ATHLETIC TRAINING AND PSYCHOLOGICAL PREDICTORS OF INJURY: A CASE STUDY OF MALAYSIAN PROFESSIONAL FOOTBALL PLAYERS INVOLVED IN MALAYSIAN FOOTBALL LEAGUE

A PRELIMINARY RESULT

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USM SHORT TERM GRANT
(GRANT NO: 304 / PPSP / 6131143)

TOPIC

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GRANT PERIOD
15 MAC 2001 TO 14 MAC 2002

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ABSTRACT

Sport psychology deals with many aspects, which are important in sports and games. Injury is one of the common things one can observe in most of the sport and games. Injuries occur either by accident or intentionally. There are many reasons one can think of injuries occurring and that psychological aspect is considered more important. Psychological predictors, psychological impacts, and psychological aspects of rehabilitation are vital to know. Therefore, the objective of the study is to determine *psychological predictors* leading to *athletic injury* with focusing to Malaysian football players involved in Malaysian Professional Football League. A descriptive method of research was used to determine the *psychological predictors* of injury among the selected state team players. A pilot study has been carried out to test the validity and reliability of the questionnaire. Cluster sampling was used to get the actual number of subjects. Based on this sampling method, all teams were clustered into five groups (North, South, East, West and East Malaysia). From these five groups, two teams from each cluster have randomly picked up as a subject (25 players each team x 10 teams = 250 players). Questionnaires, observation, and interview were the instruments that being used in determining psychological predictors of injury. For statistical analysis, Multiple Logistic Regression was used to identify the psychological predictors of injuries by using the Statistical Package for Social Science (SPSS) version 9.0 for windows. The results of this study has showed that most of the Malaysian professional football players scored higher in neuroticism, and lower in agreeableness and conscientiousness. The subjects were also found experiencing anxiety with poor *self-esteem* and *mental toughness* as well.

Keywords: psychological predictors, athletic injury, personality, state-trait anxiety, self-esteem, mental toughness.

Introduction

Sport psychology deals with many aspects, which are important in sports and games. Injury is one of the common things one can observe in most of the sport and games. Injuries occur either by accident or intentionally. There are many reasons one can think of injuries occurring and that psychological aspect is considered more important. All the psychological aspects such as psychological predictors, impacts, and aspects of rehabilitation are vital to know.

No matter how safe the environment or how well conditioned the athlete, activity will inevitably produce some injuries, whether it be by contact with other bodies, the floor or ground, or sporting equipment. Situations that cause imbalance in body control may produce injuries ranging from minor to severe. Usually, though, these injuries are minor. In sports, regardless of the best efforts made by coaches and trainers to prevent injury, but still injuries occur. In fact, injury involves an element of risk or extreme demands in terms of strength, power or endurance. One of the possible preventive measures to reduce injury in sports is to address the psychological predictors of injury.

Injury is also more than an event. It is a process played out over days or months – or even years. Norris (1998) describes injuries as the greatest source of stress, and single most important issue in sports. They may lead to emotional problems such as anxiety, depression, and unhealthy behaviours such as increased drug and alcohol abuse. These negative moods and behaviours place the athlete at risk for prolonged rehabilitation and further behavioural problems.

Basically, all parties; coaches, physiotherapists, psychologists, and team officials as the main line of defense against injuries. When the coach's role, for example, in regard to injury is defined and they meet those responsibilities that are part of his or her role, the number and severity of such injuries can be reduced. It is therefore important to address the different psychological predictors of injury and to describe psychosocial components of the rehabilitation process. In sports, injuries can be divided into three categories; mild (cannot play for less than two weeks), moderate (cannot play from 2 to 4 weeks), and severe (cannot play for more than 4 weeks). If the injury is so severe, or the damage so permanent, that an athlete will not be able to return to his/her sport (Han Inklaar, 1994). This will give a negative psychological impact on those injured athletes.

Although most causal factors for athletic injury are physical or situational, some psychological factors also contribute to injury vulnerability and resiliency (Smith et al. 1990). A number of variables have been examined as potential predictors of injury occurrence in sport. Early work in this area provided descriptive accounts of the types of athletes thought to be prone to injury and suggested that intra-personal conflict, anxiety, depression, guilt and low self-confidence were important contributors to injury occurrence (Sanderson, 1977).

The need for the present study was to determine psychological predictors that might lead to injury occurrence in sports, specifically in soccer using Malaysian Soccer League and also to develop a questionnaire which was validated and used for determining the psychological predictors of athletic injury.

METHODOLOGY

1. The descriptive method of research was used in this study to determine the psychological predictors of athletic injury among the selected state football players who are involved in Malaysian Football League. A pilot study has been carried out to test the validity and reliability of the questionnaires. Cluster sampling was used to get the actual number of subjects. From this sampling method, 250 players who are involved in Malaysian Professional Football League were chosen as respondents (flow chart) (see Appendix 1 on page 7).

Questionnaires, observation, and interview were used in this study. The subjects were asked to fill up the questionnaires. These questionnaires were administered three times; pre-season, mid-season, and post-season. All these questionnaires were translated to Bahasa Melayu (Malay Language) by experts in order to enable the subjects to understand the questions and answer properly. Then these four questionnaires were back translated to English and after that have been translated to Bahasa Melayu again. Therefore, the reliability of these translated questionnaires was established.

These questionnaires have also been validated. Content validity has been done in validating these questionnaires. Content validity was done by using factor analysis in the Statistical Package for Social Science (SPSS) version 9.0 for windows. Through this method, standard deviation of all the 148 questions have scored more than point 4, which mean these questions are valid and can be used in this research. As a result, the reliability and validity were found to be good.

2.1 The questionnaires used in this study are as follows:

2.1.1 ***Neo Five-Factor Inventory (NFFI) by Paul T. Costa, Jr. and Robert R. McCrae (1991).*** The NEO inventory measures five broad domains or dimensions of personality. The responses that subjects gave to the statements about their thoughts, feelings, and goals can be compared with those of other subjects to give a description of their personality. For each of the five domains, descriptions are given for different ranges of scores. The NEO inventory measures differences among normal individual. It is not a test of intelligence or ability, and it is not intended to diagnose problems of mental health or adjustment. It does, however, give us some ideas about what makes you unique in your ways of thinking, feeling, and interactive with others.

2.1.2 ***The State-Trait Anxiety Inventory (STAI) by Charles D. Spielberger and Rogelio Diaz-Guerrero (1976).*** It is the definitive instrument for measuring anxiety in adults. The STAI clearly differentiates between the temporary condition of "state anxiety" and the more general and long-standing quality of "trait anxiety." The essential qualities evaluated by the STAIS-Anxiety scale are feelings of apprehension, tension, nervousness, and worry. Scores on the STAIS-Anxiety scale increase in response to physical danger and psychological stress, and decrease as a result of relaxation training. On the STAIT-Anxiety scale, consistent with the trait anxiety construct, psychoneurotic and depressed patients generally have high scores. For STAIS-Anxiety, it consist of 20 statements which people have used to

describe themselves by indicating how they feel right now/present feelings best (at the moment when the questionnaire is given). For STAIT-Anxiety questionnaire, there are also 20 statements which people have used to describe themselves by indicating how they generally feel.

2.1.3 ***Self-esteem Questionnaire (SEQ) by Christine Bennette (1999).*** This questionnaire can help subjects discover the real essence of who they are and help them reach their full potential for personal growth. In the course of living, people can take on beliefs about themselves that limit their choices. These beliefs are like software in the brain and just as our computer can be reprogrammed with different software – so can our brain.

2.1.4 ***Mental Toughness Questionnaire (MTQ) by Alan Goldberg (1999).*** Through this questionnaire, subjects will be able to know just how mentally tough are they. The subjects need to take a few moments to fill out this questionnaire that covers several component skills of mental toughness. When the subjects are finished answering all the 30 questions, they can do check their answers in the evaluation section that follows to determine their mental strengths and weaknesses.

2.2 Observation and Interview were also used to get first hand information about the teams' training programmes, how the players get injured, type of injuries and treatments or rehabilitation programmes as well. By doing interview, researcher

collected the opinion, suggestion and comments from all parties, including team managers, coaches, physiotherapists, supporters and also from family members.

3. Procedure

The consent has been taken from Football Association of Malaysia (FAM). The managers of these teams were informed of the project. Players were selected taking into consideration inclusion and exclusion criteria and also asked them to fill up consent form.

4. Statistical analysis

For statistical analysis, Multiple Logistic Regression were being used to compare the psychological predictors between injured and non-injured players by using Statistical Package for Social Science (SPSS) version 9.0 for Windows. This program was selected, as it is easier for analysing data. It can also be manipulating data for the big respondents, and through this method the data that was analysed is also more accurate. Apart from that, the percentage method has also been used in order to measure every item of questions together with the data that will be shown by graft and/or tables.

RESULTS

1. Respondents' Background

Table 1 : Name of the teams

Name of the teams	Frequency (N)	Percentage (%)
Perlis	25	10
Pualu Pinang	25	10
Selangor	25	10
Negeri Sembilan	25	10
Melaka	25	10
Johor	25	10
Kelantan FA	25	10
Kelantan JKR	25	10
Sabah	25	10
Sarawak	25	10
Total	**250**	**100**

Table 2: Positioning

Positioning	Players (N=250)	Percentage (%)
Keeper	28	11.2
Defender	78	31.2
Winger	35	14.0
Midfielder	62	24.8
Striker	47	18.8
Total	**250**	**100**

Table 3: Age

Age	Players N=250	Percentage (%)
Under 18	6	2.4
18 – 21	34	13.6
22 – 26	110	44.0
26 – 29	72	28.8
30 33	22	8.8
34 and above	6	2.4
Total	**250**	**100**

Table 4: Religion

Religion	Players N = 250	Percentage (%)
Islam	196	78.4
Budhha	10	4.0
Hindu	28	11.2
Christian	16	6.4
Total	**250**	**100**

Table 5: Ethnicity

Ethnicity	**Players N = 250**	**Percentage (%)**
Malay	194	77.6
Chinese	12	4.8
Indian	28	11.2
Others	16	6.4

Table 6: Education Level

Education Level	**Players N = 250**	**Percentage (%)**
Degree	1	0.4
Diploma	1	0.4
STP/STPM	1	0.4
SPM/MCE	214	85.6
PMR/LCE	33	13.2
Total	**250**	**100**

Table 7: Marital Status

Marital Status	**Players N = 250**	**Percentage (%)**
Not married	162	64.8
Married	87	34.8
Separated	1	0.4
Total	**250**	**100**

Table 8: Period of Involvement in Malaysia League

Year of Involvement	**Players N = 250**	**Percentage (%)**
Less than 1 year	30	12.0
1 – 3	75	30.0
4 – 6	88	35.2
7 – 9	43	17.2
9 – 12	6	2.4
More than 12 years	8	3.2
Total	**250**	**100**

Table 9: History of Injury

History of Injury	Players N = 250	Percentage (%)
Yes	104	41.6
No	146	58.4
Total	**250**	**100**

Table 10 : Type of Injury

Type of injuries	Respondents	Percentage (%)
Hamstring	10	4.0
Leg	22	8.8
Ankle	38	15.2
Hand	8	3.2
Wrist	5	2.0
Shin	18	7.2
Head	7	2.8
Forehead	2	0.8
Thigh	13	5.2
Knee	42	16.8
Others	3	1.2

Table 11: Period of Injury

Period of injury	Players (N=104)	Percentage (%)
1 week	42	16.8
2 weeks	24	9.6
3 weeks	19	7.6
4 weeks	12	4.8
More than 4 weeks	7	2.8
Total	**104**	**100**

Table 12: Level of Injury

Level of Injury	Frequency (N)	Percentage (%)
Mild injury	29	27.8
Moderate	53	50.9
Severe	22	21.2
Total	**104**	**100**

Table 13: Time of Injury Occurred

Time of Injury	**Frequency (N = 104)**	**Percentage (%)**
1st quarter of the season	7	6.7
2nd quarter of the season	22	21.1
3rd quarter of the season	50	48.2
4th quarter of the season	25	24.0
Total	**104**	**100**

2. **Neo Five-Factor Inventory (NFFI)**

2.1 *Neuroticism* (N = 250). From the result, it shows that 10 players (4.0%) have scored low, 49 players (19.6%) scored average, and 191 (76.4%) have scored high.

Grap 1: Neuroticism

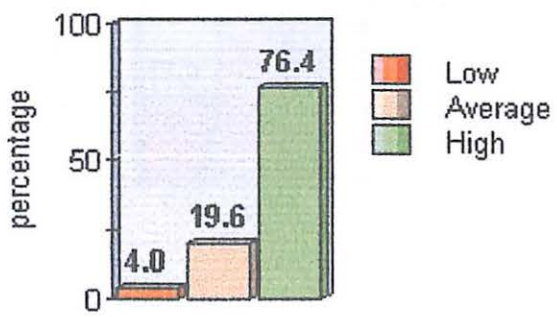

Table 14: Relationship between Neuroticism and injury

Neuroticism	Injured players	Not injured players
Low	3 (2.8%)	7 (4.8%)
Average	16 (15.4%)	33 (22.6%)
High	85 (81.8%)	106 (72.6)
Total	**104 (100%)**	**146 (100%)**

2.2 *Extraversion* (N = 250). Result shows that 43 players (17.2%) scored low, 123 players (49.2%) have scored average, and 83 players (33.6%) scored high.

Graph 2: Extraversion

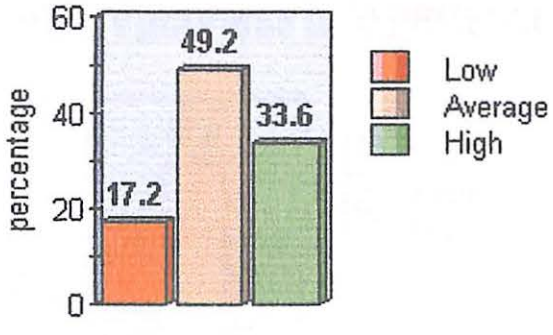

Table 15: Relationship between Extraversion and injury

Extraversion	Injured players	Not injured players
Low	29 (27.9%)	14 (9.6%)
Average	56 (53.8%)	67 (45.9%)
High	19 (18.3)	65 (44.5%)
Total	**104 (100%)**	**146 (100%)**

2.3 *Openness to experience* (N = 250). Data analysis shows that 69 players (27.6%) have scored low, 119 players (47.6%) scored average, and 62 players (24.8%) have scored high.

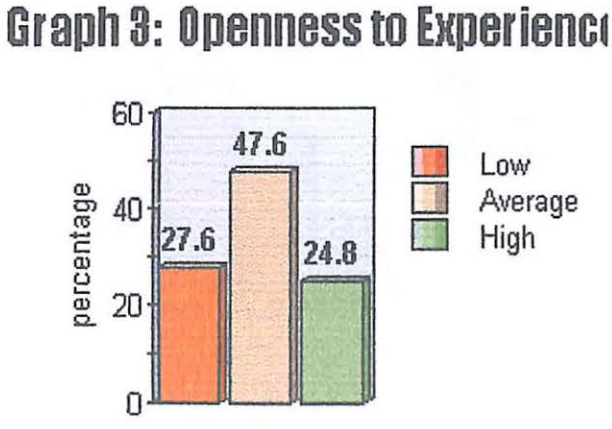

Table 16: Relationship between Openness to experience and injury

Openness to experience	Injured players	Not injured players
Low	42 (40.4%)	27 (18.5%)
Average	51 (49.0%)	48 (32.9%)
High	11 (10.6%)	71 (48.6%)
Total	**104 (100%)**	**146 (100%)**

2.4 *Agreeableness* (N = 250). Result shows that 125 players have scored low, 93 players (37.2%) scored average, and 32 players (12.8%) scored high.

Graph 4: Agreeableness

Table 17: Relationship between Agreeableness and injury

Agreeableness	Injured players	Not injured players
Low	51 (49.0%)	74 (50.7%)
Average	37 (35.6%)	56 (38.4%)
High	16 (15.4%)	16 (10.9%)
Total	**104 (100%)**	**146 (100%)**

2.5 *Conscientiousness* (N = 250). It shows that 127 players have scored low (50.8%), 93 players scored average (37.2%), and 30 players have scored high (12.0%).

Graph 5: Conscientiousness

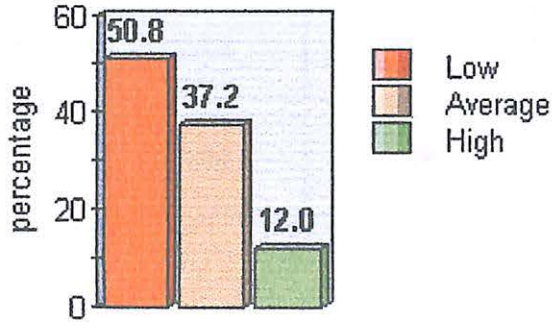

Table 18: Relationship between Conscientiousness and injury

Conscientiousness	**Injured players**	**Not injured players**
Low	71 (68.3%)	56 (38.4%)
Average	19 (18.3%)	74 (50.7%)
High	14 (13.4%)	16 (10.9%)
Total	**104 (100%)**	**146 (100%)**

Conscientiousness	Injured players	Not injured players
Low	71 (68.3%)	56 (38.4%)
Average	19 (18.3%)	74 (50.7%)
High	14 (13.4%)	16 (10.9%)
Total	**104 (100%)**	**146 (100%)**

The detail result/scale of the Neo Five-Factor Inventory is showed in table 19.

Table 19: The Overall Scoring of the Neo Five-Factor Inventory

New Five-Factors Inventory	Neuroticism (%)	Extraversion (%)	Openness to Experience (%)	Agreeableness (%)	Conscientiousness (%)
Low	4.0	17.2	27.6	50.0	50.8
Average	19.6	49.2	47.6	37.2	37.2
High	76.4	33.6	24.8	12.8	12.0
TOTAL	**100**	**100**	**100**	**100**	**100**

3. **State-trait Anxiety Inventory (on STAI, N = 250 players)**

On STAIS-Anxiety, 25 players (10%) have scored of 40 and below (low anxiety), 224 players (89.6%) have scored 0f 41 to 55 (anxiety), and only 1 player (0.4%) scored of more than 55 (high anxiety).

Graph 6: Result for State Anxiety

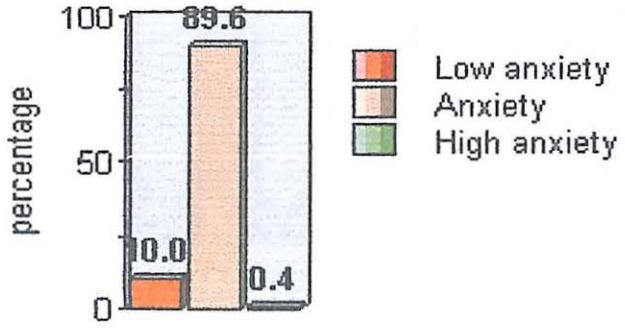

Table 20: Relationship between State-anxiety and injury

State-anxiety	Injured players	Not injured players
Low	18 (17.3%)	7 (4.8%)
Average	85 (81.7%)	139 (95.2%)
High	1 (1.0%)	0
Total	**104 (100%)**	**146 (100%)**

On STAIT-Anxiety, 18 players (7.2%) have scored of 40 and below (low anxiety), 227 players (90.8%) scored of 41 to 55 (anxiety), and 5 players (2%) have scored of more than 55 (high anxiety).

Graph 7: Result for Trait-anxiety

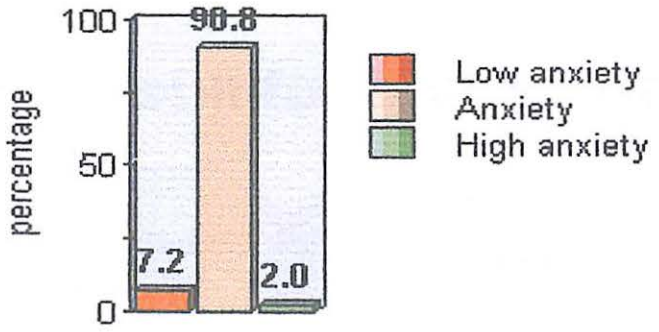

Table 21: Relationship between Trait-anxiety and injury

Trait-anxiety	Injured players	Not injured players
Low	5 (4.8%)	13 (8.9%)
Average	96 (92.3%)	131 (89.7%)
High	3 (2.9%)	2 (1.4%)
Total	**104 (100%)**	**146 (100%)**

4. **Self-esteem Questionnaire (on SEQ, N = 250)**

As shown in graph 8, the scores of 8 players (3.2%) are within normal limit (answered YES to 1 – 3 questions), 145 players (58%) score indicate of poor self-esteem (answered YES to 4 – 8 questions), and 97 players (38.8%) scoring definitely suggestive of very poor self- esteem (answered YES to more than 8 questions).

Graph 8: Result for Self-esteem

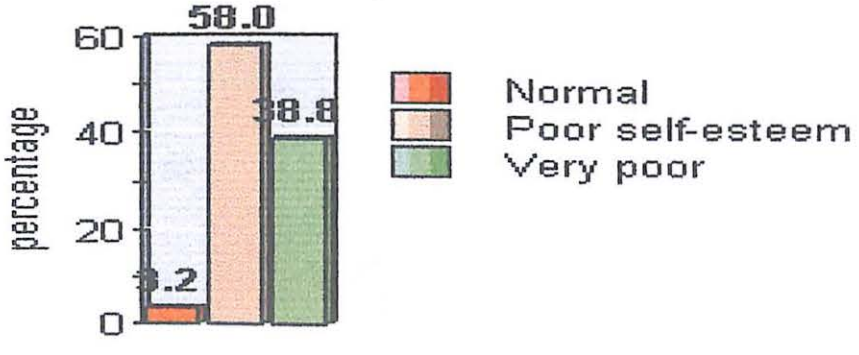

Table 22: Relationship between Self-esteem and injury

Self-esteem	Injured players	Not injured players
Low	2 (1.9%)	6 (4.1%)
Average	88 (84.6%)	57 (39.1%)
High	14 (13.5%)	83 (56.8%)
Total	**104 (100%)**	**146 (100%)**

5. Mental Toughness Questionnaire (MTQ, N = 250)

From the result, it shows that 190 players (76.0%) have scored of 22 and below (poor mental toughness), 40 players (16%) have scored of 23 to 25 (average mental toughness), and only 20 players (8%) have scored of 26 to 30 (strong mental toughness).

Graph 9: Result for Mental Tough

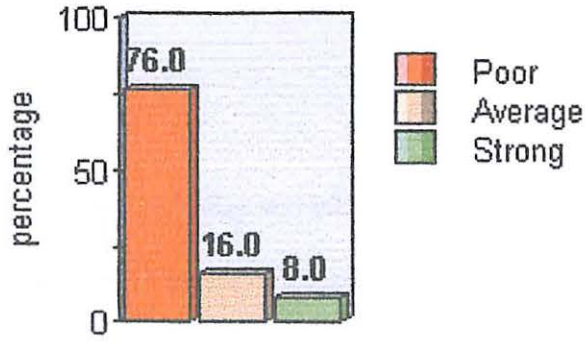

Table 23: Relationship between Mental Toughness and injury

Mental Toughness	Injured players	Not injured players
Low	77 (74.0%)	111(76.0%)
Average	19 (18.3%)	23 (15.8%)
High	8 (7.7%)	12 (8.2%)
Total	**104 (100%)**	**146 (100%)**

5. DISCUSSION

5.1 Neo Five-Factor Inventory

The results of this study shows that most of the Malaysian football players have a problem in some of the personality factors like neuroticism, agreeableness, and conscientiousness. In other words, most of them having problem with these personality factors. Whereas, the other two personality factors such as extraversion and openness to experience, the scores were normal.

5.1.1 Neuroticism

On neuroticism, 191 players (76.4%) scored high. High scores suggests that these players are prone to have irrational ideas, poor impulse control and also poor coping mechanism with stress. These players are self defeating, basically anxious, mood fluctuations and negative emotions such as anger, guilt and disgust. They are also very sensitive, emotional, and prone to experience feelings that are upsetting. Anderson & William (1988) in their research have found the same result where the part of the injury occurrence in sports and physical activity was due to inability to cope with the emotional and most of the time feel anxious.

Our results indicates that most of the Malaysian professional football players face a problem with their personality trait (neuroticism) and this phenomenon may be one of the psychological predictors of injury in football. Otherwise, 10 players (4.0%) who score low means that they are unemotional, calm, even tempered, self satisfied, comfortable with themselves, secure, hardy, and generally relax even under stressful conditions. Whereas 49

players (19.6%) who score average are generally calm and able to deal with stress effectively, but they sometimes experience feeling of guilt, anger, or sadness.

5.1.2 Extraversion

The result shows that 43 players (17.2%) scored low. Players who have scored low indicates that their personality traits are quite, introverted, reserved, and serious. They prefer to be alone or with a few close friends. Most of the time, they are solitary, quiet, and having low energy. These players are likely to vulnerable to injuries. However, 84 players (33.6%) have scored high, which indicate that these players are outgoing, highly active, and high spirited. They prefer to be around people most of the time. These players are also assertive, have good skills in using humor, energetic, and optimistic. In other words, most of the Malaysian professional football players have extraverted personality.

Whereas, 123 players scored average, which means that they always moderate in activity and enthusiasm. They will enjoy the company of others but also value privacy. According to Bramwell et al. (1975), certain specific psychological factors may predispose some individuals to injury and re-injury in sports such as stressful life events, experience, personality traits like quiet and prefer to be alone or with a few close friends.

5.1.3 Openness to experience

Results on openness to experience shows that 69 players (27.6%) scored low. Players who scored low indicate that they are conventional, preferring routine and they are also down-to-earth, practical, traditional, and pretty much set in their ways. These players

are likely to have set their goals in achieving success whereas 62 players (24.8%) who score high are open to new experiences with broad interests and highly imaginative. They tend to exhibit a preference for new and unfamiliar experiences, attention to inner feelings and fantasies, and also reflected in appreciation of knowledge. These traits are negative elements among football players. Otherwise, 119 players (47.6%) scored average, indicate that they are practical but willing to consider new ways of doing things. They seek a balance between the old and the new.

5.1.4 Agreeableness

On agreeableness trait, 125 players (50.0%) scored low. The subjects who score low, indicate that these players are hardheaded, skeptical, proud and competitive. They are antagonistic, unkind, suspicious, and unsympathetic. They are also tending to express their anger directly. Therefore, we can say that 50% of the present samples suggest that these are likely to cause injury to others because of their personality factors. Meanwhile, 93 players (37.2%) scored average, which means that they are generally warm, trusting, and agreeable, but sometimes be stubborn and competitive. Whereas, 32 players (12.8%) have scored high and these players are likely to compassionate, good natured, always try to avoid conflict, and eager to cooperate. They are also sympathetic, straight forward, and considerate. These personality traits are the positive factors required for football players.

5.1.5 Conscientiousness

On conscientiousness trait, 127 players (50.8%) scored low. The low scores are the one pursue a larger number of goals and exhibit the distractibility and spontaneity associated with diffuse focus. They are not very well-organized in anything they do, sometimes careless as well as inefficient and undependable. They are also easygoing and prefer not to make plans in anything they want to do. These personality traits are negative qualities of football players. 93 players (37.2%) who score average means that they are dependable and moderately well-organized. They generally have clear goals but are able to set their work aside.

Meanwhile, 30 players (12.0%) who score high means that they will be very well-organized, dependable, able to delay gratification, competent, and responsible. They are also conscientiousness, have high standards and always strive to acjieve their goals. Grove & Gordon (1995) also found that intra-personal conflict and personality factors such as careless, inefficient, and disorganised in doing something are among the psychological predictors of athletic injury in elite athletes.

5.2 State-Trait Anxiety Inventory (STAI)

On STAIS-Anxiety, there are 25 players (10%) scored 40 and below, 224 players (89.6%) have scored 41 to 55, and 1 player (4%) has scored more than 55. In STAIS-Anxiety, any subject who scored 40 and below, indicates the players are having minimal anxiety. For the players who score 41 to 55, they are having anxiety but able to cope up, and for the players who score more than 55, indicate that these players are having high

anxiety level. From the results, it shows that 224 players (89.6%) have scored 41 to 55, which means that they are having anxiety but still can manage and cope with anxiety. Whereas, only 1 player (4%) has scored more than 55, which means that this player is having very high anxiety and warrant professional helps.

Meanwhile, in trait anxiety, there are 18 players (7.2%) scored 40 and below, 227 players (90.8%) have scored 41 to 55, and 5 players (2%) have scored more than 55. Any subjects who have scored 41 to 55, it means that they have high trait anxiety but still can manage and cope. For the other 5 players (2%) who have scored more than 55, indicates that these players have high anxiety, which demand professional help. Sanderson (1977), Lysens et al. (1987), Banks (1989), Rodin & Salovey (1989), Grove (1993) state that anxiety and depression are common predictors of athletic injury in elite athletes. Our study indicates that majority of the players are having high anxiety and needed to learn to cope with it by taking professional help.

5.3 Self-esteem Questionnaire (SEQ)

From the result, it shows that most of the respondents were scored low in self-esteem. Eight players (3.2 %) have answered YES to 1 – 3 questions, which means they are within normal limit of self-esteem where they experiencing an amount of frustration that is common to a significant number of the population. They have a very good appreciation on their self-esteem.

Meanwhile, 145 players (58%) have answered YES to 4 – 8 questions, indicates that these players are having poor self-esteem and finding it increasingly difficult to cope. The result was also showed that 97 players (38.8 %) have scored YES to more than 8 questions, which means scoring definitely suggestive of very poor self-esteem. They experiencing a larger number of difficulties in their life and need to start putting more time into the mental training area. Kort & Kirkby (1994) in their study also found that people with poor self-esteem and low self-confidence are among the psychological predictors of athletic injury in elite athletes. Present study shows that majority of the players are having poor self-esteem, and attention is needed in this area to enhance self-esteem.

5.4 Mental Toughness Questionnaire (MTQ)

The result of the mental toughness questionnaire shows that 190 players (76%) have scored 22 points or below, which means that they are having poor mental toughness and need to start putting more time into the mental toughness aspect. Otherwise, 40 players (16%) have scored between 23 and 25 points, indicates of these players are an average to moderate skills in mental toughness. But only 20 players (8%) scored 26 to 30 points, which shows that they are having good strength in overall mental toughness.

Nideffer (1989), Rotella & Heyman (1993), Wiese-Bjornstal & Smith (1993), Ford & Gordon (1993), and Grove & Gordon (1995) also said that part of the injury occurrence in sports and physical activity are because of competitive pressure (mental toughness), personality, history of stressors, and coping resources. Again majority of the players responses suggestive of poor mental toughness. This is an important area where one can

train the players to be mentally tough and face the stress without having breakdown or injury.

6. CONCLUSION

From the present preliminary study indicates that majority of the Malaysian professional football players involved in Malaysia Football League have problem in their personality traits. Most of them are having poor emotional stability with poor impulse control. Their anxiety level is also high specially on trait anxiety. The results also indicative of poor self-esteem and poor mental toughness. The overall problem in personality is appears to be one of the predictors of injury among Malaysian professional football players. Care should be taken to preventive aspects of injury by conducting awareness programme and also educating them in coping with the stress and enhancing their self-esteem and mental toughness as well.

REFERENCES:

1. Agnew, G. A. and Carron, A. V. (1994). Crowd effects and the home advantage. *International Journal of Sport Psychology, 25*: 53 – 62.

2. Andersen, M. B. & William, J. M. (1988). A model of stress and athletic injury: Prediction and prevention. *Journal of Sport and Exercise Psychology 10*, 294 – 306.

3. Anshel, H. M. (1990). Toward validation of a model for coping with acute stress in sport. *International Journal of Sport Psychology, 21*: 58 – 83.

4. Anshel, H. M. (1997). Sport Psychology: From Theory to Practice. Third Edition. Arizona: Gorsuch Scarisbrick Publishers. pp. 153 – 173.

5. Bond, J. W., Miller, B. P., & Chrisfield, P. M. (1988). Psychological prediction of injury in elite swimmers. *Int. J. Sports Med. 9*:345 – 348.

6. Boyd, T. K., Peirce, S. N. and Batt, E. M. (1997). Common hip injuries in sport. *Sports Medicine, 24 (4)*: 285 – 286.

7. Brewer, B. W., Daly, J. M., Van Raalte, J. L., Petitpas, A. J. and Sklar, J. H. (1999). A psychometric evaluation of the rehabilitation adherence questionnaire. *Journal of Sport and Exercise Psychology, 21 (2)*, pp. 213 – 223.

8. Butki, B. D. and Rudolph, D. L. (1997). Do short bouts of exercise reduce anxiety? *Medicine and Science in Sports and Exercise, 29 (5)* pp. 100 – 110.

9. DeLongis, A., Folkman, S. & Lazarus, R. S. (1988). The impact of daily stress on health and mood: Psychological and social resources as mediators. *Journal of Personality and Social Psychology 54*, 486 – 495.

10. Duda, J. L., Chi, L., Newton, L. M., Walling, M. D., & Catley, D. (1995). Task and ego orientation and intrinsic motivation in sport. *International Journal of Sport Psychology, 26*: 40 – 63.

11. Duda, J. L., Olson, L. K., and Templin, T. J. (1991). The relationship of task and ego orientation to sportsmanship attitudes and the perceived legitimacy of injurious acts. *Research Quarterly for Exercise and Sport. Vol. 62, No. 1*, pp. 79 – 87.

12. Ebbeck, V. and Becker, S. L. (1994). Psychosocial predictors of goal orientations in youth soccer. *Research Quarterly for exercise and Sport. Vol. 65, No. 4*, pp. 355 – 362.

13. Finch, C. F. (1997). An overview of some definitional issues for sports injury surveillance. *Sports Medicine. Sep: 24(3)*: 157 – 163.

14. Ford, I. W., & Gordon, S. (1993). Social support and athletic injury: The perspective of sport physiotherapists. *Australian Journal of Science and Medicine in Sport 25*, 17 – 25.

15. Grove, J. R. (1993). Personality and injury rehabilitation among sport performers. In Pargman, D. (ed). *Psychological Bases of Sport Injuries*, pp. 99 – 120. Fitness Information Technology, Morgantown, WV.

16. Inklaar, H. (1994). Soccer Injuries I: Incidence and Severity. Sports Medicine, 18 (1): 55 – 73.

17. Kolt, G. S. & Roberts P. D. (1998). Self-esteem and injury in competition field hockey players. *Perception Motor Skills*, Aug; 87 (1): 353 – 4.

18. Lysens, R., Steverlynck, A., Van Den Auweele. Lefevre. J., Renson, L. , Claessens, A., & Ostyn, M. (1984). The predictability of sports injuries. *Sports Medicine* 1:6 – 10.

19. Nideffer, R. M. (1989). Psychological aspects of sports injuries: Issues in prevention and treatment. *Int. J. Sport Psychol.*, 20:241- 255.

20. Norris, C. M. (1998). *Sports injuries, diagnosis and management*. Second Edition. Wobur, MA: Heinemann.

21. Rodin, J. & Salovey, P. (1989). Health Psychology. *Annual Review of Psychology 40*, 533 – 579.

22. Rotella, R. J. & Heyman, S. R. (1993). Stress, injury and the psychological rehabilitation of athletes. In Williams, J. M. (ed). *Applied Sport Psychology: Personal Growth to Peak Performance*, pp. 338 – 355. Mayfield, Palo Alto, CA.

23. Smith, A. M., Scott, S. G. and Wiese, D. M. (1990). The psychological effects of sports injuries : coping. *Sports Medicine 9 (6)*: 352 – 369.

24. Sanderson, F. H. (1977). The psychology of the injury prone athlete. *British Journal of Sports Medicine 11*, 56 – 57.

25. Wiese-Bjornstal, D. M. and Smith, A. M. (1993). Counseling strategies for enhanced recovery of injured athletes within a team approach. In Pargman, D. (ed). *Psychological Bases of Sport Injuries*, pp. 149 – 182. Fitness Information Technology, Morgantown, WV.