SPORT COMMITMENT AMONG MALAYSIAN RACQUET SPORTS PLAYERS

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SPORT COMMITMENT AMONG MALAYSIAN RACQUET SPORTS PLAYERS

ABSTRACT

Sport Commitment Model (SCM) has been widely used to understand the motivation of players to continue their involvement in sports. However, the factor that influence players' commitment in racquet sports specifically were understudied especially in Malaysia. Therefore, this study aimed to utilize the Sport Commitment Model (Scanlan, Chow, Sousa, Scanlan, & Knifsend, 2016) framework to examine Malaysian players' commitment in badminton, table tennis, tennis and squash. A total of 612 players (367 males, 245 females, μ age 30.32 ± 11.56) completed the Sport Commitment Questionnaire-2 which measured seven predictors and two dimensions of sport commitment. Results revealed that sport enjoyment was the main reason contributing to the players' commitment in all sports (Badminton μ = 4.38 ± 0.51, Table tennis μ = 4.37 ± 0.54, Tennis μ = 4.79 ± 0.50, Squash μ = 4.63 ± 0.47). Data analyses showed significance difference in players' enthusiastic commitment [$F_{(3,608)}$ = 45.44, p = 0.00] and constrained commitment [$F_{(3,608)}$ = 17.87, p = 0.00] across four racquet sports. However, significant difference were only found in enthusiastic commitment across gender in table tennis (t = 3.10, p = 0.04) and tennis (t = 2.63, p = 0.04). While only table tennis players showed significance difference in constrained commitment (t = -0.63, p = 0.04) across gender. Moreover, there were significant difference in enthusiastic commitment [$F_{(3,608)}$ = 9.00, p = 0.00] across age groups 11-20 vs. 31-40, 11-20 vs. >40, 21-30 vs. 31-40. Players' constrained commitment [$F_{(3,608)}$ = 18.84, p = 0.00] differ across the age group of 11-20 vs. 31-40, 11-20 vs. >40 and 21-30 vs. 31-40. In conclusion, understanding sport commitment is important to facilitate players' continuous participation in various racquet sports by taking into account on gender and age groups differences.

Keywords: Constrained Commitment, Enthusiastic Commitment, Malaysian racquet sports, Sport Commitment Model, Sport Enjoyment

KOMITMEN SUKAN DI KALANGAN PEMAIN SUKAN BERAKET MALAYSIA

ABSTRAK

"Sport Commitment Model (SCM)" telah digunakan secara meluas untuk memahami motivasi dan komitmen pemain melibatkan diri secara berterusan dalam aktiviti sukan. Walau bagaimanapun, kajian spesifik tentang faktor yang mempengaruhi komitmen pemain sukan beraket masih kurang diberi perhatian terutama di Malaysia. Oleh yang demikian, kajian ini bertujuan untuk menggunakan "Sport Commitment Model" (Scanlan et al. 2016) sebagai rangka untuk mengkaji komitmen di kalangan pemain sukan badminton, ping pong, tenis dan squash di Malaysia. Sebanyak 612 orang pemain (367 lelaki, 245 perempuan, μ umur 30.32 ± 11.56) telah menjawab soal selidik "Sport Commitment Questionnaire-2" yang mengukur tujuh faktor dan dua dimensi komitmen sukan. Dapatan kajian telah menunjukkan keseronokan dalam sukan adalah faktor utama yang mempengaruhi komitmen pemain dalam semua jenis sukan beraket (Badminton μ = 4.38 ± 0.51, Ping pong μ = 4.37 ± 0.54, Tenis μ = 4.79 ± 0.50, Skuasy μ = 4.63 ± 0.47). Analisis data juga telah menunjukkan perbezaan signifikan dalam komitment semangat (enthusiastic commitment) pemain [$F_{(3,608)}$ = 45.44, p = 0.00] dan komitmen kekang (constrained commitment) [$F_{(3,608)}$ = 17.87, p = 0.00] di kalangan empat jenis sukan beraket. Walau bagaimanapun, perbezaan signifikan hanya didapati dalam komitmen semangat antara jantina di kalangan pemain ping pong (t = 3.10, p = 0.04) dan tenis (t = 2.63, p = 0.04). Malah, perbezaan signifikan bagi komitmen kekang antara jantina cuma didapati di kalangan pemain ping pong sahaja (t = -0.63, p = 0.04). Selain itu, komitmen semangat [$F_{(3,608)}$ = 9.00, p = 0.00] antara kumpulan umur 11-20 vs. 31-40, 11-20 vs. >40, 21-30 vs. 31-40 juga telah menunjukkan perbezaan yang ketara. Komitmen kekang pemain [$F_{(3,608)}$ = 18.84, p = 0.00] antara kumpulan umur 11-20 vs. 31-40, 11-20 vs. >40 dan 21-30 vs. 31-40 juga didapati adalah berbeza.

Kesimpulannya, memahami komitmen sukan adalah penting untuk mendorong pemain melibatkan diri secara berterusan dalam pelbagai sukan beraket dengan mengambil kira perbezaan jantina dan kumpulan umur.

Kata kunci: Komitmen Kekangan, Komitmen Semangat, Sukan Beraket Malaysia, Sport Commitment Model, Keseronokan dalam Sukan

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LIST OF SYMBOLS AND ABBREVIATIONS

SCM : Sport Commitment Model

SCQ-2 : Sport Commitment Questionnaire -2

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CHAPTER I: INTRODUCTION

1.1 Background of study

In Malaysia, most sportsmen and women are well taken care of as the government is committed to develop the standard of national sports by providing a lot of support in terms of funding, allowances, sports science expertise, facilities, equipment and rewards (Ronglan, Houlihan, & Andersen, 2015). For example, part of the allocation was used in the implementation of 1Murid 1Sukan (2008) and Talent Identification (TID) which aim to select and recruit talented players that would be absorbed into various sport development programs throughout the country (Ronglan et al., 2015). These players selected from the above programmes will be trained for years before they are ready to represent Malaysia in the ASEAN, Asian Junior/Youth tournaments and other Open tournaments. In order to become national players, these players need to exhibit commitment in their sports training because the level of commitment will positively affect players' performance (Masrur, Hossini, Alam, & Ab, 2014).

According to Dr Ong Kong Swee who is the Chief Executive Officer of the Sarawak Sports Corporation cum Director of Sarawak State Sports Council mentioned that commitment mean sportsmen and women often need to give up "something" in life in order to succeed in sports. Ong further explained that "players cannot live a normal life as they need to sacrifice a lot of time for their sport" (Edward, 2016). Ong added that family members especially parents also have to sacrifice a lot of time and money for their children who are involved in sports (Edward, 2016). For example, world champion and national diver Cheong Jun Hoong sacrificed precious family time to focus on training in Kuala Lumpur for six months before competing in the World Aquatics Championship and 29th SEA Games (Ming, 2017).

Scientific studies (Ericsson, & Charness, 1994; Salmela, Young, & Kallio, 1998) have shown that it takes at least 10,000 hours of training for a sport player to reach elite levels. This is equivalent to three hours of training every day for ten years continuously to reach elite level. In other word, it requires many years of committed training and lots of resources to develop a sport player in order to compete at international level. Another great example is Malaysian diver, Pandelela Rinong who is very committed in diving. She trains 6 hours a day, six days per week (Elias, 2015). In an interview, Pandelela explained that she is passionate towards diving because she forges good relationship with others such as friends, teammates and coach (Elias, 2015). With great commitment and proper training, Pandelela was able to equip herself with matured skills and better techniques which made Malaysian proud by winning a bronze at London Olympic (2012) and a silver medal at Rio de Janeiro Olympic (2016).

In the 1950's to 1970's Malaysian sport players exhibited great commitment, dedication and passion for their sports with many years of training without much support in terms of sports development, equipment, training, money, facilities and rewards in those days (Francis, 2007). For example, former national sprinter, Dr Jegathesan said there was no proper equipment and qualified coach for him in those days (Francis, 2007). Besides that, he had to borrow money from friends due to limited financial aid because he was still a student (Francis, 2007). In addition, former Malaysian players had to fork out their own expenses when they travelled to compete (Kutty, 2015). For example, former national cyclist, Joo Pong recalled that there were no special allowances, food or accommodation when he was called for centralized training (Pandiyan, 2017). Another example, keirin cycling world champion Azizul is passionate towards his sport and trained hard. This is because Azizul wants to excel in his sport (Bernama, 2017). With his hard work and quality coaching, he won several prestigious medals including a bronze medal in 2016 Rio Olympic) and the 2017 World

Championship cycling title. While Bibiana Ng (shooter) pointed out that she still remains active in shooting because she loves and enjoys the sport even though she is in her 40s (Paul, 2017). Furthermore, former Malaysian footballer, Santokh Singh recalled that he has always been very committed and put in extra training time in order to retain a place in the national football squad (Francis, 2007). Such commitment was the key factor that made these former athletes succeed in sports. In a nutshell, Professor Dr Khoo Kay Kim summed it up that commitment is one of the main factor that affects the performance of athletes ("Athletes should not get married too early," 2013).

In racquets sports, Malaysian former badminton national player, Moey (2017) stated that players need to be passionate about the game, well-discipline, show full commitment in their sport and ready to make sacrifice. In addition, Lee Chong Wei also believes that players have to be disciplined and train hard in order to excel (Paul, 2015). In squash, Nicol Ann David was exposed to squash at the age of five years old. She trained thrice a week. Her love and passion toward squash has driven her to train harder. According to her coach, Liz Irving commented that Nicol was very dedicated and disciplined in her training in Amsterdam since 2003 (Devinder, 2015). Such a great commitment has made Nicol maintained World No 1 ranking for nine years in a row since 2006.

However, former national badminton player, Wong (2014) said Malaysian badminton sport players are lacking in commitment as compared to European players nowadays. He further explained that these players lacked inner strength and discipline in training and competition (Wong, 2014). These issues draw attention to the need of understanding sport players' commitment in order to coax them to remain active in sports.

Over the years, many sport psychologists are keen to understand the reasons why some players continue to be committed in sports while others drop out. One of the reasons why players remain committed in sport because they feel the enjoyment that sport can bring to them (Carpenter & Scanlan, 1998; Scanlan, Chow, Sousa, Scanlan, & Knifsend, 2016; Scanlan, Simons, Carpenter, Schmidt, & Keeler, 1993a; Young & Medic, 2011). Another study by Iñigo, Podlog and Hall (2015) had identified players who were recovering from injuries may show passion and commitment toward their sport because they enjoy their sports. Besides, Scanlan, Russell, Beals, and Scanlan (2003) reported that social support was an important factor that drove players to commit in the sport. Thus, reasons why players remain active participation in sports could also vary. Therefore, it is important for sport authorities, sport bodies, sport associations, coaches and schools administrators to understand the reasons why players are active in sport from the psychology perspective.

It is important that sport players need to be committed in their sports in time and resources in order to succeed in sport. Some players showed great commitment in sports while others failed to do so. Hence, one way to understand players' commitment is by identifying factors which influence commitment using Sport Commitment Model (SCM) which was developed by Scanlan et al. (1993a). The SCM has been widely used to examine factors influencing one's commitment in sport (Casper & Stellino, 2008; Chairat, Naruepon, Li, & Harmer, 2009; Frayeh & Lewis, 2017; Scanlan et al., 2016; Scanlan, Russell, Magyar, & Scanlan, 2009; Weiss & Weiss, 2007; Wilson, Rodgers, Carpenter, Hall, Hardy, & Fraser, 2004). Scanlan and colleagues (1993a) listed five factors in examining athletes' commitment in sport; sport enjoyment, involvement alternatives, personal investment, social constraints and involvement opportunities. Over the years, SCM has been expanded whereby new factors have been added into the model. The changes in SCM will be discussed in Chapter Two-Review Literature.

1.2 Statement of Problem

Scanlan et al (1993a) explained that sport commitment means the wish of the sportsmen and women to involve in sport activities. In another word, withdrawing oneself from sport participation shows less commitment toward sport. In a recent study, Woods (2011) found that over 70% of US sport program participants dropped out from sport programs along the way from ages 6 to 17 years old. The dropped out rate might create some problems for sport practitioners to find talented players from the grass root. According to Malinero, Salguero, Tuero, Avarez and Marquez (2006), many talented players drop out from various sport programs every year. They found that players who dropped out tend to spend more time on other things instead of their respective sports (Malinero et al., 2006). In addition, Weiss and Amorose (2008) discovered that the tendency of players who were involved in sport extensively wanted to drop out from sport were much higher.

Whereas in Malaysia, many players failed to show high level of commitment in their respective sports (Wong, 2014). This has led to low quality training sessions because players tend to take it easy during training (Wong, 2014). Therefore, they will be drop out from the national team if they under-perform. In addition, Dato' Sieh Kok Chi, Honorary Secretary of the Olympic Council of Malaysia had pointed out that current Malaysian sportsmen and women are not focused and hardworking as compared to the sport players in the 50s and 60s (Paul, 2017). Furthermore, Ali (2016) commented that players who were lack of commitment had led to the decline in quality of Malaysian sports nowadays. He argued that our country needs more committed sportsmen and women as commitment is the key to success in sport ("A Look at Team Malaysia's Progress in the Rio Olympic and Marching Forward into Tokyo", 2016). In addition to

that, in an interview with Datuk Misbun Sidek, he stated that some of the badminton players in national showed low commitment (Paul, 2017).

In a nutshell, sport commitment issues among players have leads to sports practitioners questioning the commitment given by players to their sport. Less commitment of sport might draw players to perform badly and also drop out from sport. Hence, the need to study factors affecting Malaysian players' commitment is important because one's commitment is essential for sport development and increase performance (Masrur et al., 2014). Therefore, this study will examine factors influencing racquet sports players' (i.e., badminton, tennis, table tennis & squash) commitment based on Sport Commitment Model.

1.3 Objective of the study

There are four main research objectives:

1.3.1. To examine the factors influence players' commitment in badminton, tennis, table tennis and squash.

1.3.2 To compare players' commitment across racquet sports.

1.3.3. To compare racquet sports players' commitment based on gender.

1.3.4. To compare racquet sports players' commitment based on age groups.

1.4 Research Questions

The research questions to be addressed are as follows:

1.4.1. What are the factors that influence badminton, tennis, table tennis and squash players' commitment in Malaysia?

1.4.2. Are there any significant differences in players' commitment across different racquet sports?

1.4.3. Is there any gender difference in Malaysian racquet sports players?

1.4.4. Are there any age groups difference between racquet sports players' commitment?

1.5 Rationale of the study

One of the factors in sports successes depend on one's commitment towards sports (Masrur et al., 2014). Plethora of studies had been conducted based on the sport players' commitment using Sport Commitment Model in USA, New Zealand, and Thailand (Carpenter & Scanlan, 1998; Casper & Stellino, 2008; Casper, Stellino, & Gray, 2007; Chairat et al., 2009; Raedeke, 1997; Scanlan et al., 2009; Scanlan, et al. 1993a; Weiss & Weiss, 2007; Weiss, Weiss, & Amorose, 2010; Wigglesworth, Young, Medic, & Grove, 2012; Young & Medic, 2011). However, based on my extensive review literature search, there is no study on Malaysian sports nor Malaysian racquet sports players' commitment. Thus, my study will help fill-in the gap on sports commitment among Malaysian racquet sports players.

Moreover, most of the studies of sport commitment were done on younger athletes. For examples, there were several studies focused on teenagers' commitment (Carpenter

& Scanlan, 1998; Garn, 2016; Scanlan et al., 1993a; Weiss & Weiss, 2003) and colleges and universities students (Baghurst et al., 2014; Boyst, 2009; Jess, 2009; Weiss & Neibert, 2014; Weiss et al., 2010). Besides, not many studies focus on racquet sports players except study alone on tennis (Casper & Stellino, 2008; Casper et al., 2007). Therefore, more researches need to be carry out to add information on sport commitment across different countries, sports, different age groups, community and genders. Thus, the current study will examine players' sport commitment from 19-65 years old and four types of racquet sports (i.e., badminton, table tennis, tennis and squash) to further understand the factors contribute to sport commitment.

1.6 Significance of the study

This study could provide valuable information on factors that might contribute to racquet sport players' commitment. This study, I hope to provide a better understanding for sports administrators (i.e., Ministry of Youth and Sports, Ministry of Education, ISN, MSN and National Coaching Academy) to design and provide a better environment for racquet sports players to remain in the sports from the grass roots.

Examining the commitment of players in school also help the school authorities to understand the situation better thus creating a more inviting and conducive environment to attract school children to participate and continue playing racquet sports even after leaving school.

For sports and recreational clubs, this study provides valuable information to club administration to keep clubs' members from switching clubs and continue to engage in sports. As a result, clubs are able to generate more income from the active members and to promote healthy lifestyle among a broader range of the population.

1.7 Delimitation and Limitation

1.7.1 Delimitations

There are two delimitations of this study, which are:

1. Only players from racquet sports (badminton, squash, table tennis and tennis) are chosen.

2. Participants chosen are aged between 19 to 65 years old. Players younger or older than the said age range will not be included in this study.

1.7.2 Limitations

The population of participants who are representing schools can be accessed during inter-district or division and inter-state meets (e.g., MASUM and SUKMA) However, the population of other racquet sports players (non-elite) or recreational players remains unknown as there is no data collected for racquet sports players in Malaysia.

1.8 Operational Definition

Terminologies often used in this study:

a. Sports commitment – Psychological construct representing the desire and resolve to continue sport participants (Scanlan et al., 1993a).

b. Sport player(s) - Individual who engage in an activity that they enjoy and recognize as having socially redeeming values during their free time (Hurd & Anderson, 2011).

c. Racquet sports – Badminton, tennis, table tennis and squash.

1.9 Summary

Chapter One outlines the importance of sport player's commitment in sport. However, when a player fails to commit, it will lead to withdrawing themselves from the sport. Therefore, it is necessary to investigate factors that influence players' commitment in sports. The current study will look into the factors contributing to commitment of racquet sports (badminton, squash, table tennis and tennis) players in Malaysia. With the limited studies done on racquet sports players' commitment in Malaysia, this study offers valuable information to fill the gap in this understudied area.

CHAPTER II: LITERATURE REVIEW

Introduction

This chapter discussed the Sport Commitment Model (SCM) and literature review on studies related to sport commitment. First, the original Sport Commitment Model (SCM) will be discussed, followed by current changes of SCM model. Next, the theories related to the Sport Commitment Model will also be addressed. The last part of this chapter will discuss the studies on the players' commitment in various sports.

2.1 Sport Commitment Model

Based on the ideas proposed in Social Exchange Theory (1959), Kelley's (1983) Model of Love and Commitment in close relationship and Rusbult's (1980) Investment Model, Scanlan and colleagues (1993), the Sport Commitment Model (SCM) was developed to explain the norms in sport commitment among athletes. This section will first explain the original Sport Commitment Model followed by changes made to the model over the years.

Sport commitment is defined as "psychological construct representing the desire and resolve to continue sport participation" (Scanlan et al., 1993a). The original SCM consists of five factors that allows sport psychologist to measure sport commitment. The factors listed in the original SCM are sport enjoyment, involvement alternatives, personal investment, social constraints, and involvement opportunities. Below are the definitions for each factor in Sport Commitment Model.

Sport enjoyment: Sport enjoyment is defined as positive emotion towards sport activity such as the feeling of pleasure or having fun (Scanlan et al., 1993a). It is believed that one will commit more in sport when he or she enjoys the sport (Scanlan et al., 1993a). Therefore, sport enjoyment serves as an important factor to explain one's

desires to continue in sport participation. According to Scanlan et al. (1993a), there are several sources of sport enjoyment. For example, positive team interactions and support, the joy that master the skill and supportive coach were the sources of sport enjoyment. In addition, McCarthy and Jones (2007) reported perceived competence, social involvement and friendships, social support, and mastery-oriented learning environment as the sources of sport enjoyment among 7 to 12 years old children.

Involvement Alternatives: Involvement alternatives is defined as the alternative(s) or other activities that might draw interest of one to participate in by leaving the current sport activity (Scanlan et al., 1993a). The examples of involvement alternatives are clubs' activities or other sport programs. It is assumed that the more attractive the alternatives are, the more they will diminish the sport commitment.

Personal Investment: Personal investment are the resources that one had put into the activity which cannot be taken back or recovered if one has withdrawn from the current sport activity (Scanlan et al., 1993a). Examples of resources are money, time and effort. One will lose everything that he or she invested upon termination of an activity (Rusbult, 1980). Sports (e.g., elite sports) required large financial demands (Scanlan, et al., 1993a). Therefore, the greater the investments are, the greater the sport commitment one will demonstrate.

Social Constraints: Social constraints are the social expectations, standards or norms which make one feel obligated to remain in the sport activity (Scanlan et al, 1993a). Social constraints are viewed as pressure towards participants. It is assumed that the greater the pressure by others, the greater will be the commitment of the participant. However, studies revealed limited relationship between social constraints and level of sport commitment. Instead, studies (Guillet, Sarrazin, Carpenter, Trouilloud, & Curry, 2002; Ryan & Deci, 2000) revealed that there was little relationship between social

constraints and commitment, or negative impact of social constraints on commitment (Guillet et al., 2002). Another example, Scanlan et al. (2003) in their study with New Zealand rugby players had reported that rugby players remained in their respective sport was not due to the expectation of other people but the enjoyment of the sport.

Involvement Opportunities: Involvement opportunities are the opportunities or something valuable which one can grab when he or she continues involve in the sport activity (Scanlan et al, 1993a). Examples of involvement opportunities could be players see the opportunity to gather with their friends, they want to take the opportunity to master the sport skills, or players see some opportunities to gain something (Scanlan et al., 1993a). Other aspects of valuable opportunities that players valued as important element would be the travel time, future career, performance recognition, friendship and competitive achievement (Scanlan et al., 2013). It was predicted that the greater ratings of involvement opportunities, the higher the commitment will be.

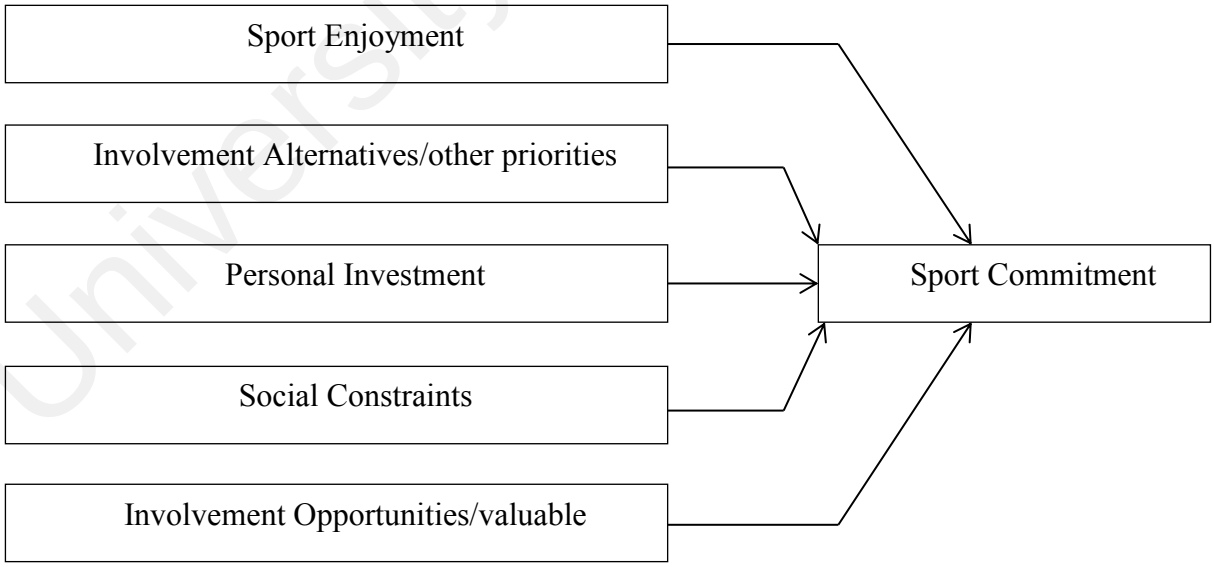

Figure 2.1: Scanlan et al. (1993) Sport Commitment Model

Carpenter, Scanlan, Simons, and Lobel (1993) had tested Sport Commitment Model using structural equation modelling (SEM). The results showed good fit of the data

with CFI=0.981, R^2=0.68, Standardised residuals between 0.0265 and -0.128. The finding concluded that sport enjoyment as the strongest predictor of sport commitment where sport enjoyment obtained $\beta = 0.222$, valuable opportunities $\beta = 0.578$, personal investment $\beta = 0.189$, social constraints $\beta = -0.069$.

2.1.1 Modification and Changes of Sport Commitment Model

For the past twenty years, Sport Commitment Model (SCM) had been used to study commitment among sport players across varies sports and groups (Carpenter & Scanlan, 1998; Casper & Stellino, 2008; Casper, et al., 2007; Chairat et al., 2009; Raedeke, 1997; Scanlan et al., 2009; Scanlan et al., 1993; Weiss & Weiss, 2007; Weiss, et al., 2010; Wigglesworth et al., 2012; Young & Medic, 2011). In addition to this, SCM has been revalidated as well as evolve so that it could precisely measuring players' commitment and the predictors that contribute towards sport commitment. The following section discusses changes or modification of Sport Commitment Model.

Enjoyment as a Mediating Variables. Studies by Chairat et al. (2009), Weiss, Kimmel and Smith (2001) and Weiss et al. (2010) had found that enjoyment consistently proved to be top factor for sport players commit themselves in sport. Their studies also found that variables in SCM were highly correlated with each other. For example, the study done by Scanlan et al. (1993a) reported sport enjoyment was highly related to sport commitment but moderately related to other variables such as involvement alternative, personal investment and involvement opportunities. Thus, Weiss et al. (2001) proposed a mediated variable to cope with multicollinearity issues resulting in a modified version of SCM called Mediated Model of Sport Commitment.

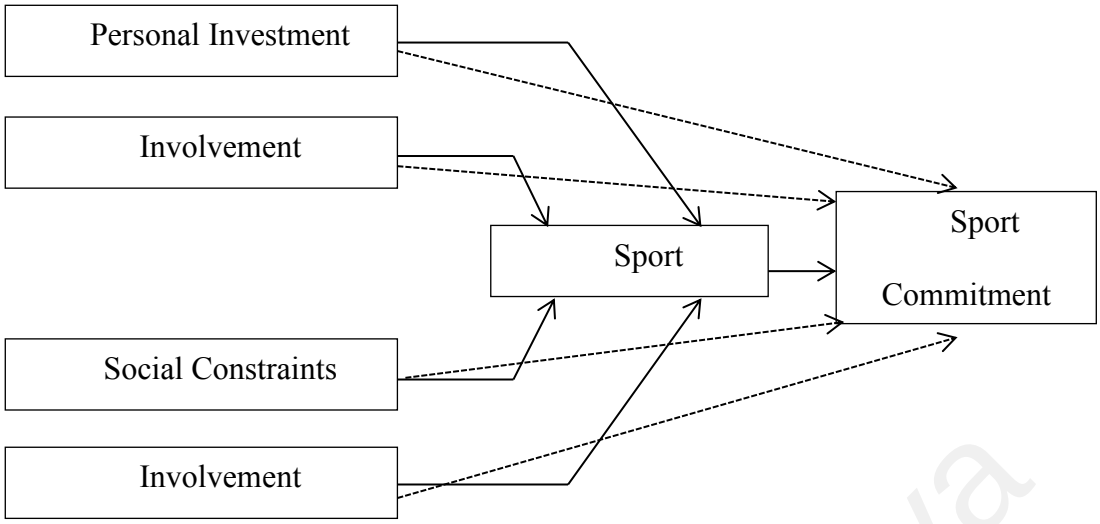

Figure 2.2: A modified version of the Sport Commitment Model proposed with sport enjoyment as a mediating variable along with paths for direct/indirect influences of commitment (Weiss et al., 2001)

Both structural and mediational model were tested on 198 tennis players in Weiss and colleagues' study (2001). Using structural equation model, the structural model showed CFI = 0.914, RMSEA = 0.074, R^2 = 91.7 and mediational model showed CFI = 0.903, RMSEA = 0.078, R^2 enjoyment = 68.7, R^2 commitment = 91.9. Both models presented a less than satisfactory fit statistics. Weiss and colleagues (2001) further examined both direct and indirect influences on sport commitment (a combination of structural and mediational models). This test also presented a less than satisfactory fit statistics (CFI = 0.914, RMSEA = 0.074, R^2 enjoyment = 57.7, R^2 commitment = 91.7). The final test by Weiss and colleagues found that personal investment and alternatives are strongly correlated with enjoyment while social support and social constraints shown low relationship to enjoyment.

Both models were once again re-validated by Casper, et al. (2007) and Chairat et al. (2009) in Thailand. Casper and colleagues (2007) reported the original model fit indices were $\chi^2(411) = 1655.35$; RMSEA = 0.078; NFI = 0.95; NNFI = 0.95; CFI = .94; SRMR = .07, while direct/indirect model fit indices were $\chi^2(406) = 1738.91$); RMSEA

= 0.077; NFI = 0.94; NNFI = 0.93; CFI = .94; SRMR = 0.10. Statistics of both models fit the data when examined using SEM (Casper et al., 2007; Chairat et al., 2009). However, the study rejected the mediation model (χ^2 = 2362.32, CFI = 0.97, RMSEA = 0.057) because the structural model (χ^2 = 2197.45, CFI = 0.98, RMSEA = 0.054) fit better. In line with Chairat et al.'s (2009) study Scanlan and colleague (2009) claimed that all the factors are equally important in examining commitment of player.

To avoid confusion of sport practitioners, Scanlan et al. (2003) renamed two sources of commitment in SCM which were involvement opportunities and involvement alternatives/other priorities. Involvement opportunities was changed to valuable opportunities and involvement alternatives/other priorities was renamed to other priorities (Scanlan et al., 2003).

Social Support as one of the factors in Sport Commitment Model. Social support is defined as the support and encouragement given to the players so that they could continue involve in sport activity (Scanlan et al., 2003). In conducting sport commitment research with rugby players in New Zealand using mixed-method, Scanlan and colleagues (2003) found that social support was highly rated as one of the factors that players committed in the sport. There are 3 types of supports, which are emotional, informational and instrumental (Scanlan et al., 2016). The source of emotional support comes from family and friends or someone who is significantly important. Informational support refers to advices and suggestions to problem arose from the sport players and instrumental supports are the aids given to players such as money and resources.

Desire to excel as one of the factors in Sport Commitment Model. Through mixed-method study, four new candidates emerged to be added into SCM (Scanlan, Russell, Scanlan, Klunchoo, & Chow, 2013). The four new candidates were desire to excel,

worthy of team membership, elite team membership and team tradition (Scanlan et al., 2013). However, only the factor 'desire to excel' was accepted to be added in the model as the rest of the three candidates were not applicable to individual sports (Scanlan et al., 2016). There were two subcategories for desire to excel which were mastery achievement and social achievement (Scanlan et al., 2016). Mastery achievement referred to one's ability to improve, striving to be perfect and pursue goals, while social achievement referred to "*winning and establishing superiority, and to outperform opponents*" (Scanlan et al., 2013).

Types of Commitment. The original SCM explained commitment as "psychological construct representing the desire and resolve to continue sport participants" (Scanlan, et al., 1993a). The initial commitment was an uni-dimensional construct. Influenced by ideas of Brickman (1987), Wilson and colleagues (2004) distinguished commitment into two subcategories, which were functional and obligatory commitment. Functional commitment was self-willingness to participate in sport because they "want to", on the other hand, obligatory commitment referred to sense of feeling trapped in the activity because they feel they "have to" continue the activity (Wilson et al., 2004). Studies found that the higher the level of functional commitment will result in higher rate of participation (Wilson et al., 2004)

SCM has adapted these two dimensions of commitment in refining tool (Sport Commitment Questionnaire-2) to examine sport player's sport commitment. In SCM, there are two types of commitments which are enthusiastic commitment and constrained commitment. Enthusiastic commitment, in line with functional commitment, referred to one's willingness to participate in sports through overcoming all the obstacles (Scanlan, et al, 1993a). Constrained commitment was when one felt forced, trapped, obligated and compelled in participating in an activity (Wilson et al., 2004; Young & Medic,

2011). In other words, enthusiastic commitment indicated that player "want to" continue in sport. On the other hand, constrained commitment meant that the players felt they "have to" continue the sport.

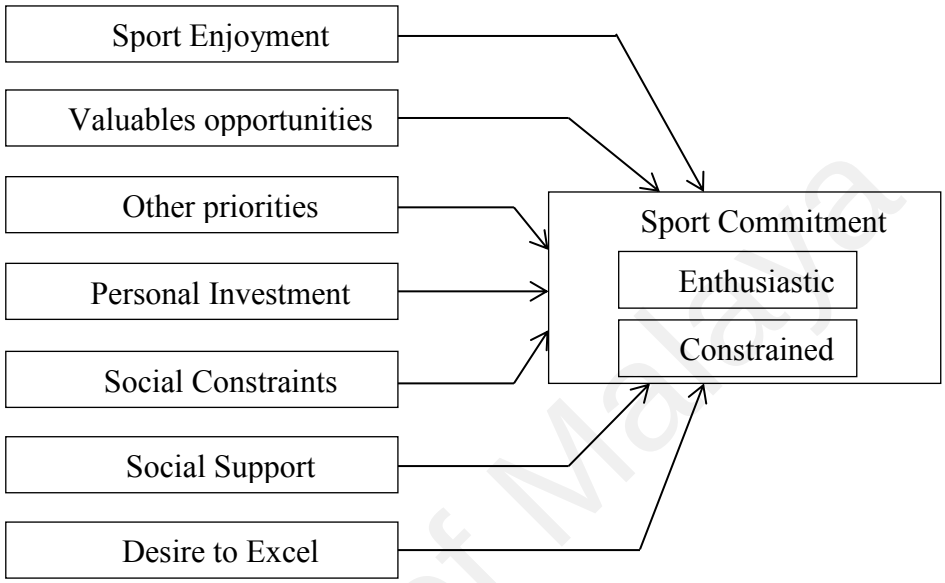

Figure 2.3: Sport Commitment Model (Scanlan et al., 2016)

The following section will briefly discuss related theories governing sport commitment. Firstly, an overview of the Social Exchange Theory (Thibaut & Kelley, 1959) relating to the present research is presented. This will be followed by a review of related literature on the constructs in the Social Exchange Theory which encompasses the relationship between rewards and outcomes. Secondly, a review of literature of the Investment model (Rusbult, 1980) will be address. Next, the Model of Interpersonal relationship (Kelley, 1983) emphasizing the relationship between love and commitment will be discuss in accordance to the purpose of this study.

2.2 Related Theories on Sport Commitment

2.2.1 Social Exchange Theory

Social Exchange Theory (Thibaut & Kelley, 1959) explained that relationships between individuals were patterned based on cost-benefit analysis and comparison of alternatives. The three main ideas in Social Exchange Theory are outcomes, comparison level (CL), and comparison level of alternatives (CLalt). The definition for outcomes is the rewards and costs that a person experiences from participating in an activity. If the rewards are greater than the costs, it will result in greater outcomes. In sport context, examples of rewards are money, properties, trophies, achieving goals, feelings of competence and mastery, admiration and esteem of others (Smith, 1986). Whereas, examples of costs are time and effort, feeling of failure or disapproval of others, negative emotions such as anxiety and depression, disappointment, feeling helpless or lack of control or unable to engage in activities and relationship, and time away from family (Smith, 1986).

To identify one's will to stay in an activity, outcomes are compared to two standards which are comparison level (CL) and comparison level for alternatives (CLalt). First, outcomes are compares to CL. CL serves as neutral point on a scale from goodness to badness. If the outcomes exceed CL, it indicates that one is satisfied with the chosen activity and will possibly stay in it. If one is not satisfy with the chosen activity it means that outcomes drop below CL, and one will probably leave the activity. Second, outcomes are compare to level for alternatives (CLalt). By definition, CLalt means the lowest level of outcomes that a person is willing to accept without leaving the current activity for another alternative. This comparison explains why individual will still remain in the chosen activity even though outcomes drop below CL. For example, when CLalt is belows CL but above CLalt, individual will stay in the chosen activity.

On the other hand, if CLalt exceeds outcomes, individual will choose to leave the chosen activity (Schmidt & Stein, 1991).

In sport context, Smith (1986) used Social Exchange theory to explain the commitment of athletes by looking at burnout and dropout of athletes in sport. For instance, low level of enjoyment might diminish the commitment of athlete below CL, thus, encourage athlete to turnover.

Social exchange theory has given a picture of individual participation in an activity based on the relationship of outcomes, comparison level and comparison level of alternatives. Hence, this model serves as an important foundation concept in developing SCM. However, it could not explain why individual still remain in the activity even though there is no longer enjoyment element in the chosen activity (Schmidt & Stein, 1991). To overcome this limitation, Scanlan et al. (1993a) integrate another theory in their study to develop SCM, which was Investment model by Rusbult (1980) and Model of Interpersonal Relationship by Kelley (1983).

2.2.2 Social Exchange Theory

As Social Exchange Theory continues to evolve over years, another set of model was used to explain social interaction between humans. The investment model was found in 1980 by Rusbult which initially used to describe satisfaction and commitment in a relationship. Investment model argued that commitment was the result of rewards minus costs, plus alternatives and investments. The mathematical model of investment model is presented below:

Commitment = rewards – costs + alternatives + investment

Rusbult (1980) explained that the investments were the resources that one has put in a relationship. If the respective relationship ends, one will lose everything that has been invested in the relationship (Rusbult, 1980). Examples of investments are money and time. Investment model has contributed an important idea by filling up the missing component in Social Exchange Theory. In other words, high investments might be the reason explaining why individuals still remain in an activity when outcomes drop below comparison level for alternatives (Schmidt & Stein, 1991). Rusbult (1983) study on collegiate couples found that couples who remained in relationship have resulted in increasing rewards and satisfaction, declining alternatives and increasing investment.

2.2.3 Model of Interpersonal relationship

Another theory that used to explain commitment is the Model of Interpersonal Relationship or Model of Love and Commitment in close relationship which was developed Kelley (1983). Kelley (1983) defined commitment as the level of stabilities in couples whereby this stability is influenced by stable factors, positive and negative factor. Whereas, love is governed by stable factors, unstable and positive components. This model suggests that commitment is influenced by either positive pulls or non-positive pushes (Schmidt & Stein, 1991). The positive pulls and non-positive pushes are categorize into two components which are stable and unstable. The important elements in this model are commitment and love. The model explained that love could be substitutional options for satisfaction and enjoyment in order to convincing individual to be committed in a relationship. Kelley (1983) argued that commitment came along with love, but there were exceptional case where love can be without commitment or commitment can be without love.

In sport context, this model gives an idea that why sportsmen and women still remaining in sport even though they no longer enjoy or the love to the sport. The

commitment to sport might be governed by other factors. Therefore, Scanlan et al. (1993a) has listed five factors that could possibly influence sportsmen and women's commitment in developing the SCM. Kelley's model of love and commitment is presented in the figure 2.4.

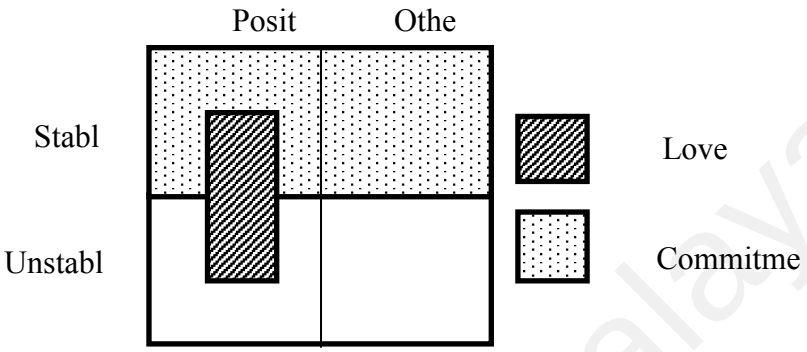

Figure 2.4: Kelley's model of love and commitment

These three theories (i.e.: Social Exchange Theory, The Investment Model and Kelly's model Of Love and Commitment) had provided a foundation in developing SCM. The following section will discuss on the studies and findings of sport commitent based on SCM across different regions, communities and sports.

2.3 Commitment in Sports

The following section will briefly discuss related findings on sport commitment. Studies from 1993 to 2017 will be discussed in detail.

2.3.1 Factors influence sports commitment

Carpenter et al. (1993) examined the commitment of 875 male and 467 female athletes from various sports (football, soccer and volleyball) in USA. This study concluded that sport enjoyment was the strongest predictor of sport commitment. Similar result was reported in the subsequent study by Carpenter and Scanlan (1998) on

103 US soccer players (both genders) reported that sport enjoyment was the main predictor of sport commitment. The study also reported that athletes believed that they will gain more from sports if they increase their commitment in sport. Thus, it was believed that athletes' commitment has significant relationship with involvement opportunities as one of the factors that influence athletes' commitment. In the same year, Taylor (1998) conducted a study on 52 males and 28 females triathletes' commitment using SCM. The study reported that sport enjoyment and personal investment were the main predictors of sport commitment among triathletes. The study had reported that there was no relationship between social constraints and sport commitment.

With the same area of interest, a study conducted by Weiss, Kimmel and Smith (2001) utilized SCM to examine sport commitment of 198 junior tennis players had reported sport enjoyment was the main reason why players remain actively in sports. One year later, Alexandris, Zahariadis, Tsorbatzoudis, and Grouios (2002) conducted a study in Greece on 210 members of three health clubs reported that involvement opportunities was the strongest predictor of sport commitment followed by personal investment and enjoyment. The result reported from Alexandris et al. (2002) study showed that there was another predictor to sport commitment besides sport enjoyment.

In a qualitative study conducted by Scanlan and colleagues (2003) on New Zealand rugby players reported that sport enjoyment and valuable opportunities were the two important factors predicting sport commitment. However, they found that personal investment was also highly related to sport commitment. This study had supported the findings of the previous study (Scanlan et al., 1993) that the greater resources that athletes invested, the greater the commitment will be shown by the athletes. Furthermore, this study had reported that social constraint did not predict sport

commitment. This study was an important study whereby it had provided important information for the expansion of SCM (Scanlan et al., 2003) where they found that social support was an important factor predicting sport commitment.

In a study on 124 female gymnasts in USA, Weiss and Weiss (2003) grouped the gymnasts into three categories i.e., Attracted gymnasts, Entrapped gymnast and Vulnerable gymnasts. The study reported Attracted gymnasts perceived greater enjoyment and commitment compare to the other groups of gymnasts. The study also reported that sport enjoyment was the main factor influencing the commitment level of the female gymnasts. The result was consistent with the previous studies where it reported that sport enjoyment was ranked top factor contributing to sport commitment. This study also reported that 90% of the young gymnasts were "attracted-based" gymnasts, which meant that most of them were willing to participate in this sport. The findings also suggested that gymnasts continued participating in their respective sports due to supportive coaches. This was in line with another study done by Scanlan and colleagues (2003) on 15 male rugby players in New Zealand which suggested that social support from family members and teammates has contributed to players' commitment. The study reported that rugby players' commitment were not influence by social constraint.

With a different sample, Scanlan et al. (2003) had utilized SCM to examine factors that predict sport commitment among 12 New Zealand netball players. The study has reported that sport enjoyment as the main predictor of sport commitment. Consistent with their previous study on rugby players, other priorities and social constraints were not associated with sport commitment.

In examining commitment among 117 gymnasts, Weiss and Weiss (2006) reported that 86% of gymnasts still continued their sport. The study reported that committed

female gymnasts got more support from parents and coaches. In the following year, commitment of different age groups of 304 female gymnasts which consisted of age group of 8 to 11, 11 to 14.5, and age group of 14.5 to 18 years were examined. Weiss and Weiss (2006) found gymnasts' commitment was governed by different factors at different competitive levels. For examples, personal investments, perceived costs, coach social support, and social constraints by coach, best friend, and teammates were predictors of commitment for level 5 to 6 gymnasts. In contrast, personal investments and teammate social constraints were predictors of sport commitment among gymnasts level 8 to 10 gymnasts.

With the same area of interest to find whether social support influence one's commitment in sport, Young and Medic (2011) had examined the relationship between sources of social influences and sport commitment. The samples consisted of 220 males and 224 female swimmers. This study had reported that social constraints from spouse predicted swimmers obligatory commitment. Meanwhile, enjoyment, personal investments, social constraints from own children, and investment alternatives determined athletes' functional commitment.

In another study, Scanlan et al. (2013) reported that New Zealand rugby and netball players' commitment were related to how much an athlete wants to be excelling in their respective sports. The study reported that players tend to put more effort in order to win the game.

A similar study investigating the relationship of social support on commitment was conducted by Santi, Bruton, Pietrantoni and Mellalieu (2014) on 523 Itallian swimmers. Their study concluded that support from coach will increase athletes' enthusiastic commitment. The study also reported that pressure from coaches and teammates will

increase swimmers constrained commitment and therefore led swimmers less enjoy during the swimming activity.

In the same year, Weiss and Neibert (2014) had examined sport commitment among 99 athletes aged 19 to 24 years old who trained under athletics training program. This study has made comparison of sport commitment of the same group of students from the time they were still studying until they were graduated. The result of the study reported that increase of sport enjoyment and personal investment will relatively increase sport commitment. However the result reported that students who were graduating showed lower commitment and enjoyment compared to the students who were not yet graduated.

A study conducted in Philippines by Iñigo et al. (2015) on 10 athletes who returned to their respective sport after severe injuries showed that sport enjoyment, valuable opportunities, personal investments, social constraints, and social support were the main predictors of commitment. The study also found additional factors governed commitment in sport which were wanted to be the best, self-affirmation, and contractual obligations.

Frayeh and Lewis (2017) conducted a study on adult recreational soccer players on their commitment in sport. The study recruited 156 females and 196 males with the average age of 29.5 years old found that enjoyment and investments were highly correlated with sport commitment.

In general, sport enjoyment consistently emerged as the most important predictor to predict sport commitment. The following section will specifically discuss sport commitment based on gender.

2.3.2 Sport Commitment based on Gender

Scanlan et al. (1993b) had utilized SCM to examined 875 males and 467 females young athletes' commitment. The result of the study revealed that sport enjoyment was ranked the top of among all the predictors that contributes to sport commitment (Scanlan et al., 1993b). The result also reported that there was no significant in sport commitment across gender.

Casper and Stellino (2008) conducted a study on 292 females and 247 males recreational adult tennis players. The result reported that there was no significant difference in commitment by gender. However, the study reported that females had higher score for sport enjoyment and personal investment compared to males, while males reported have higher social support than females.

In the following year, Jess (2009) conducted a study on 302 college-university students in Canada had reported that sport enjoyment was the main predictor for them to stay actively in sports. The study also reported that there was no significant difference in sport commitment across gender. The result shared the same conclusion with Caper and Stellino (2008) and Scanlan et al. (1993b) studies where it shows that male and females has the same level of sport commitment.

Scanlan and her colleagues (2009) in examining netball female players' commitment had reported that sport enjoyment was the main predictor for female players' commitment. Interestingly, female participants in this study claimed social constraints had influence on their commitment towards sports. The result of the study is contradicted to results of studies conducted by Scanlan et al. (1993a), Carperter and Scanlan (1993) and Scanlan et al. (2003) because these studies reported that social constraints does not show significant impact on players' commitment in sport.

In a later study conducted among 235 male and 272 female swimmers to examine commitment, it was reported that factors of commitment can vary by gender (Wigglesworth et al., 2012). The study examined the two dimensions of the commitment, which are obligatory commitment and functional commitment. The findings suggested that males had higher obligatory commitment compared to females. For example, male swimmers had greater involvement alternatives and social constraints than female swimmers which could later draw them out from participating in swimming activities. Females reported personal investment contributes to commitment. In general, social constraints, involvement opportunities, and involvement alternatives explained obligatory commitment levels for both genders. This study reconfirmed enjoyment served as predictor of both male and female commitment.

In examining men's rugby players' commitment, Scanlan and colleagues (2013) reported that the desire to excel in sport is highly related to commitment. Rugby players had claimed that they were very committed in training just to improve their skills and win the games. The study also reported that female netball players also wanted to excel in their sports by setting their goals. Through setting goals, female volleyball players were able to keep themselves committed and more determined in their sport. Therefore, this study suggests that male and females' sport commitment were associated to the level of anxiety to excel in their sports respectively.

From all the studies mentioned in this section, I can draw conclusion that there were several factors that predict sport commitment across genders. In another word, predictor of sport commitment between genders was not conclusive.

2.3.3 Sport Commitment based on Age Groups

Scanlan and colleagues (1993b) used SCM in examining 1342 soccer, football and volleyball athletes' commitment aged 10 – 19 years. The result of the study concluded that sport enjoyment was the main predictor of sport commitment. The study also reported that there were no significant differences in commitment across age groups.

A study by Weiss and Weiss (2007) utilizing SCM examined the commitment of different age groups of total 304 female gymnasts which consisted of 8 to 11, 11 to 14.5, and 14.5 to 18 years reported that perceived costs and social constrained from parents and best friends were the main predictor to sport commitment of younger gymnasts while perceived competence and costs determined sport commitment were for the older gymnasts.

Casper, Gray and Stellino (2007) used SCM to conduct a study on adult tennis players' participation frequency and purchase intention. The study reported that personal investment, enjoyment, involvement opportunities and social support were the predictors of sport commitment among adult tennis players. The study also reported that tennis players' commitment was highly correlated with participation frequency and purchase intention. In the following year, Casper and Stellino (2008) conducted a study on 534 recreational adult tennis players. The result reported that older tennis players were more committed in their sport as compared to the younger players. In addition to that, younger players age 19 to 44 had higher involvement alternatives because they had other choices for their leisure time as compared to older players. Besides that, the study also reported younger tennis players had higher social constraints as compared to the older age groups.

In a study conducted by Young and Medic (2011) that examined sport commitment of 220 males and 224 females master swimmers had reported that older swimmers often get more support than the younger swimmers (i.e., physicians and therapist). The support given to the older swimmers resulted in higher commitment.

In another study, Weiss (2014) had reported that there was significant difference in athletes' commitment based on age groups when he conducted a study on 99 athletes' commitment aged 18 to 24 years old students. Weiss (2014) reported that the level of athletes' commitment may change as athletes got older. For example, graduate students had shown lower level of commitment toward sports as compare to fresh students because they no longer enjoy themselves in sports.

Weiss (2015) further examined competitive-level differences in relationship with sport commitment. Sport commitment of 284 high school and 207 college-level male and female athletes who were competing in several sports had been studied. The study concluded that collegiate athletes had higher perceptions of investments, costs, involvement opportunities, perceived competence, social support, and performance-motivational climate than high school athletes. However, social constraints and mastery-motivational climate were the determinants of commitment for high school athletes. The findings also reported that sport enjoyment and investment were the main sources of commitment in different competitive-level athletes.

Studies (Casper, Gray & Stellino, 2007; Weiss, 2015; Weiss & Weiss, 2007; Young & Medic, 2011) on sport commitment across age groups were not inclusive as the predictors of sport commitment varied across the age groups. Furthermore, the sport commitment were also inclusive in these studies for different age groups, for instance Casper and Stellino (2008) reported older players were more committed in participating

in sport while Weiss and Neibert (2014) reported that younger players were more committed in their sports.

2.3.4 Commitment in Racquet Sports

Weiss, et al. (2001) used SCM to examine sport commitment on 198 junior tennis players. The result revealed that sport enjoyment was the main reason why the junior tennis players were committed in tennis. The study had suggested that sport enjoyment should be the mediating variable of sport commitment because others factors such as investment and social support were strongly related. The study suggested an indirect model of sport commitment which the model was used in the studies conducted by Casper et al. (2007), and Chairat et al. (2009). However, their studies (Casper et al., 2007 & Chairat et al., 2009) reported that the original study was a better fit than the indirect model.

Casper et al. (2007) conducted a study on 537 tennis players in USA and reported that sport enjoyment and personal investment were the main predictor of sport commitment among adult tennis players. Other factors such as involvement opportunities and social support also had significant relationship to commitment. The study also revealed that involvement alternatives and social constraints did not have any significant relation with sport commitment.

Subsequently, Casper and Stellino (2008) conducted a study on recreational tennis player to examine sport commitment across age, sex, income, and skill level in USA. The result supported previous findings (Scanlan et al., 1993b; Carpenter & Scanlan, 1998; Weiss & Weiss, 2003) where enjoyment is the number one predictor of commitment. The study reported that there were significant differences in involvement alternatives, and social constraints across different ages. While commitment based on

gender differs by enjoyment, personal investments, and social support. Finally, Casper and Stellino (2008) also found no significant difference in sport commitment among various populations across demographics.

2.4 Summary

This chapter presents a review of the related literature that supports the formulation of this study. First, it discussed the conceptual framework used in this study. As Sport Commitment Model continues to evolve through time, it is able to better explain players' commitment through different dimensions. This is because there are other related factors that were added to the original model.

Secondly, the literature review discussed related studies on the commitment of players in various sports. Majority of these studies reported that sport enjoyment was the main factor governs players' commitment, despite a few studies (Alexandris et al., 2002 Santi et al, 2014; Weiss & Neibert, 2014; Young & Medic, 2011) reported other factors such as involvement opportunities and personal investment as the main factor influencing one's commitment in sport.

The literature review also reported there were significant differences in commitment across gender. Most of the studies reported that male are committed in sport because they enjoyed it while social support became the main factor that kept female players remained committed in their sports. Lastly, majority of the studies reported that sport enjoyment served as predictor of commitment across different age groups. The following chapter describes the methodology used in this study.

CHAPTER III: METHODOLOGY

Introduction

First, this chapter describes the design and methodology that will be used in conducting this study. Second, sampling procedures and subjects, instrumentations, pilot study, administration of the questionnaires and data analysis were discussed.

3.1 Research Design

This quantitative study uses survey. The instrument for this study will be discussed later in this chapter. The rationale for choosing survey over other research design is because this method is able to access players' commitment at a larger scale across diverse and large population across Malaysia.

3.2 Sampling procedures and subjects

In Malaysia, there is no data to show the exact number of athletes playing racquet sports (i.e., badminton, table tennis, tennis and squash). The proposed number of participants in this study according to G-power software is 604, which is 151 participants for each sport. Moreover, the number of participants is also in line with past global studies that use SCM ranging from 103 to 507.

Inclusion criteria. The participants must be Malaysians who play racquet sports (badminton, squash, table tennis and tennis) regardless whether one is an athlete or recreational player. The participants must play the sport at least one year of playing experience at any levels. In addition, participants must currently be playing the sport once in a week. Participants that were recruited in this study were between 11 years old and 65 years old. There was no gender or race preference in this study.

3.3 Recruitment Procedure

The data collection started after ethics approval from UM Ethics Board (UM. TCN2/RCH&E/UMREC-14) was obtained. In recruiting enough number of participants to participate in this study, the first step was to write in to the sport organizations or sport bodies to get permission to conduct this study on their members, and players.

This study was a survey, thus, questionnaires were distributed to the racquet sports players during the data collection period. Upon granted permission from managers or administration bodies of sport complexes, sports clubs, schools, colleges and universities, Sport Commitment Questionnaire-2 (SCQ-2) were distributed to the participants from June 2017 until November 2017. The questionnaire is in English. Thus, participants would need to answer the questionnaire in English.

A total of 11 research assistances were assigned to distribute SCQ-2 in Malaysia. Research assistances were briefed on the procedure of data collection, i.e., objectives of the study, to ensure each participant to sign the consent form and token of appreciation were given to participants upon completion of SCQ-2. Participants were given 20 to 25 minutes to answer all the items in SCQ-2. The participation of this study was voluntarily. Therefore, participants were allowed to withdraw themselves at any time if they felt they do not want to participate in the study. Questionnaires were then collected for the analysis purposes. Table 3.1 showed the timeframe of the data collection.

Table 3.1: Timeframe of data collection

Month	States / Sport Events	Remark
June	Sarawak, Sabah	-
July	Pahang, Johor, Perak, Perlis, Melaka, Negeri Sembilan	Universities' holiday
August	All states	-
September	Selangor, KL, Penang, Kelantan, Terrenganu, Johor	-
October	Penang, Kelantan	-
November	All states	MASUM

3.4 Instrument

For the purpose of gathering data in this study, SCQ-2 was administered to the racquet sports players. The questionnaire for this study consists of two parts; demographic questions and Sport Commitment Questionnaire-2.

Demographic questionnaire consists of 12 questions. This part serves an important purpose i.e., to understand the characteristics of the participants (i.e., years of playing the sport, time spent in playing the sport).

SCQ-2 consists of 58 questions which utilises the Likert scale ranging from 1 = strongly disagree, to 5 = strongly agree. There are 9 core subscales used to investigate players' commitment which are enthusiastic commitment, constrained commitment, sport enjoyment, other priorities, personal investments, social constraints, valuable opportunities, social support and desire to excel. The SCQ-2 [$\chi^2(1530)=3327.33$,

p<0.001, NNFI=0.89, CFI=0.90, SRMR= 0.04, RMSEA= 0.04] showed good validity and reliability in the sports setting (Scanlan et al., 2016).

Sport Commitment (Enthusiastic commitment). Enthusiastic commitment is defined as functional component of commitment (Brickman, 1987). It is the intention to continue playing in racquet sports because they "want to". This item is measured by 6 questions.

Sport Commitment (Constrained commitment). Constrained commitment is defined as obligatory component of commitment (Brickman, 1987). Players continue playing in racquet sports because they fell that they "have to". This item is measured by 5 questions. For example, staying in this sport is more of a necessity than a desire.

Sport enjoyment. Enjoyment comes along with the feelings of enjoy, happy, fun and like to involve in sport activities. This item will be measured by 5 questions such as playing this sport is fun, like playing this sport and I love to play this sport.

Other priorities. The attractiveness of the most preferred alternative(s) to continued participation in the current endeavour (Scanlan et al., 1993a) will be investigated using 5 questions such as other things in my life make it difficult to play this sport and I am being pulled away from this sport by other things in my life.

Personal investment. The investment refers to resources that put into coaching which cannot be recovered if the activity is discontinued (Scanlan et al., 1993a). Scanlan et al. (2016) listed 9 questions to examine the 2 dimension of personal investment where the first one examine the amount of resources that one has put into the sport. The second subscale of personal investment examined the difficulties level of the player to leave their current sport. The example of the questions are, I have spent a lot of time in this sport, the mental effort I have put into this sport makes it difficult to stop

playing and the physical effort I have put into this sport makes it difficult to stop playing.

Social constraints. Social expectations or norms which create feelings of obligation to remain in the activity (Scanlan et al., 1993a) will be tested using 4 questions such as people would be disappointed if I didn't keep playing this sport.

Valuable opportunities. Valuable opportunities is defined as values opportunities that are present only through continued involvement (Scanlan et al., 1993a) is investigate using 4 questions. For example, there are future events in this sport that I would really miss experiencing if I no longer played.

Social support. There are 3 subscales of social support used to examine the importance of social support in predicting sport commitment, which are emotional, instrumental and informational support. The support and encouragement the player perceives from significant others enable them to continue participating in sport (Scanlan et al., 2003). There were 10 questions used to examine social support. These includes, I have a mentor who provides guidance in this sport, and people who are important to me attend the majority of my competitions in this sport.

Desire to excel. It is defined as wanting or striving to achieve excellence through Mastery and Social Achievement behaviours (Scanlan et al., 2013). This item will be tested using 11 questions such as I try to dominate in this sport, I challenge myself to continue improving, and I constantly try to learn from my mistakes in this sport.

3.5 Pilot study

A pilot study was administered to ensure the suitability of the instrument used among racquet sports players in Malaysia. The SCQ-2 was administrated to racquet sports players (i.e., badminton, table tennis, tennis and squash). Another reason to conduct the pilot study is to identify issues that might arise during data collection process. Along the process, the researcher had observed the way how participants answered the questions and clarify items that were not clear to them. There were 50 questionnaires collected during the pilot test. The result for Cronbach alpha is shown in table 3.2.

Table 3.2: Cronbach alpha of all the factors in Sport Commitment Model based (N = 50) during pilot study

Factor	No of item	Cronbach alpha
Enthusiastic Commitment	6	0.89
Constrained Commitment	5	0.86
Sport Enjoyment	5	0.85
Valuable opportunities	4	0.87
Other Priorities	5	0.88
Personal Investments	9	0.92
Social Constraints	4	0.90
Social Support	9	0.94
Desire to Excel	11	0.93

3.6 Data Analysis

This study aims to find out the factors influencing commitment of racquet sports athletes in Malaysia. SPSS version 23.0 was used to perform data analysis in this study. Descriptive statistics, independent sample t-test and one-way ANOVA were computed to address all research questions.

3.7 Summary

Chapter Three outlines the research methodology used in this study. The criteria of the participants and procedures of recruitment were also discussed. Next, a pilot study was conducted prior to the actual study to determine the suitability of the questionnaire for local population and also to iron out any possible data collection issues. Lastly, data analyses were carried out to answer all the research questions.

CHAPTER IV: RESULTS

Introduction

This chapter presents the research findings which are divided into three sections. The first section presents the psychometric properties and descriptive statistics of the measurements to gain a general understanding of the data. The second section will discuss the results addressing the main research questions as propose in this study. The final section of the chapter summarized the findings of the study.

4.1 Demographic Characteristics of Participants

There are 612 participants from the sports of badminton, tennis, squash and table tennis participate in the study. Table 4.1 shows the demographic characteristics of the participants which include gender, age, ethnicity, age, state, sport, year of playing, highest level representing, and playing / training session per week.

Table 4.1: Demographic Characteristics of Participants by Frequency and Percentage (N = 612)

Variables	N	%
Gender	612	100
Male	367	60
Female	245	40
Ethnicity		
Malay	209	34.2
Chinese	267	43.6
Indian	34	5.6
Others	102	16.7
Location		
Peninsular Malaysia	330	53.9
East Malaysia	242	39.5
Wilayah Persekutuan	40	6.5
Sports		
Badminton	155	25.3
Table Tennis	152	24.8
Tennis	153	25
Squash	152	24.8
Age group (years)		
11 – 20	157	25.7
21 – 30	212	34.6
31 – 40	106	17.3
>40	137	22.4
Playing / training session per week		
1 day	110	18.0
2 days	154	25.2
3 days	183	29.9
4 days	88	14.4
5 days	55	9.0
6 days	16	2.6
7 days	6	1.0

There are a total of 612 participants comprising 367 (60%) male and 245 (40%) female. There are slightly more male than female participating in the survey. Whereas, the sports categories showed that 155 (25.3%) of the respondents were badminton players and 152 (24.8%) were table tennis players. The tennis players were accounted for 153 (25%) respondents and squash players comprised of 152 (24.8%) respondents.

4.2 Descriptive Analysis of the Sports Commitment Questionnaire-2 (SCQ-2)

This section presents the results of the seven factors (Sport enjoyment, valuable opportunities, other priorities, personal investments, social constraints, social support and desire to excel) that influence sport commitments and two dimensions of sport commitment (enthusiastic commitment and constrained commitment) in the questionnaire.

Table 4.2: Descriptive Analysis of the Factors in SCQ - 2

Factors	Mean	SD
Factors		
Sport enjoyment	4.54	0.50
Desire to excel	3.69	0.70
Valuable opportunities	3.38	0.79
Personal investment	3.36	0.65
Social support	3.15	0.79
Social constraints	2.92	0.83
Other priorities	2.57	0.95
Sport Commitment		
Enthusiastic Commitment	4.08	0.66
Constrained Commitment	2.20	0.89

For detail analyses of each subscales in SCQ-2, please refer to Appendix A, B, C, D, E, F, G and H.

4.3 Answering research questions

The following section will present the results to answer the research questions.

4.3.1 What are the factors that influence badminton, tennis, table tennis and squash players' commitment in Malaysia?

Table 4.3: Descriptive Analysis of Factors Influencing Racquet Sports Players

Factor	Badminton		Table Tennis		Tennis		Squash	
	Mean	SD	Mean	SD	Mean	SD	Mean	SD
Factors								
Sport enjoyment	4.38	0.51	4.37	0.54	4.79	0.34	4.62	0.47
Desire to excel	3.48	0.67	3.70	0.64	3.62	0.73	3.97	0.68
Valuable opportunities	3.24	0.74	3.48	0.82	3.17	0.68	3.63	0.82
Personal investment	3.17	0.61	3.38	0.69	3.23	0.55	3.63	0.68
Social support	3.07	0.70	3.23	0.81	2.82	0.74	3.47	0.76
Social constraints	2.75	0.72	2.97	0.88	2.64	0.76	3.31	0.79
Other priorities	2.62	0.87	2.81	0.88	2.06	0.83	2.80	1.03
Sport Commitment								
Enthusiastic Commitment	3.74	0.62	3.87	0.70	4.41	0.48	4.31	0.56
Constrained Commitment	2.24	0.71	2.48	0.92	1.79	0.80	2.28	0.96

Scale: 1- Strongly disagree, 3- Neither agree nor disagree, 5- Strongly agree

Table 4.3 shows Sport Enjoyment is the main factor that contribute to sport commitment for badminton ($\mu = 4.38 \pm 0.51$), table tennis ($\mu = 4.37 \pm 0.54$), tennis ($\mu = 4.79 \pm 0.34$) and squash ($\mu = 4.62 \pm 0.47$). On the other hand, other priorities serve as least important factor contribute to sport commitment for badminton ($\mu = 2.62 \pm 0.87$), table tennis ($\mu = 2.81 \pm 0.88$), tennis ($\mu = 2.06 \pm 0.83$) and squash ($\mu = 2.80 \pm 1.03$).

4.3.2 Are there any significant difference in terms of players' commitment across different racquet sports?

Table 4.4: One-Way ANOVA Comparisons of Sport Commitment Between Four Racquet Sports

Commitment	Age groups				F	*p* - value
	Badminton	Table Tennis	Tennis	Squash		
Enthusiastic Commitment	3.74 (0.62)	3.87 (0.70)	4.41 (0.48)	4.31 (0.56)	45.44	0.00
Constrained Commitment	2.24 (0.71)	2.48 (0.92)	1.79 (0.80)	2.28 (0.96)	17.87	0.00

Table 4.5: Post-Hoc Tukey Test of Enthusiastic Commitment and Constrained Commitment across Sports

Commitment	*Difference between groups, p*-value					
	B vs TT	B vs TT	B vs S	TT vs T	TT vs S	T vs S
Enthusiastic Commitment	0.22	0.00	0.00	0.00	0.00	0.54
Constrained Commitment	0.06	0.00	0.98	0.00	0.16	0.00

Note: B=Badminton, TT=Table Tennis, T=Tennis, S=Squash

A one-way ANOVA was conducted to compare the significant difference of sport commitment across four racquet sports. There were significant differences in enthusiastic commitment and constrained commitment across racquet sports. Post hoc comparisons using Tukey HSD test shows that the mean score of badminton Enthusiastic Commitment was significant different than the tennis ($F_{(3,608)}$ = 45.44, p =

0.00, d = -1.21, effect size is large), badminton vs. squash ($F_{(3,608)}$ = 45.44, p = 0.00, d = -1.00, effect size is large), table tennis vs tennis ($F_{(3,608)}$ = 45.44, p = 0.00, d = 0.90, effect size is large) and table tennis vs squash ($F_{(3,608)}$ = 45.44, p = 0.00, d = 0.69, effect size is medium). For Constrained Commitment, results showed that there were significance difference between badminton vs. tennis ($F_{(3,608)}$ = 17.87, p = 0.00, d = 0.59, effect size is medium), table tennis vs. tennis ($F_{(3,608)}$ = 17.87, p = 0.00, d = 0.80, effect size is large), and squash vs. tennis ($F_{(3,608)}$ = 17.87, p = 0.00, d = 0.53, effect size is medium). Since there are significant difference between the above pairings, thus effect size was calculated.

Calculation 1: Comparison between badminton and tennis players' enthusiastic commitment

$$\text{Cohen, } d = \frac{M_1 - M_2}{\sqrt{(SD_1^2 + SD_2^2)/2}}$$

$$= \frac{3.74 - 4.41}{\sqrt{(0.62^2 + 0.48^2)/2}}$$

$$= \frac{-0.67}{0.55}$$

$$= -1.22$$

Therefore, the effect size between badminton and tennis players' enthusiastic commitment is large.

For the rest of the calculation for the effect size, it strictly follows the method shown above. For further detail, please refer to Appendixes. Table 4.5 below shows the effect size of the pairing of racquet sports.

Table 4.6: Effect size between the pairing of racquet sports

Pairing	**Cohen *d***	**Effect size**
Enthusiastic Commitment		
Badminton vs. tennis	1.21	Large
Badminton vs. squash	1.00	Large
Table tennis vs tennis	0.90	Large
Table tennis vs squash	0.69	Medium
Constrained Commitment		
Badminton vs. tennis	0.59	Medium
Table tennis vs. tennis	0.80	Large
Squash vs. tennis	0.53	Medium

4.3.3 Is there any gender difference in Malaysian racquet sports players?

Table 4.7: Independent Sample t-test on Sport Commitment and gender

Variables	Male		Female		t-test			Cohen *d*
	M	***SD***	***M***	***SD***	***t***	**df**	***p***	
Enthusiastic Commitment								
Badminton	3.84	0.62	3.63	0.61	2.18	153	0.03*	0.34
Table Tennis	4.00	0.74	3.65	0.57	3.33	150	0.00*	0.53
Tennis	4.48	0.42	4.27	0.56	2.40	151	0.02*	0.42
Squash	4.36	0.53	4.25	0.59	1.08	150	0.28	-
Constrained Commitment								
Badminton	2.19	0.68	2.30	0.75	-0.95	153	0.34	-
Table Tennis	2.45	0.99	2.55	0.77	-0.68	150	0.50	-
Tennis	1.73	0.79	1.90	0.80	-1.25	151	0.21	-
Squash	2.28	0.97	2.28	0.96	0.04	150	0.97	-

Note:*=$p < 0.05$

The effect size of the sport commitment between genders was also calculated since there were significant differences. Independent samples t-test revealed significance difference in Enthusiastic Commitment for badminton (t = 2.18, p = 0.03, d = 0.34, effect size is small), table tennis (t = 3.33, p = 0.00, d = 0.53, effect size is medium) and tennis (t = 2.40, p = 0.02, d = 0.42, effect size is small) across gender. All male players reported higher Enthusiastic Commitment compared to females players.

4.3.4 Are there any age groups difference in racquet sports players' commitment?

Table 4.8: One-Way ANOVA Results for Differences Based on Age Groups

Commitment	Age groups				F	*p* - value
	11 - 20	21 - 30	31 - 40	>40		
Enthusiastic Commitment	3.94 (0.71)	4.00 (0.71)	4.25 (0.48)	4.24 (0.57)	9.00	0.00
Constrained Commitment	2.52 (0.89)	2.31 (0.89)	1.85 (0.75)	1.94 (0.80)	18.84	0.00

Table 4.9: Post-Hoc Tukey Test of Enthusiastic Commitment and Constrained Commitment between Age groups

Commitment	*Difference between groups, p*-value					
	1 vs 2	1 vs 3	1 vs 4	2 vs 3	2 vs 4	3 vs 4
Enthusiastic Commitment	0.82	0.00	0.00	0.01	0.00	1.00
Constrained Commitment	0.92	0.00	0.00	0.00	0.00	0.86

Note: 1=11-20, 2=21-30, 3=31-40, 4=>40

Table 4.10: Effect size between the pairing of age groups

Pairing	**Cohen *d***	**Effect size**
Enthusiastic Commitment		
11-20 vs. 31-40	0.51	Medium
11-20 vs. >40	0.47	Small
21-30 vs 31-40	0.41	Small
21-30 vs >40	0.37	Small
Constrained Commitment		
11-20 vs. 31-40	0.81	Large
11-20 vs. >40	0.69	Medium
21-30 vs 31-40	0.56	Medium
21-30 vs >40	0.44	small

One-way ANOVA was conducted to compare the significant difference of sport commitment across age groups. The results revealed significant difference in both enthusiastic commitment and constrained commitment. Therefore, Post Hoc comparisons using Tukey HSD test was performed and results shows that enthusiastic commitment were significantly different between age group 11-20 vs. 31-40 (p = 0.00, d = 0.51, effect size is medium), 11-20 vs. >40 (p = 0.00, d =0.47, effect size is small), 21-30 vs 31-40 (p = 0.01, d = 0.41, effect size is small) and 21-30 vs >40 (p = 0.00, d = 0.37, effect size is small). For Constrained Commitment, results showed that there is significance difference between age group 11-20 vs. 31-40 (p = 0.00, d = 0.81, effect size is large), and age group 11-20 vs. >40 (p = 0.00, d = 0.69, effect size is medium), age group 21-30 vs. 31-40 (p = 0.00, d = 0.56, effect size is medium), and age group 21-30 vs. >40 (p = 0.00, d = 0.44, effect size is small).

CHAPTER V: DISCUSSION AND CONCLUSION

Introduction

The purpose of this study was to examine the factors that influence Malaysian racquet sports players' commitment. This study also explored the possible differences in sport commitment across type of sports and gender. In this chapter, the research questions are discussed based on results from Chapter Four and the conclusion drawn. The limitations and implication of this study as well as recommendation for future research are also addressed.

5.1 Discussion

My discussion are based on the order of the research questions. The research questions are as follows:

5.1.1 What are the factors that influence badminton, tennis, table tennis and squash players' commitment in Malaysia?

A total of 155 badminton players, 152 table tennis players, 153 tennis players and 152 squash players completed the SCQ-2 survey for the study. My results revealed that the 'sport enjoyment' (μ = 4.54 ± 0.50) was the main factor (refer to Table 4.2) that influences Malaysian racquet sports players' commitment. Result of this study supports previous studies by Baghurst, Tapps and Judy (2014), Carpenter et al. (1993), Carpenter and Scanlan (1998), Frayeh and Lewis (2017), Iñigo et al. (2015), Scanlan et al. (1993a), Scanlan et al. (2003), Taylor (1998), Weiss and Neibert (2014), Weiss and Weiss (2003), and Weiss et al. (2001) which showed sport enjoyment was indeed the main factor in sport engagement across the globe. Most players enjoy playing sports due to their passion, positive emotions and the love of the sports (Podlog & Eklund, 2006;

Ryan & Deci, 2007). In line with my finding, Jess (2009) previously reported that college students are more willing to participate actively in sports if they feel that sports can bring them element of happiness (e.g. enjoyment and fun).

In my study, all the racquet sports players perceived 'desire to excel' as the second most important factor ($\mu = 3.69 \pm 0.70$) (refer to Table 4.2) of their commitment in their respective sports. The participants are mostly from the age group of 19 – 34 years old whereby the majority of them would are still in local colleges, universities or young adults. Jess (2009) commented that competitive level is greater in this age group of young adults as they could be participating in inter-collegiate or inter varsities games. Hence, it requires the players to be more committed in their training in order to compete at this level. My finding is also in line with Scanlan et al. (2013)'s study which indicated the desire to excel as an important factor contributing to sport commitment.

The 'valuable opportunities' was the third most influential factor (refer to Table 4.3) of commitment among Malaysian badminton and table tennis players. The result supported previous studies (Alexandris et al., 2002; Carpenter & Scanlan, 1998; Casper et al., 2007; Casper & Stellino, 2008; Iñigo et al., 2015) which also reported that 'valuable opportunities' was associated with the level of sport commitment. Opportunities such as scholarships, future career opportunities, travel time, performance recognition, developing friendship through sports and competitive achievement arose as important consideration for players to actively participate in sports (Boyst, 2009; Casper & Stellino, 2008; Scanlan et al., 2003; Scanlan et al., 2009). Therefore, the participants in age group 19 -34 years old which comprised 65% of the participants were mostly students, graduate students or young adults might perceive these opportunities such as scholarship and future career opportunities as an important consideration for their participation in sport. This is in line with Scanlan et al. (2003) study which reported

that valuable opportunities is the most important factor of sport commitment among the collegiate rugby players. Another important element of involvement opportunities is the social relationships which participants want to develop through continue participation in sport. In addition, other studies also reported the importance of developing and maintaining social relationship among the active players which represented another important factor of sport commitment (Baghurst et al., 2014; Iñigo et al., 2015; Scanlan et al., 2009).

Descriptive analysis showed that tennis and squash players perceived 'personal investment' as the third most important factor that influence their commitment in their respective sports (refer to Table 4.3). One explanation to this is because younger age groups players would have greater personal investment because they need to compete more during intercollege or inter-universities' meet. Thus, they need to spend more time, energy, effort, resources i.e. money to buy racquets and attire at this level (Boyst, 2009). Besides, regular or frequent players will tend to spend more money on buying respective sports related items, spend money to travel and to buy up-to-date equipment (Jeon & Ridiger, 2009). My result is in line with Casper et al.'s (2007) study where they also reported that 'personal investment' was the main factor influence sport commitment among 537 American adult tennis players. However, the result of this study is different from Baghurst et al. (2014) study. Baghurst et al. (2014) reported low personal investment among collegiate players because players do not have to pay any fee to play sports. Therefore, playing sport for certain groups are relatively cheap. This is probably true for participants from lower income group. For example, some of the sports facilities in Malaysia are free of charge such as sports facilities in schools and universities, outdoor badminton court and rooms for table tennis. Thus, it is an interesting area to be explored if personal investment will emerge in top three predictor of sport commitment in other sports in future studies.

In addition, social support is moderately an influential factor to sport commitment (refer to Table 4.3) in all the racquet sports. My results is similar to previous studies (Garn, 2016; Weiss et al., 2001; Weiss et al., 2010) that revealed social support was not a major factor of sport commitment. In contrast, other studies such as study conducted by Baghurst et al., (2014), Scanlan et al. (2003), Weiss and Weiss (2006), Weiss and Weiss (2007) and Boyst (2009) have found that social support was an important factor that contributed to sport commitment. Hence, the importance of social support is inconclusive and this might be due to the different samples characteristics for example different nationality, culture, different age groups, gender and type of sports.

On the other hand, 'other priorities' was the least influential factor of sport commitment among racquet sports players in Malaysia. This means that other priorities have little to no effect on racquet sport players commitment in Malaysia. The result is similar with a few other studies (Casper et al., 2007; Scanlan et al., 1993; Iñigo et al., 2015; Weiss & Weiss, 2005) which found that other priorities was not an important factor of sport commitment. One possible reason is that the players were adults who could make well calculated decision for themselves whether to be involved in sports or other activities (Casper et al., 2007). Similar to other studies (Baghurst et al., 2014; Boyst, 2009; Carpenter & Scalan,1998; Casper et al., 2007; Casper & Stellino, 2008; Scanlan et al., 1993a), the results of my study found social constraints as another less important factor to commitment. An explanation for might be due to Malaysian society are mostly more exam-oriented where parents are likely more focus on the academia successes of their children rather than in sports (Nurul, Hazlina, Low, & Zariyawati, 2011; Ong, 2010). Therefore there were less pressure on the players from significant others such as parents, and coaches (Baghurst et al., 2014; Boyst, 2009; Carpenter and Scanlan, 1998).

5.1.2 Are there any significant difference in terms of players' commitment across different racquets sports?

ANOVA result has revealed that there were significant differences in both enthusiastic commitment [$F_{(3,608)}$ = 45.44, p = 0.00] and constrained commitment [$F_{(3,608)}$ = 17.87, p = 0.00] across racquet sports (Table 4.4). Therefore, post hoc test was performed to specify the significant pairing. Post Hoc test for enthusiastic commitment revealed that there were significant difference between badminton and tennis ($F_{(3,608)}$ = 45.44, p = 0.00, d = -1.21, effect size is large), and badminton vs. squash ($F_{(3,608)}$ = 45.44, p = 0.00, d = -1.00, effect size is large). For Constrained Commitment, results showed that there were significance difference between badminton vs. tennis ($F_{(3,608)}$ = 17.87, p = 0.00, d = 0.59, effect size is medium), table tennis vs. tennis ($F_{(3,608)}$ = 17.87, p = 0.00, d = 0.80, effect size is large), and squash vs. tennis ($F_{(3,608)}$ = 17.87, p = 0.00, d = 0.53, effect size is medium).

Tennis players had the highest Enthusiastic commitment (μ = 4.41 ± 0.48) and lowest constrained commitment (μ = 1.79 ± 0.80) among four racquet sports (refer to Table 4.3). Casper and Stellino (2008) reported that sport enjoyment was the top reason influencing tennis players' commitment. Due to the nature of enjoyment of the sport, tennis players did not feel pressure to engage in tennis (Casper & Stellino, 2008).

Badminton players have relatively lowest enthusiastic commitment (μ = 3.74 ± 0.62) compared to other racquet sports (Table 4.3). This finding was unexpected because in general badminton is the most popular sport in Malaysia beside football. According to Scanlan et al. (2013), one of the factors that contribute to enthusiastic commitment is 'desire to excel'. With the majority of the badminton players in this study were recreational players who might perceived playing badminton as an activity to keep them living in a healthy lifestyle rather than excel in this sport could be an explanation to why

badminton players had low Enthusiastic Commitment. For information, badminton players in this study scored the lowest in 'desire to excel' ($\mu = 3.74 \pm 0.67$) compared to other racquets sports (Table 4.3).

5.1.3 Is there any gender difference in Malaysian racquet sports players?

Independent samples t-test revealed significance difference in Enthusiastic Commitment. As shown in Table 4.6, The effect size of the sport commitment between genders was also calculated since there were significant differences. The effect size of the sport commitment between genders was also calculated since there were significant differences. Independent samples t-test revealed significance difference in Enthusiastic Commitment for badminton ($t = 2.18$, $p = 0.03$, $d = 0.34$, effect size is small), table tennis ($t = 3.33$, $p = 0.00$, $d = 0.53$, effect size is medium) and tennis ($t = 2.40$, $p = 0.02$, $d = 0.42$, effect size is small) across gender. All male players reported higher Enthusiastic Commitment compared to females players.

The possible reason why female table tennis players showed lower enthusiastic commitment and higher constrained commitment could be due to several reasons. First, Scanlan et al. (2009) and Weiss and Weiss (2007) stated that females were more committed in sports due to support from parents, coaches and friends. As observed in this study, female table tennis players might no longer enjoy support from parents and coaches (participants were mostly adult players or recreational players). Second, female players especially those that are married might be burden with other priorities compare to male players in both sports. For example, they need taking care of family members and career that might influence adult female players to withdraw from sports.

However, the results for badminton and squash revealed no significant difference in sport commitment across gender. The results were in line with other studies (Casper

and Stellino, 2008; Jess, 2009; Scanlan et al., 1993a) that found male and female were equally committed in their sports respectively. Males and females badminton and squash players reported that they have equal level of enthusiastic commitment and constrained commitment could be due to gender equality provided in term of opportunities in these two sports (Casper & Stellino, 2008; Csizma, Wittig, & Schurr, 1988; Matteo, 1986; Salminen, 1990).

5.1.4 Are there any age groups difference in racquet sports players' commitment?

The ANOVA results showed that age groups has significant differences (Table 4.8) for enthusiastic commitment [$F_{(3,608)}$ = 9.00, p = 0.00] and constrained commitment [$F_{(3,608)}$ = 18.84, p = 0.00]. Since there were more than two groupings a post hoc test was conducted to find which pairing is significant.

Post Hoc test for Enthusiastic Commitment revealed that there were significantly different between age group 11-20 vs. 31-40 (p = 0.00, d = 0.44, effect size is small), 11-20 vs. >40 (p = 0.00, d =0.47, effect size is small), 21-30 vs 31-40 (p = 0.01, d = 0.41, effect size is small) and 21-30 vs >40 (p = 0.00, d = 0.37, effect size is small). For Constrained Commitment, results showed that there is significance difference between age group 11-20 vs. 31-40 (p = 0.00, d = 0.81, effect size is large), and age group 11-20 vs. >40 (p = 0.00, d = 0.69, effect size is medium), age group 21-30 vs. 31-40 (p = 0.00, d = 0.56, effect size is medium), and age group 21-30 vs. >40 (p = 0.00, d = 0.44, effect size is small).

My results (Table 4.9) which showed that sport commitment varies in different age groups were similar to Casper and Stellino (2008) and Weiss's (2014) studies. As observed from the results, age group 31-40 and age group above 40 showed the higher Enthusiastic Commitment compare to younger age groups. The reason could be that

they enjoy playing sports could be due to having positive competitive and conducive environment at this stage as these age groups have the higher Sport Enjoyment (31-40 μ = 4.67 ± 0.43; >40 μ = 4.63 ± 0.48) compare to younger age groups.

The younger age group (11-20 and 21-30 years old) which perceived highest constrained commitment compare to older age groups which comprises of mostly college and university students. The reasons why this group perceive higher constrained commitment might be due to pressures from external sources such as scholarship, and future athletic career (Boyst, 2009). The result of this study is similar to Casper and Stellino's (2008) study who revealed that younger tennis players have greater social constraints compare to older tennis players. The impact of greater social constraints might lead to greater constrained commitment.

5.2 Limitation

This study was bound by several limitations. First, the questionnaire SCQ-2 has too many items (i.e., 58 items). Thus, participants may feel bore which would decrease their level of concentration perhaps lose interest. Besides, this might also resulted in many not answering the questionnaire sincerely as needed. For example, 56 set of returned questionnaires were found with similar answers for all items or answering the first 10 questions with the same answer and follow by the second set of same answer were removed from analysis. These "rouge" questionnaires were removed from data analyses. Besides, some Malaysians especially those from the rural areas that answer this questionnaire are more fluent in Bahasa Malaysia, Mandarin and other Malaysian native languages while SCQ-2 is in English, hence some of their feedbacks might not fully reflect what they feel. To overcome this limitation, players were briefed on the objectives of the study and were assisted by research assistants when they need clarification in answering the questionnaire. Lastly, the actual population of racquet

sports players in Malaysia are unknown because there were no proper records even at national sports association or ministry level. Thus, G-power was used to calculate the sample size needed (refer section 3.3).

5.3 Future studies

For future studies, it is ideal to reduce the number of items in the questionnaire. In doing so, a shorten version of sport commitment questionnaire can be develop without compromising on the content and construct validity through Structural Equation Modelling technique. To solve the other limitation, perhaps a translated version would be ideal through translation to Bahasa Melayu and revalidation to ensure that the questionnaire is easily understandable by all Malaysian in order to examine the sport commitment of Malaysian.

Besides, current study only focus on racquet sports players in Malaysia, therefore, future studies should consider other popular sports in Malaysia to examine the factors that influence Malaysians sports commitment. Lastly, in depth studies or mixed method e.g., survey and interviews and/or focus group could be explore to understand sport commitment among people who play sports in Malaysia.

5.4 Conclusion

Sport enjoyment is the strongest predictor of sport commitment among Malaysian racquet sports players. There are significant difference in enthusiastic commitment (badminton vs tennis, badminton vs squash and table tennis vs tennis) and constrained commitment (badminton vs tennis, table tennis vs tennis and squash vs tennis) across racquet sports. There are also significant difference in enthusiastic commitment (table tennis and tennis) and constrained commitment (table tennis) across gender. Finally, there is significant difference among different age groups in enthusiastic commitment

(11-20 vs 31-41, 11-20 vs >40, 21-30 vs 31-40 and 21-30 vs >40) and constrained commitment (11-20 vs 31-41, 11-20 vs >40, 21-30 vs 31-40 and 21-30 vs >40). In conclusion, coaches have to look into the different needs base on type of sports, gender and age groups. Besides, coaches and sport administrators should carefully design a varieties training programmes and uses different approaches with the element of fun and enjoyment. This is because a blanket training programme might be easier to execute but the effectiveness of "one programme fits all" might not work for everyone in the team due to the differences found in this study. In doing so, coaches and sport administrator are able to generate life-long interest and participation in their respective sports.

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LIST OF PUBLICATIONS AND PAPERS PRESENTED

1. **Presentation**

   a. 5th International Seminar on Sports and Exercise Psychology 2018 -

      Understanding Sport Commitment among Malaysian Badminton Players based on the Sport Commitment Model

   b. 8th International Congress of Asian South Pacific Association of Sport Psychology -

      Perceived Sport Commitment of Racquet Sports Players among Malaysia College and University Students.

APPENDIX

Appendix A: Descriptive Analysis of Sport Enjoyment (N = 612)

Factor: Sport Enjoyment	Mean = 4.54	SD = 0.50
SE1	4.67	0.52
SE2	4.56	0.62
SE3	4.52	0.70
SE4	4.43	0.70
SE5	4.50	0.69

Note: SE = Sport Enjoyment.
Scale: 1- Strongly disagree, 3- Neither agree nor disagree, 5- Strongly agree.

Appendix B: Descriptive Analysis of Valuable Opportunities (N = 612)

Factor: Valuable Opportunities	Mean = 3.38	SD = 0.79
VO1	3.31	1.00
VO2	3.32	0.99
VO3	3.48	0.91
VO4	3.40	0.98

Note: VO = Valuable Opportunities.
Scale: 1- Strongly disagree, 3- Neither agree nor disagree, 5- Strongly agree.

Appendix C: Descriptive Analysis of Other Priorities (N = 612)

Factor: Other Priorities	Mean = 2.57	SD = 0.95
OP1	2.65	1.13
OP2	2.46	1.26
OP3	2.68	1.14
OP4	2.66	1.22
OP5	2.41	1.10

Note: OP = Valuable Opportunities.
Scale: 1- Strongly disagree, 3- Neither agree nor disagree, 5- Strongly agree.

Appendix D: Descriptive Analysis of Personal Investment (N = 612)

Factor: Personal Investment	Mean = 3.36	SD = 0.65
PI1	3.31	0.92
PI2	3.17	0.96
PI3	3.13	1.00
PI4	3.11	0.92
PI5	3.25	0.89
PI6	3.77	0.92
PI7	3.52	0.98
PI8	3.42	0.89
PI9	3.54	0.83

Note: PI. = Personal Investment, L = Loss, Q = Quantity.
Scale: 1- Strongly disagree, 3- Neither agree nor disagree, 5- Strongly agree.

Appendix E: Descriptive Analysis of Social Constraints (N = 612)

Factor: Social Constraints	Mean = 2.92	SD = 0.83
SC1	2.87	1.08
SC2	2.83	1.06
SC3	2.88	1.05
SC4	3.09	1.00

Note: SC. = Social Constraints.
Scale: 1- Strongly disagree, 3- Neither agree nor disagree, 5- Strongly agree.

Appendix F: Descriptive Analysis of Social Support (N = 612)

Factor: Social Support	Mean = 3.15	SD = 0.79
SS1	2.88	1.11
SS2	2.93	1.09
SS3	3.22	0.97
SS4	3.30	0.97
SS5	2.98	1.26
SS6	3.18	1.05
SS7	3.18	0.97
SS8	3.30	0.91
SS9	3.34	0.97

Note: SS. = Social Support, E = Emotional, I = Informational.
Scale: 1- Strongly disagree, 3- Neither agree nor disagree, 5- Strongly agree.

Appendix G: Descriptive Analysis of Desire to Excel (N = 612)

Factor: Desire to Excel	Mean = 3.69	SD = 0.70
DesEx1	3.86	0.85
DesEx2	3.77	0.87
DesEx3	3.80	0.95
DesEx4	3.71	0.93
DesEx5	3.70	0.90
DesEx6	3.54	0.98
DesEx7	3.62	0.91
DesEx8	3.66	0.95
DesEx9	3.75	0.87
DesEx10	3.51	0.92
DesEx11	3.69	0.88

Note: DesEx. = Desire to Excel, M = Mastery Achievement, S = Social Achievement.
Scale: 1- Strongly disagree, 3- Neither agree nor disagree, 5- Strongly agree.

Appendix H: Descriptive Analysis of Sport Commitment (N = 612)

Sport Commitment	Mean	SD
Enthusiastic Commitment	4.08	0.66
EnCom1	4.22	0.73
EnCom2	3.88	0.92
EnCom3	4.12	0.81
EnCom4	4.06	0.87
EnCom5	4.17	0.82
EnCom6	4.05	0.94
Constrained Commitment	2.20	0.88
ConCom1	2.41	1.17
ConCom2	1.73	1.25
ConCom3	2.73	1.25
ConCom4	1.81	1.02
ConCom5	2.24	1.16

Note: EnCom = Enthusiastic Commitment, ConCom = Constrained Commitment.
Scale: 1- Strongly disagree, 3- Neither agree nor disagree, 5- Strongly agree.

Appendix I: Descriptive Analysis of the Factors of Racquet Sports Players Across Gender

Subscales	Badminton		Table Tennis		Tennis		Squash	
	M	**SD**	**M**	**SD**	**M**	**SD**	**M**	**SD**
Enthusiastic Commitment	3.74	0.62	3.87	0.70	4.41	0.48	4.31	0.56
Male	3.84	0.62	4.00	0.74	4.48	0.42	4.36	0.53
Female	3.63	0.61	3.65	0.57	4.27	0.56	4.26	0.59
Constrained Commitment	2.24	0.71	2.48	0.92	1.79	0.80	2.28	0.96
Male	2.19	0.68	2.45	0.99	1.73	0.79	2.28	0.97
Female	2.30	0.75	2.55	0.77	1.90	0.80	2.28	0.95
Sport enjoyment	4.38	0.51	4.37	0.54	4.79	0.34	4.62	0.47
Male	4.44	0.49	4.41	0.56	4.81	0.31	4.64	0.45
Female	4.31	0.54	4.29	0.49	4.75	0.39	4.59	0.50
Valuable opportunities	3.24	0.74	3.48	0.82	3.17	0.68	3.63	0.81
Male	3.30	0.75	3.41	0.87	3.11	0.67	3.66	0.84
Female	3.17	0.73	3.60	0.73	3.28	0.71	3.60	0.79
Other priorities	2.62	0.87	2.81	0.88	2.06	0.83	2.80	1.03
Male	2.50	0.84	2.73	0.92	1.93	0.79	2.74	1.10
Female	2.76	0.88	2.94	0.79	2.33	0.85	2.88	0.92
Personal investment	3.17	0.61	3.38	0.69	3.26	0.55	3.63	0.68
Male	3.27	0.63	3.45	0.72	3.26	0.57	3.68	0.69
Female	3.07	0.57	3.25	0.61	3.26	0.52	3.57	0.65
Social constraints	2.75	0.72	2.97	0.88	2.64	0.77	3.32	0.79
Male	2.84	0.73	3.02	0.98	2.60	0.81	3.36	0.82
Female	2.65	0.70	2.87	0.66	2.72	0.67	3.27	0.76
Social support	3.07	0.70	3.23	0.81	2.82	0.74	3.47	0.76
Male	3.11	0.75	3.18	0.87	2.76	0.75	3.47	0.81
Female	3.03	0.65	3.31	0.69	2.93	0.70	3.48	0.71
Desire to excel	3.48	0.66	3.71	0.64	3.62	0.73	3.97	0.68
Male	3.59	0.67	3.76	0.67	3.62	0.76	4.02	0.68
Female	3.34	0.65	3.60	0.57	3.62	0.67	3.90	0.68

Scale: 1- Strongly disagree, 3- Neither agree nor disagree, 5- Strongly agree

Appendix J:

Descriptive Analysis of the Subscales of Racquet Sports Players Across Age Groups

Factors	M	SD
Sport enjoyment		
11-20	4.47	0.54
21-30	4.46	0.50
31-40	4.67	0.43
>40	4.63	0.49
Valuable opportunities		
11-20	3.48	0.87
21-30	3.38	0.84
31-40	3.28	0.63
>40	3.34	0.70
Other priorities		
11-20	2.78	0.92
21-30	2.68	0.98
31-40	2.32	0.87
>40	2.36	0.93
Personal investment		
11-20	3.39	0.72
21-30	3.37	0.70
31-40	3.30	0.51
>40	3.35	0.60
Social constraints		
11-20	2.96	0.96
21-30	2.93	0.81
31-40	2.89	0.64
>40	2.88	0.84
Social support		
11-20	3.25	0.83
21-30	3.16	0.78
31-40	3.08	0.67
>40	3.04	0.82
Desire to excel		
11-20	3.70	0.73
21-30	3.65	0.75
31-40	3.77	0.57
>40	3.69	0.69
Enthusiastic Commitment		
11-20	3.94	0.71
21-30	4.00	0.71
31-40	4.25	0.48
>40	4.24	0.57
Constrained Commitment		
11-20	2.52	0.89
21-30	2.31	0.89
31-40	1.85	0.75
>40	1.94	0.80

Scale: 1- Strongly disagree, 3- Neither agree nor disagree, 5- Strongly agree

Appendix K: Calculation for effect size

Calculation 1: Comparison between badminton and tennis players' enthusiastic commitment

$$\text{Cohen, } d = \frac{M_1 - M_2}{\sqrt{(SD_1^2 + SD_2^2)/2}}$$

$$= \frac{3.74 - 4.41}{\sqrt{(0.62^2 + 0.48^2)/2}}$$

$$= \frac{-0.67}{0.55}$$

$$= -1.21$$

Therefore, the effect size between badminton and tennis players' enthusiastic commitment is large.

Calculation 2: Comparison between badminton and squash players' enthusiastic commitment

$$\text{Cohen, } d = \frac{M_1 - M_2}{\sqrt{(SD_1^2 + SD_2^2)/2}}$$

$$= \frac{3.74 - 4.31}{\sqrt{(0.62^2 + 0.55^2)/2}}$$

$$= \frac{-0.57}{0.59}$$

$$= -1.00$$

Therefore, the effect size between badminton and squash players' enthusiastic commitment is large.

Calculation 3: Comparison between badminton and tennis players' constrained commitment.

$$\text{Cohen, } d = \frac{M_1 - M_2}{\sqrt{(SD_1^2 + SD_2^2)/2}}$$

$$= \frac{2.24 - 1.79}{\sqrt{(0.71^2 + 0.80^2)/2}}$$

$$= \frac{0.45}{0.76}$$

$$= 0.59$$

Therefore, the effect size between badminton and tennis players' constrained commitment is medium.

Calculation 4: Comparison between table tennis and tennis players' constrained commitment

$$\text{Cohen, } d = \frac{M_1 - M_2}{\sqrt{(SD_1^2 + SD_2^2)/2}}$$

$$= \frac{2.48 - 1.79}{\sqrt{(0.92^2 + 0.80^2)/2}}$$

$$= \frac{0.69}{0.86}$$

$$= 0.80$$

Therefore, the effect size between table tennis and tennis players' constrained commitment is large.

Calculation 5: Comparison between squash and tennis players' constrained commitment.

$$\text{Cohen, } d = \frac{M_1 - M_2}{\sqrt{(SD_1^2 + SD_2^2)/2}}$$

$$= \frac{2.28 - 1.79}{\sqrt{(0.96^2 + 0.80^2)/2}}$$

$$= \frac{0.47}{0.88}$$

$$= 0.53$$

Therefore, the effect size between squash and tennis players' constrained commitment is medium.

Calculation 6: Comparison between age group 11 – 20 years old and age group 31 - 40 years old players' enthusiastic commitment.

$$\text{Cohen, } d = \frac{M_1 - M_2}{\sqrt{(SD_1^2 + SD_2^2)/2}}$$

$$= \frac{3.94 - 4.25}{\sqrt{(0.71^2 + 0.48^2)/2}}$$

$$= \frac{-0.31}{0.61}$$

$$= -0.51$$

Therefore, the effect size between age group 11 – 20 years old and age group 31 - 40 years old players' enthusiastic commitment is medium.

Calculation 7: Comparison between age group 11 – 20 years old and age group >40 years old players' enthusiastic commitment.

$$\text{Cohen, } d = \frac{M_1 - M_2}{\sqrt{(SD_1^2 + SD_2^2)/2}}$$

$$= \frac{3.94 - 4.24}{\sqrt{(0.71^2 + 0.57^2)/2}}$$

$$= \frac{-0.30}{0.64}$$

$$= -0.47$$

Therefore, the effect size between age group 11 – 20 years old and age group > 40 years old players' enthusiastic commitment is small.

Calculation 8: Comparison between age group 21-30 years old and age group 31 – 40 years old players' enthusiastic commitment.

$$\text{Cohen, } d = \frac{M_1 - M_2}{\sqrt{(SD_1^2 + SD_2^2)/2}}$$

$$= \frac{4.00 - 4.25}{\sqrt{(0.71^2 + 0.48^2)/2}}$$

$$= \frac{0.25}{0.61}$$

$$= 0.41$$

Therefore, the effect size between age group 21-30 years old and age group 31-40 years old players' enthusiastic commitment is small.

Calculation 9: Comparison between age group 21-30 years old and age group > 40 years old players' enthusiastic commitment.

$$\text{Cohen, } d = \frac{M_1 - M_2}{\sqrt{(SD_1^2 + SD_2^2)/2}}$$

$$= \frac{4.00 - 4.24}{\sqrt{(0.71^2 + 0.57^2)/2}}$$

$$= \frac{0.24}{0.64}$$

$$= 0.37$$

Therefore, the effect size between age group 21 – 30 years old and age group > 40 years old players' enthusiastic commitment is small.

Calculation 10: Comparison between age group 11 – 20 years old and age group 31 - 40 years old players' constrained commitment

$$\text{Cohen, } d = \frac{M_1 - M_2}{\sqrt{(SD_1^2 + SD_2^2)/2}}$$

$$= \frac{2.52 - 1.85}{\sqrt{(0.89^2 + 0.75^2)/2}}$$

$$= \frac{0.67}{0.82}$$

$$= 0.81$$

Therefore, the effect size between age group 11 – 20 years old and age group 31 - 40 years old players' constrained commitment is large.

Calculation 11: Comparison between age group 11 – 20 years old and age group > 40 years old players' constrained commitment

$$\text{Cohen, } d = \frac{M_1 - M_2}{\sqrt{(SD_1^2 + SD_2^2)/2}}$$

$$= \frac{2.52 - 1.94}{\sqrt{(0.89^2 + 0.80^2)/2}}$$

$$= \frac{0.58}{0.85}$$

$$= 0.69$$

Therefore, the effect size between age group 11 – 20 years old and age group > 40 years old players' constrained commitment is medium.

Calculation 12: Comparison between age group 21 – 30 years old and age group 31 - 40 years old players' constrained commitment

$$\text{Cohen, } d = \frac{M_1 - M_2}{\sqrt{(SD_1^2 + SD_2^2)/2}}$$

$$= \frac{2.31 - 1.85}{\sqrt{(0.89^2 + 0.75^2)/2}}$$

$$= \frac{0.46}{0.82}$$

$$= 0.56$$

Therefore, the effect size between age group 21 - 30 years old and age group 31 - 40 years old players' constrained commitment is medium.

Calculation 13: Comparison between age group 21 – 30 years old and age group > 40 years old players' constrained commitment

$$\text{Cohen, } d = \frac{M_1 - M_2}{\sqrt{(SD_1^2 + SD_2^2)/2}}$$

$$= \frac{2.31 - 1.94}{\sqrt{(0.89^2 + 0.75^2)/2}}$$

$$= \frac{0.37}{0.85}$$

$$= 0.44$$

Therefore, the effect size between age group 21 - 30 years old and age group > 40 years old players' constrained commitment is small.

Appendix L: Sport Commitment Questionnaire-2

SPORT COMMITMENT SURVEY

Part A: Please respond to the following questions by either circling (O) or (√) the appropriate response.

1. Gender: Male / Female Age: _____ year
2. Ethnicity: Malay / Chinese / Indian / Iban / Bidayuh / Melanau / Orang Ulu / Others (please state): _____
3. Highest Level of Education: Certificate/Diploma/Degree/Master Degree/Doctoral Degree Others: (please state) _____
4. State:_____

About Your Sport

1. Sport: _____
2. Athletic playing experience (year):

Less than 1 year	☐	1-5 years	☐	6-10 years	☐
11-15 years	☐	16-20 years	☐	20+years	☐

3. How would you classify yourself as an athlete?

Part-time ☐ Full-time ☐

4. Are you currently playing your sport: Yes/No

5. Highest level representing:

No	☐	School	☐	Clubs	☐	
Division/District	☐	State	☐	National	☐	Others:(please state) _____

6. Playing/training session per week: _____

7. Playing/training hour per session: _____

Part B: Sport Commitment Questionnaire

In this section, please provide your responses base on your commitment in sport (i.e., the desire and intent to continue in sport). Circle the answer that best described you.

Choose the answer based on the scale below.

1 Strongly disagree; 2 Somewhat disagree; 3 Neither agree nor disagree; 4 Somewhat agree; 5 Strongly agree

1	Playing this sport is fun.						
2	I have spent a lot of time in this sport.						
3	Other things in my life make it difficult to play this sport.						
4	I try to dominate in this sport.						
5	In this sport, I am constantly trying to improve my skills.						
6	The mental effort I have put into this sport makes it difficult to stop playing.						
7	Staying in this sport is more of a necessity than a desire.						
8	There are future events in this sport that I would really miss experiencing if I no longer played.						
9	I am being pulled away from this sport by other things in my life.						
10	The physical effort I have put into this sport makes it difficult to stop playing.						

11	I like playing this sport.					
12	I am dedicated to keep playing this sport.					
13	Once I attain a goal in this sport, I challenge myself to continue improving.					
14	I would really miss the travel experiences I have if I no longer played this sport.					
15	People would be upset if I didn't keep playing this sport because they have invested so much.					
16	In this sport, I strive for the perfect performance.					
17	In this sport, I have put in a lot of training.					
18	People would be disappointed if I didn't keep playing this sport.					
19	I have a mentor who provides guidance in this sport.					
20	People who are important to me attend the majority of my competitions in this sport.					
21	I feel trapped in this sport.					
22	People who are important to me are there for me after I perform poorly in this sport.					
23	The time I have spent in this sport makes it difficult to stop playing.					
24	I constantly try to learn from my mistakes in this sport.					
25	When things get tough in this sport, people who are important to me provide comfort.					
26	It is almost impossible to play this sport because of other things in my life.					
27	People who are important to me teach me the strategies of this sport.					
28	I love to play this sport.					
29	In this sport, I strive to be better than my opponents.					
30	I would really miss the things I learn in this sport if I didn't play.					
31	I am willing to overcome any obstacle to keep playing my sport.					
32	Although I think about quitting this sport, I feel must keep playing.					
33	I push myself to win every time I compete in this sport.					
34	I have put a great deal of mental effort into this sport.					
35	People who are important to me teach me about the mental side of this sport.					
36	There are other things in my life that limit my participation in this sport.					
37	Because people who are important to me also play this sport, it is assumed that I will keep playing.					
38	In this sport, I strive to improve every aspect of my performance.					
39	I feel I am forced to keep playing this sport.					
40	Other things in my life compete with playing this sport.					
41	I push myself to reach my full potential in this sport.					
42	It is difficult to stop playing because of the personal discipline I have maintained in this sport.					
43	I feel I have to keep playing this sport, even though I don't want to.					
44	To improve in this sport, I push myself to achieve the goals that I have set.					
45	Playing this game is very pleasurable.					
46	I am determined to keep playing this sport.					
47	In this sport, I challenge myself to be better than everyone else.					
48	I have put a great deal of physical effort into this sport.					
49	I am very attached to this sport.					
50	I would really miss the competition in this sport if I no longer played.					
51	When I compete in this sport, people who are important to me cheer me on.					
52	People who are important to me expect me to keep playing this sport.					
53	I will continue to play this sport for me as long as I can.					
54	People give me trustworthy advice about this sport.					
55	Playing this sport makes me happy.					

56	It is difficult to stop playing because of the training I have put into this sport.					
57	In this sport, people provide useful instruction to improve my performance.					
58	I am willing to do almost anything to keep playing this sport.					

THANK YOU