive evaluation of

this programme supports the view that such a programme can achieve long-term outcomes of positive behavioural change with young people “at risk”.

However this needs to be qualified by the methodological difficulties of distinguishing between the programmes and the propensity of the participants as determining factors. Additionally, the most important factor in contributing to this change was the characteristics of the staff (Nichols, Knight & Astburg, 2005, p.97).

Robbins (1990) examined the role of sport in crime prevention programmes aimed at young people in the United Kingdom by evaluating many sport projects and programmes in different prisons, such as Bridge Park Sports, Harlesden, Brent, Chelmsford Juvenile Justice and the City of Birmingham Football School.

Among the locations chosen those with high crime-high, youth unemployment and inner city areas predominate and include programmes based on single ‘problem estate’. There are also examples of programmes taking place in small towns and suburban overspill settings. The survey and assessment of these schemes was based on a variety of research techniques, which included: interviews with scheme founders and leaders, with other scheme workers including part-time volunteers and with participants as well as observation of (and sometimes participation in) sessional activities and attendance at management committee and neighbourhood association meetings. There was an analysis of monitoring, an evaluation report of some of the schemes and the administration of a specially designed questionnaire which covered the population and stratification (boys – girls, employed – unemployed etc.). In the course of this research, discussions were held with a number of other informed parties, including researchers, sports administrators, sports club officials and youth and community workers as well as many young people actively involved in sports.

Documents from the French Social Crime Prevention Programme including the 'Ete Jeune' Scheme were also evaluated. As a result of the study, it has been proven that the effectiveness of sports in reducing or changing patterns of recidivism is sparse, but there is no evidence that participation in sports makes juvenile delinquency worse. However, it is important to notice that sport is considered as a significant part of the whole rehabilitation process, and the positive effect which could be observed among the inmates during their custody or after they being released, is not only depending on sport participation but rather on the whole package of the crime prevention programmes (Hartmann & De-pro, 2006, p.192)

3.2 Opposing Studies

In contrast to the previous findings, some other studies did not support the notion that sports offer beneficial aspects and positive consequences for the individuals. In other words these studies claimed that sport participation does not play a significant role in the rehabilitation process and sports moreover affected the individuals negatively.

One example of this is Marshall, Moffitt, Langley and Dorothy (1996) examined the relationship between involvement in sporting activity in mid-adolescence and the deterrence of delinquent behaviour in late adolescence as associated with the Deterrence Hypothesis. The authors utilised the Dunedin Multidisciplinary Health and Development Study (DMHDS), a longitudinal cohort study of youth born in Dunedin, New Zealand in 1972-1973. The subjects were interviewed at ages 15 and 18 years old and were questioned relating to involvement in physical activity and delinquent behaviour. They concluded that the study did not support the deterrence hypothesis and showed that high involvement in sporting activity was associated with a subsequent increase in delinquent behaviour. They found that after controlling delinquent and

psycho-social behaviour at the age of 15, males and females with high levels of sports participation were significantly more likely to be delinquent at the age of 18 than those with low levels of participation.

Although the results of this study do not support the deterrence hypothesis, neither do they support the “athletic delinquent” hypothesis which claims that deviancy is the product of an individual’s membership of organisations, such as a sporting organisation. It seems likely that these organisations would have a higher representation among team sports, rather than overall sporting activity. The study argued that there could be an increased involvement in delinquency for those with a higher involvement in team sport activity but that was not shown, however, by the findings of this study. The study found no increase in either delinquency or aggressive behaviour of the participants in team sports, which incidentally could be considered the main high profile sports in New Zealand (rugby union, netball, rugby league, cricket, basketball, soccer, and hockey). The reason why the findings of current studies do not support the findings from earlier studies is not immediately apparent (Marshall & Moffitt, 1996, p.340).

The non-significant result for team sport activity may be because some of the team sports which this study include are high profile sports such as cricket which is not commonly perceived as an “aggressive” sport whereas others such as, rugby union and rugby league are. The argumentation regarding this result is that the inclusion of the so-called non-aggressive team sports negated the effect of the more aggressive team sports, and hence the non-aggressive behaviour. The results from this study do not support the view that involvement in sporting activity is a panacea for delinquent behaviour; if anything they indicate that it may exacerbate it.

However, the previous opinion should not be commonly accepted. It does not mean that sport activities should be discouraged and prohib-

ited for the youth in prison, as on the one hand, there are many other good reasons why young people should engage in such activities, such as, increasing the ability to manage anxiety or mood, cope with stress, master social skills and build self-esteem and confidence (Williams & Streat, 2002, p.95). On the other hand, careful sport programme planning will enable the participants to achieve positive and desirable goals.

Another study in 2006 conducted by Faulkner, Adlaf, Irving, Allison, Dwyer and Goodman, scholars from various Universities in Canada, discusses the positive relationship between vigorous physical activity and juvenile delinquency. The study examines the relationships between vigorous physical activity, self-esteem, and delinquent behaviour among adolescents in a large cross-sectional survey of Ontario adolescents. The data are based on questionnaires from 3,796 students (ranging from 11 to 20 years old) taken from the 2005 Ontario Student Drug Use Survey. Negative binomial regression methods were used to estimate both additive and interactive models of predictive delinquent behaviour.

Vigorous physical activity was positively associated with delinquent behaviour. However this pattern of association was observed only among male adolescents. There was no evidence of a mediating role of self-esteem. The findings of this study suggest that physical activity is not the solution for reducing juvenile delinquency.

However, fostering positive youth development through physical activity requires careful planning through appropriate designs and engagement with adolescents, policy makers, sport organisations, coaches and parents and should be embedded within wider programmes of personal and social development through such broader efforts. Then physical activity may be part of the solution. In addition, some physical activities require more training and supervision than others, so it may be advisable to consult with an activity trainer recreation specialist or some associated staff members (Williams & Streat, 2002, p.95).

3.3 Discussion

The previous studies are mainly related to specific programmes which seek to use sport to address issues and they are divided into prevention and rehabilitation programmes. A review of the literature reveals a healthy connection between sports and anti-social behaviour. It can be argued that participation in sports may play a role in the prison inmates' criminal behaviour or anti-social behaviour, because it can help to divert the individual's thoughts away from committing crime, or it can help to convert unfavourable definitions (such as crime and anti-social behaviour) to more favourable ones.

While the results of some studies demonstrate this correlation, others suggest that particular sports can be positively associated with criminal behaviour. These show that the consequences of practising sport in the rehabilitation centres could increase the inmates' unfavourable behaviour, such as aggression and violence. Consequently they conclude that sports may not be the solution for reducing delinquency. However there may be a serious methodological flaw in some of the research that finds a causal relationship between participation in sport and delinquency. This is difficult to establish. For instance, the study of researchers in Canada in 2006 found no evidence of a mediating role for self-esteem. Nevertheless, the studies which do not support the idea of the positive impact of sport on reducing crime or anti social behaviour emphasised that sport could be a part in the youth development process when used carefully and with the engagement of other social, psychological and physical policies.

3.4 Conclusion

This field needs more empirical studies from a social therapy perspective to identify the link between sports and rehabilitation. Very little re-

search has been devoted to health promotion or wellness programmes, exercise and other health related lifestyles, and the way that modification training can be used to develop effective treatment programmes in prisons and jails.

In light of this need, this present work has the following aims:

First: to be one of the empirical works in this field which will provide evidence about the relationship between sports and the rehabilitation process and will identify the role of sports in prisoners' lives during their term of imprisonment.

Second: to encourage further research in this area by increasing the awareness of the contribution that this dimension of corrections via sport can make to this interdisciplinary field of study. Furthermore, it is expected that this study will help to provide specific findings on the benefits associated with rehabilitation and sport, which will serve as a tool to improve this area in correctional institutes.

The focus of this thesis is based solely on the rehabilitation and correctional centres for males and not those for females. The reason for this is that there are far fewer female institutions and female inmates. This study will measure the efficiency of the programme through several measurement tools such as interviews, fitness tests, and questionnaires in order to provide the recreation system in Jordan with significant tools that will contribute to the recreational process as a whole.

4. The Society, History and General Aspects of Jordan

4.1 The State of Jordan and its History

Jordan (الأردن – Al. U’rdunn) officially the Hashemite Kingdom of Jordan, is a country in the Middle East and is a land steeped in history. It has been home to some of the earliest Settlements and villages of mankind with relics of many of the world’s great civilisations that can still be seen today (B.O.C., 2001).

The country that became Jordan is part of the richly historical Fertile Crescent region. Around 2000BC Semitic Amorites settled along the River Jordan in the area called Canaan. Subsequent invaders and settlers include the Hittites, Egyptians, Israelites, Assyrians, Babylonians, Persians, Arab Muslims, Christian Crusaders, the Mameluks, Ottoman Turks, and finally the British.

At the end of World War I, the league of Nations awarded the territory now comprising Israel, Jordan, the west bank, Gaza and Jerusalem to the United Kingdom as the mandate for Palestine and Transjordan.

In 1922, while continuing the administration of Palestine under a British High Commissioner, the British divided the mandate by establishing the semiautonomous Emirate of Transjordan, ruled by the Hashemite prince Abdullah. The mandate over Transjordan ended on 22nd. May 1946 and on the 25th of May the country became the independent Hashemite Kingdom of Transjordan (CIA, 2011).

Since 1951 Jordan has been a constitutional hereditary monarchy with a parliamentary form of government. It is politically stable, with freedom of democracy. In 1989 parliamentary elections were instituted, and since that time, martial law has been lifted and political parties have been legalised and elections held in 1993 and 1997 (Rank, 2010).

The next major crisis for the Kingdom came in 1967, when the occupation of the west bank and Gaza Strip by Israeli forces caused a massive wave of migrants to flow into the East Bank. Two decades later, in accordance with the desires of the Arab states and the Palestinian national authority, the West Bank was administratively disengaged from the kingdom in order to facilitate the establishment of the Palestinian state (Masarweh and colleagues, 2007).

4.1.1 Jordan's Location and Geography

Jordan has an area of about 35,475 square miles (91,900 square kilometres). Amman is the capital with a population of 2.5 million. It lies in the centre of the Middle East sharing its northern border with Syria, its eastern with Iraq, its south-eastern with Saudi Arabia, and its western border with the River Jordan, the Dead Sea, and Israel. Its only seaport is Aqaba in the south.

Jordan has barren desert, fertile valleys and mountains formed out of colourful rock and sand. It includes the lowest point on earth, the Dead Sea, and the Great Rift Valley, which was created twenty million years ago when tectonic plates shifted, stretching from Lake Tiberius south through Jordan and into eastern Africa (Rank, 2010).

4.1.2 Family and Kinship in Jordan

Family is the basis of Jordanian society and one of its major strengths. Like most Arab family structures, the Jordanian family is patriarchal with the male as head of the household, the major decision maker and the main disciplinarian.

Despite important changes in recent decades, the family remains an important part of Jordanian culture. Respect for elders is still found, though few still as they did before kiss their father's or mother's hand whenever they enter their presence as a public recognition of their respect. Honour and the reputation of being "good family" are still important values for Jordanians (Shoup, 2006, p.87).

A typical Jordanian household consists of a married couple, their unmarried children, and possibly some other relatives such as grand parents or a widowed parent or an unmarried sister. Because the family is central of social life, all children are expected to marry at the appropriate age an eligible spouse and the divorced or widowed are expected to re-marry.

Marriage is a family rather than personal affair because the sexes do not socially mix much. Young men and women have few acquaintances among the opposite sex, although among Bedouins a limited courtship is permitted.

Parents traditionally arrange marriages for their children, finding a mate either through their family or social contacts. Kinship is based on blood ties between men. The family form and household structure is not changed because of births, deaths, marriages, and migrations (Mongabay, 2009).

4.1.3 Religion in Jordan

Islam is the state religion, although everyone is guaranteed religious freedom. Most Jordanians (85 percent) are Sunni Muslims. Of the racial minorities, the Turkmens and Circassias are Sunni Muslims but the Druze is a heterodox Muslim sect.

Christians constitute about four percent of the population and live mainly in Amman or the Jordan valley and of these most are Greek Orthodox or Roman Catholic. Other officially recognised denominations include the Melkite, Armenian Orthodox, Marionette, Assyrian, Anglican, Lutheran, Seven-day Adventists, Baptists, and the United Pentecostal (Rank, 2010).

A tiny community of Samaritans maintains the faith of its ancestors, a heterodox form of the ancient Jewish religion. There are also numerous missionary groups within the country (Rank, 2010).

4.1.4 Language in Jordan

All Jordanians, regardless of ethnicity or religion speak Arabic, the official language of Jordan. Dialects of spoken Arabic vary greatly throughout the Arabic world. Most Jordanians speak a dialect common to Syria, Lebanon, and parts of Iraq and, like people who speak other dialects, they proudly regard theirs as the best. (Small numbers of nomads traversing Jordan from Saudi Arabia may speak a dialect akin to one used in their country) (Metz, 1989).

Beside the Arabic language, English is used widely in the government, the universities, the medical field and among educated people. Arabic and English are obligatory at public and private schools. Students are also provided with the option to learn French. At present there is a community called Francophone and it is very distinguished in modern Jordan.

Minority languages like Armenian and other Caucasian languages (Circassia and Chechen) are also spoken in the country and schools that are few in numbers also provide education in such languages alongside Arabic and English. The older Jordan generation are able to speak

Russian too because most of them have studied in the USSR (UNESCO, 2011).

Likewise, German, Italian, and Spanish are also spoken due to the fact that some Jordanians have travelled or have been educated abroad, but to a lesser extent (Suhqom, 2010).

4.1.5 Demography in Jordan

The Department of statistics executed the first Housing Units Census in 1952, giving a total population of 586.2 thousand. By the second census of Population and Housing carried out in 1961 the total population of the East Bank of the Kingdom was 900.8 thousand. The third census was carried out in 1979 when the total population of the East Bank had increased to 2,133 thousand and the fourth on 10th December 1994, with a total population of 4,139.5 thousand, whereas according to the results of 2004 census with coverage rate of 95.9% the total population was 5.1 million (Masarweh and colleagues, 2007).

Recently in 2010, and based on statistics from the Population census from the CIA, the total population in Jordan was 6,407,085. In comparison with the years 2004 and 2008 when it was 5.1 million in 2004 and 6,198,677 in 2008 the population has risen considerably (CIA, 2010).

The population of Jordan consists almost entirely of Arabs. The only sizeable racial minorities in the country are the Circassia and the Armenians where each group accounts for less than one percent of the population. Jordan is 72 percent urban whereas nomads (Bedouins) and semi nomads make up perhaps 5% of the population (Coutsoukis, 2004).

In addition, it is estimated that 75% of the Jordanian population are Palestinians, who have been evacuated after the creation of the state of Israel 1948. There are also foreign workers in the kingdom, mainly from Egypt, Syria, and Iraq (Rank, 2010).

4.1.6 Birth and Death Rate in Jordan

Table 1 represents the rate of Birth & Death Rate among the Jordanians in 2010 as presented by CIA.

Birth Rate	Death Rate	Year
27.06% 1,000 population	2.66% 1,000 population	2010

Table 1

Table 1 gives the average rate of birth and death during a year (reckoned at midyear) per one thousand of the population. The birth rate is usually the dominant factor in determining the rate of the growth of the population. It depends on both the level of fertility and the age structure in the population. On the other hand, the death rate gives a rough indicator of the mortality situation in a country and accurately indicates the current mortality impact on population growth in Jordan and according to figure 1 it is obvious that the average of births is considerably higher than the average of the deaths per 1,000 persons.

There is a huge difference between the birth rate which makes 27.06 % comparison with only 2.66% death rate. Jordan's high population growth can be attributed to high fertility rates on one hand, and on the other the Jordan's low death rate can be contributed to be a good indicator of the improvement of health services, health care and increasing the general awareness about health issues in society.

4.1.7 Youth in Jordan

Youth (young people in general) in Jordan represent a very large percentage of the Jordan's overall population. In a country that is limited in natural resources, Jordan's human resources, especially the youth, are its greatest asset. The youth in Jordan is leading the country to keep up with new developments in global scientific, economic and social sectors. While young people in Jordan have a proven track record and commitment to national development, they still need more opportunities to be able to play their full role in the society (Debono and Apap, 2008). Young People in Jordan are one of the greatest concerns of His Majesty King Abdullah who sees the youth as the greatest hope for the future and believes in their abilities, productive potential and their creativity to enable Jordan to keep up with new developments.

In order to inspire creativity and talent among young Jordanians, bringing to life the notion of active citizenship, the Royal family launched many initiatives to provide the youth of Jordan, both male and female, with means for achievement, success, preparedness and a future of promise. For instance, the "King Abdullah II Award for Youth Innovation and Achievement" (KAAYIA award) is one of the royal initiatives which invite Arab youth to showcase their success stories and the positive impact they have had on their societies. It seeks to reward these distinguished young leaders throughout the region by providing them with much needed support and recognition. It will also enable them to continue their good work, demonstrate what is possible to their peers and in turn allow the concept of active citizenship to flourish and become an inherent part of the Arab youth culture (Al Mutafiq and colleagues, 2010).

4.1.8 Age Structure in Jordan

The Jordanian population has an age group structure which is unique as the majority groups lies between 15 and 64 years (Youth Society).

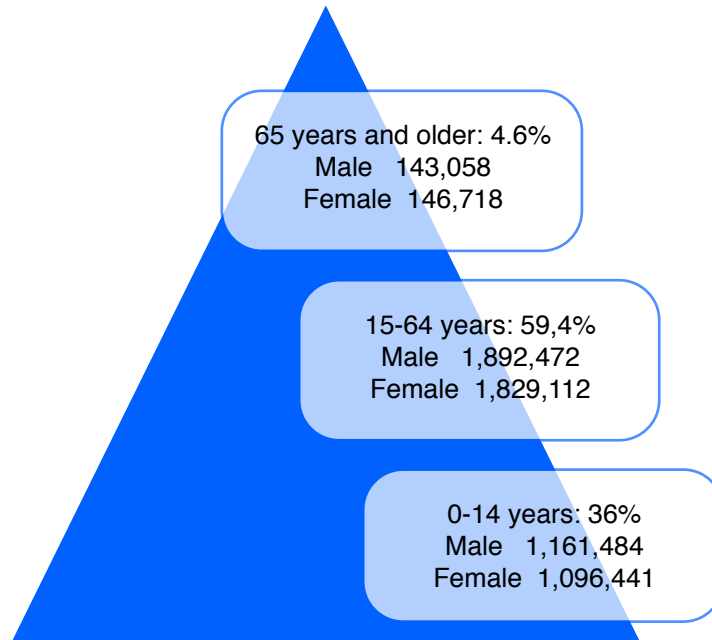


Figure 1: Age Structure in Jordanian Society in 2010

Figure 1 demonstrates the age structure in the Jordanian society according to the CIA statistics in 2010. It provides the distribution of the population according to age and gender.

At the base of the pyramid, it is easy to recognise the higher percentage of males compared to females in all age groups in which the number of males in Jordanian society is 3,196,614 whereas females are 3,072,271. As a comparison, German society favours females with 41,848,826 to 40,480,932 males (CIA, 2010).

In the middle of the pyramids, the figure shows, ages groups that lie between 15 and 64 representing 62.4% of the entire population in Jordan whereas the same group in the German society represents the highest percentage of the entire population with 66.1%. At the top of the pyramids, the figure shows that the age group from 65 and over is only

4.6%, which explains why the population of Jordan is considered to be “a youth society”.

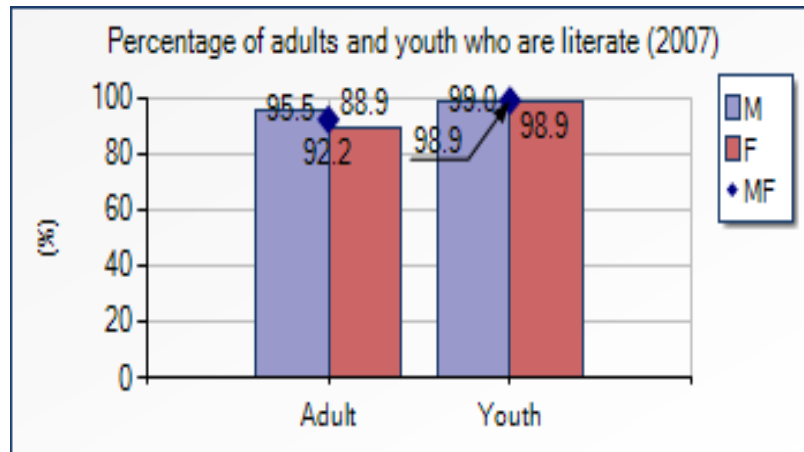
The age structure of a population affects a nation’s key socio-economic issues. Countries with young populations (a high percentage under the age of 15) need to invest more in schools and education, while countries with an older populations (a high percentage over 65) need to invest more in the health sector.

The age structure can also be used to help predict potential political issues. For example, the rapid growth of a young adult population unable to find employment can lead to unrest (CIA, 2010).

4.1.9 Education in Jordan

Jordan’s educational resources face tremendous challenges due to the high population growth. With close to half of the population (43%) below the age of 15 the challenge for the 21st century is to ensure that Jordan’s youth receive the quality of education and relevant labour market skills needed to effectively compete for domestic, regional and international employment (Al-Noaimi, 2008; UNESCO, 2010).

Jordan’s considerable investment in its human resources is reflected in its well educated workforce and a large number of university graduates which is reflected in figure 3 as the higher percentage of both educated males and females is in its youth population (UNESCO, 2010).



92.2% of adults and 98.9% of youth are literate

Figure 3: Percentage of Adults and Youth who are Literate
(UNESCO Institute for Statistics, 2008)

Figure 3 illustrates the percentage of educated males and females in Jordan in a statistic carried out in 2007 by UNESCO. It shows how in the year 2007 the trend of the literacy is increased for both males and females among the youth compared to the adult population. This increase of literate youth has two main reasons.

First, there is an increased awareness of the people with regard to education. Second, the government encourages people to be educated through different ways and initiatives, such as complimentary education and the Jordan Education initiative (JEI) which aims to accelerate education reform by innovation and to further additional values to students, teachers and the education system, and thus to effectively contribute to building an economy based on knowledge (JEI, 2009).

The structure of the educational system in Jordan consists of a two year cycle of pre-school education, ten years of compulsory basic education, and two years of a secondary academic or vocational education, after which the students sit for a general certificate of secondary education examination (UNESCO, 2010).

Additionally, access to higher education is open to holders of the secondary education certificate who can then choose between private community colleges, public community colleges or universities. The credit hour system has been adopted at universities, which entitles students to select courses according to study plans. Higher education has developed along two separate lines with traditional universities on the one hand and non-university level institutions (community colleges) on the other (UNESCO, 2010).

4.2 Modern Jordan

It is impossible to understand the fabric of Jordan's modern history without some knowledge of the royal family. The Hashemite royal family is interwoven into the life of Jordan, having established the modern state in 1921.

4.2.1 The Royal Family

His Majesty King Hussein Bin Talal (1935-1999) was born in Amman on November 14th 1935 to Prince Talal Bin Abdullah and Princess Zain al-Sharf bint Jamil. He attended Victoria College in Alexandria, Egypt, and Harrow School in England and later received his military education at the Royal Military Academy in Sandhurst, England. His Majesty, known as the father of modern Jordan, will be always remembered as a leader who guided his country through strife and turmoil until it became an oasis of peace, stability and moderation in the Middle East.

Among Jordanians, his memory is cherished as the inspiration for Jordan's climate of openness, tolerance and compassion. Known to his people as Al-Malik Al-Insan (The Human King), King Hussein established a legacy which promises to guide Jordan for many years to

come. Over the course of his life his Majesty, King Hussein, was an avid sportsman. He was an accomplished aviator motorcyclist and race car-driver who also enjoyed water sports, skiing and tennis (B.O.C., 2001).

After the death of King Hussein, on February 7th 1999 his Majesty King Abdullah bin Al-Hussein assumed his constitutional powers as King of the Hashemite Kingdom of Jordan. He was born in Amman on 30th January 1962 as the eldest son of the late King Hussein. He began his primary education at the Islamic Educational collage in Amman, and later attended St. Edmund's school in Surrey in England. For his secondary education he attended Eagle brook school and Deerfield Academy in the United States of America. King Abdullah II attended Oxford University in England where he completed a one-year special studies course in Middle Eastern affairs. Then he entered the Royal Military Academy in Sandhurst (U.K) and was commissioned as a second lieutenant in the Royal Hussars Regiment (of the British Army) where he served as a reconnaissance troop leader in the U.K. and West Germany (B.O.C., 2008).

The remarkably stable political and social climate that Jordan has enjoyed for decades under the Hashemite Dynasty continues to thrive under His Majesty King Abdullah's leadership. The new King has continued his father's legacy of reform, committing his country to the goals of privatisation, economic liberalisation and modernisation of the legal system (JCM, 2008).

Internally King Abdullah has made extensive efforts towards ensuring sustainable levels of economic growth and social development aimed at improving the standard of living of all Jordanians. He is also working toward modernising Jordan's information technology and educational system.

4.2.2 Sports in Jordan

Sports play an important part in just about every society, country, and all over our planet. In one way or another, everyone is involved in sports of some sort, whether they are playing or watching. Likewise, in Jordan sport plays an important role in many aspects of individuals' lives. Those active in sport, academia, the private sector, non-profit, non-governmental and international organisations, government agencies, the media, the general public as well as many young people are increasingly interested in the potential of sport as a tool to reach personal, community, national and international development objectives. They are also interested in how sport can be used as a tool for addressing some of the challenges that arise from humanitarian crises, in conflict and post-conflict settings.

As sport becomes increasingly part of humanitarian and development work, as well as a part of the corporate social responsibility, the practices of some private sectors those active and involved are interested to explore the potential, as well as the limitations of sport in their work (SAD, 2011). Accordingly and building upon this idea a number of community-based initiatives have taken place in Jordan in order to include sport in development and peace programmes in a more practical way. Generation for Peace is one of the examples regarding the role of sport in the peace process and in the health lifestyle of individuals.

Generation for Peace is a global organisation founded by HRH Prince Feisal Al Hussein of Jordan. Launched in 2007 it uses sport to empower youth leaders from hostile regions to act as agents of change to help instil tolerance, understanding and ultimately peace (HRH Al-Hussein, 2010). Through different kinds of programmes Generations for Peace teaches young people sports along with education on peace and how to establish these programmes in their own communities and regions.

There are various programmes: some for delegates and pioneers including for example the Peace Football League under the Youth Voices Programmes, training in life skills, with particular focus on the inclusion of girls and women in the community activities, learning team-building, acceptance of winning or losing, sharing and implementing new skills and the values of sport (HRH Al-Husseini, 2010).

Furthermore, in order to activate the role of sport in the Jordanian society among the youth, King Abdullah II founded an award for physical fitness which aims to build the participants' self-confidence, increase their fitness level, invest in their free time in a positive manner and develop their social skills. It also seeks to arouse an interest in themselves and others to regularly practice physical exercises and discover their abilities and how to develop them (RHAS, 2010).

The most popular sports in Jordan are football (soccer) and basketball, although handball and volleyball are also widely played. In individual sports, boxing, tae-kwon-do, and swimming are the most widespread followed by karate, cycling, table tennis, judo, bowling, bridge, weightlifting; boxing, shooting, gymnastics, golf, marine sports, rugby, tennis, body building, wrestling, chess, kick-boxing, squash and, fencing (Britannica Encyclopaedia, 2010; Jordan Olympic Committee, 2010). Additionally, one of the most famous sports in Jordan is motor sport, the roots of which can be traced back to 1953, when his Majesty King Hussein founded the Royal Automobile Club of Jordan, which has become the backbone for developing regional clubs for motor sport excellence (Britannica, 2010).

5. Crime as Phenomena

Crime and disorder include a vast set of incidents involving behaviour formally considered to be against the law and usually committed with 'evil intent'. The incidents range from murder to fraud, theft, and vandalism, dealing in drugs, computer hacking and acts of terrorism (Smith & Tilley, 2005, p.28).

Crime is not only a social phenomenon but it is also a scientific field attracted by sociologists, psychologists and criminologists. Yet criminology as a degree subject began at least 250 years ago. Since then it has been shaped by philosophers, psychologists, anthropologists, psychiatrists, medics and lawyers as well as by the sociologists, cultural analysts and historians.

"Unfortunately crime is one of society's' universals: it exists wherever there is material, emotional or ideological conflict between individuals or groups and wherever there are concentrations or flows of wealth, goods and services that motivated criminals can safely tap into in order to yield a more congenial living". Yet, individuals, communities, institutions and governments can take a range of responses that over time and space are able to reduce the volume of crime, its rate of growth and its consequences (Smith & Tilley, 2005, p.28).

5.1 Crime in Jordan

According to crime and criminal justice statistics the national sources of information on crime show considerable differences in approach and coverage which means that the measurement of crime trends at the European Union level is still at an early stage (Thomas & Tavares, 2009).

It is possible for only about half of the EU member states to compare trends in total crime over the period 1998-2007. From 1999 crime rose to reach a peak about 2002 but has fallen consistently in the next five years. The types of crime which have featured increasingly in the police records in the period 1998-2007 include violent crimes (up 3%) drug trafficking and robbery (both up 1%). In the same context, Abei, 2004, pointed out that the upward trend in violent crimes can be explained partially by gang struggles over the control of illegal markets and by the association of problematic neighbourhoods, but seems also due to a large extent by the increase in the reporting of violent offences by their victims and the recording of such offences by the police. The analysis shows that opportunity-based theories provide a satisfactory explanation of the trends in recorded crime and that the crime opportunities are heavily influenced by socio-economical factors (cf. Abei, 2004, p.163).

Furthermore the types of crime which have become less prevalent over the period 1998-2007 include property offences such as theft of motor vehicles (down 71%) and domestic burglary (down 3%). The annual rate for homicides as recorded by the police in the period 2005-2007 was about 1.4 per 100,000 of the population, but rather higher in capital cities (an average of 1.9).

Finally the report recorded that over the period of 1998-2007 the percentage of the prison population rose by about 1% annually to reach for the years 2005-2007 an average per 100,000 of the population (Thomas & Tavares, 2009). For instance, in Germany over the same period (1998-2007) the tendency of the total crimes had fallen from 6,456,996 to 6,284,661. The same can be said about the total crimes in England and Wales which fell over the same period from 5,109 to 4,950,971 (Thomas & Tavares, 2009).

However, the analysis of crime rate statistics around the world remains complicated. Different definitions of what constitutes a crime make offi-

cial criminal statistics unreliable. Still the United Nations' initiative of global crime rates tracking, the World Crime Survey, may offer the most realistic and reliable figures. Madsen (2006) also suggests some factors affecting crime levels:

- A difference in the legal and criminal justice systems.
- The rates of crime reporting and police recording.
- Differences on the point at which the crime is registered. For example some countries believe it is the time when a suspect is identified and the papers transferred to the prosecutor.
- Differences in the ruling by which multiple offences are counted.
- Differences in the lost offences to be included in the total crime figures.
- Differences in data quality (Madsen, 2006).

5.2 Types of Crime in Jordan

“Crime” comes from the Latin “crimen” which means ‘judgement, accusation or offence’. A crime is an act in a violation of a law and a misdemeanour is a less serious crime, while a felony is a major crime (The-saurus, 2011). Farahat (2008) defined crime as “any act that causes damage or injury to persons or public or private property, and covers grave crimes, felonies as well as simple offences” (Farahat, 2008).

Crimes are divided into three categories: grave crimes, defined as those such as murder for which they are convicted to death or imprisonment for a minimum of three years; felonies as those offences for which the convicts serve their sentence in a detention and rehabilitation centre for a period from one week to three years, and simple offences which do not pose any threat to society and most of which end with conciliation between the litigating parties (Farahat, 2008).

5.3 Crime Rate and some Statistics from Jordan

The latest Public Security Directorate Statistics show that from 2008 to 2009 the number of recorded crimes in the Kingdom rose by 4,5%. It emphasised that these figures indicate no cause for alarm, as the rise was well within the natural range expected of a developing country with a rapidly growing population (Abo-Ragheb, 2010).

According to the Department of Statistics, from 2008-2009 the rate of crime rose only by 2.2 % while from 2007-2008 it was 1.7% and in 2009 there was a decline in the number of crimes in several categories. The possession and sale of stolen goods plunged 34% to 909 cases; reported rapes declined 1.7% to 118 cases, and murders dropped by 11%, to 19 cases. That is fewer than 1.5 murders per 100,000 citizens. While such comparisons give the impression that the murder rate is not high on a global scale, according to figures from the United Nations in 2008 there were 5.2 murders per 100,000 citizens in the United States, and 60.9 per 100,000 in Honduras the same year (Abo-Ragheb, 2010).

5.4 The Correctional System in Jordan

In Jordan there are fourteen correctional and rehabilitation centres distributed geographically in the different parts of the Kingdom which have five different “care programmes”:

1. Health care: Almost every rehabilitation centre provides the inmates with the general medical care they need.
2. Religious Care: With regards to religious care the centre assists its inmates by all possible means such as providing them with the Holy Quran in addition to various religious books and places of worship inside the centre with suitable furniture as well as inviting clerics to preach and lecture on different topics.

3. **Cultural and Educational Care:** In the field of cultural care the system provides the inmates with all necessary cultural needs, including TV sets, newspapers and magazines. In addition, different cultural and educational programmes are provided inside the centre and the inmates have the right to take part in them. These programmes include painting, music, and drama. It is noteworthy to mention that the administration of the rehabilitation and correctional centres publishes a special magazine for the inmates under the name "Inmate" which deals with many issues concerning the inmates, the activities which have taken place in the centres, and some other social and educational articles.
4. **Social Care:** Social care is provided for the inmates through experts and social workers in order to gain information about the inmates' social circumstances and their families' background which aim at assisting (supporting) financially the inmates' families that are in need.
5. **Sport Programmes:** The centre organises championships such as, volleyball, basketball, chess, and football tournaments.

Additionally, these centres offer four rehabilitation programmes:

1. **Farming and Agricultural Production:** This program aims at training the inmates to develop their skills in this area so that after their release they can work and be productive in society.
2. **Professional Training:** The centre organises different kinds of professional training in co-operation with the local organisations in the society in order to train the inmates in vocations that suit their wishes and abilities. Those who participate in one of these programmes will be given a certificate enabling them to work after they leave the centre.

3. Academic Education: In co-operation with the ministry of Education, the centre affords free education for the inmates, ranging from literacy classes to high school. Furthermore, the centre gives the inmates the opportunity to do their graduate and post-graduate studies in conjunction with the local universities and colleges and also holds regular English and computer courses for them.

4. Handicraft Factories: The centre provides different handicraft factories for the inmates enabling them to work and earn a salary. Some of these handicraft factories provide for carpentry, decoration, metal craftsmanship, tailoring, cookery bakery and chemical purification.

Furthermore, the inmates have the opportunity of participating in the social insurance scheme in order to ensure a fair chance for a normal life when they return to society after serving their sentence (www.crc.psd.gov.jo).

6. Theories of the Study

“Theories are useful tools that help us to understand the world around us“ (Akers & Sellers, 2004, 5). Theories that explain a broad range of phenomena are powerful, yet ambitious criminologists, sociologists and psychologists aim at explaining crime and deviance in general. In criminology, theory helps in examining why people commit crime on the ongoing debate of how crime should be prevented and handled. Furthermore, many theories have emerged over the years, and they continue to be explored, individually and in combination, as criminologists seek the best solution in ultimately reducing types and levels of crime (cf. Briggs, 2009).

Modern criminology is unthinkable without the contribution of sociological theories. However, not all criminology is sociological in orientation and, far more troublesome, not all sociologically minded criminological work is resolutely and thoroughly grounded in theory (cf. Deflem, 2006, p.1). According to Dantzer & Hunter (2002), criminology has four major models, the classical school of criminology, the medical model, the sociological model and the interdisciplinary model (cf. Dantzer & Hunter, 2002, p.25-26). They also divided the criminological theories into two main categories: the social structure theories and the social interaction theories (cf. Dantzer & Hunter, 2002, p.103).

They asserted that social interaction theories may be viewed as being more social-psychological in nature, whereas the social interaction theories present a relatively consistent theme in that social processes and interactions are seen as influencing criminality (cf. Dantzer & Hunter, 2002, p.103). However, Reid 2003, argued that it is not possible to separate all sociological theories into categories. Therefore, and to explain these differences, sociologists suggest that human behaviour is learned and that criminal behaviour may be acquired in the same way as any other behaviour (Reid, 2003, p.162).

Accordingly, and in order to understand the reasons behind criminal behaviour better, the hypotheses advocating the influence of sports on the inmates, can be integrated within several existing criminological theories. Three criminological theories are specifically relevant to crime and sports: (1) social learning theory, (2) cognitive and social cognitive theory, and (3) self control theory.

6.1 Social Learning Theory

The “Social learning theory” is a general theory of criminal and deviant behaviour that has found consistent and robust empirical support for more than four decades. Throughout the years the generality and the validity of the theory have become increasingly recognised. In recent major compilations on the status of the criminology theory, the social learning theory along with control theories were placed as the “core” theories in the field (Akers & Jennings 2009, p.103). Therefore, various scholars have based their research on the learning theory which was presented originally by Robert Burgess and Akers (1966) as a different association reinforcement theory which is also an integration of Sutherland’s (1947) as a sociological theory of differential association with behavioural principles (Goode, 2008, p.79).

Social learning theorists share many assumptions with behaviourists, particularly the belief that people are shaped in fundamental ways by their environment through the learning processes. Social learning theorists also acknowledge that classical and operational conditioning is an important influence on human behaviour. However, they add to these learning processes a third: observational learning. They believe people learn by observing others and therefore that other people in the social environment are particularly important as an influence on behaviour. Along with the emphasis on observational learning comes a belief that it

is impossible to explain human behaviour, something that behaviourists reject (cf. Sammons, 2009).

Additionally, the learning theory has been developed by sociologists and psychologists to explain a variety of human behaviours and simply stated, the individuals become predisposed toward criminality because of an excess of contacts that advocate criminal behaviour. Due to these contacts a person will tend to learn and accept values and attitudes that look more favourably on criminality (cf. Hagen, 2011, p.158).

The first major theory of social learning was that of Julian Rotter which argued that cognition in the form of expectations is a crucial factor in the social learning theory. Furthermore, Rotter claimed that behaviour is determined by two major types of expectancy: the expected outcome of a behaviour and the value a person places on that outcome (Gale, 2001). Whereas, the social learning theories of Albert Bandura emphasise the reciprocal relationship among cognition, behaviour, and environment for which Bandura coined the term “reciprocal determinism”. (Gale, 2001) For example, hostile thoughts can result in hostile behaviour which can affect our environment by making others hostile and evoking additional hostile thoughts.

Thus, not only does our environment influence our thoughts and behaviour, but our thoughts and behaviours also play a role in determining our environment. Bandura is especially well known for his research on the importance of imitation and reinforcement in learning. His work on modelling has been influential in the development of new therapeutic approaches, especially the methods used in cognitive behavioural therapy. Bandura also expanded on Rotter’s notion of expectancy by arguing that our expectations about the outcome of situations are heavily influenced by whether or not we think we will succeed at the things we attempt. Bandura introduced the term “self-efficacy” for this concept, arguing that it has a high degree of influence not only on our expectations

but also on our performance itself. Relevant in this context, is that Bandura is considered as one of the most prominent scholars who based his work on “reciprocal interaction” between cognitive behaviour and environmental determinants (Reid, 2003, p.162; Gale, 2001).

According to Akers the social learning theory consists of four elements, the first element is “imitation”. Imitation refers to the extent to which one imitates the behaviour of individuals one admires. In the present case the theory predicts that individuals who personally observe others whom they admire engaging in acts of violence against a partner are more likely to engage in that behaviour as well (Akers & Jensen, 2002, p.113). Imitation refers also to the engagement in behaviour after the direct or indirect observation of similar behaviour by others whether or not the behaviour modelled by others will be imitated is determined by the characteristics of the models (Cullen & Wright & Blevins, 2006, p.40). The social learning holds that the media plays a role in the imitation process. It is thought to provide additional references groups and sources (Rogers, 2001, 25-26).

It is important to note here that, in social skills training, modelling (imitating) can be divided into two types: (a) live modelling in which the target individual observes the social behaviour of models in naturalistic settings and (b) symbolic modelling in which a target child observes the social behaviours of a model via film or videotape. Both types of modelling have been effective in teaching social skills (Elliot and Gresham, 1993, p.301).

The second element of the social learning theory is “definitions” which refers to the attitudes or level of approval individuals have regarding morals, laws in general and specific deviant behaviour (Akers & Jensen, 2002, p.13). According to Britt, Gottfredson (2003) and Akers (1998) definitions “label the commission of an act as right or wrong, good or bad, desirable or undesirable, justified or unjustified” (Akers & Jensen,

1998, 3-4). Goode (2008) assumes that definitions refer to an individual's own general and specific, positive and neutralising attitudes, values, orientations, definitions of the situation and other evaluative and moral attitudes that orient the individual to the commission of an act as right or wrong, good or bad appropriate or inappropriate, expected or unexpected (Goode, 2008, p.80).

Sutherland (1947) argues that a person becomes delinquent or criminal because of an excess of definitions favourable to the violation of law over definitions unfavourable to the violation of the law. Then the expectation is that the individual will be more likely to make a decision to engage in criminal/deviant behaviour. This principle of differential association according to Sutherland assumes that individuals can learn these "definitions" through interaction with others who are already involved in criminal / deviant activities. In contrast learning favourable definitions toward engaging in conforming behaviour from law-abiding citizens is not always the case (Akers & Jennings, 2009, p.104). Cullen, Wright & Blevins concluded that the individual can either learn favourable definitions from others that would likely increase the probability that he would copy that behaviour or he can learn unfavourable definitions that would likely decrease the probability that he would engage in that particular behaviour.

The third element of the social learning theory is the "differential association". The main of this is that conduct is learned through coming into contact with social norms. The nature of one's conduct is therefore influenced by the norms present in the particular groups of which one is a member and of other groups with which one comes into contact on a regular basis (Newburn, 2007 p.151). These most important groups are primarily those of the family and friends, but the concept of differential association also includes both direct and indirect interaction and exposure to secondary and reference groups as well as to mass media, internet, computer games, and other "virtual groups" (Cullen, Wright & Blevins, 2006, p.38).

In criminology according to the “differential association”, criminal behaviour is learned and the learning process is influenced by the extent of the individual’s contact with persons who commit crimes. The more an individual associates with such persons, the more likely it becomes that he will learn and adopt criminal values and behaviour (cf. Erickson, Crosnoe and Dornbusch, 2000, p.398). More specifically, the individuals with whom a person differentially associates are those who expose the individual to the normative definitions, values, and attitudes favourable or unfavourable to a particular behaviour (as well as behavioural models and social rewards / punishment). If a person is differentially associated with those who are involved in criminal behaviour or demonstrate pro-criminal attitudes, then he or she is more likely to engage in the criminal/deviant behaviour. In contrast, if the person differentially associates more with those who participate in and express conforming behaviour then he or she is more likely to refrain from involvement in crime and instead engage in pro-social behaviour (cf. Akers & Jennings, 2009, p.106).

The fourth element of the current theory is the “differential reinforcement” which means that individuals may teach others through the reinforcement of punishment of certain behaviour. “This is the balance between rewarding with desired outcomes or with negative and undesirable consequences of actions. “The greater the reinforcement on balance, depending on what is anticipated for a given action, the more likely it is to be repeated” (Akers & Jensen, 2002, p.40). In other words, crime is more likely to occur when it is frequently reinforced and infrequently punished. Moreover, the results of criminal behaviour will be increased with regard to money, social approval or gratification which causes the individual to commit crime regarding these benefits.

In this context the same has been argued that criminal behaviour and attitudes are most likely to be learned when they are reinforced by family and friends. When the rewards for criminal behaviour outweigh the

rewards for alternative behaviour, differential reinforcement occurs and the criminal behaviour is learned (cf. Dantzer & Hunter, 2002, p.107).

6.2 Cognitive and Social Cognitive Theory

Study of cognitive and social cognitive theories shows significant corresponding factors, which we would like to highlight for understanding and to implement in current sport intervention.

In recent years, cognitive theory has received increased recognition as it focuses on the mental process, the way individuals perceive and mentally present the world around them and how they solve problems (cf. Fritscher, 2001). According to Neisser (1967), cognition refers to all processes by which sensory input is transformed, reduced, elaborated, stored, recovered, and used. The reference to a sensory input implies that cognition begins with our contact with the external world (Reed, 2013). The last part of Neisser's definition is the most important: after information has been perceived, stored and recovered, it must be put to good use (Reed, 2013).

Jean Piaget (1980), a pioneer of this perspective, asserted the following: (1) An individual's internal mental structures and schemes can be learned by direct observation of that individual's behaviour. (2) Intellectual or cognitive growth is linked to the physical, social and linguistic milieu of an individual. (3) Human beings as a biological species are intrinsically motivated to grow intellectually or mentally by the process of the organisation and adaption common to all organisms (Neurrenben, 2001, p. 1107).

Kohlberg maintained that people travel through stages of moral development during which their discussions and judgements on issues of right and wrong are made for different reasons. Kohlberg's stages of development are as follows:

1. Right is obedience to power and avoidance of punishment.
2. Right is taking responsibility for oneself, meeting one's own needs and leaving to others the responsibility for themselves.
3. Right is being good in the sense of having good motives, concern for others, and "putting yourself in the other person's shoes".
4. Right is maintaining the rules of a society and serving the welfare of the group or society.
5. Right is based on recognised individual rights within a society with rules agreed upon, such as a social contract.
6. Right is assumed obligations to the principles applying to all humankind, such as principles of justice, equality and respect for human personality.

Kohlberg classified people according to the points of this scale at which their moral development ceased to grow (Hunter & Danzter, 2002, p.3). In studies conducted by Kohlberg and his associates, criminals were found to be at significantly lower levels than non-criminals of the same background in their moral judgement development. The majority of non-criminals were classified in stages three or four, while the majority of criminals in stages one or two (cf. Hunter & Dantzer, 2002, p.73).

Cognitive theorists posited that mental disorders and pattern of thoughts and beliefs plays a role in causing social disorders (anxiety). They posit that on the basis of early learning experiences, individual with social anxiety develop number of distorted, negative assumptions about themselves (e.g "I am stupid", "I am unattractive"). That becomes reinforced over time by selective information processing errors that occur both within and between social encounters (cf. Hoffman, 2007). In

addition, when faced with social threat, individuals with social anxiety shift their attention inward and engage in a process of detailed self-monitoring, during which they experience spontaneous, recurrent, and excessively negative self-images that they perceive as being accurate (cf. Hoffman, 2007).

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Furthermore, behavioural theorists view anxiety as a product of learning processes such as modelling and classical conditioning. The behavioural model assumes that psychopathology is environmentally determined. Information regarding the influence of parental and other family environmental factors on the development and maintenance of social anxiety come from studies that examine adults with social anxiety (Elmer, 2004, p.15).

Elmer (2004) posits that deficits in social skills have also been theorised to contribute to the maintenance of social anxiety disorders. Elmer continues that social performance significantly contribute to social anxiety in the sense that those who are more anxious demonstrate poor social performance on behavioural assessment tasks relative to non-anxious controls (Elmer, 2004, p.19).

In regard to criminal thinking and cognitive theory, Hollin (1992), explained that one of the most notable characteristics of criminal offenders is distorted cognition, self-justificatory thinking, misinterpretation of social cues, displacement of blame, deficient moral reasoning, schemes of dominance and entitlement, and the like (cf. Hollin, 1992). Accordingly, it seems appropriate to deliver treatment programs to young offenders that focus on cognitive aspects and the various deficiencies and delays that appear to be associated with young offenders. For instance, Nichols (2007), in his effort “Sport and Crime Reduction” emphasises that crime reduction programs should focus on the development of cognitive skills (cf. Nichols, 2007).

Moreover, Nichols (2007) discussed the work of Ross and Fabiano in developing an understanding of criminal behaviour as being predisposed to a set of cognitive deficiencies that were apparent in offenders. These deficiencies included: an inability to solve interpersonal problems and to deal with relationships, a lack of self-control and the ability to reason abstractly, a low locus of self control, and an inability to feel empathy with others (Nichols, 2007, p.6).

In the same context, Lipsey, Landengerger and Willson (2007), discussed the effort of Ross and Fabiano (1985) as a cognitive behavioural therapy program for offenders including “The Reasoning and Rehabilitation” program, which was organised around exercises. The program focused on modifying impulsive, ego-centric, illogical and rigid thinking of offenders and teaching them to stop and think before acting, to consider consequences of their behaviour, to conceptualise alternative ways of responding to interpersonal problems, and to consider the impact of their behaviour on other people, particularly their victims (cf. Lipsey, Landenberger & Wilson, 2007).

Finally, cognitive behavioural intervention programs apply various techniques that attempt to change social cognition. Such techniques include

self-instructional training, modelling, role play, discussion and training skills for problem solving (Borden, 2002, p.24).

The previous techniques are a core concept in the social cognitive theory, which explains how people acquire and maintain certain behavioural patterns, while also provides the basics for intervention strategies (Glanz & Lewis, 2002). Social cognitive theory favours a model of causation involving triadic reciprocal determinism. Bandura (1989) explained this model as reciprocal causation, behaviour cognition, and other personal factors and environmental influences. All operate as interacting determinants that influence each other bi-directionally (Bandura, 1989, p.1-60). Bandura (2001) asserted a closely related assumption with the social cognitive theory, which is that people have the ability to influence their own behaviour and environment in a purposeful goal (cf. Bandura, 2001).

While this assumption does not deny the importance of the environment in determining behaviour, it does argue that people, through forethought, self reflection and a self-regulation process, exert substantial influence over their own outcomes and the environment more broadly (Denier, Wolters & Benzon 2009).

Another assumption within social cognitive theory is that learning can occur without an immediate change in behaviour, or more broadly, that learning and the demonstration of what has been learned are distinct processes. One reason for this separation is that social cognitive theory also assumes that learning involves not just the acquisition of new behaviours, but also of knowledge, cognitive skills, concepts, abstracts, rules, values and other cognitive constructs. This division of learning and behaviour is a shift from the position advocated as a change in the form of frequency of behaviour. It also means that learners can learn, yet not demonstrate that learning until motivated to do so (Denier, Wolters & Benzon, 2009).

6.3 Self-Control Theory

At the heart of the general theory is the self-control theory with its concern for the long-term consequences of one's actions (cf. Newburn, 2007, p.235). Gottfredson and Hirschi (1990) listed the "elements of a lack of self-control" as: incapacity to delay gratification, lack of tenacity and persistence, preference for physical rather than mental activities, intolerance of frustration, and lack of sensitivity to the needs of others." In other words, 'people who lack self-control will tend to be impulsive, insensitive, physical (as opposed to mental), risk-taking, short-sighted, and nonverbal, and they will tend therefore to engage in criminal and analogous acts" (Gottfredson and Hirschi, 1990, p.90).

In the original statement of the general theory, Gottfredson and Hirschi stated that the lack of self-control can be defined as the tendency to pursue immediate gratification to the neglect of its long-term consequences, and is mainly composed of six elements: temper, risk taking, self-centredness, preference for simple solutions to problems, and preference for physical activity over those that more sophisticated, such as verbal persuasion. Therefore, the theory merges concepts of control theory with rational choice, routine activities, and biological and psychological explanations. Hunter and Dantzer (2002) emphasised how crucial it is to distinguish between crime and criminality. According to Reid (2003) the term criminality means a trait of the personality that is central to the thesis of this approach, i.e. low self-control, whereas crime is an act of force or fraud undertaken in pursuit of self-interest (cf. Hunter & Dantzer, 2002, p. 153; Reid, 2003, p.180).

The Self Control Theory is used by sociologists to explain differences between people in the frequency of engaging in a wide variety of acts of which that cause harm to others. It is defined as the tendency to avoid acts of which long-term consequences exceed their momentary advantages. The consequences include penalties from institutions such as,

schools and the criminal justice system, the loss of affection from family and friends, loss of jobs and advancements in employment, and bodily injury and physical pain (cf. Gottfredson, 2007).

“Modern control theories in criminology have their roots in systematic efforts to discover and then to explain the facts with regard to crime and hold first place among modern theories for this generation of research” (Cullen, Wright & Blevin, 2006, p.77). In the control theory criminal behaviour is likely whenever its advantages outweigh immediate and long-term risks, as perceived by the individual (cf. Britt & Gottfredson, 2003, p.151). In addition, the control theory assumes that delinquent and criminal acts provide immediate and obvious benefits, or satisfaction of ordinary human desires, at little expense of time and energy This means that all people are alike in that they tend to pursue self-interest, seek pleasure and try to avoid harm, because most criminal and deviant acts satisfy human needs and desires, and control theories assume a relatively constant motivation for deviance (cf. Cullen, Wright & Blevins, 2006, p.79).

Among these control theories, low self-control theories have gained increased recognition. A key mechanism in these theories is the idea that the greater the individual’s self-control is, the less the person is likely to be attracted to short-term rather than long term gains. This implies that people with greater self-control will be less likely to commit crimes, since these acts are aimed at primarily short-term benefits for the offender (cf. Britt & Gottfredson, 2003, p.168).

Therefore, individuals with a high level of self-control will not engage in behaviour that could either harm their plans or other individuals, but they tend to have low rates of crime, delinquency and substance abuse because these kinds of behaviour entail potential long-term costs and they tend to have relatively high rates of school and employment success and lasting interpersonal relationships. In contrast, individuals who

do not pose an adequate level of self-control will engage in a wide variety of acts that provide immediate gratification without consideration of long-term risks for themselves or possible harms to others (Nofziger, 2001, p.14-15; Delisi & Vauhn, 2007, p.3-5).

Newburn (2007) examined the final major question for the general theory of crime: What causes low self-control? Why do some people display low self-control compared with others? The answer endorses the view that the cause of low self-control is ineffective or incomplete childhood socialisation and especially ineffective child rearing by parents (Newburn, 2007, p. 253; Goode, 2008, p.79).

More particularly, those with low self-control have parents who generally fail to monitor their behaviour or are poor at recognising inappropriate behaviour and either do not punish such behaviour or do so only inconsistently. By contrast, effective child rearing tends to involve consistent monitoring of behaviour and the punishment of deviation, leading to high levels of self-control (Newburn, 2007, p.236).

Relationship between Theoretical Concept and Present Study

Generally speaking, scholars tend to base their scientific efforts on a good theory and not on common sense because theories are often more testable than common sense, and it is easier to make clear consistent predications from a consistent theory rather than from inconsistent common sense.

Therefore, the present study is based on three major theories (The social learning theory, the control theory and the cognitive and social cognitive theory) which on the one hand explain the criminal behaviour and the reasons behind criminality, and on the other hand, aid in planning intervention programmes oriented toward the prevention and reduction

of anti-social behaviour among the inmates. The present study utilises an intervention sport programme constructed with a scientific background which primarily aims to help the inmates develop self-control strategies which should reduce behavioural deficiencies or behavioural excesses (cf. Friedrich, M.A, 2011).

It has been scientifically proven that self-control is often associated with criminal behaviour (cf. Gies, 2003, p.62). When one lacks self-control, one lacks the ability to recognise the long-term negative consequences in favour of immediate benefits. Consequently, those with high levels of self-control will tend to avoid criminal acts and those with low self-control will tend to engage in such behaviour (cf. Gies, 2003, p.62). Accordingly, this intervention attempts to develop the inmates' self control and pro-social behaviours through providing them with different experiences in the field, as sports participation has the potential to shape the individual's actions and behaviours (cf. Gough, 1977; McKinley, 2003, p.15). In addition, they will be taught about the benefits of sport, the social function of sport in society and the importance of rules, which will enable them to apply this understanding outside the prison.

Moreover, self control strategies are often taught in the treatment and rehabilitation centres and are based primarily on the social cognitive theory and behavioural skills used by individuals to maintain self-motivation and achieve personal goals (cf. Friderich, M.A, 2011). There are three main types of self-control strategies: (1) environmental strategies, (2) behavioural strategies and (3) cognitive strategies.

Some of these types are applied within the current programme. For example, the environmental strategies involve changing times, places and situations where one experiences problematic behaviour. These can be applied within the programme through providing the inmates with outdoor activities which reflect the changing of the places and situations and through the situations in various games or matches which include

failure and success. Through the programme these environmental strategies are applied consistently over a period of two months. All of these circumstances could play a positive role in developing the inmates' self control strategies, which will help them in reducing their tendencies toward anti-social behaviour and behavioural deficiencies. According to the type of behavioural strategies, self-support is one of the examples which encourages asking others to work toward the same goal which is described in the programme as it gives the inmates plenty of opportunities and challenges them toward teamwork and to be supportive to one another in order to achieve their goal and win.

Another type of the self-control strategy is cognitive and social cognitive strategies. Cognitive strategies involve changing one's belief about particular behaviour and social cognitive strategies involve social competence, morale reasoning, social perspective-taking skills, such as empathy and role taking, locus of control and impulsivity (cf. Friedrich, 2011). For example, the significance of the rules within the game/match could discipline the inmate's views concerning crimes and anti social behaviour, which would help them to be more observant of laws. In addition it has been demonstrated that appropriate social behaviour such as cooperation, being a good friend, helping others, having good manners and respecting others improve only when interventions are implemented in physical activity settings. The social learning theory asserts that most behaviour is learned and thus, direct instructions can be employed to teach pro-social behaviour (cf. Samalot, 2007, p.13).

Referring to the social learning theory, Spence (2003) described a social skills training programme that aims at teaching a range of fundamental social skills and strategies to help deal with common social situations that present a challenge for young people. Spence argued that instructions, discussion and modelling are used to provide information about how to perform a particular response and why such behaviour is important for social outcomes. Spence added "we know from the

social learning literature that learning is most likely to occur if the model is of a similar age and background to the trainee, and provides a competent but not unrealistically perfect performance” (Spence, 2003, p.90).

The previous notion supports the idea in the current study which focuses on the role of leadership. In line with Spence’s model above, coaches who assisted this study were of a similar age of the inmates, creating a better and more active atmosphere to work in the development of the inmates’ social skills, and the idea of the similar age, as the coaches who assist this study are in the similar age of the inmates which creates a better and active atmosphere to work in.

Additionally, the current sport programme helps the inmates to learn or develop these social values through different situations within the games or the matches which will help them practise these values in the field. As social values are enforced and given greater merit in sports, the field is a great place to learn moral and social values (cf. Rudd, & Andy, 2005, 205-211). Furthermore, by the use of the ‘differential association’ aspect in the social learning theory, young people are moved from the criminal culture of their peer groups to mix with more positive role models (Coalter, 2005, p.25) as applied in this programme. The inmates will have the opportunity to mix with different individuals from outside the prison, such as the leaders (coaches), some other sport communities and groups which will play matches and games with the participants (inmates).

Description of Sport Programme and its Relationship with the Theories of the Study

The sport programme is better described as a recreational fitness programme as the primary aim of this programme is participation with the related goals of improved physical fitness, fun and social involvement is

often prominent. Recreational, fitness, and cognitive sports are usually perceived as being less stressful, both physically and mentally, and to commitment to the sport in the recreational, fitness sphere (Gale, 2001). Additionally, recreational and fitness sports play an important part in achieving physical, psychological and spiritual health (cf. Williams and colleagues, 2002. p.31).

It has also been proven scientifically that recreational and fitness sports programmes play an important role in the social control of prisons, other findings show that these programmes are beneficial to inmates during their incarceration in a number of ways, for instance, these programmes reduced stress and / or frustration, alleviated boredom, increased self-esteem, helped in the establishment of goals and a routine, and assisted inmates in developing friendships. (Caplan, 1996).

Moreover, the sports programme includes physical cognitive activities; aimed at enhancing the abilities of the inmates to react appropriately in different situations as well as, stimulate their positive thinking in resolving a problem during the game (activity) (Hogle, 1996). This could help them resolve real issues in their real life after re-entry into their respective societies. These activities were designed to be played in peers or with a whole group, which help the inmates to learn the meaning of cooperation.

Building upon the current sport programme consists of two parts: theoretical and practical. The theoretical part consists of three lectures: first beginning with an explanation of the benefits of participation in sport within the three realms, social, physical and psychological, second the social function of sport in society and third the significance of the rules in the games. Through the theoretical part of the intervention the aim is to provide the participants with knowledge concerning the social, physical and psychological benefits of sport, beside the significance of the rules and playing according to them. The lectures will be presented by

specialists in the sport science field. This scientific knowledge helps the inmates to gain positive definitions (favourable definitions) about sport which will (hopefully) affect their attitudes, orientations and values in their lives after prison. (cf. Akers & Jennings, 2009, p.106).

In addition, the programme contains team and individual sports and other physical activities, which involve running, jumping and stretching. Team and individual sports play a vital role in one's social well-being. For example, they contribute to the development of a person's social skills and enable him to positively interact with others and act as part of a team. They also foster collective thinking and develop planning skills in the participants.

Interestingly, sports involve competition (e.g. winning and losing), which exposes the individual to both success and failure and helps him to accept both aspects of life in a positive manner (cf. Oak, 2001). Much has been written about the various benefits of participating in team sports, which include both physical fitness and an enhanced opportunity to develop mental, social and leadership strengths. Co-operation with peers and authority figures, team work, interpersonal communication skills, responsibility, social skills and other personal developments all benefit the participants in team sports (cf. Gosling, 2010).

Moreover, people who play team sports learn to deal with failure and success in all aspects in their lives. Individual sports on the other side give the individuals the chance to become stronger especially mentally, as it is a challenge to play as an individual because it makes the player handle the circumstances in the game alone with courage and perseverance which as a consequence makes the player mentally persistent for the rest of his / her life.

Furthermore, individual sport help people get through bad or rough moments in life, because in individual sports one experiences deep moments of failure and terrible losses which he / she has to handle.

This process helps prepare them difficult challenges in life (cf. Bradenton, 2009). In addition, individual sports help in becoming more confident and responsible as the individual has to take quick decisions without asking anybody (cf. Bage, 2011).

6.4 Statement of Hypotheses and Questions of the Study

Statement and Hypotheses

There are many benefits of being involved in physical activities and sports. One of the most important contributions that sport makes is in the area of psycho-social and physical development among youth and adult (Gatz and colleagues, 2002, p.34). The literature also indicates that sport experiences foster citizenship, social success, positive peer relationships, and leadership skills. Further, youth sport and physical activity participants has been positively correlated with adult career achievement, opportunities to experience positive inter-group relations, community integration, social status, and social mobility (Thomas, Deakin & Cote, 2005, p.24). Additionally, participating in positive physical activities can help young people feel good about themselves and their chances in life by developing their confidence and self-esteem, their motivation and aspirations. These characteristics can have an impact on their attitudes in different fields of their lives and can also reduce involvement in crime and anti-social behaviour (Sport England, 2008, p.6).

Nevertheless, there appears to be a gap between the potential positive outcomes of sports participation and some of the negative realities of youth and adult sport programmes. Building upon this foundation, this work is to be considered as one of the scientific efforts in this field trying to narrow this gap by assuring that youth and adults have a positive experiences rather than negative outcomes from sport involvement. This work deals with two main statements:

First

For many years physical educators stressed the inter-relationship between sports and psycho-social health. The first statement of the present study will support the suggestion which claims that it is possible to develop positive social skills and to reduce the tendency toward criminal activities and anti-social behaviour among adult inmates through a structured sport programme.

According to the cognitive theory it can be contended that sport participation provides the individuals with new ways of thinking which can help them by turning their thoughts from criminal behaviour. In particular, it is not surprising that successful sport rehabilitation programmes attempt to change the way offenders think about crimes (Nichols, 2007). Subsequently, participation in sport reduces the propensity of the young people to engage in criminal behaviour by way of character building and the socialising effect through which the participants learn virtues such as discipline, selflessness, respect, courage, leadership and team spirit. These disciplines learned by the participants on the field can be transferred to their lives off the field, which in turn reduces the probability that these young people will further engage in criminal activity (cf. Gies, 2003).

Additionally, sport and physical activities have long been thought to promote stability of emotions and energy, provide a socially acceptable outlet for tension and improve memory and cognitive skills (cf. Morris and colleagues 2003).

Second

Evidence of a positive relationship between exercise and mental health has been discovered. Mental health includes depression, stress; self esteem, and body image (Oughton, 2007). Accordingly, the second statement of the current study will be dealing with the role of sport on enhanced body image through sports.

It is significant to understand that the vital role of body image means that it has the potential to dramatically influence our quality of life. From early childhood on, body image effects our emotions, thoughts, and behaviour in everyday life, so if as scientists and clinicians we can appreciate the breadth and depth of body experience, then we have the capacity to prevent and relieve the suffering of persons whose body images undermine the quality of their lives (cf. Cash & Pruzinsky, 2002, p.7).

Cash and Williams (2001) pointed out that there exists an important need to effective interventions to help the growing numbers of persons with body image difficulties. Cognitive-behavioural body image therapy has clear efficacy for body-image improvement, even when administered in a self-help format. They added that one such eight-step treatment programme include the assignment of fitness-enhancement activities largely to facilitate the development of the source of physical self evaluation that is competency-derived rather than purely based on appearance (cf. Cash & Williams, 2001, p.80).

This study hypothesised that inmates have body-image dissatisfaction and through the sport intervention programme they will develop better body image for themselves which will, as a result, affect their behaviour and interaction with others in a positive way.

Hypothesis 1

There is a significant relationship between participation in sport and changes in social skills among inmates in the prison.

Questions

1. Is there a correlation between participating in sport activities and reduced the inmates' anti-social behaviour?
2. Does the programme positively influence the inmates' social interaction (social skills) between the inmates themselves?
3. Is there a correlation between participation in sport and conceit?
4. Is there a correlation between sport and reduced social anxiety?

Hypothesis 2

There is a relationship between involvement in sport activities and developing a positive body image.

Questions

1. Does the programme improve the inmates' mental image of their bodies?

Hypothesis 3

There is a relationship between sport and better social climate in the prison between the inmates and the staff prison.

Questions

1. Is there a relationship between sport and creating a positive social climate in the prison between the inmates and the staff prison?

7. Procedure and Methods of the Study

7.1 Procedure

The study presented in this paper was carried out in one of the rehabilitation and correctional centres in Amman (Al-Mwagar). Permission to carry out the study was obtained from the Ministry of Local Affairs and the Public Security Directorate. A visit was paid to the three local centres intended for recruitment, during which an assessment was made of their suitability to the study.

Interviews were carried out with the leaders of each in which the purpose and value of the proposed study were explained. The study had full support of the Director of the centre and the entire team, as this was the first to examine the impact of sport on different variables in this field. A research proposal was also required for the general administration of the rehabilitation and correctional centres.

The Director informed all the inmates about the research project and asked them to voluntarily participate in the study. The participants were required to fill in a questionnaire and to take part in a physical examination. Furthermore, the participants were asked about the type of sports they would prefer to be included in the programme as it was deemed important to value their opinion and respect their needs.

7.1.1 Sample

The sample included 80 adult male inmates, ranging in age from 18 to 28, volunteers from the rehabilitation and correctional centre in Al-Mwagar in Amman. By random selection the sample was separated into a treatment and a control group; the first one being the experimental group, which would receive the experimental treatment; the first to receive the experimental treatment was the experimental group.

7.1.2 Sports Programme

The sports programme was tailored both to answer the questions of the study as well as to meet the needs of the participants which included involving the most popular sports. The programme lasted for two months with a frequency of three times per week. It was developed following a review of the relevant, published studies and after consultation with the experts in this field at the University in Tuebingen.

Furthermore, organisations were contacted that arrange team games and use sport positively to influence society. A stronger team from Amman specialised in team building, and ice breaking sports were also included.

A theoretical component to the programme was also carried out involving aspects of the social learning theory. In particular, favourable definitions were provided to the participants through the theoretical part of this programme in accordance with the theories definition element. The theoretical part of the programme included general information about sport, focusing on the social operation of sport in society. Providing the inmates with positive definitions about the social function of sport should encourage them to adopt a better way of living and behaving.

As stated previously, the participants were asked about the kind of sports they would prefer to be included in the sports programme. The researcher was informed by the director of the centre that the participants would like to include basketball, football and chess in their programme.

Components of the Sports Programme

The programme consisted of different kinds of sports as well as a theoretical view about the social function of sport in society and the various benefits of practising sports. It included a football tournament, ice breaking games and building-team activities. The specific objectives of the games were to build a good communication between the sport trainers and the participants and to isolate the pressures between the participants. Our expected outcome was to generate a positive atmosphere, and give the inmates experiences that help them relate to their communities when they return to society.

The Sport Programme

September 2011

Sunday 3rd July: A general view of the programme was explained for the inmates by one of the trainers (sport assistants) and also the main aims of the programme was presented.

Tuesday 5th: Wednesday 6th, Sunday 10th: Team-building and ice-breaking sports was introduced and carried out with the co-ordination of the Stronger Team group in Jordan (*The Stronger Team* is a Jordanian company specialised in adventures, camps and trips for youth, schools, companies, and associations.).

Tuesday 12th: General physical fitness exercises including running, some push-ups and sit-ups. The second half involves a basketball game and badminton.

Wednesday 13th: Football and volleyball were played. Each of the two games lasted for 30 minutes and afterward the groups switched the games.

Sunday 17th: The participants were divided into four small groups and given four different activities (basketball, Frisbee, badminton and football.). Each game lasted 15 minutes and afterward the groups switched to the next game.

Tuesday 19th: Two activities took place on this day: (1) a free basketball shooting tournament, and (2) a free football kicking tournament. The time was divided into 30 minutes for each activity.

Wednesday 20th: A lecture about the social function of sport was presented by a professor from the University of Jordan.

Sunday 24th: There was one group activity (volleyball) and one individual activity (table tennis) with 30 minutes for each activity and switching afterwards. The groups also switched once they were finished.

Tuesday 26th: A basketball match (22 players) and football match (26 players) was played.

Sunday 31st: This is an Open Day with free activities, including basketball, football, frisbee, badminton, chess, and volleyball and some other activities according to the inmates' needs and requests.

October 2011

Tuesday 2nd: There was a lecture on the benefits of participation in sport.

Wednesday 3rd: There was a rope pulling competition and a badminton activity.

Tuesday 9th: A football and a volleyball match was played.

Wednesday 10th: Basketball and a badminton matches.

Sunday 14th: Frisbee and table tennis activities

Tuesday 16th: A running competition (race), push ups and sit ups competitions (two groups against each other).

Wednesday 17th: Chess, badminton and table tennis.

Sunday 21st: Open Day with free activities.

Tuesday 23^d, Wednesday 24th, Sunday 28th: A football tournament in co-operation with the staff prison football teams and celebration and closing activity.

Description of Ice-breaking, Thinking and Solving problems, Co-operation, and Self Control Activities:

1. Football Game (blind playing)
 - Purpose: trust, ice breaking, team building and co-operation
 - Procedure: two teams played against each other (like a normal football game). Participants were asked to put blindfolds, and every team had a leader guides the team to play.

2. The Knot

- Purpose: thinking and problem solving
- Procedure: a group of 12 participants formed a circle. Each person put the right hand into the centre and clasps hands with one other person who is not standing next to him. Then everyone puts their hands into the circle and clasps hands, again making sure that person is not standing next to them. There should be holding two different participant's hands. The goal of the game is to untangle the knot without letting go of any one's hand.

3. Toss-A-Name

- Purpose: icebreaker, teamwork
- Procedure: the participants distributed in the field, a basketball was tossed into the air, and the one who tossed the ball had to say someone else's name. In case the second person could not get the ball before hitting the ground he was eliminated from the game (he loses).

4. Wrong Rules

- Purpose: self-control
- Procedure: the participants play a football game but with wrong (opposite football rules).

5. Blind Polygon

- Purpose: thinking, co-operative, team work
- Procedure: the objective of this game is for the group to form a perfect square and a triangle (and other shapes if desired). Using the given length of rope, participants were asked to put on the blindfold. All participants were required to have at least one hand on the rope all times. All participants must remain blindfolded until the task is completed. When the group believes the task is finished, they were asked to keep their blindfolds, without moving from their current places.

6. Water Race

- Purpose: team work
- Procedure: two teams parallel lines. Each team has a bucket of water in the front and an empty bucket at the back. Each team has to fill the empty bucket with water by passing the water by hands from beginning to the end.

7. Blanket Volleyball

- Purpose: team work, icebreaking
- Procedure: divide the group into two teams, each with a blanket hold like a parachute. Toss in an object that is volleyball from to team using the blanket for propulsion.

8. The Sunshine Net

- Purpose: thinking, problem solving and teamwork
- Procedure: the tool used in this game was a net rope formed as a circle and connected from the centre to a ring with a tennis ball on it. The team had to move this net from the front of the field to the back without dropping the ball on the ground. If the ball was dropped on the ground, the team had to start from the beginning.

7.1.3 Questionnaire

Following consultation with the German psycho-social experts at the University of Tuebingen, the Matson Evaluation of Social Skills with Youngsters (MESSY) and the Landau scales on social climate were chosen for the quantitative methods of this study. The Matson Evaluation of Social Skills with Youngsters MESSY is a self reporting scale designed to measure social skills. Developed by Matson, Rotaori and Hessel (1983) the scale consists of 62 items which are rated by the child or adolescent according to a five point Likert scale. The items are related

to 6 factors / dimensions originally named “Appropriate Social Skills” and “Inappropriate Assertiveness” including. Impulsiveness, obstinacy, overconfidence and Jealousy, withdrawal and miscellaneous Items which are difficult to classify (Teodoro & colleagues, 2005, p.239, 246).

The MESSY was translated into the Arabic language by a native speaker. This version was then modified in order to make it understandable to persons who are less well-educated, whilst still retaining the original meaning it is noteworthy to mention that the MESSY was the most suitable tool for this study, as it consisted of targeted social skills measured in this study. In addition, the Matson scale has been suitably evaluated and adapted for different countries and languages.

The MESSY also provides items for both appropriate and inappropriate social skills so that it will not focus exclusively on the negative aspects of the tested individual, but also take into account the positive aspects. Examples of appropriate skills are, helping a friend who is hurting and walking up to people in order to start a conversation. Examples of inappropriate skills are: giving dirty looks and getting even with someone who has hurt him / her (Felce & Perry, p.19). Compared to other social skill scales the MESSY is designed to provide information on communication and general social skills behaviour that can be identified both for treatment goals and to evaluate treatment efficacy.

The second scale is the German scale (Landauer, Skalen zum Sozialklima). This scale was selected because sub-scales were deemed appropriate for the study. The Landau scale on social climate aims to ascertain how the students perceive their learning environment. It also tries to discern the feelings or thoughts of the students in terms of their classmates, teachers and courses (Littig & Saldern 1987, p.3).

The scale is suitable for application in other scientific fields and it is important for this study because it assesses the social climate in the reha-

bilitation centre, enabling the researcher to answer questions regarding the social climate among the inmates. This scale was also translated into Arabic by a native speaker and the items were adjusted in order to fit the targeted group in the current study.

In order to examine the effect of this sport programme on the inmate's body image the German questionnaire for body image (Fragebogen zum Körperbild, FKB-20) was applied in this study. The current questionnaire (FKB-20) measures the relevant dimensions of the body image. This questionnaire is applied among the clinical area as body image disturbance; however, the application of this questionnaire is also suitable among the non-clinical areas where the subjective aspects of body image want to be examined (Clement & Loewe, 1996, p.6). The Body Image questionnaire was filled in by the control group and the experimental group in the pre- and the post-test. The procedure of filling the questionnaire took place in one of the prison's classrooms under the supervision of the researcher and the staff.

7.2 Results

To examine whether the sport programme has a significant impact on the inmate's social behaviour and the body image concept, data were analysed using the Statistical Package of Social Science SPSS. Two major analyses were conducted in this study, the t-test for mean comparisons and T-test for group equality. The reasons for utilising two analyses are twofold. First, we needed to determine whether the experimental and the control group were equivalent at the onset of the study. Second, we needed to compare the pre-and post-test of the social climate method between the staff and the inmates.

T-test for group's equality was performed to determine whether the experimental group and control group differed significantly prior to the ini-

tiation of the exercise protocol. Table 2 shows no significance differences between the two groups which means that the control and the experimental group were essentially equivalent prior to the initiation of the exercise protocol in the pre-test. However, significant differences between the groups were found in the post-test in favour of the experimental group. This means that the subjects in the experimental group exhibited a reliable change from pre to post test, particularly in the four factors of the Matson scale. It scored higher comparing to earlier findings in the Experimental group. For example, the factor of anti-social behaviour scored 2.32 pre, 1.51 post, the social skills factor scored 2.57 pre, 3.14 post, the conceit factor scored 2.49 pre-2.12 post, social anxiety factor scored 2.46 pre, 1.92 post, and the body image factor scored 3.09 pre, 3.71 post.

On the other hand, changes occurred in the control group as well, and changes were scored in the pre and post test in the control group. However, in comparison with the means of the experimental group, results show favour to the experimental group versus control group. For example, in the factor of anti-social behaviour results scored 1.81 in the control group versus 1.15 to the experimental group. Concerning the social skill factor results scored 2.61 in control group versus 3.14 to the experimental group.

The conceit factor results scored 2.62 in the control group versus 2.12, in the social anxiety factor results scored 2.56 in the control group versus 1.92 in the experimental group. Finally in the body realm results scored 3.20 in the control group versus 3.71 in the experimental group, and the tables below explain the previous findings.

**T-test Results to Verify the Difference between
the Experimental and Control Groups in the Pre-test**

	Group	N	mean	std. dev.	t	df
Aggressiveness / Anti-social Behaviour	experimental	40	2.32	.447	-1.212	78
	control	40	2.46	.623		
Social Skills / Assertiveness	experimental	40	2.57	.558	.937	78
	control	40	2.46	.478		
Conceit / Haughtiness	experimental	40	2.49	.779	-.738	78
	control	40	2.62	.805		
Loneliness / Social Anxiety	experimental	40	2.46	.693	-.694	78
	control	40	2.56	.499		
Body image	experimental	40	3.09	.462	1.197	78
	control	40	2.98	.378		

Table 2

Table 2 shows that there are statistically significant differences ($\alpha = 0.05$) attributed to group variable, which indicates the equality between groups in the pre-test.

**T-test Results to Verify the Difference between
the Experimental and Control Groups in the Post-test**

	Group	N	mean	std. dev.	t	df	Sig. (2-tailed)
Aggressiveness / Anti-social Behaviour	experimental	40	1.51	.537	-2.482	78	.015
	control	40	1.81	.514			
Social Skills / Assertiveness	experimental	40	3.14	.746	3.550	78	
	control	40	2.61	.585			
Conceit / Haughtiness	experimental	40	2.12	.854	-2.615	78	.011
	control	40	2.56	.634			
Loneliness / Social Anxiety	experimental	40	1.92	.627	-2.477	78	.015
	control	40	2.26	.582			
Body Image	experimental	40	3.71	.580	4.537	78	.000
	control	40	3.20	.414			

Table 3

Table 3 shows that there are statistically significant differences ($\alpha = 0.05$) attributed to group variable, in favour of experimental group.

In order to answer the third question of the study, namely, the impact of the sport programme on the social climate between the inmates and the staff, T-test and comparison of means were applied in order to examine the previous correlation. The social climate scale consisted of five factors which are: (1) discrimination (2) satisfaction (3) competition (4) clique forming (5) Corporation. Table 3 shows the differences between the means of the five factors in pre- and the post-test in the five factors.

**T-test for the Five Factors in the Social Climate Scale
in the Pre-test and the Post-test**

			N	mean	std. dev.	std. dev. of mean
Factor (1)	Discrimination	pre-test	12	2.9167	0.59975	0.17313
		post-test	12	3.0000		0.15954
Factor (2)	Satisfaction	pre-test	12	2.2967	0.39195	0.11315
		post-test	12	2.5567		0.07143
Factor (3)	Competition	pre-test	12	2.8482	0.43113	0.12999
		post-test	12	2.9245		0.12584
Factor (4)	Clique Forming	pre-test	12	2.6064	0,30131	0.09085
		post-test	12	2.6509		0.12213
Factor (5)	Cooperation	pre-test	12	2.4425	0.32530	0.09391
		post-test	12	2.8808		0.08505

Table 4

Table 4 shows the means and the variations of the five factors in the social climate scale in the pre-test and the post-test. It shows significant differences in the five factors in favour of the post-test.

The Estimation of the Effect Size

Data in my study strongly suggest that the sport intervention affected the inmate's social skills, social climate and their body image. In order to know whether the intervention's effects are large, moderate or small, meaningful or trivial, we applied the relative size of effects based on standardised estimates of effect size (effect size method, Cohen's d), which is the estimation of the strength of association between two or more variables (Osteen & Bright, 2010).

**Size of Effect for each of Social Skills Scale
and the Concept of the Body Image**

		std. dev.	dev.
Pre	Aggressiveness / Anti-social Behaviour	0.7314369	0.19
	Social Skills / Assertiveness	0.7484018	0.15
	Conceit / Haughtiness	0.8822221	0.15
	Loneliness / Social Anxiety	0.8355269	0.12
	Body Image	0.681335	0.16
Post	Aggressiveness / Anti-social Behaviour	0.537592	0.56
	Social Skills / Assertiveness	0.7497701	0.71
	Conceit / Haughtiness	0.8590289	0.51
	Loneliness / Social Anxiety	0.6281407	0.54
	Body Image	0.7644399	0.67

Table 5

Based on the data in table 5, there appears to be a moderate effect size in almost all of the variables except the social skills variable which recorded 0.71 as a large effect size in the post-test. Concerning the other variables, for instance, in the anti-social behaviour the effect size recorded 0.19 in the pre-test and 0.56 in the post-test (which as stated previously a moderate effect). In the conceit factor the effect size recorded 0.15 in the pre-and 0.51 in the post-test. In the social anxiety factor the effect size recorded 0.12 in the pre-and 0.54 in the post-test and finally in the body image factor the effect size recorded 0.16 in the pre-and 0.67 in the post-test.

We have also examined the effect size Cohen's d for the social climate scale as table (6) shows.

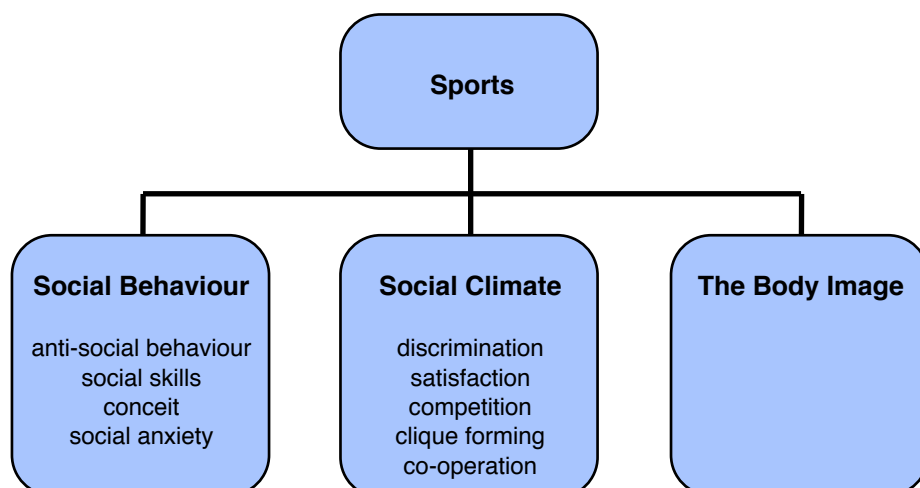
		std. dev.	dev.
Factor (1)	Discrimination	0.57669382	0.14450187
Factor (2)	Satisfaction	0.32775638	0.79327213
Factor (3)	Competition	0.42430157	0.17997491
Factor (4)	Clique forming	0.35696957	0.12478782
Factor (5)	Co-operation	0.3103456	1.41240387

Table 6

According to the results in the table 6 the effect size recorded the largest in the co-operative factor as $1,14 > \pm 80$. Another large effect size recorded in our result in the satisfaction factor $.79 < \pm 80$. Concerning the other factors discrimination effect size, $.14 < \pm 20$ which means small effect size, in the competition factor the effect size recorded, $.17 < \pm 20$ as a small effect, and finally the in the clique forming factor the effect size recorded $.12 < \pm 20$ as a small effect.

7.3 Discussion

The aim of this discussion is to summarise the previous findings and to highlight the potential of sport intervention in a male prison. Additionally, this discussion will identify some of the factors that judgementally lead to positive and sustained impact after the intervention. As such, this work goes some way towards addressing the need for research to focus on the processes that lead to positive impact, while identifying the product of participation. This study also investigates the hypotheses that assume a positive significant relationship between sports and other variables, such as, social behaviour, social climate and the concept of the body image. Our findings do support the previous findings in the literature, namely, that sport has a significant positive impact on social behaviour, social climate and the concept of the body image among the inmates in the prison.



This discussion focuses on the three major hypotheses of this study (see chapter 6.4) which are as stated previously, and posit a significant correlation between:

1. Sports and social behaviour includes four dimensions: (A) anti social behaviour, (B) social skills, (C) conceit, (D) social anxiety.
2. Sports and social climate.
3. Sports and the concept of the body image.

1. Social Behaviour

To begin with the first hypothesis of this study our results show a consistent pattern of evidence that sustained participation in regular sports encourages the development of positive behaviour patterns in relation to MESSY dimensions. This finding is consistent with previous research findings (Russel, 2006; Cameron & MacDougall, 2000; Peterson, 1995). For example, using adventure and wilderness activities to challenge young offenders to try newly learned personal and social skills, demonstrated significant improvements in youth well-being (Complete Physical, Mental and Social Well-being, WHO, 2002) and interpersonal relations domain relates to how the youth interact with their friends and their level of aggressiveness, propensity to argue with others, and their defiance (Russel, 2006).

(A) Anti-social Behaviour

Changes Recorded in the Anti-social Behaviour Dimension

group	mean pre-test	mean post-test	d. pre-test	d. post-test
Experimental	2.32	1.15	0.19	0.56
Control	2.46	1.81		

According to our findings in the MESSY dimensions, the anti-social behaviour dimension found a significant association to the sport intervention with a moderate size effect recorded $56 > 50$. We argue that sport with its different concepts provides many opportunities for individuals to learn to engage in a behaviour that is valued by society. This makes it possible to young people to divert from offending behaviour to engage in sport and other physical activities, as a result they can make up the pro-social choice easier than the anti-social one (Cameron & MacDougall, 2000). Bandura suggested “that it is individuals’ belief in their ability to empathise and control their own emotions that influences social behaviours (Bandura, 2003, p.74). In other words, engaging in pro-social behaviours helps the individual have more self control, gain the ability to regulate feelings and emotions and feel empathy toward others.

We also argue that our sport intervention covered the elements of the social learning theory (differential association – definitions – modelling – differential reinforcement). Digeser (1988) and Walter (1990) emphasised the role of the differential association in the prison in the sense that sport clubs must provide the prison with sport trainers and experts who organise sport activities in the prison (Digeser 1988 & Walter 1990).

We argue that providing the prison with qualified sport leaders who are willing and have the ability to deal (socially) with the offenders could play a significant role in the inmates’ rehabilitation process and could have a positive impact on their lives when they are back in society. Based on the social learning theory –differential association, if the person differentially associated more with those who participated in and expressed conforming behaviour, then the individual is more likely to refrain from involvement in crime and instead engage in pro-social behaviour (Akers & Jennings, 2009).

Our sport intervention was implemented in the prison with the assistance of sport experts who held seminars, organised sport activities, reinforced the inmates for good (positive) behaviour, and gave them feedback for (negative) anti-social behaviour. This social communication created a healthy relationship between the inmates and the sport leaders during the sport intervention, which had a positive impact on the inmate's social behaviour.

Another element of the social learning theory which has been covered in our study is definition. Sutherland (2006) assumed that individuals can learn favourable definitions from others which would increase the probability that he/she would copy the behaviour he/she learns. We argue that, during the sport intervention, the inmates had the opportunity to associate with sport leaders (principles), which could have impacted their social behaviour. We assumed that the sport leaders modelled a favourable definition for the inmates in the sense that the sport leaders own general and specific, positive and neutralising attitudes, values orientations, and moral attitudes that orient the individual to deeming an act as right or wrong, appropriate or inappropriate, which had a positive impact on the inmate's social behaviour.

With respect to modelling (imitation) and differential reinforcement, our study recorded many examples during the intervention correlated to modelling and differential reinforcement. Elliot and Gresham (1993) argued that non-aversive methods (modelling, coaching and reinforcement) are often used in social skills intervention which focuses on improving the individual's positive (pro-social) behaviour.

We argue that our sport program was a means of sport social intervention which, through sport activities, focused on improving the inmate's pro-social behaviour verses anti-social behaviour. Moreover, social learning theory emphasised that when individuals who personally observe others whom they admire engaging in pro-social behaviour, they

are more likely to engage in that behaviour as well (Akers & Jensen, 2002).

The sport leaders in our study were admired by the inmates for many reasons, firstly, their ages were close to those of the inmates, which created a good relationship between the two groups. Secondly, the leaders' orientation: one of the most significant reasons for the leaders to take part in this study was to help inmates have new positive experiences, assist them in becoming more aware of their lives in and outside the prison and to increase their self-control skills. Thirdly, their positive attitude towards the inmates: the way sport leaders communicated was highly appreciated by the inmates. Accordingly, the inmate's behaviour could be positively impacted by the leaders (principles) and change their behaviour.

Finally, referring to the differential reinforcement factor (element), we could argue that, through the positive reinforcement given to inmates by coaches, inmates had a new challenge to exhibit better behaviour and repeat the same behaviour over and over again. It is noteworthy that, from the beginning of our sport intervention, the inmates were informed that their positive and negative behaviour would be recorded and, accordingly, they would either get their reward or not. The previous idea is based on the scientific background in the social learning theory which states, "The greater the reinforcement on balance, depending on what is anticipated for a given action, the more likely it is to be repeated" (Akers & Jensen, 2002, p.40). The more the action or behaviour is repeated, the more it will become a part of the individual's daily life.

(B) Social Skills

Changes Recorded in the Social Skills Dimension

group	mean pre-test	mean post-test	d. pre-test	d. post-test
Experimental	2.57	3.14	0.15	0.71
Control	2.46	2.61		

In the dimension of social skills, positive changes have been recorded with a large effect size $71 < 80$. A possible explanation for this finding is first, that physical activity can help individuals develop important social skills which is relevant to Nicholas and colleagues (2005) such as leadership and empathy which in turn can influence healthy lifestyle behaviours (Andrews & Andrews, 2003; Russel, 2006). Our sport intervention was designed to provide the inmates with special kinds of sports and situations which enable them to develop their social skills, such as cooperation, self-control, and responsibility.

Second, we also argue that social skills are influenced by the differential reinforcement element according to the social learning theory (Elliot & Gresham 1993). In our sport intervention, the leaders (coaches) rewarded the inmates for desired outcomes and did not reward them for negative or undesirable actions. This principle is scientifically based on the social learning theory (differential reinforcement), which assumed that a specific behaviour is more likely to occur when it is frequently reinforced and infrequently punished (Akers & Jensen, 2002).

Moreover, we argue that our findings are similar to other scientific findings in the same field. For instance, Scheid and Simen (1999) argued that it is significant in the rehabilitation process to focus on improving the inmate's social skills, general knowledge and other personal traits (Scheid & Simen, 1999). Interestingly enough, in one of the previous opposing studies which we included in our study (i.e., a study did not support the notion that sports offer beneficial aspects and positive con-

sequences for individuals), Williams and Streaan concluded that selected sport activities in the prison are recommended for many good reasons. For instance, activities help the inmates to increase the ability to manage anxiety or mood, cope with stress and master social skills (Williams & Streaan, 2002).

- Co-operation: In agreement with Bandura's social cognitive theory, we argue that behaviour is shaped by interaction between individuals and environmental factors (Street & Ray 2008). Our sport intervention contained team and individual sports which provided a sense of value for inmates' belonging through cooperation and attachment in order to archive their goal. Corn (2012) supports the assumption that sports play a positive role in developing social interaction and cooperation, and he emphasised the importance of cooperation within the team (group), as it helps build the bond of trust and support with one's team (Corn, 2012).

Inmates developed a level of cooperation not only with the peers, but also with prison staff. We recorded many situations in the current study in which the inmates were willing to help staff in many tasks during the intervention, for example, in preparing the sport arena with equipment after and before the intervention.

- Self-control: The inmates played a self-control football game, in which the referee on purpose judged wrongly in most of the game situations in order to develop the sense of self-control among the inmates. Every time they played the game, they were less angry and they had to learn how to develop positive self-control.

According to the self-control theory, we argue that the tendency to pursue immediate gratification to the neglect of its long-term consequences declined among inmates through the period of

our sport intervention. For instance, during the sport intervention (within the games) we rarely recorded any kind of “rule infractions” by inmates, either involving others or material things. This means that inmates improved self-control by following the rules of the game versus breaking them to achieve immediate satisfaction (gratification).

It could also be argued that team work (team games) had a positive impact on inmates’ self-control. As Hirschi and Gottfredson 1990 assumed that the individual with low self-control lacks sensitivity to the needs of others, and an inability to establish close social bonds. However, during the sport intervention, many team games (activities) were played and the entire target group took part. This means that inmates developed better understanding for the needs of others in order to lead the team to triumph. Moreover, they developed better social bonds to the rest of the team and to the group in general.

Moreover, Scheid & Simen (1999) and Walter (1998) posit that one of the many advantages of practicing sports in prison is becoming more disciplined and developing a new level of self control. In other words, practising sports reduce impulsiveness of the participants.

- Responsibility: It is considered to be one of the social skills that increased during our sport intervention. It could be argued that the inmates practiced different skills and knowledge during the intervention, which helped them increase their sense of being responsible. For instance, these included playing the role (modelling) of leader (head of the team), or playing the role of a referee, or taking part in the organisation of the final ceremony of the current intervention and leading the final football game against the prison guards.

These experiences helped inmates become more responsible, accountable and trustworthy. As mentioned previously, in the social learning theory, modelling (imitation) plays a significant role in learning (anti-or pro-social behaviour) or even engaging in the same behaviour (Cullen, Wright, Blevins, 2006 & Akers & Jensen, 2002). Our assumption, which considers sport as a tool of enhancing inmates' social skills in general and sense of responsibility in particular, is scientifically proven in the WLE program (see page 27), in which Russell (2006) concluded that, by teaching high core values such as responsibility, effort, attitude and honour, pro-social behaviours favoured anti-social one's.

(C) Conceit and (D) Anxiety

Changes Recorded in the Conceit Dimension

group	mean pre-test	mean post-test	d. pre-test	d. post-test
Experimental	2.49	2.12	0.15	0.51
Control	2.62	2.56		

Our study recorded changes in the dimensions of anxiety and conceit. The results show that the level of anxiety and conceit dropped due to the sport intervention. Concerning the conceit dimension, little was said about the correlation between sports and conceit and it is unclear what is the significant about this finding. More research in larger samples is needed to confirm such a link. However, we could argue that sports can play a role in increasing or decreasing the level of conceit among participants according to the kind (type) of sports he/she takes part in. For example, winning could drive the individual to behave in unfavourable manner or a conceited manner as a result of high ranking or high performance.

However, various kinds of sports teach morals, rules, and favourable behaviours. For example, most of the sports in our intervention depend

on teaching the participants co-operation and how to care / be friendly toward each other. Winning and being the best were not the goals of these sports, which have given the inmates the sense of equality and fairness which affected them and stimulated their favourable behaviours.

Changes Recorded in the Social Anxiety Dimension

group	mean pre-test	mean post-test	d. pre-test	d. post-test
Experimental	2.46	1.92	0.12	0.59
Control	2.56	2.25		

Consistent with other studies we found an association between social anxiety disorders and sport activities among the targeted group recorded as moderate effect $d = .59$ at in the post-test. Studies which examine the influence of exercise on mental health found that anxiety can be reduced with aerobic exercise, and there is usually inverse relationship between participating in sports and the level of aggression, hostility and anxiety (Palermo and colleagues, 2006).

It could be also argued that the nature of the selected activities in the sport intervention, which focused on sports that develop different social and personal traits, such as honesty, caring, compassion, friendship, generosity and excluded high competitive sports and high performance. This variety enabled the inmates with social anxiety disorders to take part in these activities. Furthermore, it helped them to build friendships with others, unbroken in spirit and they able to enter into normal social relations (Caplan, 1996, p.31).

It has been proven scientifically that social anxiety is related to the concept of body image in an interpersonal context (Cash and colleagues, 2004). Judgmentally speaking, the level of social anxiety dropped among inmates in the current study due to the fact, that positive

changes on their body image took place in this study. Moreover, Ströhle, (2008) and Pavilanis (2011) emphasised the role physical activities play in developing an individual's mental health with regard to social anxiety (Ströhle, 2008 & Pavilanis 2011).

We argue that the nature of selected activities in the sport intervention focused on sports that develop different social and personal traits, such as; honesty, caring, compassion, friendship, and generosity, but excluded highly competitive sports and high performance. This variety enabled inmates with social anxiety disorders to take part in these activities. Furthermore, it helped them to build friendships with others, be unbroken in spirit and enable them to enter into normal social relations (Caplan, 1996, p.31).

Furthermore, we argue that social anxiety dropped due to the fact that cognitive and behavioural changes increased among the inmates. We recorded many examples in which some of the inmates refused to take part in activities, when questioning them about the reason, they explained that they did not feel comfortable to perform in front of others. This concept is similar to Elmer (2004) who assumed that those who are more anxious demonstrate poor social performance. However, as soon as they started engaging in simple individual activities and afterward, they were fully engaged in the team activities. It could be due to the reason that the inmates observed their peers and shifted their thinking from self monitoring and negative body image (Hofman, 2007) to concentrating on the model i.e. the others who are performing and enjoying their time (Elmer, 2004). The social cognitive theory according to Hoffman (2007) and Elmer (2004) explains that cognitive and behavioural factors determine individual social disorders (anxiety), which is similar to Neisser (1967) assumption of the social learning theory which posits, after information has been perceived, stored and recovered it must be put to a good use (Reed, 2013).

2. Social Climate

Changes Recorded in the Social Climate Dimension

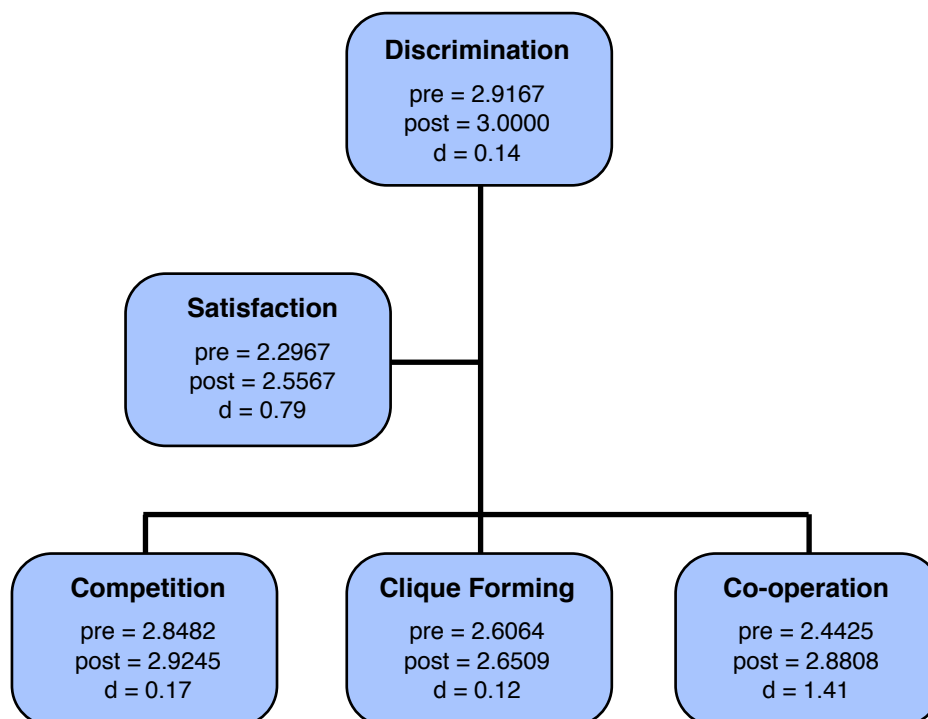


Figure 2

The second hypothesis illustrated through the current work in the dimension of social climate included five factors illustrated above in figure 2. Our findings show a significant correlation between the sport intervention and the social climate in the prison. Interestingly, the intervention shows the most effect in the co-operative factor $d = 1.14 > 80$ in the post t-test. This finding could be due to the fact that the type of the sports used in the programme were so much targeted to teach the inmates co-operation, in order to reach a goal or help others in their tasks. For example, during team sports, co-operation was the most important factor to win or to perform well. This was illustrated in the final football game between the inmates and the prison staff. In that game, the inmates won defeated the staff prison. Judgementally, one of the key reasons behind their win was their ability to play as a team and co-operate.

We also argue, due to fact that the inmates' anti-social behaviour decreased, and they developed pro-social behaviour which helped in enhancing the relationship to their peers and the staff. This finding agree with Nickolai (1992), Frey and Delany (1996). Nickolai (1992) asserted practicing sport in prison for even a short time developing the inmates' social behaviour and developing a better relationship between the inmates' and the staff. Frey and Delany (1996) emphasised the positive role of sports (leisure activities) on the prison life and climate.

Moreover we argue, the inmates' behaviour had the ability to influence the environment in a purposeful goal and particularly the social climate . According to the social cognitive in which Bandura 1989 explained a model of reciprocal causation, behaviour cognition and other personal factors and environmental influences, all operate as interacting determinants and influence each other (cf. Bandura, 1989, p.1-60).

Another factor recorded at high levels during the intervention was the satisfaction or contentment factor $d = .79$. We could argue that during the intervention the inmates had the opportunity to be active, to exercise and to feel physically fit. In addition, the pattern of the physical activities served as an outlet for frustration (Caplan, 1993), creating a great deal of enjoyment and instilling self confidence in the person and overall self-esteem (Nichols, 1997, p.184; Caplan, 1993). Additionally, it gave the prisoners something to look forward to in the otherwise bleak custodial context. Judgementally, the intervention helped the inmates relieve the daily tensions and stress created by incarceration.

Concerning the competition factor, we could argue that competition occurs naturally between humans co-existing in the same tight-knit environment. The same can be said about sports, competition occurs between teams or even individuals. Our findings recorded $d = .17 < .20$ as a small effect, which could be related to the type of the sports included in the intervention, which did not required high levels of competition.

Concerning the discrimination and clique forming factors, the intervention recorded a small effect size among these two factors, discrimination $d = .14 < .20$, clique forming $d = .12$. When forming teams for a sport event, there are naturally going to be small levels of togetherness or a so-called “we“ feeling. Small levels of this behaviour are inevitable in any competitive sport environment. However, the strength of the relationship between discrimination, clique forming and the sport intervention is a small effect size, rendering it statistically insignificant. Net, the positive benefits of sport strongly outweigh the slight effect size we see in the data.

3. Concept of Body Image

group	mean pre-test	mean post-test	d. pre-test	d. post-test
Experimental	3.09	3,71	0.16	0.67
Control	2.98	2.20		

The third hypothesis of this study correlates sport and the concept of the body image, and posits that sports (could) have a positive impact on the mental image which the inmates have for themselves. Our results recorded a moderate size of effect in the concept of the body image $d = .67 > .50$. These changes may be due to the fact that sports and physical exercise (activities) have been consistently shown to be associated with physical and physiological well-being (health) and positive body image, considering body image as a part of the mental health (Cash and colleagues, 2004). During the sport intervention, the inmates were able to take part in almost every activity which helped them to remain physically and mentally active. Judgementally, it helped them to accept their bodies, feel secure about their physical appearance and enable them to successfully perceive and interact with the surrounding environment (Probst, Vandereycken & Coppennolle, 1998).

The concept of Body image consist of perceptions, cognition, emotion and values (Clement & Loewe, 1996), as well as thoughts, feelings and attitudes (Pallan and colleagues, 2011). Accordingly, we argue that the current intervention apply various techniques helped the inmates at developing the way they feel and think about their body which as a consequence affects their actions and attitudes. The techniques included modelling, role play, discussion and training skills for problem solving. The previous techniques are a centre in the social cognitive theory, and they consider as a basic for intervention strategies (Glanz & Lewis, 2002), which aimed primarily at developing inmates mental health (body image).

7.4 Conclusion and Potentials of the Study and Future Prospects

This study is one of the first empirical studies relating to physical education and rehabilitation in prisons in the Arabic speaking world. The main goal of this dissertation is to highlight the role of sports in Al-Mwagar rehabilitation and correction centre (prison) in Jordan, and to provide empirical evidence clarifying the role of sport in the rehabilitation process. Furthermore, this study seeks to answer the three major questions regarding the correlation between sports and psycho-social variables. The study provides evidences to suggest that in general, sports participation in prisons reduces an inmate's anti-social behaviour, enhances their body image, and creates a better overall social climate in the prison. By demonstrating the benefits of funding sport programmes in order to first; motivate more prison leaders to fund these programmes. Second, being able to purchase new sport equipment and employ new people to work in those programmes (sport leaders).

This dissertation yields support for the theoretical nature of the role of sport in prison in the following ways:

- Firstly, using sport as a tool to teach the inmate's new knowledge, new physical and social skills through sports and sport activity; through this process of teaching the inmates learn favourable definitions versus unfavourable definitions (Digel, 1995; Akers & Jennings, 2009, Social Learning Theory).
- Secondly, utilising sports as a tool to enhance the inmates cognitive skills, through developing their abilities to solve problems, morale reasoning and to shift their thoughts from anti-social to pro-social behaviour (Nichols, 2007, Cognitive Theory).
- Thirdly; using sports as a mean of developing the inmate's social control skills, and help them to be more self-controlled in order to avoid criminal acts in the future (Gies 2003, Self Control Theory).

The current analysis yields five major findings which scientifically support the hypotheses of the study and answering the questions of the hypotheses

1. Sport activity (sports) can reduce anti-social behaviour.
2. Sport activity can develop the inmate's social skills.
3. Sport activity can decrease the inmate's conceit and social anxiety.
4. Sport activity can develop the inmate's body image.
5. Sport activity can create a positive social climate in the prison.

Table 2 indicates, first, that participation in sports reduced anti-social behaviour. This finding provides evidence to support the first hypothesis of this study, suggesting a correlation between participating in sports and reduced anti-social behaviour. This finding is consistent with Coalter (2007), who mentioned that sports has the ability to reduce the youth's anti-social behaviour as well as build self-confidence and en-

courage strong community groups. Schroeder (1987) posited that sport function as a mean of medium therapy against anti-social behaviour. Dolling (1992) emphasised that sports also function as a tool to practice social behaviour. Nickolai (2002) asserted that team sports help in developing the inmate's social behaviour. Walther (1998) emphasised that better relationships between the team members will help the inmate's in developing positive social behaviour. In the same context, Cameron and MacDougall (2000) concluded that sport programmes help young people learn new skills and develop their pro-social behaviour.

Second, our study provided scientific evidences that practising sports positively affects the inmate's social skills and social interaction. This finding is consistent with Scheid and Simen (1999), who emphasised the important role of sport in a successful rehabilitation process, particularly, in the development of an inmate's social skills through sports. Nichols (2005) went further with his findings, noting that developing an inmate's social skills through sports has a long term outcomes of positive behaviour. Spence (2003) argued from a theoretical perspective that teaching the inmates social skills through sports is related to the social learning theory. The process of learning social skills through sports, enables the inmates to deal with common social situations outside the prison in a positive manner.

Third, we concluded that the level of the conceit among the inmate's dropped after participation in the sport programme. This finding could be an indicator of the kind of sports that need to be offered in the prison, and the level of competition they provide. For instance, Coalter (2007) suggested that team sports and team activities should teach the participants unity and raise their team spirit. Via sports, they learn to build community spirit, increase social interaction, encourage strong community groups and build self confidence (Coalter, 2007). Furthermore, we concluded that the inmate's social anxiety dropped down as a result of the sport programme. This is supported by the data collected in

the study. We also concluded that decreased levels of anxiety can lead to less drug abuse, self harm and suicide among the inmate population (Buckaloo and colleagues, 2006).

Fourth, our second hypothesis suggests a positive correlation between the concept of body image and sport participation. It is noteworthy to say, that this correlation adds a new dimension to the scientific, which could help future studies. We concluded that the sport programme positively correlated to the body image among the inmates. This finding is consistent with Cash and colleagues (2001), Thiel (1994) and Thompson and Fischer (1994), who all, generally speaking, suggest that sports positively impacts the mental image individuals have about themselves.

Fifth, we hypothesised that sports creates a better social climate in the prison (Table 4). This is consistent with previous findings (e.g. Knobel 2004; Nickolai, 1992; Walther, 1998) that provide evidence that sport has a positive effect on the social climate in a prison. This study tackled this correlation through the examination of five factors related to the social climate. It is noteworthy to say that the social climate scale (from which we select these factors) is targeted at examining social climate in German schools. However, we obtained the scientific permission from Tuebingen University to apply this scale in the prison. These five factors are:

1. Discrimination
2. Co-operation
3. Satisfaction
4. Clique forming
5. Competition

As stated previously, all five factors registered changes and were positively correlated to the sport programme. However, discrimination and clique forming factors consider were negative, and slightly contradicted the positive effect of sport in the prison. Hence, these two factors re-

corded as a small effect size comparing with, for instance, co-operation and satisfaction. We concluded that sports, as any other social, physical, psychological activity has both positive and negative effects. We intend to focus more on the positive aspects and try to examine how can we reduce the negative sides.

In order to avoid discrimination and clique forming among the inmates, we need to be aware of the types of sports selected. Additionally, proper planning for the sport programmes in the prison is key. For instance, team sports require a group of people (inmates) to work and play together as a team, however, it is recommended to change the structure of the groups frequently. This strategy could help reduce discrimination and clique forming.

Another reason why it is crucial to carefully select sports in the prison is that some types of sports, particularly vigorous sports, are associated with delinquent behaviour and delinquency. This finding is consistent with (Marshal and colleagues, 1996; Faulkner and colleagues, 2006), who hypothesised that sports correlated positively with delinquency. However, in their conclusion, they did not suggest that sports must be discouraged or prohibited in prisons, but be carefully selected and planned for instead.

In this study, different kind of sports were utilised (see chapter 7), these sports were carefully selected, according to a scientific background. It is noteworthy to say that the study's target group had the opportunity to suggest sports they like to be included in the sport programme. It was important to include some sports according to the inmate's wishes and motivations, which would also help in planning for some programmes in the future. A main reason behind that, was to motivate the inmates for the programme, and giving their ideas and opinions a value, which could boost their self-esteem. For instance, team sports, are very popular among the inmates, and team sports contain winning and losing, which expose the individual to both succeed or failed.

In addition, sports prepare the individual for good and bad times in life (Oak, 2001; Bradenton 2009; Morris and colleagues, 2003; Cameron and colleagues, 2000). Individual sport activities are also recommended. This is consistent with Nichols and colleagues (1999), Palermo and colleagues (2006) and Morris and colleagues (2003). As stated previously, sports must be carefully selected in the prison, and some kind of sports must be prohibited. For instance, boxing and wrestling must not be included in the sport programmes, as they require a high level of physical contact and contain high level of aggression. As a result, the level of aggression among could increase, and the sport programme will contradict the whole aim of the rehabilitation process.

Our study concluded, that including cognitive and self-control games (sports) lead in general to a complete physical, mental and social well-being (Meier, 2003; Nichols, 2007; Borden, 2002). Interestingly, use of these types of sports in prison programmes is considered as a new dimension. Borden (2002) mentioned concluded that these programmes attempt to develop to inmate's social cognition which related to self control and social interaction.

The sport programmes in prison must also be adequate in length and frequency. We suggest that practising sports for a minimum three times a week can bring favourable results. It is recommended that the sport session is not less that an hour and a half. This recommendation is consistent with (Palermo, 2006). Buckaloo and colleagues (2009) implemented their sport programme in one the prisons in the United States for three times a day between thirty minutes and two hours.

In addition, we recommend that the government should employ people in the community rather than the prison staff. This recommendation is consistent with the conclusion in Caplan's study (1993). Arguably, the staff prisons are over loaded with other tasks in the prison, which might make it difficult for them to keep the sport programme running in the required quality.

Additionally, we recommend a longitudinal study similar in nature to the present study would be useful for providing information on how sport participation affects behaviour over time and through the life course. Turner (2002) mentioned that testing a group over time may reveal interesting trends and patterns in behaviours as inmates begin, maintain or leave various sport programmes. Furthermore, we recommend that the government maintain contact with the former inmates as they may struggle to survive financially after going back to society (Caplan, 1993, p.133; statistics in Al-Mwagar prison). However, by providing them with job opportunities in sport clubs or sport organisations, judgementally, we could help them not to turn back to crime and anti-social acts.

Additional studies might also examine and investigate the role of sport on health and psychological aspects in the prison. Many inmates spend the majority of their days in their cells or dormitories, which results in antagonism, violence, depression, aggression, and obesity. In these circumstances it is essential that they be given an adequate amount of time each day in the open air and be allowed to walk about or to take other exercises (cf. OHCHR, 2005, p.78). A significant recommendation for a future study similar in nature is the effect of sport on the health, physical, psychological aspects among senior inmates. According to our personal experience during the sport programme in the prison, senior prisoners were also interested in taking part in our study. However, and because our study targeted to a special group they did not have the opportunity to do so. They suggested that they also need adequate amount of movement and exercise in the prison. In the same context, we have been also requested to organise sport programme and games targeted for the staff prison.

This study also recommends a future comparison study examining the effect of sports in prison across different countries. Digel and Gruppe (2007) emphasised that sports consider as a part of the world culture, part of many people's everyday lives. Rehabilitation through physical

education studies could benefit many countries, and develop many different sport programmes in prisons. This could happen through exchanging knowledge and experience between countries (cultures), and through support the sport programmes in the developing countries financially.

This thesis is suggesting that sports and sport participation has a powerful role in prison. It is crucial to focus on sports programmes targeted to the inmates population that aim at developing them physically, psychologically and socially. The inmates are part of a whole society and part of the world, and by develop them (physically, mentally and psychologically) through sports, they go back to their societies, families better than before and they will be able to help in build up their societies and not tear it down. However, it is not logical to assume that the sport programme alone will convert the inmates from committing crimes, or being criminals, but it does help as a part in the whole rehabilitation process and improves the typical inmate quality of life. This effort is targeted to benefit all the inmates in Jordan, Middle East and the whole world. Societies, governments, sport clubs and organisations are responsible to support the prisons authorities with these programmes.

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Appendix A: Inmates' Social Behaviour and Body Image Survey

This questionnaire is a part of a study on the impact of sport on the social behaviour among the inmates in the rehabilitation and correction centres. You have been selected through a random process to participate in this study.

Please take your time and read each question carefully. If you do not understand a question, please ask the survey monitor for clarification. ***Remember: do not put any marks on this survey that will identify yourself in any way.*** The surveys are kept completely confidential and anonymous. You need to be completely honest throughout the survey. Once your survey is complete, remain seated until all surveys are collected.

Your honesty and participation is appreciated.

Thank you for helping with this project.

Appendix B: Social Behaviour and Body Image Survey

This survey contains of 35 statements. Please answer all of them correctly.

- If you strongly agree, cross number 4.
- If you agree, cross number 3
- If you refuse, cross number 2.
- If you strongly refuse, cross number 1.

Item	Statement	1	2	3	4
1.	I lie to get something I want				
2.	I pick on people to make them angry				
3.	I make fun of others				
4.	I take or use things that are not mine without permission				
5.	I get into fights a lot				
6.	I am bossy (tell people what to do instead of asking)				
7.	I hurt others when teasing them				
8.	I speak (interrupt) when someone else is speaking				
9.	I want to get even with someone who hurts me				
10.	I give other inmate dirty look				
11.	I gripe or complain often				
12.	I hurt others' feelings on purpose (I try to make people sad)				
13.	I think that winning is everything				
14.	I slap or hit when I am angry				
15.	I pick out other inmate's fault/mistakes				
16.	I feel angry or jealous when someone who hurts me				
17.	I brag about my self				
18.	I act like I am better than other people				
19.	I make sounds that bother others (burping, sniffing)				
20.	I am jealous of other people				
21.	I threaten people or act like a bully				
22.	I break promises				
23.	I speak too loudly				
24.	I think people are picking on me when they are not				
25.	I become angry easily				
26.	I am stubborn				

27.	I explain things more than I need				
28.	I feel good if I help someone				
29.	I cheer up a friend who is hurt				
30.	I do nice things for people who are nice to me				
31.	I say "thank you" and am happy when someone does something for me				
32.	I stick up for my friends				
33.	I ask others how are they, what they have doing etc.				
34.	I ask if I can be of help				
35.	I help a friend who is hurt				
36.	I feel happy when someone else does well				
37.	I feel sorry when I hurt someone				
38.	I share what I have with others				
39.	I see my friends often				
40.	I laugh at others people's jokes and funny stories				
41.	I look at people when they are speaking				
42.	I tell people they look nice				
43.	I take care of others' property as if it were my own				
44.	I look at people when I talk to them				
45.	I ask questions when talking with others				
46.	I join in games with other inmates				
47.	I call people by their names				
48.	I walk up to people and start conversation				
49.	I show my feelings				
50.	I keep secrets well				
51.	I stay with others too long (wear out my welcome)				
52.	I explain things more than I need to				
53.	I try to be better than everyone				
54.	I always want to be first				
55.	I like to be the leader				
56.	I think I know it all				
57.	I feel lonely				
58.	I like to be alone				
59.	I know how to make friends				
60.	I have many friends				
61.	I am afraid to speak to people				

Body Image Dimension

62.	In general I feel myself strong				
63.	There is something wrong in my physical appearance				
64.	I am healthy				
65.	Sometimes I feel a great physical power in me				
66.	I can simply live with any physical lack (hinder) in my body				
67.	Often my physical appearance annoyed me				
68.	I feel that I am strong				
69.	I am not happy from my physical appearance				
70.	I hope if I would have had another body				
71.	Sometimes I feel bad from my physical appearance				
72.	I am so stressed out				
73.	I do not like myself in Photos				
74.	I feel that I have the "top fit" body				
75.	My physical hinderers annoyed me				
76.	I do not trust my body so much				
77.	Sometimes I hope that I would have been another person				
78.	I am satisfied with my body image				

Appendix C: Social Climate in the Prison

This questionnaire is part of a study on the impact of sport on the social climate in the prison. You are selected according to your position, as staff prison, who are – almost every day – in direct contact with the prisoners (the targeted group). Your answers to the questions found within this questionnaire are crucial to the success of this study.

Please take your time and read each question carefully. If you do not understand a question, please ask the survey monitor for clarification. ***Remember: do not put any marks on this survey that will identify yourself in any way.*** The surveys are kept completely confidential and anonymous. You need to be completely honest throughout the survey. Once your survey is complete, remain seated until all surveys are collected.

Your honesty and participation is appreciated.

Thank you for helping with this project.

Appendix D: Social Climate Questionnaire

This survey contains of 35 statements. Please answer all of them correctly.

- If you strongly agree, cross number 4.
- If you agree, cross number 3
- If you refuse, cross number 2.
- If you strongly refuse, cross number 1.

Item	Statement	1	2	3	4
1.	Sometimes the inmates feel lonely				
2.	Some inmates can be very mean to other inmates				
3.	If one of the inmates says something stupid, the others will laugh about him				
4.	Inmates who have made themselves unpopular some time ago are still rejected the others				
5.	Some inmates don't like other prisoners				
6.	In this group (of inmates) you cannot rely on your fellow detainee				
7.	In group, the inmates like to work together				
8.	The inmates enjoy being in this group				
9.	Many inmates are content because of the good comradeship in the prison				
10.	The inmates of the prison are not very interested in cooperating with others				
11.	One cannot be content with the fellow detainees in this prison				
12.	Some inmates don't care about what the group is doing				
13.	The solidarity in our group could not be any better				
14.	Most inmates in our group would rather have other fellow detainees				
15.	Some inmates always try to be better than other inmates				
16.	The inmates often fight about who effected a better performance				
17.	The inmates consider competition a necessary means to evaluate what each individual is capable of				
18.	Many inmates only care about achieving more than the others during evaluations				
19.	The inmates contend with each other to see who will effect the best performance				

20.	Some inmates don't whisper the answer to a comrade because they want to answer themselves				
21.	Some inmates work together in groups without caring about the rest of the big group				
22.	There are groups that don't get along with the big group				
23.	Many inmates only think about themselves				
24.	Certain inmates only cooperate with close friends				
25.	The inmates in our group are not interested in working together with others				
26.	The inmates cooperate equally well with all fellow detainees				
27.	There are always inmates in this group that will encourage the one who feels depressed				
28.	If one of the inmates wants to cooperate with someone, he always finds a partner quickly				
29.	If an inmate is lost, the others will help him immediately				
30.	If an inmate received a bad result on an evaluation, there are often other inmates who will comfort him				
31.	Some inmates imitate their fellow detainees				
32.	Sometimes individual inmates will mock the inmate of another group for no reason				
33.	Individual inmates annoy their fellow inmates				
34.	Some inmates in our group are always looking for trouble				
35.	If an inmate has trouble, his fellow detainees will help him				

Appendix E: Documentary Pictures





