A STUDY OF SPORTSMANSHIP AND
LOYALTY OF ATHLETIC STUDENTS
AND NON-ATHLETIC STUDENTS IN
HONG KONG BAPTIST UNIVERSITY

BY

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We hereby recommend that the Honours Project by Mr. ZHANG SHUGE entitled "A STUDY OF SPORTSMANSHIP AND LOYALTY OF ATHLETIC STUDENTS AND NON-ATHLETIC STUDENTS IN HONG KONG BAPTIST UNIVERSITY" be accepted in partial fulfillment of the requirements for the Bachelor of Arts Honours Degree in Physical Education And Recreation Management.

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DECLARATION

I hereby declare that this honours project "A STUDY OF SPORTSMANSHIP AND LOYALTY OF ATHLETIC STUDENTS AND NON-ATHLETIC STUDENTS IN HONG KONG BAPTIST UNIVERSITY" represents my own work and had not been previously submitted to this or other institution for a degree, diploma or other qualification. Citations from the other authors were listed in the references.

ZHANG SHUGE

26th APRIL, 2011
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ABSTRACT

The purpose of this study to study the sportsmanship and loyalty of athletic and non-athletic students in Hong Kong Baptist University, and to see if gender and type of sports may be influential factor to sportsmanship, and also to examine if there is a relationship between sport commitment and loyalty. As the study involves 124 university athletes and 121 non-athletic students, the translated version of Extended Multidimensional Sportspersonship Orientation Scale (EMSOS-30) was used for examining sportsmanship while a new self-developed scale was used for examining interpersonal and group loyalty in sport content. The results show: 1) athletes and non-athletes are not different in their concerns and respect to opponents (athletes scored significant lower than non-athletes); 2) gender is not the influential factor of sportsmanship; 3) team sports players tend to apply more aggressive behaviors than individual sports players; 4) significant relationship was found between sports commitment and loyalty.

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Chapter 1

INTRODUCTION

Sport has been playing a more and more important role in the past several decades. It is not only focusing on physical development but it also has important impact on mental as well as moral health. Bredemeier and Shields (1986) declared that sport is a unique context that can be symbolized as "world within a world" in which special concerns and moral restrains of daily life are temporarily set aside. Researchers considered sports to be the vehicle to learn sports virtues including fairness, self-control, courage, persistence, loyalty and teamwork (Shields & Bredemeier, 1995, p.174). However, it seems to be easily observed that athletes nowadays perform more and more unsportsmanlike behaviors such as refusing to shake hands with opponents, complaining with referees, being more and more aggressive movements during the matches. Previous studies also provided some unsportsmanlike behaviors. For example, Hopkins and Lantz (1999) conducted a study of sportsmanship attitude in youth soccer players and reported some real situations that soccer players tended to perform unsportsmanlike behaviors and did worse cooperations. These unsportsmanlike behaviors are not only committed by soccer players, but also athletes in other sports.

These observed conditions of unsportsmanlike
behaviors may be explained due to the sport itself. Since sport is a kind of physical activity which is organized, skillful and under a winning-losing situations with competition, the results of the competition will be more focused and the issue of sportsmanship may not be an important concern for athletes. Bredemeier and Shields (1986) drew a conclusion that competitive sport often places individual into the conflicting situation where winning is more important and is more focused than having a fair competition by upholding sportsmanship. Although the results of competition seems to play a vital role in sport, the general public as well as all athletes should notice that the results and rewards are not the most important thing; instead, communicating each other through sport, challenging ourselves in the sport, self-actualization in the sport should be more emphasized and sportsmanship is really the basic element in playing sport.

It should be noticed that good sportsmanship is of great significance to athletes and it has many positive impacts. From the review of literature, it is known that sportsmanship is positively related to motivation (Ryska, 2003) and goal orientation (Duda, Olson, & Templin, 1991), which means good sportsmanship may lead to higher motivation and goal orientation. At the same time, to an athlete who represents the image of a country, an area, a specific team or group, good sportsmanship builds up and raises the positive images of athletes.
However, having good sportsmanship seems to be a great challenge for athletes nowadays. In 1992, Beller and Stoll reported findings that the longer athletes involved in sport, the less sportsmanship they become and some athletes demonstrate worse sportsmanship than non-athletes (as cited from Hopkins & Lantz, 1999). This finding indicated significant decline in sportsmanship of athletes over the time and demonstrated a threat to athletes that would lead them to more and more unsportsmanlike behaviors.

In addition to negative concerns of athletes' sportsmanship, previous literature also showed that relevant researches about athletes' sportsmanship are inadequate in Hong Kong. As a result, a research of sportsmanship in Hong Kong is meaningful. This study of sportsmanship of both athletic students and non-athletic students in Hong Kong in Hong Kong Baptist University helps to evaluate the sportsmanship under a local background and provide useful information for further studies in this area.

Another issue closely related to sportsmanship that is of a concern in this study is loyalty, which to some extent reflects the value of virtue ethic. Toledo-Pereyra (2006) described loyalty this way: "If gratitude is the mother of all virtues, loyalty is the most distinguished member of the family since loyalty is the most required
of all of them." (p.275). Although loyalty may be neglected by some researchers, there is no doubt that it is based on the virtue ethic, reflecting the good of community as well as the good of individual (Klopfenstein, 2008). Scientific research (Ali & Azim, 2001) also provided evidence that ethic and loyalty were strongly correlated, which indicated that loyalty is of great significance.

What is the meaning of loyalty? It seems a little bit difficult to define loyalty and indeed it may be different due to the way how people understand it. People can be loyal to others; people can also be loyal to a team or an organization; people can even be loyal to certain product or brand. It is clear that loyalty can be separated and developed into various areas. But when we see loyalty in a more general way, it can only be divided initially into interpersonal loyalty and group loyalty (Beer & Watson, 2009). Beer and Watson (2009) regarded loyalty in a general way that it ties and binds people together, whether it is in a romantic relationship, a platonic friendship, or an organization framework, etc. In this way, it is easy to get the point that loyalty is not only a reflection of virtue ethic but also is a kind of mean to deal with social network as well as a kind of belonging to a team, an organization, or a country.

However, as talking about athletes, what may the loyalty be? As many researches have been done to study
consumer loyalty, fan loyalty and organization loyalty, very few researchers studied the athlete loyalty. Though some researchers (e.g., Bee & Havitz, 2010) found that psychological commitment was related to behavioral loyalty in a sports spectator context, as well as for employees in an organizational background (Rousseau, 2010), how sports commitment which relates to sportsmanship may correlate to athlete loyalty is still unknown. That is reason why athlete loyalty is to be studied in this research.

**Statement of problem**

The main purpose of this study is to examine attitudes of both athletic and non-athletic students in Hong Kong Baptist University towards sportsmanship and loyalty. The secondary purpose is to do a comparison of sportsmanship and loyalty between athletic students and non-athletic students in Hong Kong Baptist University. The third purpose is to determine whether the sportsmanship of those university team athletes will differ due to type of sports and gender. The fourth purpose is to determine whether there is a relationship between sport commitment and loyalty.

According to the above, following research questions were raised:

1. What are the subjects’ responses to sportsmanship and
loyalty to the survey in scoring that related to the demographic characteristics?

2. Is there any difference in sportsmanship and loyalty between athletic students and non-athletic students in Hong Kong Baptist University?

3. Is there any difference in sportsmanship among athletic students due to different type of sports and gender?

4. Is there any relationship between sport commitment and loyalty?

**Hypotheses**

To study the problem above, the following statistical hypotheses were examined:

1. There would be no significant difference in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Social Convention” between athletic students and non-athletic students in Hong Kong Baptist University.

2. There would be no significant difference in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Rules & Officials” between athletic students and non-athletic students in Hong Kong Baptist University.

3. There would be no significant difference in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of
4. There would be no significant difference in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of "Opponent" between athletic students and non-athletic students in Hong Kong Baptist University.

5. There would be no significant difference in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of "Negative Approach" between athletic students and non-athletic students in Hong Kong Baptist University.

6. There would be no significant difference in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of "Instrumental aggressive behavior" between athletic students and non-athletic students in Hong Kong Baptist University.

7. There would be no significant difference in the mean score of interpersonal loyalty between athletic students and non-athletic students in Hong Kong Baptist University.

8. There would be no significant difference in the mean score of group loyalty between athletic students and non-athletic students in Hong Kong Baptist University.

9. There would be no significant interaction effect between type of sports and gender of athletic students in the mean score of extended multidimensional sportspersonship orientation scale.
There would be no significant difference in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Social Conventions” among different type of sports in athletic students.

11. There would be no significant gender difference in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Social Convention” among athletic students.

12. There would be no significant interaction effect between type of sports and gender of athletic students in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Rules and Officials”.

13. There would be no significant difference in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Rules and Officials” among different type of sports in athletic students.

14. There would be no significant gender difference in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Rules and Officials” among athletic students.

15. There would be no significant interaction effect between type of sports and gender of athletic students in the mean score of extended
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16. There would be no significant difference in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Commitment” among different type of sports in athletic students.

17. There would be no significant gender difference in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Commitment” among athletic students.

18. There would be no significant interaction effect between type of sports and gender of athletic students in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Opponent”.

19. There would be no significant difference in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Opponent” among different type of sports in athletic students.

20. There would be no significant gender difference in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Opponent” among athletic students.

21. There would be no significant interaction effect between type of sports and gender of athletic students in the mean score of extended multidimensional sportspersonship orientation scale
There would be no significant difference in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of "Negative Approach" among different type of sports in athletic students.

23. There would be no significant gender difference in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of "Negative Approach" among athletic students.

24. There would be no significant interaction effect between type of sports and gender of athletic students in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of "Instrumental Aggressive Behavior".

25. There would be no significant difference in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of "Instrumental Aggressive Behavior" among different type of sports in athletic students.

26. There would be no significant gender difference in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of "Instrumental Aggressive Behavior" among athletic students.

27. There would be no significant relationship between the mean score of interpersonal loyalty and the mean
score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Commitment”.

28. There would be no significant relationship between the mean score of group loyalty and the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Commitment”.

**Definition of terms**

The important terms listed are to be explained as following:

1. *Athletic Students in Hong Kong Baptist University*

   The athletic students in Hong Kong Baptist University refer to athletes who represented the university team of Hong Kong Baptist University to participate in related training and competitions. Those who are not belonging to university teams currently but have had a formal training in certain sports for three years or above are also grouped into athletic students.

2. *Non-athletics Students in Hong Kong Baptist University*

   Non-athletic students in Hong Kong Baptist University refer to those who are not university team athletes and their formal training time in certain sports should less than three years.

3. *Global Sportsmanship Index*

   Global sportsmanship index refers to the number that
averages scores on each of the six EMSOS subscales and adds the means, after reverse coding the negative approach toward participation and instrumental aggression subscales.

4. Loyalty

Loyalty refers to faithfulness or devotion to a person, country, group, or cause. (Wikipedia)

5. Multidimensional Sportspersonship Orientation Scale (MSOS-25 & EMSOS-30)

The multidimensional sportspersonship orientation scale (MSOS-25) is a good and popular used 25-items 7-point Likert scale that contains five subscales as “Commitment”, “Social Conventions”, “Rules and Officials”, “Opponent” and “Negative Approach”, developed by Vallerand and his colleagues in 1997. The extended Multidimensional Sportspersonship Orientation Scale (EMSOS-30) (Stornes & Bru, 2002) added an additional 7-items subscale which was the “instrumental aggression” (will be explained in detail in chapter two & three). And this study would use the EMSOS-30 to measure athletes’ attitude toward sportsmanship.

6. Sportsmanship

Sportsmanship can be defined as “The quality inherent in playing a game in which one is honor bound to follow the spirit and letter of the rules. Sportsmanship rules are rules of conduct, explicitly written or implicitly believed, that adhere to this principle” (Center for Ethics, 2005).
7. Sportspersonship

Sportspersonship is the measure of sportsmanship and can be defined as "concern and respect for one’s full commitment toward sports participation", "concern and respect for social conventions in sports", "concern and respect to rules and officials", "concern and respect for one’s opponent", and "negative approach towards sports participation". (Vallerand, Briere, Blanchard & provencher, 1997, p.198).

Delimitations

This study of sportsmanship and loyalty of athletic students and non-athletic students in Hong Kong Baptist University has the following delimitations:

1. Subjects of this study of sportsmanship and loyalty contained athletic students as well as non-athletic students in Hong Kong Baptist University.

2. The multidimensional sportspersonship orientation scale (EMSOS-30) which is a 30-items 7-point Likert scale and contains six subscales as "Commitment", "Social Conventions", "Rules and Officials", "Opponent", "Negative Approach", and "Instrumental aggressive behavior" was applied to examine those elite athletes’ attitude towards sportsmanship.

3. A modified interpersonal and group loyalty scale for sports content that contains two subscales as
“interpersonal loyalty” and “group loyalty” was applied in this study.

Limitations

This study of sportsmanship and loyalty of athletic students and non-athletic students in Hong Kong Baptist University probably has the following limitations:

1. The athletic students in this study were mainly from nine major competitive sports (Basketball, Football, Volleyball, Handball, Racket Sports, Swimming, Woodball, Track & Field, and Rugby) in Hong Kong Baptist University. Other sports that are less competitive and are not that popular may be ignored in this study.

2. The sampling of non-athletic students was conducted in various faculties if Hong Kong Baptist University but not random-sampled, which would be a limitation.

Significance of study

Three main points may support the importance of this study. Basically, it is mentioned before that sportsmanship and loyalty are considered to reflect the sport virtues and virtue ethic. All these virtues are of great importance and have become more and more emphasized by people in the past decades. Secondly, good sportsmanship and loyalty can help to build up good images as well as bring other positive impacts. However,
it seems that nowadays poor sportsmanlike behaviors as well as poor athlete loyalty appear more frequently. As a result, good sportsmanship and loyalty are urgent to be promoted and advocated. Moreover, this research is able to study sportsmanship and loyalty in a local background in Hong Kong and has large potential value for further research in related fields. As the participants cover both athletic and non-athletic students, it helps us to understand more clearly about athletes' sportsmanship and loyalty through a comparison means.
Chapter 2

REVIEW OF LITERATURE

Sport is regarded as containing the features of fairness, courage, persistence and other virtues. The purpose of this study is to determine the sportsmanship and loyalty of athletic students in Hong Kong Baptist University, which was compared with the sportsmanship and loyalty of non-athletic students. This may help us understand more about athletes' moral development in Hong Kong. As this chapter is a review of literature, several sections are included: (a) What is sportsmanship; (b) Factors related to sportsmanship; (c) Measurements of Sportsmanship; (d) What is loyalty; (e) Alternative models of loyalty; (f) Measurements of loyalty.

What is sportsmanship?

Fundamentally, people may always feel puzzled about the difference between sportsmanship and sportspersonship. Lumpkin, Stoll and Beller (1999) held an idea that the word “sportsmanship” should be a misuse of the word “sportspersonship” but it was acceptable to use the word “sportsmanship” since the majority of people and even more than 4000 sties on Internet use this word instead of sportspersonship. Besides, as sportsmanship is described in a more general way, sportspersonship is described more
specific in five subscales by Vallerand and his colleagues in 1997, which is to be discussed in detail later. But a common agreement was that both words identified the moral value, virtues in sports (Lumpkin, Stoll, & Beller, 1999).

Generally, people's understanding of sportsmanship may be a virtue that shows polite behavior during the competitions or trainings. Shields and Bredemeier (1995) summarized the sportsmanship as the behavior becoming of a sportsperson with virtue based on a research stating that we should understand sportsmanship as the virtue attitudes appropriate to certain sport.

However, there were some conflicts reflecting different opinions that whether a radical separation of general sport and athletics should be applied to sportsmanship. It was believed that sportsmanship in competitive sports was winning-oriented but not focused more on fun, pleasure and delight which should be the spirit of playing sports. On the other hand, Kretchmar (1994) defined sportsmanship as moral behaviors on unwritten rules in both competitive sports and free games. That means, the radical separation of general sports and athletics was denied. And this was supported by Shields and Bredemeier (1995) stating the disagreement of Keating's separation theory.

In sports studies, researchers built a more formal
concept for sportsmanship. Green and Gabbard (1999) reported that both cooperation and competition are significantly necessary to sportsmanship. Competition is required for surviving in the sports and cooperation is to work with teammates and even opponents to reach the goals of sports, to face challenges and to seek for further improvements. Pearson (1973) stated that deception in athletics showed unsportsmanlike behaviors that destroyed the fair of play in sport, which means sportsmanlike behavior is an important to ensure the fair of play in sport. Feezel (1986) supported the idea that sport should be an extension of play, and the key to sportsmanship is the spirit of play which was an expression of fair. Besides, Shields and Bredemeier (1995) regarded sportsmanship and fair play as central components of character and both were related to the moral action. Moreover, Stornes and Ommundsen (2004) said that sportspersons with good sportsmanship should abide by the spirit of game and should never be detracted from the virtues of sport. In addition, Chantal and Assollant (2003) stated another way of understanding sportsmanship that "It provides a clear indication of the extent to which an athlete is willing to stretch the rules for victory" (p. 11).

Furthermore, a more accurate and precise meaning of sportsmanship was explored by Vallerand and colleagues in 1997, which did not provide an abstract theory but applied five scales to define the sportsmanship in a more
measurable way. And this is to be discussed more detailed in the measurements of sportsmanship.

**Factors related to sportsmanship**

There are some factors that are related to sportsmanship. According to the review of literature, motivation, goal orientation, influences of parents may have some relationships with sportsmanship.

Firstly, motivation is found to have correlation with sportsmanship. For example, Ryska (2003) did a research to study the sportsmanship of young athletes in the United States and the competitiveness, motivational orientation and sportsmanship were measured. In this study, 185 boys and 134 girls from youth sports of soccer (n=105), swimming (n=80), tennis (n=56), horse-riding (n=42) and cycling (n=36) were included as subjects. Ryska found that young athletes who participate sports for intrinsic motivation such as learning better skills, seeking for interesting and happiness, and experiencing cooperation showed greater sportsmanship, while young athletes go into sports for extrinsic reasons showed worse sportsmanship. Chantal and Assollant (2003) stated that positive relationship between self-determined motivation and sportsmanship orientation was found in previous research with 17 female and 24 male physical education students as subjects. That means athletes in
high self-determined and intrinsic motivation may have better sportsmanship.

Secondly, evidences have shown that goal orientation is related to sportsmanship. Duda, Olson and Templin (1991) stated that athletes who are high in task-orientation have fewer opportunities to perform unsportsmanlike behaviors when compared with ego-orientated athletes. Dunn and Dunn (1999) reported a similar conclusion that young male hockey athletes with high task-orientation are less likely to perform bad sports behaviors. In another research that aims to study the relationship between achievement goal, perceptions of motivational climate and sportsmanship, Stornes and Ommundsen (2004) indicated that achievement goal has positive relationship with sportsmanship.

Thirdly, parents also play a vital role in leading children’s sportsmanship. White (1998) raised the study of parents-initiated motivational climate that regarded parents as playing an important role in making children believed of achievement which is also related to children’s good sports behaviors. In a recent study, Lavoi and Stellino (2008) stated that parent-created sport climate relates to children’s good and poor sports behaviors (GPSB) in multidimensional scales.
Measurements of sportsmanship

In the early years, sportsmanship was measured by the Competitive Attitude Scale (CAS) in order to evaluate whether the athletes will use any means including some immoral ways to win the games (Lakie, 1964). The Competitive Attitude Scale (CAS) is a 5-point Likert scale that contains 22 items which are all the description of poor sports behaviors that are regarded unsportsmanlike. In this 5-point Likert scale, "1" means strong disapproval, "2" means disapproval, "3" means undecided, "4" means approval, and "5" means strong approval; at the same time, the score of item 6, 13, 18 are reversed. In this way, the high overall score of Competitive Attitude Scale (CAS) a person gets, the more likely that person perform unsportsmanlike behaviors during sports (Lakie, 1964).

Besides the Competitive Attitude Scale, King (1992) developed a sportsmanship quiz directed to coaches. Then, Craig (1996) modified King’s sportsmanship quiz by changing the coaches into parents and minor changes were made to the main body of quiz to make sure easier understanding and the precision of grammar. Craig (1996) also indicated that although there was no reported validity and reliability of King’s sportsmanship quiz, it
is acceptable that the quiz is believed to reflect the aspect of sportsmanship.

In addition to Competitive Attitude Scale (CAS) and sportsmanship quiz, the prevalent measurement researchers use to measure sportsmanship nowadays is the Multidimensional Sportsmanship Orientation Scale (MSOS). Vallerand et al. (1997) developed the Multidimensional Sportsmanship Orientation Scale (MSOS) which is a 7-point Likert scale that five 5-item sub-scales including concern and respect for rules and officials (e.g., “I respect the official, even if she/he is not good”), concern and respect for one’s opponent (e.g., “When an opponent injures her/himself, I do not take advantage of the situation”), social conventions in sport (e.g., “After competing, I shake hands with the opponent no matter win or lose”), commitment toward sport participation (e.g., “I always think how to improve myself”), and negative approach toward sport participation (e.g., “I won’t admit my own mistake”). Besides, Vallerand et al. stated that this 7-point Likert scale is rating from 1 (meaning does not correspond to me at all) to 7 (meaning corresponds exactly to me) and the validity is proved.

Furthermore, Stornes and Bru (2002) modified the MSOS-25 version into Extended Multidimensional
Sportspersonship Orientation Scale (EMSOS). A new subscale named “Instrumental Aggression” was added to assess the planned aggressive behaviors that were taken to opponents in order to obtain personal benefits such as raising the opportunities to win the game “e.g., ' I often use physical force to make opponents annoyed so that they make mistakes' ”.

What is loyalty?

Loyalty is a topic that has been studied for a long time. Royce (1971) defined loyalty as the will to believe in something eternal, and to express that belief in the practical life of a human being. Basically, when referred to loyalty, people linked it with a kind of virtues or ethics. Klopfenstein (2006) indicated that loyalty was based on a virtue-based approach to duty of human beings, which showed both the good of community and the good of individuals. Some studies even found a significant evidence that indicated the relationship between ethics and loyalty. For example, Ali and Azim (2001) conducted a study of which the result showed a strong correlation between work ethic and work loyalty.

In addition to reflect the virtues and ethics, other explanations were provided to define loyalty. Biggar (2001) delivered an idea that beneficiaries ought to be
grateful to benefactors with an example that those who have benefited from a nation's protection and nurture owe it a certain loyalty. Sabini and Silver (1998) also stated that the obligation of loyalty was generalizable as a duty for all who stayed in a relationship with others.

Nowadays, although loyalty can be specified into different aspects as customer loyalty, religious loyalty, brand loyalty and so on, Beer and Watson (2009) argued that in a more general way loyalty should be divided into interpersonal loyalty and group loyalty. Beer and Watson also stated that loyalty is one of the principle ties that bind people to each other, or even to a brand, a product, a team, a country, etc.

Alternative models of loyalty

Dialectical Approach

Montgomery and Baxter (1998) used a dialectical approach to study personal relationships. This approach supported the idea that when people become loyal to others, they actually were disloyal in advance.

Peer-support Approach

Berry (1927) stated that person who had been a member
of a smooth, well integrated team would express his/her loyalty to the team as well as other members in the team. Besides, Dodge, Mitchell, and Mensch (2009) conducted a study in athletic training education programme, showing that a peer-support system is a key factor that related to students persistence in athletic training. At the same time, evidence also showed that coworker support as well as supervisor support are positively correlated with employees' loyalty. This approach regards peer-support as a vital role in forming loyalty.

Exit, Voice, Loyalty

Hirschman (1970) created this exit-voice-loyalty model to explain people's responses to dissatisfying events. While exit is a bad option that people choose to deal with dissatisfying events, voice reflects positive and active factors that people strike for improvements. As stated by Hirschman, the presence of loyalty makes exit less likely and the activation of voice is regarded as a function of loyalty. Hoffmann (2006) did a study to compare the dispute resolution strategies in companies from different industries and found that the more loyal the workers, the more they may voice out to address their problems, and this makes them easier to deal with conflicts.
Measurements of loyalty

As the loyalty is too abstract to be described, it is a good idea to use qualitative method to study it. Hoffmann (2006) applied the qualitative method to study the workers' loyalty in three various different industries. In this study, the data were gathered by interviewing the workers, observing the behaviors, attending companies' businesses and so on. The questions Hoffmann provided in the interview were mainly open-ended with some follow-up inquires; however, one thing to be mentioned was that loyalty itself could not be the direct answer of the questions. As a result, Hoffmann designed questions to enable him to do analysis. (e.g. "In what way is your job difficult?" "How would you describe your job?" "How would you recommend or criticize your job to another worker in the same industry?" etc.) Through these questions, the level of loyalty was found by analyzing the way and the attitude how interviewees responded to various questions.

Although qualitative method may be a good way to study loyalty, it consumes too much time and efforts, as well as be too subjective sometimes. As a result, certain method by using questionnaire was developed. Ali and Krishnan (1997) designed a 5-point scale with nine items to measure personal and organizational loyalty. All the items were stated in positive way (e.g. "Work hard to accomplish task" "Warn me of doing wrong thing"). This
scale was also used in other study (e.g. Ali & Azim, 2001).

Recently, Beer and Watson (2009) designed a more valid questionnaire as “The Individual and Group Loyalty Scale (LGLS)” to measure both interpersonal and group loyalty. Beer and Watson said that though measurements of group loyalty could be found in some literature, no adequate measures of interpersonal loyalty exist. That was the reason they design the LGLS scale. As its name, the individual and group loyalty scale contained two subscales that called individual loyalty and group loyalty. Individual loyalty was to measure how one keeps in relationship with others (e.g. “If I make a promise to a friend, I will keep it.” or “I would sacrifice my time and money to help a friend.”). Group loyalty was to measure how one be loyal to a team or country (e.g. “It is important to show respect for our country's flag” or “It bothers me when someone criticizes our country”).
Chapter 3

METHOD

Participants

The participants included 124 athletes from nine university sports teams, other athletic students (with senior formal training experience, take part in competitions as representatives of university but they are not university team members) as well as 121 non-athletic student in Hong Kong Baptist University. The athletic students could be representatives of Hong Kong Baptist University in sports. They have been leading their own sports in developing, fighting not only for their own honor but also the university's. Those athletic students participating in this study represented for Hong Kong Baptist University to join university competitions in Hong Kong at least for one time in the past two years. Choosing these athletes as subjects to participate in this study can help to understand the overall level of these athletes' attitude towards sportsmanship and loyalty. Other than the university sports team athletes, non-athletic students of Hong Kong Baptist University were selected and viewed as comparison group, of which the attitude towards sportsmanship and loyalty were also studied. By doing this comparison study, the level of university sports team athletes' sportsmanship and
loyalty would be better understood. At the same time, the data collected from all these subjects contribute to provide useful and meaningful information for athletes’ further development.

**Questionnaire**

From the review of literature, most previous study related to athletes’ attitude towards sportsmanship used the Multidimensional Sportspersonship Orientation Scale (MSOS-25) to assess athletes’ behaviors in a sportsmanship. However, the Multidimensional Sportspersonship Orientation Scale (MSOS-25) was suspected to have psychometric problems especially in the subscale of “Negative approach” (McCutcheon, 2000). By solving this problem, the extended Multidimensional Sportspersonship Orientation Scale (EMSOS-30) (Stornes & Bru, 2002) added a 5-item subscale to the original version to improve the psychometrics of instrument. Although the subscale of “Negative approach” may still show psychometric problems, the extended version had showed evidence of satisfactory construct validity and the reliability (Knortz, 2009).

The Extended Multidimensional Sportspersonship Orientation Scale (EMSOS-30) measured sportsmanship along six dimensions which consisted of 4 positive dimensions and 2 negative dimensions. These six dimensions standard
for six subscales as following:

1. **Concern and respect for social conventions in sports**
   This subscale reflects a kind of virtue that athletes respect to opponents’ performances, acknowledge opponents’ good work during the competition, be polite even when losing. (E.g. When I lose, I congratulate the opponent whoever he or she is.)

2. **Concern and respect to rules and officials**
   This subscale reflects athletes’ attitude, concern, and respect to referees’ decisions as well as to what degree to obey the officials. Nowadays, as complaining to the referee becomes a more and more common situation, this subscale really focuses a lot on athletes’ sportsmanship in and off the competitions. (E.g. I respect an officials’ decision even if he or she is not the referee.)

3. **Concern and respect for one’s full commitment toward sports participation**
   This subscale reflects to which degree athletes spend their maximal efforts during training and competitions, acknowledge their mistakes, as well as their attempts to improve their skills. (E.g. In competition, I go all out even if I’m almost sure to lose.)

4. **Concern and respect for one’s opponent**
   This subscale reflects athletes’ attitudes, concerns, and respects to their opponents. Athletes with good sportsmanship should also hold a kind and respect
attitude to their opponents for the fairness of the competition. (E.g. If by misfortune, an opponent forgets his or her equipment, I lend him my spare one.)

5. Negative approach towards sports participation
This subscale reflects athletes’ possibility in negative approach, such as finding excuses for losing, losing the will to fight due to bad performance and so on. (E.g. When my coach points out my mistakes after a competition, I refuse to admit that I made those mistakes.)

6. Instrumental aggressive behaviors
This subscale reflects athletes’ attitude towards performing aggressive behaviors for winning by hook. (E.g. I often use physical force to make opponents annoyed so that they make mistakes.)

Having the above six 5-items subscales to be measured, respondents were required to show how applicable of each subscale items is for them by circling along a 7-point Likert scale with “1” meaning “Doesn’t correspond to me at all” and “7” meaning “Correspond to me exactly”.

For measures of athlete loyalty, a modification was done to the Individual and Group Loyalty Scale designed by Beer and Watson (2009). The reason to develop a new scale was to create a more specific scale to meet with loyalty in athletic background. For instance, in the individual loyalty subscale, the item “People can always
count on me” was changed into “My coaches and teammates can always count on me” and the item “It is important for me to keep in touch with old friends” was changed into “It is important for me to keep in touch with old coaches and teammates”. The modified version of individual and group loyalty for athletes contained total 20 items divided as 10 items in individual loyalty scale and 10 items in group loyalty scale. And the items of individual loyalty and group loyalty were alternative, showing that items with odd reflected individual loyalty while items with even reflected group loyalty.

**Procedures of data collection**

All research data were collected through the questionnaire which included the translated version of Multidimensional Sportspersonship Orientation Scale (EMSOS-30) and the modified version of Individual and Group Loyalty Scale explained detailed in last section. All participants involved in this study were reached personally.

When administering the survey, the participants were provided pencil and survey paper as well as the information sheet which showed the basic information of the study. Prior to beginning the survey, a brief and clear notification was declared to the subjects that this study was a voluntary survey on sports behaviors and
loyalty in a sports background. At the same time, although subjects were encouraged to take part in this study, they were assured of the ability to terminate their participating in this study at any time for any reason, and this was also explained to them before they accepted to do the questionnaire.

In addition, those who choose to participate in this study were required to finish the questionnaire with their full honesty. In order to make sure their clear understanding of all the items of the questionnaire as well as anything that related to this study, they were also assured of the right to ask any question at any time before, during or after participating this study.

Data analysis

The Statistical Package for Social Science (SPSS, version 16.0) was used to do the data analysis. After all the data were collected and entered into the computer, the scoring of the “Negative approach” and the “Instrumental aggressive behavior” in Extended Multidimensional Sportspersonship Orientation Scale (EMSOS-30) should be reversed scoring before starting to do any data analysis.

Scores on each question were recorded in related to each subscale. As a result, a prior research was done and
a global sportspersonship index was calculated as well as the mean score of both individual and group loyalty. The global sportspersonship index reflects the average scores on each of the six subscales of EMSOS-30 (the scores of “Negative approach” and “Instrumental aggressive behavior” were reversed). In this way, the higher scores in the global sportspersonship index suggested the stronger and more positive commitment towards sports participation, stronger concern and respect for social conventions as well as rules and officials, while also indicated less negative approached and less instrumental aggressive behaviors. Similar works would not be applied to the individual and group loyalty scale for athletes since all items in that scale were positive stated. By the way, the analysis done in the following were based on the alpha level of 0.05.

The statistical analysis of descriptive statistics would be done to see the frequency distributions of participants’ responses to the survey related to the demographic characteristics. This analysis provided a wide and basic understanding of both athletic and non-athletic students’ attitudes toward sportsmanship and loyalty.

The independent t test was to be done to compare the mean differences of athletic students and non-athletic students in the global sportspersonship index for the six subscales of “Commitment”, “Social conventions”, “Rules
and officials”, “Opponents”, “Negative approach”, “Instrumental aggressive behavior” and also for the modified Individual and Group Loyalty Scale in sports background. This analysis was to find out if there was any difference in sportsmanship and loyalty between participants in two groups, which was significant in deciding those university athletes' level of sportsmanship and loyalty.

In addition, two-way ANOVA was to be done in athletic students to see if there was any difference in sportsmanship and loyalty for athletes in different types of sports and gender. This was to understand whether the type of sports and gender would be influential factors that affect athletes' attitude towards sportsmanship and loyalty.

Last but not the least, correlation test was to be done to examine if there was any relationship between sport commitment and interpersonal loyalty as well as sport commitment and group loyalty. This helped to understand to what extend attitude towards sport commitment might impact on interpersonal loyalty and group loyalty.
Chapter 4

ANALYSIS OF DATA

This chapter is to present the results of data collection and analysis. As there were four major problems raised in the first chapter, each research question is to be addressed orderly, and the results are to be stated. First, a descriptive statistics of the participants are shown. Second, results of t-test are provided to determine difference in sportsmanship and loyalty between athletic and non-athletic students. Third, results of two-way ANOVA are illustrated to see if there is any difference in sportsmanship of athletic students due to various types of sports and gender. Finally, results of correlation study are offered to determine if there is a relationship between sport commitment and interpersonal loyalty, or sport commitment and group loyalty.

Research question 1:

Descriptive statistics

The first research question asked: what are the
participants’ responses to sportsmanship and loyalty in the survey that related to demographic characteristics? As all participants were either athletic students or non-athletic students of Hong Kong Baptist University, a total number of 245 participants responded to the survey.

Table 1 shows the distribution of all participants. About 49.4% of participants (121 out of 245) were non-athletic students, while the rate of athletic students responded to the survey took up to about 50.6% (124 out of 245). Besides, about 48.2% of participants were male (118 out of 245), while about 51.8% of participants were female (127 out of 245).

Table 1

<table>
<thead>
<tr>
<th></th>
<th>Frequency (N)</th>
<th>Percent (%)</th>
<th>Valid Percent (%)</th>
<th>Cumulative Percent (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Non-Athletic</td>
<td>121</td>
<td>49.4</td>
<td>49.4</td>
<td>49.4</td>
</tr>
<tr>
<td>Athletic</td>
<td>124</td>
<td>50.6</td>
<td>50.6</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>245</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
<tr>
<td>Male</td>
<td>118</td>
<td>48.2</td>
<td>48.2</td>
<td>48.2</td>
</tr>
<tr>
<td>Female</td>
<td>127</td>
<td>51.8</td>
<td>51.8</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>245</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Table 2 shows that nature of sport that athletic students took part in. The statistic results reflect that among 121 athletic students participants in the survey, 53 of them were trained in team sports and 71 of them were trained in individual sports.
Table 2

Nature of sport that athletic students took part in

<table>
<thead>
<tr>
<th></th>
<th>Frequency (N)</th>
<th>Percent (%)</th>
<th>Valid Percent (%)</th>
<th>Cumulative (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team Sports</td>
<td>53</td>
<td>42.7</td>
<td>42.7</td>
<td>42.7</td>
</tr>
<tr>
<td>Individual Sports</td>
<td>71</td>
<td>57.3</td>
<td>57.3</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>124</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
</tr>
</tbody>
</table>

Table 3 shows that the athletic students mainly came from nine major competitive sports: basketball, football, volleyball, handball, racket sports, swimming, wood ball, track & field, and rugby. 23 athletes were from the track & field team, followed by basketball (15 participants), racket sports (14 participants), football (12 participants), volleyball (12 participants), wood ball (12 participants), handball (7 participants), swimming (7 participants), and rugby (7 participants). Other than the nine major competitive sports, athletic students from cycling, boxing and so on were grouped into the type “Others” (15 participants).

Table 3

Type of sports of athletic students

<table>
<thead>
<tr>
<th></th>
<th>Frequency (N)</th>
<th>Percent (%)</th>
<th>Valid Percent (%)</th>
<th>Cumulative (%)</th>
</tr>
</thead>
<tbody>
<tr>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 4 shows participants’ global sportsmanship index that indicates the mean scores and distribution of participants’ response to the six subscales of sportsmanship. The mean scores of each subscale with standard deviation are 5.66±0.77 (Social Convention), 5.52±0.73 (Rules & Officials), 5.67±0.74 (Sport Commitment), 4.88±0.92 (Opponent), 3.99±0.85 (Negative Approach), and 4.12±1.06 (Aggressive Behavior). In addition to the mean scores and distribution, median, mode, range, minimum score, maximum score and the percentiles are provided.

Table 4

<table>
<thead>
<tr>
<th>Social Convention</th>
<th>Rules &amp; Officials</th>
<th>Sport Commitment</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>245</td>
<td>245</td>
</tr>
<tr>
<td>Mean</td>
<td>5.66</td>
<td>5.52</td>
</tr>
<tr>
<td>SD</td>
<td>0.77</td>
<td>0.73</td>
</tr>
</tbody>
</table>

Opponent Negative Aggressive

<table>
<thead>
<tr>
<th>Track &amp; Field</th>
<th>Basketball</th>
<th>Racket</th>
<th>Sports</th>
<th>Football</th>
<th>Volleyball</th>
<th>Wood Ball</th>
<th>Handball</th>
<th>Swimming</th>
<th>Rugby</th>
<th>Others</th>
</tr>
</thead>
<tbody>
<tr>
<td>23</td>
<td>14</td>
<td>12</td>
<td>12</td>
<td>12</td>
<td>7</td>
<td>7</td>
<td>7</td>
<td>15</td>
<td>18.6</td>
<td>100.0</td>
</tr>
<tr>
<td>15</td>
<td>12</td>
<td>9.7</td>
<td>9.7</td>
<td>9.7</td>
<td>5.6</td>
<td>5.6</td>
<td>5.6</td>
<td>7</td>
<td>12.1</td>
<td>100.0</td>
</tr>
<tr>
<td>14</td>
<td>12</td>
<td>11.3</td>
<td>9.7</td>
<td>9.7</td>
<td>5.6</td>
<td>5.6</td>
<td>5.6</td>
<td>7</td>
<td>11.3</td>
<td>100.0</td>
</tr>
<tr>
<td>12</td>
<td>12</td>
<td>9.7</td>
<td>9.7</td>
<td>9.7</td>
<td>5.6</td>
<td>5.6</td>
<td>5.6</td>
<td>7</td>
<td>9.7</td>
<td>100.0</td>
</tr>
<tr>
<td>15</td>
<td>7</td>
<td>5.6</td>
<td>5.6</td>
<td>5.6</td>
<td>5.6</td>
<td>5.6</td>
<td>5.6</td>
<td>7</td>
<td>15</td>
<td>100.0</td>
</tr>
<tr>
<td>Total</td>
<td>124</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td>100.0</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>
Table 5 shows that mean scores and distribution of participants’ responses to interpersonal loyalty and group loyalty. The mean scores of interpersonal loyalty and group loyalty with standard distribution are 5.82±0.65 (Interpersonal Loyalty) and 5.69±0.73 (Group Loyalty). In addition to the mean scores and distribution, median, mode, range, minimum score, maximum score and the percentiles are provided.

Table 5
Mean scores and distribution of responses to interpersonal and group loyalty

<table>
<thead>
<tr>
<th></th>
<th>Interpersonal Loyalty</th>
<th>Group Loyalty</th>
</tr>
</thead>
<tbody>
<tr>
<td>N</td>
<td>245</td>
<td>245</td>
</tr>
<tr>
<td>Mean</td>
<td>5.82</td>
<td>5.69</td>
</tr>
<tr>
<td>Standard Deviation</td>
<td>0.65</td>
<td>0.73</td>
</tr>
</tbody>
</table>

*SD stands for standard deviation

Research question 2:

Differences between athletic & non-athletic students

The second research question asked: Is there any difference in sportsmanship and loyalty between athletic students and non-athletic students in Hong Kong Baptist University? T test was done to provide the results of
this question, and each hypothesis is to be discussed sequentially.

**Hypothesis 1**: There would be no significant difference in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of "Social Convention" between athletic students and non-athletic students in Hong Kong Baptist University.

Table 6 indicates the result of hypothesis 1. There was no significant difference \((t=0.763, p=0.446)\) in mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of "Social Convention" between athletic students and non-athletic students. The mean score of athletic students \((\text{Mean}=5.695, \text{SD}=0.839)\) was no significant difference compared to the mean score of non-athletic students \((\text{Mean}=5.620, \text{SD}=0.697)\).

Table 6

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Convention</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Athletic</td>
<td>124</td>
<td>5.695</td>
<td>0.839</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-athletic</td>
<td>121</td>
<td>5.620</td>
<td>0.697</td>
<td>0.763</td>
<td>243</td>
<td>0.446</td>
</tr>
</tbody>
</table>

**Hypothesis 2**: There would be no significant
difference in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of "Rules & Officials" between athletic students and non-athletic students in Hong Kong Baptist University.

Table 7 indicates the result of hypothesis 2. There was no significant difference (t=0.510, p=0.610) in mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Rules & Officials” between athletic students and non-athletic students. The mean score of athletic students (Mean=5.539, SD=0.736) was no significant difference compared to the mean score of non-athletic students (Mean=5.491, SD=0.731).

Table 7
T test for “Rules & Officials” between athletic and non-athletic students

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rules &amp; Officials</td>
<td>Athletic</td>
<td>124</td>
<td>5.539</td>
<td>0.736</td>
<td>0.510</td>
<td>243 0.610</td>
</tr>
<tr>
<td></td>
<td>Non-athletic</td>
<td>121</td>
<td>5.491</td>
<td>0.731</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hypothesis 3: There would be no significant difference in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Commitment” between athletic students and non-athletic students in Hong Kong Baptist University.
Table 8 indicates the result of hypothesis 3. There was no significant difference ($t=1.909$, $p=0.057$) in mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Commitment” between athletic students and non-athletic students. The mean score of athletic students (Mean=5.758, SD=0.728) was no significant difference compared to the mean score of non-athletic students (Mean=5.576, SD=0.744).

Table 8
T test for “Commitment” between athletic and non-athletic students

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sport Commitment</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Athletic</td>
<td>124</td>
<td>5.758</td>
<td>0.728</td>
<td>1.909</td>
<td>243</td>
<td>0.057</td>
</tr>
<tr>
<td>Non-athletic</td>
<td>121</td>
<td>5.576</td>
<td>0.744</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hypothesis 4: There would be no significant difference in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Opponent” between athletic students and non-athletic students in Hong Kong Baptist University.

Table 9 indicates the result of hypothesis 4. There was significant difference ($t=-2.098$, $p=0.037$) in mean score of extended multidimensional sportspersonship
orientation scale (EMSOS-30) for the subscale of “Opponent” between athletic students and non-athletic students. The mean score of athletic students (Mean=4.763, SD=0.976) was significantly lower than mean score of non-athletic students (Mean=5.006, SD=0.835).

Table 9
T test for “Opponent” between athletic and non-athletic students

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opponent</td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Athletic</td>
<td>124</td>
<td>4.763</td>
<td>0.976</td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Non-athletic</td>
<td>121</td>
<td>5.006</td>
<td>0.835</td>
<td>-2.098</td>
<td>243</td>
<td>0.037*</td>
</tr>
</tbody>
</table>

*Significant at 0.05 level

Hypothesis 5: There would be no significant difference in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Negative Approach” between athletic students and non-athletic students in Hong Kong Baptist University.

Table 10 indicates the result of hypothesis 5. There was no significant difference (t=0.935, p=0.351) in mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Negative Approach” between athletic students and non-
athletic students. The mean score of athletic students (Mean=4.044, SD=0.731) was no significant difference compared to the mean score of non-athletic students (Mean=3.942, SD=0.954).

Table 10
*T test for "Negative Approach" between athletic and non-athletic students

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative Approach</td>
<td>Athletic</td>
<td>124</td>
<td>4.044</td>
<td>0.731</td>
<td>0.935</td>
<td>243</td>
</tr>
<tr>
<td>Non-athletic</td>
<td>121</td>
<td>3.942</td>
<td>0.954</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hypothesis 6: There would be no significant difference in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of "Aggressive Behavior" between athletic students and non-athletic students in Hong Kong Baptist University.

Table 11 indicates the result of hypothesis 6. There was no significant difference (t=1.128, p=0.260) in mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of "Aggressive Behavior" between athletic students and non-athletic students. The mean score of athletic students (Mean=4.197, SD=1.102) was no significant difference compared to the mean score of non-athletic students.
Table 11

*T test for “Aggressive Behavior” between athletic and non-athletic students*

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggressive Behavior</td>
<td>Athletic</td>
<td>124</td>
<td>4.197</td>
<td>1.102</td>
<td>243</td>
<td>0.260</td>
</tr>
<tr>
<td></td>
<td>Non-athletic</td>
<td>121</td>
<td>4.045</td>
<td>1.006</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Hypothesis 7: There would be no significant difference in the mean score of interpersonal loyalty between athletic students and non-athletic students in Hong Kong Baptist University.

Table 12 indicates the result of hypothesis 7. There was significant difference (t=2.396, p=0.017) in mean score of interpersonal loyalty between athletic students and non-athletic students. The mean score of athletic students (Mean=5.964, SD=0.911) was significantly higher than the mean score of non-athletic students (Mean=5.721, SD=0.653).

Table 12

*T test for “Interpersonal Loyalty” between athletic and non-athletic students*
non-athletic students

<table>
<thead>
<tr>
<th>Group</th>
<th>N</th>
<th>Mean</th>
<th>Standard Deviation</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Interpersonal Loyalty</td>
<td>Athletic</td>
<td>124</td>
<td>5.964</td>
<td>0.911</td>
<td></td>
<td></td>
</tr>
<tr>
<td></td>
<td>Non-athletic</td>
<td>121</td>
<td>5.721</td>
<td>0.653</td>
<td></td>
<td>2.396 0.017*</td>
</tr>
</tbody>
</table>

*Significant at 0.05 level

Hypothesis 8: There would be no significant difference in the mean score of group loyalty between athletic students and non-athletic students in Hong Kong Baptist University.

Table 13 indicates the result of hypothesis 8. There was no significant difference ($t=1.594$, $p=0.112$) in mean score of group loyalty between athletic students and non-athletic students. The mean score of athletic students (Mean=5.759, SD=0.739) was no significant difference compared to the mean score of non-athletic students (Mean=5.611, SD=0.706).
Research question 3:

Differences among athletic students

The third research question asked: Is there any difference in sportsmanship among athletic students due to different type of sports and gender? Two-way ANOVA was done to determine the result of this question, and each hypothesis is to be discussed sequentially.

Hypothesis 9: There would be no significant interaction effect between type of sports and gender of athletic students in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Social Conventions”.

Hypothesis 10: There would be no significant difference in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Social Conventions” among different type of sports in athletic students.

Hypothesis 11: There would be no significant gender difference in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Social Convention” among athletic students.
Table 14 shows the result of hypothesis 9-11. There was no significant interaction effect \((F=0.519, p=0.473)\) between type of sports and gender of athletic students, no significant difference among different type of sports \((F=0.175, p=0.676)\), and no significant gender difference \((F=1.106, p=0.295)\) in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Social Conventions”.

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Social Convention</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>1</td>
<td>0.785</td>
<td>1.106</td>
<td>0.295</td>
</tr>
<tr>
<td>Type</td>
<td>1</td>
<td>0.124</td>
<td>0.175</td>
<td>0.676</td>
</tr>
<tr>
<td>Gender*Type</td>
<td>1</td>
<td>0.368</td>
<td>0.519</td>
<td>0.473</td>
</tr>
</tbody>
</table>

Graph 1

Estimated marginal means of "social convention" in athletic students
Hypothesis 12: There would be no significant interaction effect between type of sports and gender of athletic students in the mean score of extended multidimensional sportspersonship orientation scale.
(EMSOS-30) for the subscale of "Rules & Officials".

**Hypothesis 13:** There would be no significant difference in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of "Rules & Officials" among different type of sports in athletic students.

**Hypothesis 14:** There would be no significant gender difference in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of "Rules & Officials" among athletic students.

Table 15 shows the result of hypothesis 12-14. There was no significant interaction effect (F=0.093, p=0.760) between type of sports and gender of athletic students, no significant difference among different type of sports (F=0.719, p=0.398), and no significant gender difference (F=0.131, p=0.718) in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of "Rules & Officials".

Table 15

**Results of two-way ANOVA in "Rules & Officials"**

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Rules &amp; Officials</td>
<td>Gender</td>
<td>1</td>
<td>0.072</td>
<td>0.131</td>
</tr>
<tr>
<td></td>
<td>Type</td>
<td>1</td>
<td>0.396</td>
<td>0.719</td>
</tr>
<tr>
<td></td>
<td>Gender*Type</td>
<td>1</td>
<td>0.051</td>
<td>0.093</td>
</tr>
</tbody>
</table>
Graph 2

Estimated marginal means of "Rules & Officials" in athletic students

Hypothesis 15: There would be no significant interaction effect between type of sports and gender of athletic students in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of "Commitment".

Hypothesis 16: There would be no significant difference in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the
subscale of “Commitment” among different type of sports in athletic students.

Hypothesis 17: There would be no significant gender difference in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Commitment” among athletic students.

Table 16 shows the result of hypothesis 15-17. There was no significant interaction effect (F=2.009, p=0.159) between type of sports and gender of athletic students, no significant difference among different type of sports (F=1.068, p=0.303), and no significant gender difference (F=0.571, p=0.451) in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Opponent”.

Table 16
Results of two-way ANOVA in “Commitment”

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sport Commitment</td>
<td>1</td>
<td>0.302</td>
<td>0.571</td>
<td>0.451</td>
</tr>
<tr>
<td>Gender</td>
<td>1</td>
<td>0.565</td>
<td>1.068</td>
<td>0.303</td>
</tr>
<tr>
<td>Type</td>
<td>1</td>
<td>1.061</td>
<td>2.009</td>
<td>0.159</td>
</tr>
<tr>
<td>Gender*Type</td>
<td>1</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

Graph 3
Estimated marginal means of “Commitment” in athletic students
Hypothesis 18: There would be no significant interaction effect between type of sports and gender of athletic students in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Opponent”.

Hypothesis 19: There would be no significant difference in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Opponent” among different type of sports in athletic students.

Hypothesis 20: There would be no significant gender difference in the mean score of extended multidimensional
sportspersonship orientation scale (EMSOS-30) for the subscale of "Opponent" among athletic students.

Table 17 shows the result of hypothesis 18-20. There was no significant interaction effect ($F=0.074$, $p=0.786$) between type of sports and gender of athletic students, no significant difference among different type of sports ($F=0.001$, $p=0.971$), and no significant gender difference ($F=2.992$, $p=0.086$) in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of "Opponent".

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Opponent</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Gender</td>
<td>1</td>
<td>2.847</td>
<td>2.992</td>
<td>0.086</td>
</tr>
<tr>
<td>Gender*Type</td>
<td>1</td>
<td>0.001</td>
<td>0.001</td>
<td>0.971</td>
</tr>
</tbody>
</table>

Graph 4

Estimated marginal means of "Opponent" in athletic students
Hypothesis 21: There would be no significant interaction effect between type of sports and gender of athletic students in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of "Negative Approach".

Hypothesis 22: There would be no significant difference in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of "Negative Approach" among different type of sports in athletic students.

Hypothesis 23: There would be no significant gender difference in the mean score of extended multidimensional
sportspersonship orientation scale (EMSOS-30) for the subscale of "Negative Approach" among athletic students.

Table 18 shows the result of hypothesis 21-23. There was no significant interaction effect ($F=3.429, p=0.067$) between type of sports and gender of athletic students, no significant difference among different type of sports ($F=0.769, p=0.382$), and no significant gender difference ($F=3.429, p=0.067$) in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of "Negative Approach".

Table 18

Results of two-way ANOVA in "Negative Approach"

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig</th>
</tr>
</thead>
<tbody>
<tr>
<td>Negative Approach Gender</td>
<td>1</td>
<td>1.781</td>
<td>3.429</td>
<td>0.067</td>
</tr>
<tr>
<td>Approach Type</td>
<td>1</td>
<td>0.400</td>
<td>0.769</td>
<td>0.382</td>
</tr>
<tr>
<td>Gender*Type</td>
<td>1</td>
<td>1.781</td>
<td>3.429</td>
<td>0.067</td>
</tr>
</tbody>
</table>

Graph 5

Estimated marginal means of "Negative Approach" in athletic students
Hypothesis 24: There would be no significant interaction effect between type of sports and gender of athletic students in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of "Aggressive Behavior".

Hypothesis 25: There would be no significant difference in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of "Aggressive Behavior" among different type of sports in athletic students.

Hypothesis 26: There would be no significant gender difference in the mean score of extended multidimensional
sportspersonship orientation scale (EMSOS-30) for the subscale of "Aggressive Behavior" among athletic students.

Table 19 shows the result of hypothesis 24-26. There was no significant interaction effect (F=0.059, p=0.808) between type of sports and gender of athletic students, no significant gender difference (F=1.817, p=0.180), but was significant different among various type of sports (F=4.958, p=0.028), in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of "Aggressive Behavior". Since the difference among type of sports in athletic students was significant, t test was done to further determine the difference. Table 20 shows the result that there was significant difference in the mean score of "Aggressive Behavior" among athletic students due to their different in participation in team sports or individual sports. The mean score of athletic students in team sports (Mean=4.021, SD=1.150) was significantly lower (t=-2.424, p=0.017) than the mean score of athletic students in individual sports (Mean=4.346, SD=1.045) in "Aggressive Behavior".

Table 19
Results of two-way ANOVA in "Aggressive Behavior"

<table>
<thead>
<tr>
<th>Source</th>
<th>df</th>
<th>Mean Square</th>
<th>F</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Aggressive</td>
<td>1</td>
<td>2.123</td>
<td>1.817</td>
<td>0.180</td>
</tr>
<tr>
<td>Behavior</td>
<td>1</td>
<td>5.791</td>
<td>4.958</td>
<td>0.028*</td>
</tr>
<tr>
<td>Gender*Type</td>
<td>1</td>
<td>0.069</td>
<td>0.059</td>
<td>0.808</td>
</tr>
</tbody>
</table>

*Significant at 0.05 level
Table 20

T test for “Aggressive Behavior” among different type of sports in athletic students

<table>
<thead>
<tr>
<th></th>
<th>N</th>
<th>t</th>
<th>df</th>
<th>Sig. (2-tailed)</th>
</tr>
</thead>
<tbody>
<tr>
<td>Team Sports</td>
<td>53</td>
<td>-2.424</td>
<td>122</td>
<td>0.017*</td>
</tr>
<tr>
<td>Individual Sports</td>
<td>71</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant at 0.05 level

Graph 6

Estimated marginal means of “Aggressive Behavior” in athletic students
Research question 4:

Correlation study

The fourth research question asked: Is there any relationship between sport commitment and loyalty?
Correlation test was done to examine the relationship between sport commitment and interpersonal loyalty, as well as sport commitment and group loyalty.

**Hypothesis 27:** There would be no significant relationship between sport commitment and interpersonal loyalty.

Table 21 shows a positive correlation between sport commitment and interpersonal loyalty. There was significant positive relationship ($r=0.550, p=0.000$) between sport commitment (Mean=5.669, SD=0.740) and interpersonal loyalty (Mean=5.844, SD=0.801).

Table 21

<table>
<thead>
<tr>
<th>Correlations [sport commitment – interpersonal loyalty]</th>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Pearson Correlation</th>
<th>Covariance</th>
<th>Sig. *</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sport Commitment</td>
<td>245</td>
<td>5.669</td>
<td>0.740</td>
<td>0.550</td>
<td>0.326</td>
<td>0.000*</td>
</tr>
<tr>
<td>Interpersonal Loyalty</td>
<td>245</td>
<td>5.844</td>
<td>0.801</td>
<td></td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant at 0.05 level

**Hypothesis 28:** There would be no significant relationship between sport commitment and group loyalty.

Table 22 shows a positive correlation between sport commitment and group loyalty. There was significant positive relationship ($r=0.511, p=0.000$) between sport commitment (Mean=5.669, SD=0.740) and group loyalty.
(Mean=5.685, SD=0.725).

Table 22

Correlations [sport commitment - group loyalty]

<table>
<thead>
<tr>
<th>N</th>
<th>Mean</th>
<th>SD</th>
<th>Pearson Correlation</th>
<th>Covariance</th>
<th>Sig.</th>
</tr>
</thead>
<tbody>
<tr>
<td>Sport Commitment</td>
<td>245</td>
<td>5.669</td>
<td>0.511</td>
<td>0.274</td>
<td>0.000*</td>
</tr>
<tr>
<td>Interpersonal Loyalty</td>
<td>245</td>
<td>5.685</td>
<td>0.725</td>
<td></td>
<td></td>
</tr>
</tbody>
</table>

*Significant at 0.05 level

Chapter 5

SUMMARY & CONCLUSION

This chapter is to present the summary of results, conclusions found in this study, as well as discussions on relevant research issues. In the part of summary of results, a brief listed summary of data analysis is provided. In the part of conclusion, the meaning of all the results of data analysis is to be explained, based on
which the level of sportsmanship and loyalty of athletic students in Hong Kong Baptist University is to be discussed and the moral issue of athletic students is emphasized in the discussion part. Finally, some recommendations for further study are discussed.

Summary of results

The summary of results are listed sequentially in the order of each hypothesis as following:

1. There was no significant difference (t=0.763, p=0.446) in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Social Convention” between athletic students and non-athletic students.

2. There was no significant difference (t=0.510, p=0.610) in mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Rules & Officials” between athletic students and non-athletic students.

3. There was no significant difference (t=1.909, p=0.057) in mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Commitment” between athletic students and non-athletic students.

4. The mean score of athletic students (Mean=4.763, SD=0.976) was significantly lower (t=-2.098, p=0.037) than mean score of non-athletic students (Mean=5.006,
SD=0.835).

5. There was no significant difference \((t=0.935, \ p=0.351)\) in mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of "Negative Approach" between athletic students and non-athletic students.

6. There was no significant difference \((t=1.128, \ p=0.260)\) in mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of "Aggressive Behavior" between athletic students and non-athletic students.

7. There was significant difference \((t=2.396, \ p=0.017)\) in mean score of interpersonal loyalty between athletic students and non-athletic students.

8. There was no significant difference \((t=1.594, \ p=0.112)\) in mean score of group loyalty between athletic students and non-athletic students.

9. There was no significant interaction effect \((F=0.519, \ p=0.473)\) between type of sports and gender of athletic students in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of "Social Conventions".

10. There was no significant difference among different type of sports \((F=0.175, \ p=0.676)\) in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of "Social Conventions".

11. There was no significant gender difference \((F=1.106, \ p=0.295)\) in the mean score of extended
multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Social Conventions”.

12. There was no significant interaction effect \( F=0.093, p=0.760 \) between type of sports and gender of athletic students in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Rules & Officials”.

13. There was no significant difference among different type of sports \( F=0.719, p=0.398 \) in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Rules & Officials”.

14. There was no significant gender difference \( F=0.131, p=0.718 \) in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Rules & Officials”.

15. There was no significant interaction effect \( F=2.009, p=0.159 \) between type of sports and gender of athletic students in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Opponent”.

16. There was no significant difference among different type of sports \( F=1.068, p=0.303 \) in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Opponent”.

17. There was no significant gender difference \( F=0.571, p=0.451 \) in the mean score of extended multidimensional sportspersonship orientation scale
(EMSOS-30) for the subscale of “Opponent”.

18. There was no significant interaction effect \((F=0.074, p=0.786)\) between type of sports and gender of athletic students in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Opponent”.

19. There was no significant difference among different type of sports \((F=0.001, p=0.971)\) in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Opponent”.

20. There was no significant gender difference \((F=2.992, p=0.086)\) in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Opponent”.

21. There was no significant interaction effect \((F=3.429, p=0.067)\) between type of sports and gender of athletic students in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Negative Approach”.

22. There was no significant difference among different type of sports \((F=0.769, p=0.382)\) in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Negative Approach”.

23. There was no significant gender difference \((F=3.429, p=0.067)\) in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of “Negative Approach”.
There was no significant interaction effect ($F=0.059$, $p=0.808$) between type of sports and gender of athletic students in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of "Aggressive Behavior".

There was no significant gender difference ($F=1.817$, $p=0.180$) in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of "Aggressive Behavior".

There was significant different among various type of sports ($F=4.958$, $p=0.028$), in the mean score of extended multidimensional sportspersonship orientation scale (EMSOS-30) for the subscale of "Aggressive Behavior". The mean score of athletic students in team sports (Mean=4.021, SD=1.150) was significantly lower ($t=-2.424$, $p=0.017$) than the mean score of athletic students in individual sports (Mean=4.346, SD=1.045) in "Aggressive Behavior".

There was significant positive relationship ($r=0.550$, $p=0.000$) between sport commitment (Mean=5.669, SD=0.740) and interpersonal loyalty (Mean=5.844, SD=0.801).

There was significant positive relationship ($r=0.511$, $p=0.000$) between sport commitment (Mean=5.669, SD=0.740) and group loyalty (Mean=5.685, SD=0.725).
Conclusion

The following conclusions are found in this study:

1. Although athletic students are found no difference compared with non-athletic students in their attitudes towards concerns and respects to social convention, rules and officials, sport commitment, negative approach, and aggressive behavior, athletic students to some extent have poorer sportsmanship than non-athletic students since athletic students take poorer concerns and respects on their opponents.

2. Athletic students have better interpersonal loyalty than non-athletic students. And there is no difference between athletic and non-athletic students in the issue of group loyalty.

3. Among athletic students, gender does not affect athletes’ sportsmanship; however, athletes in team sports tend to practice more aggressive behavior than athletes in individual sports during the competition.

4. A positive relationship is found between sport commitment and interpersonal loyalty, as well as between sport commitment and group loyalty, showing that the more commitment and participation in sports, the better interpersonal and group loyalty in sport background will build.
**Discussion on athletes’ sportsmanship**

A serious topic may raise: do athletes really have poorer sportsmanship than non-athletes? According to previous studies (Bredemeier & Shields, 1986; Hopkins & Lantz, 1999), the answer should be “yes”, which revealed that athletes’ moral problem had been an increasly concerned issue. Consistent with previous study, it is found that athletic students who are with the university team have poorer sportsmanship than those non-athletic students only in the subscale of “Concerns and respects to opponents” but no differences were found in the other five subscales (Concerns and respects to social convention, rules & officials, commitment, opponent, and negative approaches).

Other than concerns and respects to opponents, it seems that athletic students share similar degree of sportsmanship with non-athletic students based on the conclusion listed above. However, it should not be an acceptable condition that athletes have similar attitudes as general public in attitudes towards social convention, rules and officials, sports commitment, negative bahavior and aggressive behavior. Athletes in good sportsmanship should have good sense and practice in social convention to play a positive model, obey to rules and officials definitely to ensure the fairness of competition, have a high level perceptions of fully commitment and participation in both training and competions, respect
even the opponents, admit for own wrong but do not find excuses, cohesion with the spirit that avoid violence and promote harmony. Without good practice in social convention, athletes cannot be a good model and may destroy their positive image in the competition. Without obeying to rules and officials, athletes cannot go further in the competition and will definitely be banned out the game. Without a high level perceptions of commitment in training and competition, athletes cannot reach the top of the world since no honor of competition can be obtained without huge and unimaginational efforts. Similarly, if an athlete always finds excuses to defend his/her own faults, he/she can hardly improve in sports; if an athlete always applies aggressive behaviors on others, he/she may also be black named by the public. As a result, when refer to the conclusion of this study that athletic students have similar level of sportsmanship as non-athletic students in social convention, rules and officials, sport commitment, negative approach, and aggressive behavior, it reveals that those university athletes are not good in sportsmanship since athletes good in sportsmanship should own higher level of sportsmanship in those behavioral categories than non-athletes.

As has been discussed before, this study reflected that university athletes do not own better sportsmanship than non-athletic students, or even own worse sportsmanship. In addition to this serious finding, other
two “hindering” situations may be paid more attention to: 1) gender differences; 2) Sports type differences.

This study showed that female university athletes and male university athletes shared similar degree of sportsmanship. Is this result questionable? Chantal and Bernache-Assollant (2003) found in their research that female athletes scored slightly higher than male athletes in sportspersonship orientation, reflecting the condition that female may have slightly better sportsmanship than male athletes. Then, the question comes: why in this study female athletes share similar sportsmanship with male athletes? Indeed, people tend to believe that female athletes are generally better in moral development; however, some researchers with previous studies conducted still argued that sex differences should be rare in moral development (Bredemeier & Shields, 1986). And even though Chantal and Bernache-Assollant (2003) got the results that female athletes had slightly better sportsmanship than male athletes, they believed the differences were really small. The theory support of this argument involves the three proposition of social-psychological mode of sportsmanship which are not affected by gender: 1) the principles of reinforcement and punishment, as well as individual difference (eg. Intrinsic or extrinsic motivation) contribute to moral development including sportsmanship; 2) other social determinants other than reinforcement and punishment impact the development of sportsmanship in a wide range, such as social-cultural
factors, structural factors (structure of sports and training), interpersonal factors (team cohesion), or situational factors (competition situation); 3) primary social agents strongly impact on athletes’ belief about sportsmanship (Chantal & Bernache-Assollant, 1999). As a result, gender itself may not be an effective factor that can discriminate athletes’ degree of sportsmanship, which is also consistent with the result of this study.

Other than gender differences, sports type differences may be another important thing to be examined. In this study, athletes from nine university sports team and other senior athletes (have received continuous formal sports training for more than three years) were divided into individual sports group and team sports group. The results showed that although team sports athletes shared similar level of concern of commitment, social convention, rules & officials, opponent, and negative approach with individual sports athletes, team sports athletes always tended to conduct aggressive behavior during competition than individual sports athletes. Similar result had been found in previous studies conducted more than 20 years ago. Bredemeier and Shields (1986) compared the level of sportsmanship of both swimmers and basketball players, saying that swimmers own better sportsmanship than basketball player because swimming is a noncontact individual sport while basketball is a contact team sport. Hopkin and Lantz (1999) also said that individual sports player have better sportsmanship than team sports player.
According to these, it seems that applying aggressive behavior and performing bad in sportsmanship has been a more common sight in team sports players than individual sports players. However, is it only the nature of sports itself that leads this situation? The answer may be still questionable. Although very few studies explored the reason why team sports players are more accepting unsportsmanlike behavior, the primary social agents role in athletes moral development may matters due to the social-psychological mode of sportsmanship (Chantal & Bernache-Assollant, 2003). For example, coach may have impact on athletes value on sportsmanship and sportsmanlike behavior. In team sport, some coaches prefer to teach some small tactics to athletes which may not be sportsmanlike (eg. Small and invisible movements that disturbing opponents) and this sends non-sportsmanship messages to the athletes.

In addition to what have been discussed above, parental influence and athletes’ orientation are two important factors that affecting athletes sportsmanship but have not been concerned in this study; however, they may be important factors. Researchers believed that parent-created sports climate impact greatly on athletes’ value towards sportsmanship especially young athletes in their childhood (Lavoi & Stellino, 2008). Turman (2007) in his research found that parental pressure that leads to children’s long-time nervous and stress is not good for them. Parents nowadays focus too much on winning and
always hope or even suppose their children should outperforming others and show their superiority (Turman, 2007). This kind of stressful environment of winning makes young athletes feeling that winning is most important and they may try everything to win to avoid parents’ blame on them, which makes unsportsmanlike behavior more acceptable. Besides parental influence, Stornes and Ommundsen (2004) stated that goal orientation impacts on athletes sportsmanship. While task-involved athletes are almost intrinsic and appears to be more cooperative as well as better in citizenship and ethical development, ego-involved athletes are more extrinsic and tend to develop greater competitiveness thus more accepting unsportsmanlike behavior (Ryska, 2003). As this study is to compare sportsmanship between university athletes and non-athletic university students, as well as study gender and sports type differences among university athletes in sportmanship, not considering the differences in parental influence and goal orientation among different participants is definitely a disadvantage. And this may also affect the results of this study.

**Recommendations for further study**

As sportmanship influences athletes’ mental and moral development, further studies may be conducted in the future. The following recommendations may be concerned in further study of sportmanship.
First of all, more accurate, specific, objective and reliable tool of measuring sportsmanship should be developed. Since the issue of sportsmanship raised more than half a century ago, researchers continuously designed and improved methods for measuring sportsmanship. From competitive attitude scale (CAS) (Lakie, 1964) to sportsmanship quiz (King, 1992), from multidimensional sportspersonship orientation scale (MSOS-25) (Vallerand et al., 1997) to extended multidimensional sportspersonship orientation scale (EMSOS-30) (Stornes & Bru, 2002), the development for better measurement tool for sportsmanship has been one of the most important topic in studying sportsmanship. In present study, the extended multidimensional sportspersonship orientation scale (EMSOS-30) is used since this may be most popular and reliable tools for measuring sportsmanship (Knortz, 2009). However, problems still exist. The most serious problem is that the statement of the questions seems to present a team sports situation, which may confuse athletes in individual sports when measuring the sportsmanship. Beside, whether sportsmanship may contain issues other than concerns and respects to social convention, rules and officials, sport commitment, opponent, negative approach, and aggressive behavior are still a questionable issue. As a result, the design and development for a more precise, specific and reliable tools in measuring sportsmanship is of great significance to further study in sportsmanship.
The second recommendation for further study in sportsmanship is that the causes of athletes' poor sportsmanship should be emphasized. Although motivation (Chantal & Assollant, 2003; Rsyka, 2003), goal orientation (Duda, Olson, & Templin, 1991; Stornes & Ommundsen, 2004), and parental factors (White, 1998; Lavoi & Stellino, 2008) have been found as influential factors of sportsmanship in previous studies, the original causes of athletes' poor sportsmanship are still unconfirmed nowadays. Under this circumstance, finding out the potential causes of athletes' poor sportsmanship is meaningful, especially in cultivating athletes to be more mental and moral healthy.

The third recommendation for further study in sportsmanship is that new scientific training method for athletes should be developed to provide a good training environment for young athlete to help to build up better sportsmanship. Coakley (2004) pointed out that elite training nowadays are high-performance oriented, which leads to too much control on athletes in their early childhood, makes them too stressful and is not good for their psychological and mental development. And this may be the same situation for sportsmanship. Thus, certain changes may be designed to improve current elite training program to balance performance training and mental development issues.
REFERENCES


Berry, E. (1927). The philosophy of athletics. New York:


Knortz, G. S. (2009). *A case study: assessing the validity and reliability of the multidimensional sportspersonship orientation scale among college athletes.* Retrieved from: 

http://library.uvm.edu/dspace/bitstream/123456789/223/1/Knortz%20Dissertation.pdf


Lavoi, N. M., & Stellino, M. B. (2008). The relation between perceived parent-created sport climate and
competitive male youth hockey players' good and poor sports behaviors. The Journal of Psychology, 142(5), 471-495.


APENDIX A

The multidimensional sportspersonship orientations scale (MSOS-25) plus E-5 (EMSOS-30)

____________________SPORT: Indicate which sport you refer to while answering the next 30 questions (ex: baseball, hockey, badminton, etc.) For each of the following items, circle the number that best represents the extent to which the item corresponds to you with respect to the sport you identified above.

Doesn't correspond

1. When I lose, I congratulate the opponent whoever he or
2. I obey the referee.

3. In competition, I go all out even if I’m almost sure to lose.

4. I help the opponent get up after a fall.

5. I compete for personal honors, trophies, and medals.

6. I often play aggressively to win the game.

7. After a defeat, I shake hands with the opponents’ coach.

8. I respect the rules.

9. I don’t give up even after making many mistakes.

10. If I can, I ask the referee to allow the opponent who has been unjustly disqualified to keep on playing.

11. I criticize what the coach makes me do.

12. On defense I often play aggressively to prevent a score.

13. After a competition, I congratulate the opponent for his good performance.


15. I think about ways to improve my weaknesses.

16. When an opponent gets hurt, I ask the referee to stop the game so that he or she can get help.

17. After a competition, I use excuses for a bad performance.
18. When tied late in the game, if an opponent tries to score I will try to stop him or her even though I will have to break the rules. 1 2 3 4 5
19. After a win, I acknowledge the opponent’s good work. 1 2 3 4 5
20. I respect the referee even when he or she is not good. 1 2 3 4 5
21. It is important to me to be present at all practices. 1 2 3 4 5
22. If I see that the opponent is unjustly penalized, I try to rectify the situation. 1 2 3 4 5
23. When my coach points out my mistakes after a competition, I refuse to admit that I made those mistakes. 1 2 3 4 5
24. I often tackle a skillful opponent extra hard to intimidate him/her. 1 2 3 4 5
25. Win or lose, I shake hands with the opponent after the game. 1 2 3 4 5
26. I respect an official’s decision even if he or she is not the referee in chief. 1 2 3 4 5
27. During practices, I go all out. 1 2 3 4 5
28. If by misfortune, an opponent forgets his or her equipment, I lend him my spare one. 1 2 3 4 5
29. If I make a mistake during a crucial time of the match, I get angry. 1 2 3 4 5
30. I often use physical force to make opponents annoyed so that they make mistakes. 1 2 3 4 5
Please answer the following questions:

Sex: _______ Current Age: _________ Class Year: _________
Scholarship Athlete: Yes or No

MSOS © Robert J. Vallerand, Nathalie M. Brière, Céline M. Blanchard, & Pierre J. Provencher, 1997 EMSOS Extended version Stornes and Bru, 2002 (questions 6, 12, 18, 24, 30).

SCORING KEYS - EMSOS-30
# 1, 7, 13, 19, 25 Respect for social conventions
# 2, 8, 14, 20, 26 Respect for the rules and the officials
# 3, 9, 15, 21, 27 Respect for one’s full commitment toward sport participation
# 4, 10, 16, 22, 28 Respect and concern for the opponent
# 5, 11, 17, 30, 29 Negative approach toward the practice of sport
# 6, 12, 18, 24, 30 Instrumental aggressive behavior
APENDIX B

Questionnaire of this study (chinese version)

運動精神及忠誠度調查

鄭重聲明：以下問卷資料將僅用於學術研究，所有資料信息將受到保護。此問卷不涉及個人隱私。
如有任何查詢，請聯繫香港浸會大學體育學系體育及康樂管理專業三年級學生張書歌（65931521）。

性別：

請在下列運動中，選出一項自己的專項：

1. 篮球  2. 足球  3. 排球  4. 手球  5. 羽毛球  6. 乒乓球
13. 田徑  14. 網球  15. 單車  16. 劍擊  17. 其他：（請例舉）

大學期間是否（曾）為校隊隊員：否 / 是，如選"是"，請寫出運動項目：

專業受訓年期：A. 小於一年  B. 一年至三年  C. 三年至五年  D. 五年以上
（注：專業受訓指於一段時間內在運動隊內定時訓練）

第一部份

請仔細閱讀下列內容，並圈出適合自己的數字。"1"表示極度不同意，"7"表示極度同意

1. 即使我輸掉比賽，我也會祝賀勝方。  1  2  3  4  5  6  7
2. 我服從裁判的決定。  1  2  3  4  5  6  7
3. 在比賽中，即使已經無法扭轉敗局，我也會竭盡全力。  1  2  3  4  5  6  7
4. 如果對手摔倒，我會伸出援手扶他（她）起來。  1  2  3  4  5  6  7
5. 我為我的個人榮譽、獎賞、以及獎牌而競爭。  1  2  3  4  5  6  7
6. 我總是通過侵蝕性地手段去贏得比賽。  1  2  3  4  5  6  7
7. 在輸掉比賽以後，我也願意和對方的教練握手致歉。  1  2  3  4  5  6  7
8. 我服從比賽規則。  1  2  3  4  5  6  7
9. 在訓練和比賽當中，即使我犯了很多過失，也絕不放棄繼續堅持。  1  2  3  4  5  6  7
10. 如果情況合適，我會請求裁判允許被不合理原因取消資格的對手繼
    續進行比賽。  1  2  3  4  5  6  7
11. 我會批評教練對我的指令。  1  2  3  4  5  6  7
12. 在防守時，我會用侵略性的動作去阻止對手得分。  1  2  3  4  5  6  7
13. 在比賽後，我會祝賀對手的優異表現。  1  2  3  4  5  6  7
14. 我完全服从我所进行的运动中的所有规则。 1 2 3 4 5 6 7
15. 我会找出克服自身弱点的方法。 1 2 3 4 5 6 7
16. 当对手在比赛中受伤时，我会向裁判申请暂停比赛，让对手得到应有的帮助。 1 2 3 4 5 6 7
17. 我会为自己在训练或比赛中的不好表现找借口。 1 2 3 4 5 6 7
18. 当比赛接近尾声时，若对手尝试获取得分，我不会努力阻止他（她），即使可能造成自己犯规。 1 2 3 4 5 6 7
19. 在获胜后，我也愿意赞扬对手在比赛中的优异表现。 1 2 3 4 5 6 7
20. 即使对裁判不满，我也尊重裁判及其判决。 1 2 3 4 5 6 7
21. 对我来说参加所有的训练非常重要。 1 2 3 4 5 6 7
22. 如果我发现对手被误判，我会尝试纠正对手受到不公平的情况。 1 2 3 4 5 6 7
23. 当教练指出我在比赛中的错误时，我会努力改正错误。 1 2 3 4 5 6 7
24. 当我遇上强劲的对手时，我会付出更多努力超越对方。 1 2 3 4 5 6 7
25. 不论比赛输赢，我都愿意和对手握手。 1 2 3 4 5 6 7
26. 我尊重并接受工作人员的决定，即使他（她）不是比赛裁判。 1 2 3 4 5 6 7
27. 即使在训练中，我也会全力以赴。 1 2 3 4 5 6 7
28. 若对手丢失或遗忘比赛装备（如球拍等），我愿意在比赛中将自己装备借给对手。 1 2 3 4 5 6 7
29. 若在比赛的关键时刻犯规，我会发脾气。 1 2 3 4 5 6 7
30. 在比赛中，我会使用一些让对手感到不适的身体接触去诱导对手犯规。 1 2 3 4 5 6 7
第二部份
請仔細閱讀下列內容，並圈出適合自己的數字。“1”表示極度不同意，“7”表示極度同意。

1. 我不會辜負教練和隊友們的信任。  
   1 2 3 4 5 6 7
2. 我希望自己能代表運動隊比賽而自豪。  
   1 2 3 4 5 6 7
3. 如果我向教練和隊友們做出承諾，我會信守諾言。  
   1 2 3 4 5 6 7
4. 尊重教練和隊友是非常重要的。  
   1 2 3 4 5 6 7
5. 即使當教練和隊友犯錯，我也會理解他們。  
   1 2 3 4 5 6 7
6. 當聽到有人刻意指責我的隊友時，我會有抵觸心理。  
   1 2 3 4 5 6 7
7. 我願意犧牲我的時間和金錢去幫助我的隊友們。  
   1 2 3 4 5 6 7
8. 參加比賽時，我會為了團隊的好成績拼搏。  
   1 2 3 4 5 6 7
9. 哪怕隊友做了我不喜歡的事，我們仍會同心協力一起拼搏。  
   1 2 3 4 5 6 7
10. 我是一個以團隊合作為重的隊員。  
    1 2 3 4 5 6 7
11. 我會和曾經的舊隊友保持聯繫，這對我非常重要。  
    1 2 3 4 5 6 7
12. 我認為團隊精神對運動員來說是非常重要的。  
    1 2 3 4 5 6 7
13. 我從不拒絕去幫助我的教練和隊友們。  
    1 2 3 4 5 6 7
14. 在比賽中為團隊取得好成績是我積極訓練的重要動力。  
    1 2 3 4 5 6 7
15. 同隊友發生衝突或不愉快的事件，我會主動和隊友溝通。  
    1 2 3 4 5 6 7
16. 我會積極宣傳賽的運動隊。  
    1 2 3 4 5 6 7
17. 當教練和隊友們受到指責時，我會為他們辯護。  
    1 2 3 4 5 6 7
18. 我會懷念曾經參加過的運動隊以及其中的隊友。  
    1 2 3 4 5 6 7
19. 我時刻準備著幫助我的隊友們。  
    1 2 3 4 5 6 7
20. 比賽中，團隊成績比個人成績更重要。  
    1 2 3 4 5 6 7