國立臺灣體育運動大學休閒運動管理研究所
碩士學位論文

年長社交舞者運動承諾之研究

SPORT COMMITMENT MODEL WITH ELDERLY BALLROOM DANCE PARTICIPANTS

研 究 生：朱 瑩 撰
指導教授：王建興 博士

中 華 民 國 一 百 年 十 二 月

ACKNOWLEDGEMENTS

This thesis is not a feat to accomplish on my own. Most of the credits go to my advisor Dr. Chien-Hsin Wang. He was always patient with me and looked out for all the small details that I might have missed along the way. His insightful comments were always valuable to me and to others around him.

I would also like to thank my committee members, Dr. Li-Wen Hsieh and Dr. Ya-Jo Lo for their constructive criticism as well as valuable suggestions for my thesis.

Next, I would like to thank my husband Darren Yi-Chien Chen for his love and support; especially for helping me with our son while I was busy with my thesis.

Finally, I would like to thank my father for his support through all the good and hard times of life; my mother who knew not to ask me too much about my thesis in silent support and lastly my twin sister who constantly asked me about my thesis and push me to finish it as soon as possible.

In addition to my family members, I would like to thank the classmates of 2010 for all the laughter and companionship throughout my memorable graduate school life.

Angel Yin Chu

January, 2012

ABSTRACT

This study focused on the sport commitment of elderly ballroom dance participants on the basis of the six determinants of sport commitment: sport enjoyment, involvement opportunity, involvement alternative, personal investment, social constraint, and social support (Scanlan, Carpenter, Schmidt, et al., 1993, Wilson et al., 2004). The purpose of this study was to understand the relationships between the demographic and behavioral characteristics with commitment and participation frequency of the elderly ballroom dance participants. A total of 180 questionnaires were distributed to elderly ballroom dance participants in dance studios and dance halls in Taichung, Taiwan between August to October 2011. There were 173 questionnaires in return (response rate 83%). The data collected were evaluated using descriptive statistics, independent *t*-test, one-way ANOVA, and regression. The results are as follow: 1. There were no gender differences to sport commitment of elderly ballroom dancers, but personal investment was shown to be more significant than that of sport enjoyment which was contradictory to previous researches (Scanlan, Carpenter, Schmidt, et al., 1993, Wilson et al., 2004). 2. The effects of participation pattern were

significant on sport commitment, personal investments and involvement opportunity. 3. The effects of participation type were significant on personal investment. Participants who participate in both types of dance (modern and latin) showed significance on personal investment. 4. Sport commitment was predicted by sport enjoyment, involvement opportunity, and social constraints. 5. The behavior of elderly ballroom dancers was shown to be significantly related to the overall sport commitment.

Keywords: Sport Commitment, Ballroom Dance, Elderly People.

TABLE OF CONTENTS

CHAPTER PAGE

LIST OF TABLES

LIST OF FIGURES

CHAPTER I

INTRODUCTION

What is "Ballroom Dancing"? According to the Oxford Dictionary of Dance it states ballroom dancing as:

> Social dance usually performed by couples in dance halls or at social gatherings. During the 20th century these dances came to be performed widely in competitions, which flourished in Britain and America following the First World War. In 1929, the Official Board of Ballroom Dancing was founded and by the 1920's standardization of training and levels of expertise had been established (Craine & Mackrell, 2000, p. 49.)

Dancing is a powerful means to express person and cultural identities (Ramirez, Cantu, & Remero, 2009).

The demographics all over the world showed an increase in the elderly population. In the future, the mental and physical health of the elderly population will be of great interest to researches all over the world. This is because if we could keep the large population of elderly adults healthy in both mind and spirit, there will be less financial as well as physical burden on healthcare system and on family and friends of elderly adults. Studies have shown that dancing helps to slow aging. Older adults, in particular, benefit from regular exercise because regular exercise slows deterioration of fitness that occurs with aging and inactivity (Serfass, 1981). Dancing is also a powerful means to express person and cultural identities (Ramirez, Cantu, & Remero, 2009). For the elderly adults, ballroom dancing could also be the gateway to retain their own identities.

Throughout history human social needs have been reflected in our dance forms. These social needs were first displayed in primitive courtship and tribal dances.

Although some primitive dances were danced without physical contact with members of the same sex, social dance however, is essentially touch dancing that is done merely for recreation or pleasure to music. One benefit of ballroom dancing is being in a pleasant, unstressful surroundings that emphasize proper etiquette and attire, which is mentally refreshing. In Taiwan, people can ballroom dance in the municipal parks grounds, dancing studios, as well as ballroom dancing halls open to the public. Some people can choose to dance wherever they are. Oftentimes, we can see people practicing dance moves in just an open area. Another major benefit of ballroom dancing is that it adds elegance to exercise! Ballroom dancing provides low-impact aerobic workout when dancing continuously. It can raise the heart rate up to 60 to 70 percent of its maximum (Wright, 2003). People can gain great personal satisfaction from dancing accomplishments, whether it is improved posture, better coordination, precision, balance and concentration. Individuals who are attracted to dance enjoy their participation and experience high rewards associated with sport. We need to bring awareness to the public that ballroom dancing is a sport as well as an activity that can be performed from children to old age. It is an activity that connects the young and the old, and it does not discriminate against any. Ballroom dancing also accommodates those disabled people who are in wheelchairs as there is also ballroom dancing performed with wheelchair. In all aspects, ballroom dance is one of the perfect recreational activity and sport to be enjoyed by all.

Need for the Study

Thus far, most of the researches with Sport Commitment Model have been done with children or juveniles and elite athletes (Scanlan et al., 1993a, 1993b; Scanlan et al., 2003, Carpenter et al., 1993; Wilson et. al, 2004; He, 2009; Jess, 2009; Boyst, 2009). There have been few studies with adults and none have been done simply to analyze a recreational sport like ballroom dancing. A sport commitment model is a valuable tool to be use to find out the links between ballroom dancing to sociology and to help us find out how to attract more elderly people to participate in this healthy and meaningful recreational activity.

Purpose of the Study

It is a paradox in life that people spent so much time in the early lifetime striving for success to have comfort in the old age, but only to find that simple moves such as climbing out of bed, entering cars and climbing stairs to be increasingly difficult in as people get older. “Older people need an incentive to restructure their lives after retirement; they need an opportunity to participate with their peers in meaningful activities and ways that are validated by society” (Berryman-Miller, 1988). Social dancing is a leisure recreational activity as well as a sport. People participate in dancing for fun, weight control, stress relief, feel better about themselves, to meet people, and for a challenge (Laverie, 1998). The older adult is an ideal population to learn social dancing. There is no other age group that has more to offer to dance in terms of life experience and wisdom. “Retirement gives them the time to get involved in regular dance classes and endurance dance can give them what they need to maintain the quality of their lives” (McAdam, 1988).

The most important reason for participating in partner or touch dancing is the “sheer joy of moving rhythmically in unison with a partner to music-regardless of your age” (Wright, 2003, p. xi). To dance with a partner not only enhances the pleasure, but it also highlights the social benefits of meeting others. Partners can share common interests, and learn to respect each other.

The classification of senior, elderly and older adults can include a large age span. Usually the classification includes those age 55 or older, but it can include up to age 100, which encompass a range of 45 years (Ensign, 1998). The level of ability is not necessarily related to age, hence, we need to find out what keeps these elderly population happy in their dancing endeavors. We can do so by using the sport commitment model on elderly population with respect to ballroom dance as a method to find out the key determinants to keep elderly adults healthy and happy in ballroom dancing. Most importantly, we can find out the key variables that can attract more

elderly adults to join in ballroom dancing. In addition, this study aims to understand the relationships between the demographic variables with commitment, participation frequency, and sport behavior of the elderly participants.

Research Questions

1. Do different demographic characteristics result in different Sport Commitment determinants?
2. Do different dance participation patterns result in different Sport Commitment determinants?
3. Do different behaviors in ballroom dancing result in different Sport Commitment determinants?
4. What is the relationship between sport commitment determinants and sport commitment of elderly ballroom dancers?
5. What is the relationship between sport commitment and sport behavior of elderly ballroom dancers?

Definition of Terms

Ballroom Dancing: Social dance usually performed by couples in dance halls or at social gatherings. During the 20th century these dances came to be performed widely in competitions, which flourished in Britain and America following the First World War. In 1929, the Official Board of Ballroom Dancing was founded and by the 1920's standardization of training and levels of expertise had been established (Craine & Mackrell, 2000, p, 49).

Sport: "Competitive activities that involve rigorous physical exertion or the use of relatively complex physical skills by participants motivated by internal and external rewards" (Coakley, 2004, p, 21).

Sport Commitment: "The psychological state representing the desire and resolve to continue sport participation" (Scanlan, Carpenter, Schmidt, et al., 1993, p,6).

CHAPTER II

REVIEW OF LITERATURE

The Quest to stay "fit" for Elderly Adults

The Importance of Physical Fitness for Elderly Adults

The share of Taiwanese population age 65 years and older has increased steadily over the years. In fact, in the past three years, the number of elderly adults has increase 10.5%. In the recent published data by the Taiwan government, the current population of people over the age of 65 in Taiwan accounts for 10.7% of the total population of 23,160,000 (Legislative Department of the Ministry of Interior, 2010). Over 2.3 million people in Taiwan are over the age of 65 and physical inactivity of older adults places a huge financial and social burden on society (Leavy & Aberg, 2010). The same issue is affecting countries all over the developed world. It is estimated that people over the age of 65 accounts for 30-40% of the total health care spending across Europe (Economic Policy Committee, 2001).

Despite proven health benefits of being physically active, most of the Taiwanese population is not reaching the levels of physical activity recommended for disease prevention. Current recommendations for aerobic activity for older adults are 30 minutes of moderate-intensity activity 5 days per week or 20 minutes of vigorous aerobic activity 3 days per week. Older adults are advised to perform a stretching routine for 10-min bouts, 2 days per week (Nelson et al., 2007). Moderately active men and women lived 1.3 and 1.1 more years than sedentary individuals (Hirsch et al., 2010). However, little is know about trends in how physical activity changes with age, therefore further longitudinal research is required to identify the course of physical activity in old age and the factors influencing physical activity and inactivity over time (Cohen-Mansfield et al., 2010).

Cultural Influence on Physical Activity

In the quest to discover if ballroom dancing is one of the best physical activities for older people, we discovered that the Taiwanese population is aging rapidly and there is a need to take measures immediately to ensure that senior citizens can stay healthy and fit. However, through literature review, it is evident that different cultures backgrounds affect the type of the leisure physical activities that the individuals will choose. Culture can be the anchor to continuous physical activity but it can also be the constraint for continuous physical activity. Culture can notably influence how a group's members view and how they interact with the world (Garcia, 2006). In some of the international studies done on leisure choices across culture, researchers found that Chinese and Vietnamese older adults value balance and moderation and stress the importance of not to overexert oneself when participating in physical activity. However, these values were not commonly expressed by older African Americans, American Indians, Latinos, or Whites. Examining perceived physical activity barriers and enablers may provide insight regarding which issues are most important for individual cultures (Mathews et al., 2010).

For example, some European elderly men see physical activity as important substitute to their work as they retired thinking that one "become more focused on other things" as it is "very important that you replace it". Most of the literature focus on the women, but it is interesting to see that men feel that "women are better survivors" and "men are used to be being providers, not being dependent" and feeling as if they have "outlived their usefulness" in old age. Some elderly people feel that exercise is not really the answer to longevity because "people had played rugby and golf and they had jogged, but they still got heart bypasses, it is not really associated with exercise, it's just the luck of the game" (Leavy & Aberg, 2010).

In Taiwan, Confucianism strictly divides the domestic and social roles of men and women, and spreads the notion of dominance of men over women. Womanhood is as defined as subordinate to manhood in general society. Confucian teachings have restricted women's leisure opportunities and particularly the choices available to them (Tsai, 2010). However, it is interesting to note from this study that nowadays, more elderly women participate in ballroom dancing in their pastime than that of men.

The government wants the elders to stay fit as it will effect the over all reduction of health care spending, but at the same time, we neglect the fact that some elderly people just want to relax, and rigorous exercise is never going to be part of the agenda due to ailments of the body.

History of Ballroom Dancing

History of Ballroom Dancing in Western Society

Originating in Europe in the fifteenth century, and evolving alongside chivalry, ballroom dancing became popular in the French royal court, where ornate balls served as ideally conspicuous displays of royal ostentation and political power (Marion, 2008). Before the 20th Century, social dance was made popular by the British and because the British people were colonizers, they introduced social dance or ballroom dancing wherever they send their military troops. After the 20th Century, America, who was once colonized by the British Empire, became one of the dominant force in the World and like its British predecessors, American introduce social dance wherever the war takes the soldiers (Yang, 1991).

History of Social Dancing in China

According to historical texts, dance was very popular in the Zhou dynasty and continues through Han and Tang dynasty. During the Song dynasty, dance lost its popularity due to the king's wishes to promote the academia. In the Qing dynasty whilst social dancing was gaining enormous popularity in the China because of the opium trade. At first only foreigners danced in the halls, and slowly government officials joined in the social dancing for business gatherings. Sadly, dance halls soon became the warm bed which breeds prostitution. Soon, society began to question and condemns social dancing activities (Lee, 2000). From 1839 to 1912, China was in the midst opium epidemic and civil war which eventually brought to the end of dynastic China (Wikipeida, 2010). This coupled with many of the traditional Confucius thinking that men should keep distance from women which resulted in the slow development of social dance in China (Yang, 1991).

Nevertheless, after the end of World War II in 1945, social dancing again became popular in China (Lee, 2000). It seems that whenever there is turmoil in a country, the popularity of social dancing subsides, and whenever a country is beginning to prosper,

social dancing flourishes. It could be that the popularity of social dancing signifies the prosperity and wealth of a nation. However, the popularity of social dance in this period was short lived in China. In 1948, Chinese Civil War began, which split the nation in two parties, Kuomingtang (KMT) and the Chinese Communist Party (CCP). Soldiers from both parties were facing casualties in the front line, whilst dance halls in major cities were still filled with couples. This created some social unrest, which KMT government announced a "nation wide ban on dancing" (Lee, 2000) with afflicting the martial law (May 19, 1949 to July 15, 1987) (Wikipedia, 2010). In 1949, the KMT government retreat to Taiwan and from then on the development of social dancing also met a cross road and took two different paths in the Chinese Society.

In China during the 1950's ballroom dancing regain a little bit of popularity with the Soviet and East European cultural and political influence, but this popularity was also short lived. The Chinese Cultural Revolution (1966 to 1976) (Wikipedia, 2010) has placed a restriction on dance for a period of Ten years. Social Dance Re-emerged in the 1980s after the end of the Cultural Revolution along with the new economic and social reforms (Zhao, 2003). The first international ballroom dancing competition in China was in 1987, and in 1991, the first International Ballroom Dancing Championship was also held and the name social dance was changed to Dance Sport in China. In 1998, a televised cultural dance competition has included Dance Sport as one of the categories and the Beijing Television Station discovered that the audience rating was the highest during Dance Sport events. The official estimated that approximately one million people in China likes Dance Sport and it has become very popular with the younger generations.

There have also been studies in China on social dancing and researchers found that people who social dance has better physical and psychological health as compared with those who do not ballroom dance(Zhao, 2003). Like music, ballroom dancing possesses the all the characteristics which links people together. It is universal, there

are no language barriers or cultural barriers, and social dancing naturally brings people together.

History of Social Dancing Evolution in Taiwan

After the retreat of the authoritarian KMT government from China to Taiwan in 1949, the development of social dancing in Taiwan laid dormant for many years as the "nation wide ban on dancing" of 1948 still taking effect. Since the KMT government did not specify what "dances" to "ban", it resulted on many incidences of police raids on underground dance halls and dancing studios, arresting anyone caught dancing in public (Lee, 2000). To this day, many of the Taiwanese people still remember going to underground dance halls during this time and being cautious of possible exits so they can flee if police raided the dancing hall. The threat of police did not deter those who enjoyed ballroom dancing; in fact, it was more popular than ever during this period. During this period from 1949-1972, Americans had supported the cause of KMT. Many U.S. soldiers were station in Taiwan, and wherever the American Soldiers were, there was social dancing. Police could not raid these dancing halls with American soldiers dancing in them because American Soldiers were seen as the ally and protectors of KMT. The Taiwanese local population took the advantage and social dancing was again in the main stream.

In 1969, the Executive Yuan permitted the application of Chinese Ballroom Dancing Association. Members of the Chinese Ballroom Dancing Association felt changing the name from social dancing to ballroom dancing would make this activity more acceptable to the people as well as the government. In November, 1989, the first International Ballroom Dancing competition in Taiwan was held in Taipei, which was also the invitation competition for World Ballroom Dancing Championship as well as World Latin Dance Championship. Ballroom dancing has transformed from social dance in to ballroom dance and now it is often been referred to as "Dance Sport" (Zhao, 2003).

Society and its Connection to Ballroom Dancing

Ballroom Dancing is a social activity as well as a sport. Although one can practice certain moves alone, but ballroom dancing is meant to be perform in pairs. Evidently, Ballroom dancing has a connection to Sociology. “Sociology is the study of social life, including all forms of social interaction and relationships. Sociology helps us examine social life in context and to see the connections between our lives and the larger social world (Coakley, 2004, p.5).” When couples are in a dance hold position, they are connected to each other with simple human interaction (Lin, 2003) regardless of their race or ethnicity. Dance, like music is a universal language that has existed since the beginning of human civilization.

As humans, we live in societies and “society refers to a collection of people living in a defined geographical territory and united through a political system and a shared sense of self-identification that distinguishes them from other people (Coakley, 2004, p.6).” People deal with sport in society as “social world that are created by people as they interact with each other and live their lives in connection with social, political, and economic processes in particular societies” (Coakley, 2004, p.6). This very direct explanation of society can be perfectly explained in ballroom dancing. In dance people must “interact with each other” through “human interaction of dance hold” in which creates a social, political and economic cycle in their own societies. What strikes us was how prominently the dance field spoke to sexual preference, role, and behavior as well as to economic opportunity (Hanna, 1988). Also, socializing through physical activity helped active participants keep “mixing,” and “in touch” (Leavy & Aberg, 2010).

Elderly people desire more contact but felt confined by physical ailments or unaware of what physical activities were available to them. Coupled dance is perfect for elderly people. It is one of the most natural things for humans because as long as there are humans, there is dance (Lee, 2000). Dance is a representation of culture and

civilizations. *Culture* is a system of ideas about the nature of the world and the expected behavior of the people in it. Ideas are encoded in public symbols, literary texts, art, drama, religious practice, and dance. These symbols, through which people represent themselves to themselves and to each other, are accessible to the observation and inquiry. Both the reality (actual fact) and illusion (pretend aspect of performance on stage) are socially constructed through individuals producing, choreographing, dancing the dance, and watching it." (Hanna, 2008. pp. 28) Dance is also an expression of emotions, arts, and physical ability without words. Through ballroom dance, women can sense the intention of men through their leads and men can court and will the women to perform in unison with him. It is a social symbol of courtship. For example when a man arrives in the ballroom for a social dance event, he would scan the room and a connection might be made with a gazing lady. The man would nod his head in a silent invitation. Upon receiving the assurance of a gentle nod, a subtle smile, or a deliberate batting of the eyelashes, he would begin the journey toward her table with his eyes locked onto hers. This was necessary to avoid embarrassing situations in which more than one suitor might have misinterpreted an intercepted a lady's green light (Paz & Hart, 2008). During this process, only body language is needed without verbal communication. Through dance, men and women can learn from each other and help each other through mistakes.

The reason why the sociology aspect is of particular interest in this study is because this study will be using the Sport Commitment Model developed by first by Scanlan in 1993; and most of the scholars in the west and east have mainly focus on the psychological side of model which focuses on motivation, perception, cognition, self-esteem, self-confidence, attitudes, and personality. However, social dance is interesting in that there is more of a social aspect than that of the psychological aspect. The psychological aspect is important as it focuses on the innate and intrinsic motivation of the individuals, but the sociological context in social dances is also very

important as it focuses on the reality outside and around the participants. Social dance deal with how people form relationship with one another and create social arrangement that enable them to exert some control over the activities they participate therefore, it is imperative that we do not overlook the importance of the sociological aspect of ballroom dancing when using the Sport Commitment Model.

Benefits of Ballroom Dancing

In the present aging society, elderly adults may find themselves more and more alone. Retirement often means less daily personal contact with others as they see spouses and close friends slowly perished one by one. In today's robust society, it may mean that children and grandchildren no longer live in close vicinity to the elders. Therefore, elderly adults need to find ways to keep themselves active. It can be very rewarding to allow seniors to have the opportunity to be with their peers. Ballroom dancing is a great physical activity to keep seniors fit and happy. Social benefits from participating in dance classes include "decrease isolation, loneliness, and boredom; and increased sharing, support, tactile, contact, cooperation and fun" (Corbin and Metal-Corbin, 1983; Stenger and Smith, 1985). Older adults, in particular, benefit from regular exercise because regular exercise slows deterioration of fitness that occurs with aging and inactivity (Serfass, 1981). Ballroom dance is a good physical and recreational activity for older adults because it can be "conducted with little equipment in a limited facility" (Lopez, 1998). Social Dance posses little health risks and works out the whole body.

Moreover, the senior population is a perfect group of people to promote ballroom dancing. Since population of this age group is "retired", it often means that they have time to support and participate in any performances. Also, an added benefit to exposing new people to dance is the chance of creating a larger audience for the art of dance. The older adult age group that is incredibly appreciative of what a good teacher gives them and becomes extremely loyal (McAdam, 1988). This is because older adults have

been through all walks of life and is very appreciative of everything around them. They understand that simple things are equally complicated to create than those that are difficult. Dance teachers find the older adult age group to be more stable. They are less likely to miss classes or practices and are more respectful of the knowledge and techniques that they learn. Therefore, whether it is for recreational or for fitness, ballroom dance is no doubt one of the perfect activities for senior adults, and it is important that we find out how to lure lonely seniors to participate in dance and how to keep those who are already dancing happy in dancing.

The Sport Commitment Model

The Beginning of the Sport Commitment Model

The original Sports Commitment Model (SCM) was developed by Scanlan and Simons in 1992 which was constructed based on a larger model of sports enjoyment and motivation. Prior to the formation of the Sport Commitment Model, ideas such as enjoyment, or fun was found to be a primary participation motive in diverse athletic samples ranging in age, ethnicity, gender, and sport type as cited in Casper & Andrew, 2008. Scanlan and her colleagues chose to construct the sports commitment model because it contrast to other approaches to persistence (e.g., Fishbein & Ajzen, 1980), they thought that the sport commitment model would provide a more comprehensive and relevant view of behavior and its psychological state. Other scholars such as Schmidt and Stein (1991) have also discussed sport commitment in context of the relationship between sport enjoyment, dropout, and burnout. Schmidt & Stein took Kelley's (1983) model of love and commitment in close relationships and applied into sport psychology. Schmidt & Stein proposed that athletes who remained in sport for a long time may do so for two reasons. First, they may stay for reasons primarily for enjoyment which requires lower costs, increasing satisfaction, lower alternatives, and increasing investments. The second type of person will stay in a sport for reasons unrelated to enjoyment, but these athletes are especially vulnerable to "burnout". (Schmidt & Stein, 1991). It is interesting to see how Schmidt and Stein transfer Kelley's idea of commitment in a love relationship into commitment in sport which undoubtly opened a new era of research in this field in the late 20th century and early part of 21st century.

Individuals who are attracted to sport activities enjoy their participation and experience high rewards. And because they enjoy sport, it is likely that they will invest substantial time and energy into their sport participation and feel that sport is more attractive than other normal activities (Raedeke, 1997). For seniors who are beginning

to feel lonely, it is imperative that they find an activity such as ballroom dancing to spend their past time. If seniors can find ballroom dancing attractive and fun, they will be more committed and will attract more friends to join in the fun.

The Determinants of the Sport Commitment Model

The original version of the Sport Commitment Model consisted of five determinants that can increase or decrease sport commitment: sport commitment, sport enjoyment, involvement alternatives, personal investments, social constraints, and involvement opportunities (Scanlan, Carpenter, Schmidt, et al., 1993). Each of the determinants is described below.

Sport *Commitment*. It is defined by Scanlan as a "general psychological state, as a specific intention, and as a specific behavior" (Scanlan, Carpenter, Schmidt, et al., 1993). Scanlan's colleague refined the definition of sport commitment as "a psychological construct reflecting the desire and resolve to continue playing," is a function of enjoyment, investments, alternatives, social constraints, and involvement opportunities. (Carpenter, 1995). According to Scanlan and colleagues, an individual can be committed for two major reasons; one is that they "want to" and another is because they "have to". Individuals are often bombarded with social pressures of constraints that might lead to burnouts or dropouts in sports. In the present study, commitment will be assessed in a particular sport: ballroom dancing. The commitment aspect represents the participants' psychological state of attachment to ballroom dancing participation.

According to Scanlan and her colleagues, they expanded sport commitment in to five more specific antecedent variables which included sport enjoyment, involvement alternatives, personal investments, social constraints, and involvement opportunities.

Sport Enjoyment. Scanlan and her colleagues chose enjoyment has one of the main antecedents because they believed that enjoyment is a major attraction variable for athletes and it is a "positive affective response to the sport experience that reflects

generalized feelings such as pleasure, liking, and fun" (Scanlan & Simons, 1992, p, 201). Also in further study with rugby athletes show "enjoyment" as the basic ingredient in sport participation (Scanlan, Russell & Scanlan, 2003). In summary, it is safe to assume that if we can keep the "fun" and "enjoyment" in ballroom dancing participation, it will greatly improve the retention rate of participants in this sport activity.

Involvement Alternatives. The original idea of involvement alternatives was found in love commitment relationships (Kelley, 1983). In relationships it is often better to be loyal and commitment to one person, therefore, other alternative persons would seem unlikely in a committed love relationship. In sports, however, Alternatives refers to the opportunities to engage in another activity instead of participating in the current sport (Scanlan, Carpenter, Schmidt, et al., 1993, p. 7).

The involvement alternative reflects the desirability of other opportunities. Having other more attractive alternatives predicts lower sport commitment. In the case of older adult dance participants, we wish to find out if there are many other "alternatives" sport activities that participants would rather do than ballroom dancing to help us understand just how attractive or how unattractive ballroom dancing is to participants.

Personal Investments. Personal investments are defined as "personal resources that are put into an activity which cannot be recovered if participation is discontinued, and it often relates to time, effort, and money (Scanlan, Carpenter, Schmidt, et al., 1993, p. 7). Investments are considered as one of the main aspect of involvement in any sport activity and since these investments cannot be retrieved even if participant decided to terminate their participation, people become more psychologically and physically attached as they increase the amounts of resources which they allocate to their participation. Some sport activities require very little investment, (e.g. running, swimming, soccer etc…) but other sports such as gymnastics, figure skating and ballroom dancing require substantial financial demands on participants.

Social Constraints. Social Constraints are defined as "social expectations or norms which create feeling of obligation to the activity (Scanlan, Carpenter, Schmidt, et al., 1993, p. 7). This means that as participants spent more time and investments on their sport activity, they will have more pressure to continue as they are perceived by others, and this as a result, will further increase his or her commitment to the sport (Scanlan, Carpenter, Schmidt, et al., 1993). This could also mean for the older adult dance participants in ballroom dancing. As they are perceived by others as part of the group, it is hard for participants to drop out of ballroom dancing.

Involvement Opportunities. Involvement Opportunities is the final antecedent variable in the sport commitment model, which is defined as "valued opportunities that are present only through continue involvement" (Scanlan, Carpenter, Schmidt, et al., 1993, p. 8). This construct focuses on the "anticipation" of events or experiences rather than requiring that any particular opportunity has been realized. For example, participants might feel that he or she would miss out on an anticipated good times if she left. It is predicted that higher ratings of involvement opportunities will be related to greater sport commitment (Scanlan, Carpenter, Schmidt, et al., 1993). It will be interesting to find out how this antecedent would fair on older adult population of ballroom dance participants.

Though Scanlan and her colleagues mentioned "social support" in the article, but this was not fully discussed in her context. It was left out in the open for exploration. In 2003, Scanlan and her colleagues did another case study with juvenile rugby players in New Zealand which included "social support". In 2004, Wilson et al., created a more complete version of the sport commitment model in which models and questionnaire provided became widely use by scholars in Taiwan from 2004 onwards. In the next section, we will see how the sport commitment model has transformed since 1993 and how it has affected scholars in Taiwan.

Modification of the Sports Commitment Model

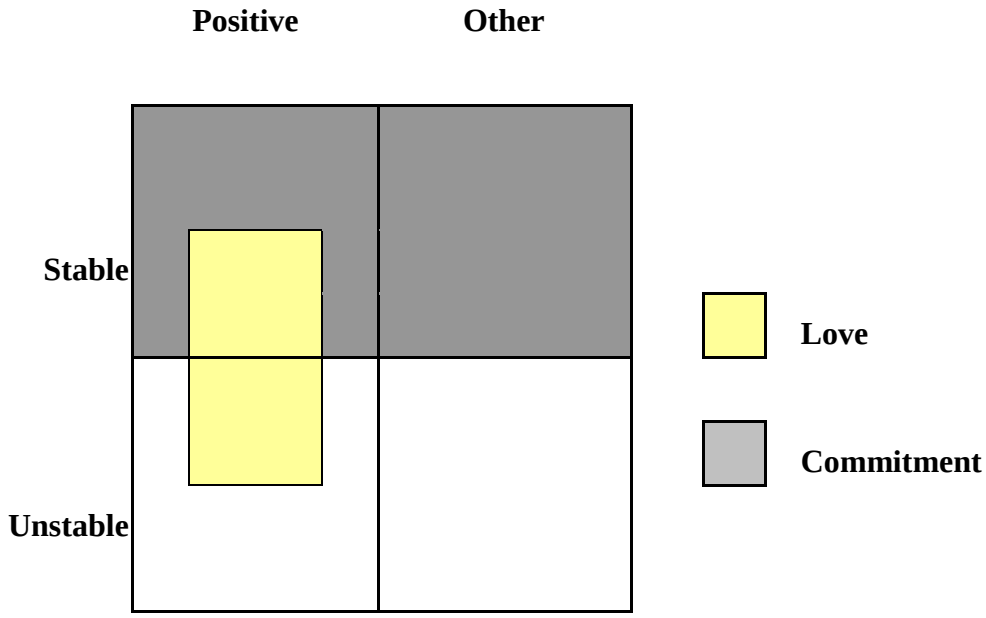


Figure 2-1. Kelley's (1983) Model of Love and commitment in close relationships. Kelley, H. H. (1983). Love and Commitment. In H. H. Kelley, E. Berscheid, A. Christensen, J. H. Harvey, T.L. Huston, G. Levinger, E. Mc Clintock, L. A. Peplua, & D. R. Petersen (Eds.), *Close Relationship*, 256-314.

The original commitment model was not for sport. It was a model of love and commitment (Kelley, 1983) in close relationships. However, the discovery of this model served as one of the foundations for the sport commitment model. Kelley argued that models of commitment need to distinguish between positive pulls (e.g., attraction) and nonpositive pushes (e.g., lack of acceptable alternatives) that hold people in romantic relationships (Casper, 2008; Schmidt & Stein, 1991). As shown in figure 2-1., love is constantly maintaining a balance between "stable" and "unstable", and commitment will only occur when the mutual feelings in couples are positive.

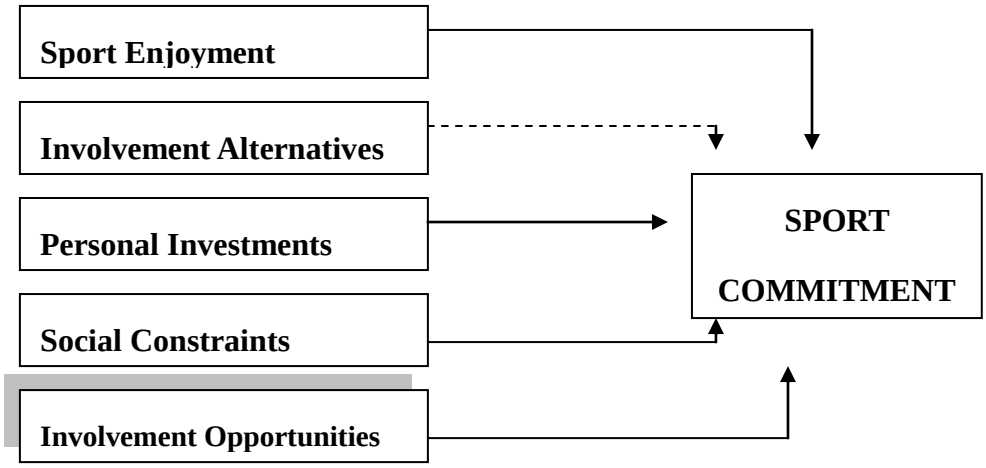


Figure 2-2. "An introduction to the sport commitment model." Scanlan, T. K., Carpenter, P. J., Schmidt, G. W., Simons, J. P., & Keeler, B. 1993. *Journal of Sport & Exercise Psychology, 15,* 1-15.

This was the original sport commitment model by Scanlan and her team. There were five determinants with which "involvement opportunities" was highlighted because some future scholars have dismissed this variable in their studies. Only four of the variables were included in past sport commitment models: sport enjoyment, involvement alternatives, personal investments, and social constrains.

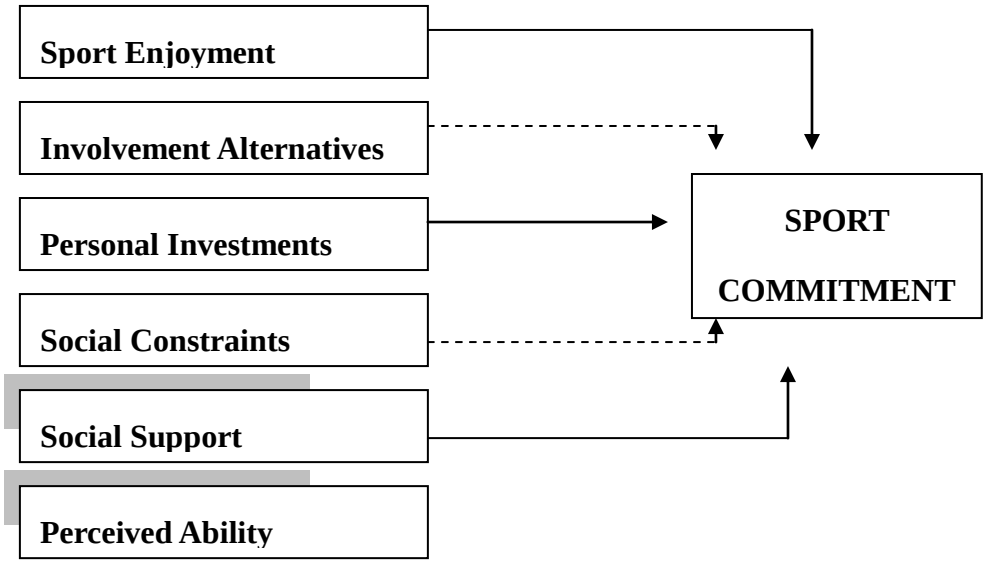


Figure 2-3a. Original Sports Commitment Model among Junior Tennis Players. (Dotted line means negative influence on Sports Commitment)
"Determinants of sport commitment among junior tennis players: Enjoyment as a mediating variable." Weiss, W. R., Kimmel, L. A., 2001. *Pediatric Exercise Science, 13,* 131-144.

Weiss added "social support" and "perceived ability" to the SCM equation because he was interested to find out the perceived ability of junior tennis players themselves and by others.

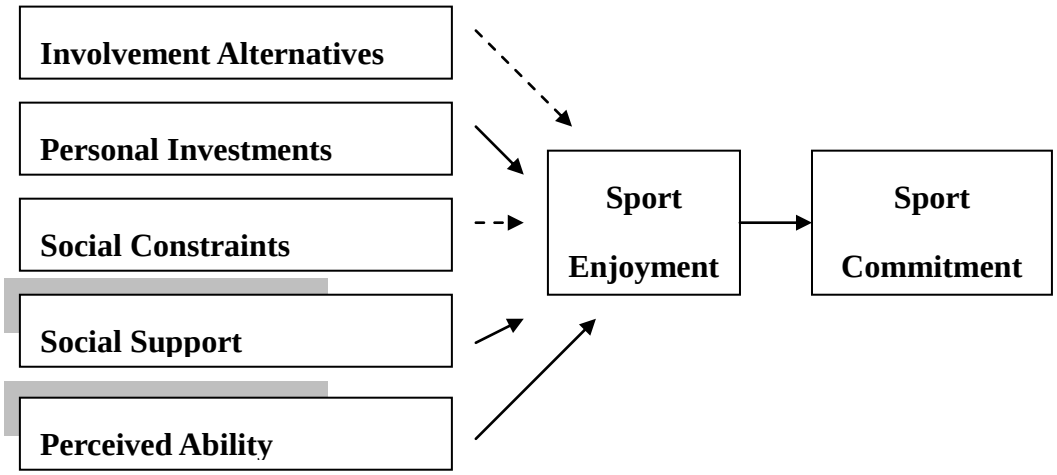


Figure 2-3b. Original Sport Commitment Model among junior tennis players with Enjoyment as a mediating variable. (Dotted line means negative influence on Sports Commitment)

"Determinants of sport commitment among junior tennis players: Enjoyment as a mediating variable." Weiss, W. R., Kimmel, L. A., 2001. *Pediatric Exercise Science, 13*, 131-144.

Figure 2-3a is the combination of original sport commitment model and Weiss' intermediary model in which, "involvement opportunity" of the original model has been replaced by "perceived ability" and "social support". In his research, Weiss discovered that peers can influence the sport commitment of junior tennis players which then results in "sport enjoyment" and henceforth resulted in significant commitment of junior tennis players. Figure 2-3a is the original sport commitment model and Weiss created another intermediary model (figure 2-3b) in which, "involvement opportunity" of the original model has been replaced by "perceived ability" and "social support"; and "sport enjoyment" became the result of the antecedents' variables.

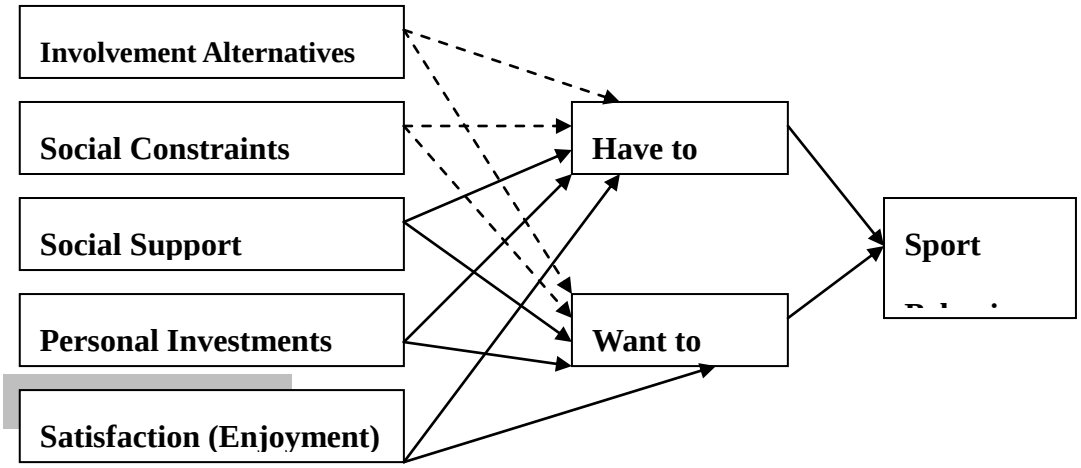


Figure 2-4. Involvement Opportunities from the original sport commitment model of 1993 is missing from this model. (Dotted line means negative influence on Sports Commitment)

"The relationship between commitment and exercise behavior." Wilson, P.M., Rodgers, W. M., Carpenter, P. J., Hall, C., Hardy, J., & Fraser, S. N., 2004. *Psychology of Sport and Exercise, 5*, 405-421.

To Wilson and his partners, "sport enjoyment" is replaced by "satisfaction" and the variables of sports commitment resulted in "have to" and "want to" behavior. Wilson and his partners were merely interested to see if they could add "behavior" into the equation; it helped them to predict the sport commitment outcome. Wilson found significance in social variables of the sport commitment model that results in behaviors that are later categorized as "have to" and "want to". Exercise behaviors were not always positively related to enjoyment. Sometimes, social constrains and peer pressure can also result in behaviors that are not intrinsic in nature, but extrinsic in action.

Application of the sport commitment results

Since Scanlan and her colleagues devised the sport commitment model in 1991, many scholars in the west had follow suit and improvised around the original model. In Taiwan, this model was still dormant. In 2005, Jian and Ji, were the first ones who did a full comprehensive research using the 2004 version of the Sport Commitment Model to analyze people's commitment level to fitness centers in different cities in Taiwan. In 2008, Hsu, and Liao also used the Sport Commitment Model to find out the burn out rate on Taiwan elite athletes. From researches that derived from the Sport Commitment Model, we found that there are a few similarities in Taiwan scholars. Most Taiwan scholars conducted their research using SCM with elite athletes and a few added determinates such as behavior and psychological aspects of the participants (Ma & Wang, 2005, 2008; He & Lin, 2009; Hsieh & Chen, 2008; Lin & Liao, 2008; Hsu & Liao, 2008; Lin & Chen, 2007) . Many of the research focused on fitness centers and customer loyalty and identification toward continuing membership in certain fitness center or certain sports (Jian & Ji, 2005; He & Lin, 2009; Dai & Huang 2005). Up to the present, none of the research use elderly adults as their research subjects in context of ballroom dance in particular as a sport or a recreational activity.

Although many scholars have duplicate and modified the original Sport Commitment model over the years, but mostly concentrated on elite athletes, youth athletes and membership loyalty for fitness centers. Thus far, we have not seen any researches done on elders as the main subject using the SCM, it should be interesting to see the result of the SCM when applied to the elderly population.

CHAPTER III

METHODOLOGY

A discussion of the methodology used in the present study is organized into four sections: 1) sample, 2) instrumentation, 3) data collection, and 4) statistical techniques and data analysis. The section on the sample covers information on the population, sample size, and selection of the participants. Instrumentation includes detail questions for all the SCM determinants: sport commitment, sport enjoyment, involvement opportunities, personal investments, social constraints, involvement opportunities, and social support. Descriptive analysis, *t*-test, one-way ANOVA, and regressions were performed to answer the formulated research questions.

Framework

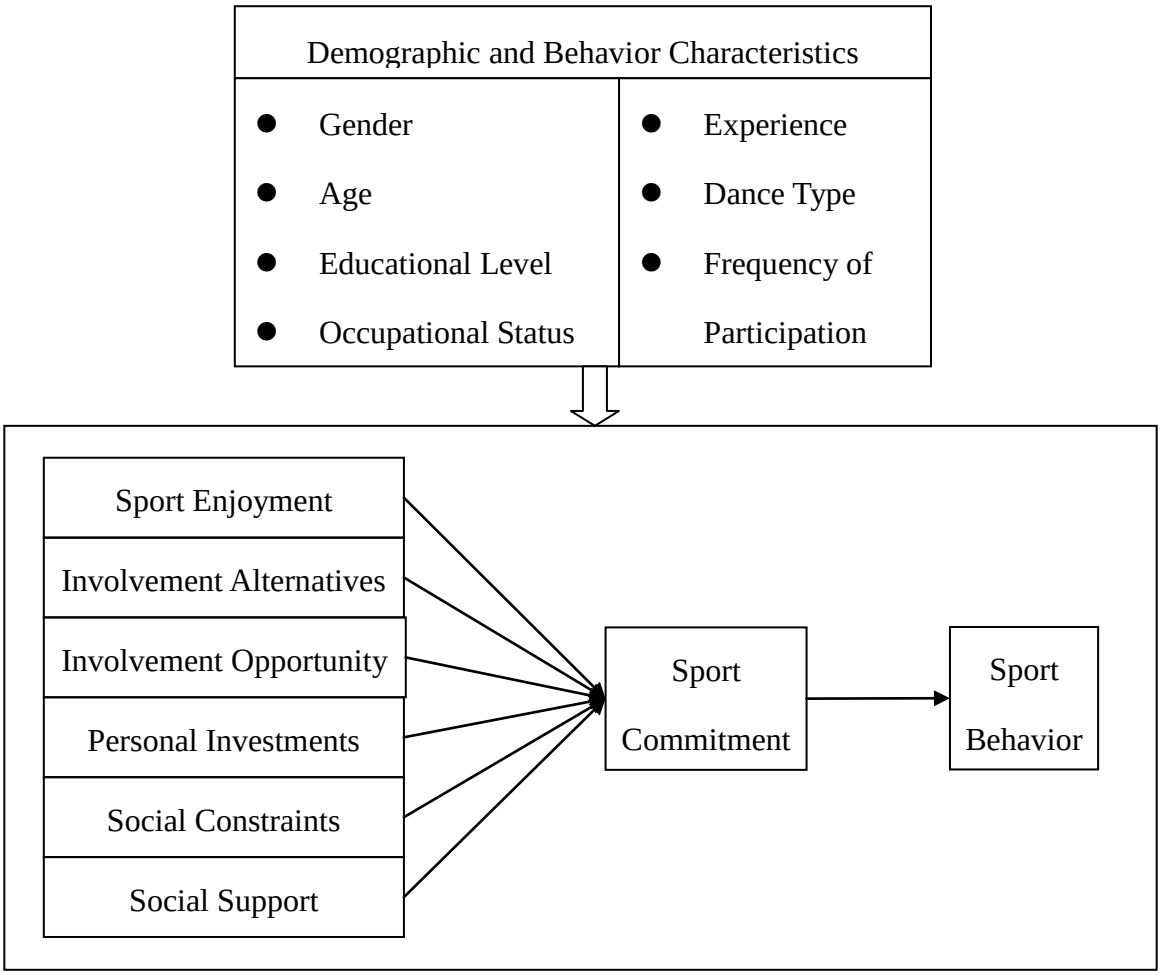


Figure 3-1. Research Framework.

In the first part, a sport commitment questionnaire for adult ballroom dancers was derived using a combination of Wilson's "Exercise Commitment Scale, ECS" (Wilson et. al., 2004) and He's "Sport Commitment Questionnaire for Elite Volleyball Players" (He, 2009). The population of the study was changed from elite volleyball players to elderly adult ballroom dancers, and volleyball was changed to ballroom dance. The questionnaire included questions which pertained to the seven variables of sport commitment: sport commitment, sport enjoyment, involvement opportunities,

involvement alternatives, social constrains, personal investment, and social support.

In the second section, questionnaires were distributed to elderly ballroom dancers in dance studios and dance halls in Taichung, Taiwan. Also, basic demographic questions were asked to find out the different background information of the participants. The aim was to find out if there was any relationship between elderly adults from different backgrounds in their sport commitment to ballroom dance.

Sample

Population

This study focuses on the sport commitment to ballroom dance for elderly adults age 55 and over in the center (Taichung) of Taiwan. Adults over the age of 55 are categorized in the elderly category (Ensign, 1998).

Sampling Techniques

The sampling method involved two stages. The first stage involved identifying the target subjects. This was done by going to dance studios, dance ballrooms, municipal parks, competition venues as well as fitness centers with ballroom dance programs during off work hours. The researchers presumed that during working office hours, the dancers in the above mentioned places consisted of people over the age of 55. The second stage of sampling, researcher and volunteers were required to identify elderly adults by the appearance and physique of individual and distributed the questionnaire to the targets. However, because these target subjects were over the age of 55, reading assistances were required to help them to complete the questionnaires.

Instrumentation

Questionnaires consisted of forty-one questions which included six variables of the sport commitment model. First part consists of basic background information of the respondents which includes gender, age, education level, occupation status, monthly income, experience level, frequency of participation as well as type of ballroom dance that they normally participate in. The second part used the original sport commitment scale that has already been modified (Scanlan et. al, 1991, 1993, 2003; Wilson et al., 2004) in conjunction with a version created by He in 2009 in his study on elite volleyball players. Only the sport "volleyball" has been changed to "ballroom dance" in context of this current study. The questions were in Chinese with each of the sport commitment determinants clearly listed. The questions consisted of the seven determinant sub scales which included sport commitment (10 questions), sport enjoyment (3 questions), involvement alternatives (4 questions), personal investment (2 questions), social constraints (7 questions), involvement opportunity (7 questions), and social support (8 questions). Respondents were requested to complete the questionnaire on a 4-point rating scale with strongly disagree, disagree, agree, and strongly agree (see Appendix A). Since this study focused on the sport commitment of ballroom dance for elderly adults age 55 and over (Ensign, 1998), only adults over the age of 55 were used in the data analysis.

Content Validity

Upon combining Wilson's "Exercise Commitment Scale, ECS" (Wilson et. al., 2004) and He's "Sport Commitment Questionnaire for Elite Volleyball Players" (He, 2009), the researcher had requested expert help from her professor and other sources of professional help to revise the questionnaire and give favorable suggestions. The experts included, Chien-Hsin Wang and Ya-Jo Lo from the National Taiwan College of Physical Education, and Li-Wen Hsieh from National Taipei University.

Data Collection

A total of 180 questionnaires were distributed to elderly ballroom dance participants. There were 173 questionnaires in return. However, 23 questionnaires were voided because respondents were under the age of 55. The effective response rate was 83%.

Data Analysis

This study uses SPSS for Window 12.0 software for statistical analysis. The data analysis was conducted in three steps. Step one includes descriptive analysis of the demographic variables. Step two uses *t*-test and one-way ANOVA to see if there is any significance between the demographic characteristics of participants and the sport commitment determinants, sport commitment, and sport behavior. Step three uses regression analysis to find out the relationship between sport commitment determinants, level of sport commitment and sport behavior.

Descriptive Analysis

Descriptive analysis (mean, frequency and percentage) was used to analyze the demographic characteristics which include gender, age, education level, occupational status, dance experience, types of social dance, and participation frequency per week.

t-test *and one-way ANOVA*

t-test was done to see if there was a difference between genders of participants to Sport Commitment Model variables. One-way ANOVA was done to see if there were any differences between the demographic characteristics of participants and Sport Commitment Model variables. Scheffé post-hoc analysis was used to examine the source of the differences within the demographic sub-groups.

Multiple Regression and Bivariate Regression

Multiple regression was performed to find out the differences between sport commitment determinants and sport commitment of elderly ballroom dancers. Bivariate regression was performed to see if there was any relationship between overall sport commitment and sport behavior of elderly ballroom dancers.

Chapter IV

RESULTS

This chapter presents the results of the analysis of data on sport commitment of elderly ballroom dancers. The first section presents the demographic information of the participants. Then, Cronbach's alphas are presented to show the sib-scale reliabilities of the participants on the Exercise Commitment Scale. Independent t-tests were implemented to test for gender differences based on the six determinants of sport commitment (sport commitment, sport enjoyment, personal investments, social constraints, involvement opportunities, and social support). Next, 7 Analysis of Variances, ANOVA were performed to determine whether the participants with different age, income, education level, occupational status, years of participation, and type of dances differed on the six SCM determinants (sport enjoyment, involvement opportunities, social support, social constrains, personal investment and involvement alternatives). Scheffé post hoc comparisons among the means were utilized to further investigate where the differences were indicated. A multiple regression with sport commitment as the dependent variable and sport enjoyment, involvement alternatives, social constraints, social support, personal investment, and satisfaction as the independent variables. Lastly, a bivariate regression was performed to see if there was any significance between sport commitment and sport behavior. Data analysis were done using SPSS 16.0 for Windows and the significance level was set at α=.05.

Descriptive Analysis

The demographic data of this study consists of 9 items. There are gender, age, income, education level, occupational status, years of participation, type of dances and time spent per week in ballroom dancing.

Gender

Females accounted for the majority of the sample with 64.7% (n=97) of the total. This could be that most men retire at a later age than women, and that women enjoy ballroom dancing more than men.

Table 4-1. Demographic and behavior analysis

Demographic characteristics	Frequency	Percentage (%)
Gender		
Male	53	35.3
Female	97	64.7
Age		
Under 54 years old	7	4.7
55-60 years old	114	76.0
61-65 years old	17	11.3
66-70 years old	5	3.3
Above 71 years old	7	4.7
Educational level		
Doctorate degree	6	4.0
Master degree	52	34.7
University degree	26	17.3
College degree	61	40.7
High school or institution	5	3.3
Monthly income		
Under NTD10, 000	16	10.7
NTD10, 001- 30, 000	28	18.7
NTD30, 001- 50, 000	42	28.0
NTD50, 001- 70, 000	31	20.7
Above NTD70, 001	33	22.0

Occupational status		
Currently working	85	56.7
Retired	30	20.0
House Keeping	31	20.7
Others	4	2.7
Years of participation		
Below 1 year	10	6.7
1-3 years	31	20.7
3-5 years	30	20.0
6-10 years	44	29.3
11-15 years	15	10.0
Above 15 years	20	13.3
Type of dances		
Modern dance	38	25.3
Latin dance	35	23.3
Both modern and latin dances	77	51.3
Hours of participation per week		
Under 2 hours	10	6.7
2-3 hours	21	14.0
4-5 hours	39	26.0
6-10 hours	41	27.3
Above 10 hours	39	26.0

Age

The 55 to 60 years old individuals accounted was the majority with 114 or 76% of the sample. (See table 4-1) This implied that although ballroom dancing is an activity that can be participated at different age levels, majority of the participants still rest at 55 to 60 years old. As people get older even ballroom dancing can be a difficult activity to participate in.

Education level

From the results of educational level, it is clear that ballroom dancing is an activity for the well educated population. A total of 96.7% of the participants acquired an educational level above college. This could mean that ballroom dancing as an activity is particularly attractive to well educated elderly population.

Monthly income

Monthly income showed that majority of the elderly ballroom dancing participants have a monthly income between NTD 30, 001 to NTD 50, 000 with 42 participants or 28% of the sample. It's also interesting to note that 44% or 64 participants have a monthly income above NTD 50, 001. Based on the current figure from the Executive Yuan, the average monthly income in Taiwan is only NTD34, 162 for men and NTD27, 387 for women for general service jobs (Executive Yuan, 2011). This clearly indicated that elderly ballroom dancing participants are better well-off economically than the average people.

Occupational status

Even though adults over the age of 55 are categorized in the elderly category (Ensign, 1998), elderly adults that are currently in the working accounted for 56.7% (n=85) of the population sample. House keeping also accounted for 20.7% (n=31) of the population sample suggesting that many elderly ballroom dance participants were house keeping but have the financial means to participate in ballroom dancing.

Years of participation

Number of years of participation in ballroom dancing is important to know as researcher can understand the sport commitment of elderly ballroom dance participants through knowing how long the participant have been involved in ballroom dancing. Results showed that only 6.7% (n=10) of participants have been involved for less than a year. Majority of the participants have been involved in ballroom dancing for more than 6 to 10 years at 29.3% (n=44).

Participation types (dance types)

Modern dance is a moderate type of ballroom dancing and latin dance is a type of ballroom dance. Results suggests that between the two dance types, modern dance was favored at 25.3% (n=38). Nevertheless, it was interesting to note that majority of the sample 51.3% or 77 participants do both modern and latin dances.

Hours of participation per week

This criterion is particularly important as it indicated the behavior of the elderly ballroom dance participants. Only 6.7% (n=10) participants dance for under 2 hours per week. Majority of the participants dance for more than 6 to 10 hours per week suggesting that majority were very committed to ballroom dancing.

Validity and Reliability Analysis

Exploratory factor analysis. Exploratory factor analysis is employed to examine the factorial validity of the SCM determinant scales as constructed by Wilson's "Exercise Commitment Scale, ECS" (Wilson et. al., 2004) and He's "Sport Commitment Questionnaire for Elite Volleyball Players" (He, 2009). One factor identification extraction criterion was used to examine the factor structure of each SCM scale. The results revealed that the salience eigenvalue of each scale were larger than 1 and, notably, the cumulative variance of explanation was greater than 50% which suggested that the SCM scales demonstrated sound factorial validity.

Internal consistency. Internal consistency is a way to estimate test score reliability while the individual items of the test are examined. A scale is internally consistent if the items are highly intercorrelated. There are several methods that can be employed to estimate a scale's internal consistency. Cronbach's coefficient alpha is often used as a measure of internal consistency which can be utilized when items on a scale are scored dichotomously, ordinally, or continuously. The internal consistency of each SCM determinants was assessed through the estimation of Cronbach's alpha. In accordance with the "coefficient alpha equal to or greater than .70" criterion (Nunnally, 1978), the internal consistency was acceptable for all SCM determinants, having Cronbach's alphas of .88 (sport commitment), .87 (sport enjoyment), .81 (involvement alternatives), .83 (personal investment), .86 (social constraints), .87 (involvement opportunities), and .88 (social support). The finalized SCM determinants were comprised of seven factors with a total of forty-one items.

Table. 4-2. Factor Analysis and Internal Consistency Analysis of Each SCM Determinant Scales

Sport Commitment

Factor	Items	Factor loadings	Item-total correlations	Cronbach's alpha
Sport Commitment	6	.79	.73	.88
	5	.77	.65	
	8	.71	.68	
	9	.71	.68	
	7	.70	.66	
	1	.69	.56	
	2	.67	.53	
	3	.67	.51	
	10	.66	.64	
	4	.66	.51	
Eigenvalue		4.95		
Cumulative (%)		50.00		

Sport Enjoyment

Factor	Items	Factor loadings	Item-total correlations	Cronbach's alpha
Sport Enjoyment	1	.90	.76	.87
	3	.90	.76	
	2	.89	.75	
Eigenvalue		2.40		
Cumulative (%)		79.92		

Involvement Alternative

Factor	Items	Factor loadings	Item-total correlations	Cronbach's alpha
Involvement Alternative	2	.88	.74	.81
	4	.84	.65	
	3	.82	.67	
	1	.67	.48	
Eigenvalue		2.58		
Cumulative (%)		64.47		

Personal Investment

Factor	Items	Factor loadings	Item-total correlations	Cronbach's alpha
Personal Investment	1	.92	.70	.83
	2	.92	.70	
Eigenvalue		1.70		
Cumulative (%)		85.21		

Social Constraints

Factor	Items	Factor loadings	Item-total correlations	Cronbach's alpha
Social Constraints	2	.85	.75	.86
	4	.78	.68	
	3	.77	.67	
	1	.72	.58	
	7	.70	.60	
	6	.70	.56	
	5	.63	.53	
Eigenvalue		3.81		
Cumulative (%)		54.44		

Involvement Opportunity

Factor	Items	Factor loadings	Item-total correlations	Cronbach's alpha
Involvement Opportunity	1	.87	.77	.87
	2	.86	.76	
	6	.79	.69	
	5	.78	.68	
	7	.75	.65	
	4	.72	.61	
	3	.54	.45	
Eigenvalue		4.11		
Cumulative (%)		58.76		

Social Support

Factor	Items	Factor loadings	Item-total correlations	Cronbach's alpha
Social Support	1	.83	.74	.88
	4	.82	.74	
	3	.78	.69	
	2	.76	.65	
	7	.74	.66	
	5	.73	.62	
	8	.68	.59	
	6	.57	.49	
Eigenvalue		4.42		
Cumulative (%)		55.31		

t-test and one-way ANOVA

This section will help us answer the following research questions:

Research Question 1: Do different demographic characteristics result in different dance participation patterns?

Research Question 2: Do different demographic variables result in different participation frequency and intension?

Research Question 3: What are the differences between the demographic variables and behavior in ballroom dancing?

Gender

t-test for gender indicated that there was no significance with over all sport commitment and sport commitment determinants.

SCM (Determinants analysis)

Table 4-3. Subscale Responses and Independent *t*-test for Gender Differences

Outcome Variables	Mean Score			
	Male	Female	*t*	*p*
Sport Commitment	3.04	3.00	.50	.62
Sport Enjoyment	3.29	3.41	-1.47	.15
Involvement Alternative	2.46	2.30	1.73	.09
Personal Investment	3.01	3.02	-.10	.92
Social Constraint	2.39	2.2	1.47	.14
Social Support	3.00	3.00	-.06	.95
Involvement Opportunity	3.13	3.16	-.28	.78

*$p < .05$, **$p < .01$.

Age

There were no significances with age and sport commitment as well as 6 determinants of sport commitment. This suggested that age is not a factor to influence sport commitment in elderly ballroom dancers.

Table 4-4. ANOVA (Independent variable: Age)

		SS	*df*	MS	*F*	*p*
Sport Commitment	Between	.48	4	.12	.50	.74
	Within	34.55	145	.24		
	Total	35.02	149			
Sport Enjoyment	Between	1.52	4	.38	1.59	.18
	Within	34.73	145	.24		
	Total	36.26	149			
Involvement Alternatives	Between	1.28	4	.32	1.04	.39
	Within	44.77	145	.31		
	Total	46.04	149			
Personal Investment	Between	2.34	4	.59	1.36	.25
	Within	62.37	145	.43		
	Total	64.71	149			
Social Constraint	Between	.45	4	.11	.42	.79
	Within	38.33	145	.26		
	Total	38.77	149			
Social Support	Between	.94	4	.24	1.03	.39
	Within	33.01	145	.22		
	Total	34.03	149			
Involvement Opportunity	Between	.90	4	.22	.99	.42
	Within	32.83	145	.23		
	Total	33.73	149			

*$p < .05$, **$p < .01$.

Income

There were no significances with income and sport commitment as well as 6 determinants of sport commitment. This suggested that income is not a factor to influence sport commitment in elderly ballroom dancers.

Table 4-5. ANOVA (Independent variable: Income)

		SS	*df*	MS	*F*	*p*
Sport Commitment	Between	1.26	4	.32	1.36	.25
	Within	33.76	145	.23		
	Total	35.02	149			
Sport Enjoyment	Between	.57	4	.14	.58	.68
	Within	35.69	145	.25		
	Total	36.26	149			
Involvement Alternatives	Between	1.27	4	.32	1.03	.40
	Within	44.77	145	.31		
	Total	46.04	149			
Personal Investment	Between	3.87	4	.97	2.31	.06
	Within	60.85	145	.42		
	Total	64.71	149			
Social Constraint	Between	.31	4	.08	.29	.88
	Within	38.46	145	.27		
	Total	38.77	149			
Social Support	Between	1.38	4	.35	1.54	.20
	Within	32.65	145	.23		
	Total	34.03	149			
Involvement Opportunities	Between	1.49	4	.37	1.68	.16
	Within	32.24	145	.22		
	Total	33.73	149			

*$p < .05$, **$p < .01$.

Education Level

Results using ANOVA indicate that the effect of education level was only significant on social constraints. Scheffé post hoc analysis reveals that those participants with only high school degree have more social constraint than those participants with graduate or master degree. This suggests that social constraint was a factor that hinders dance sport participation.

Table 4-6. ANOVA (Independent variable: Education Level)

		SS	*df*	MS	*F*	*p*	Post-hoc
Sport	Between	.80	4	.20	.85	.50	
Commitment	Within	34.22	145	.24			
	Total	35.02	149				
Sport	Between	2.55	4	.64	2.74*	.03	
Enjoyment	Within	33.71	145	.23			
	Total	36.26	149				
Involvement	Between	.70	4	.18	.56	.69	
Alternative	Within	45.34	145	.31			
	Total	46.04	149				
Personal	Between	.81	4	.20	.46	.77	
Investment	Within	63.90	145	.44			
	Total	64.71	149				
Social	Between	3.86	4	.96	4.00**	.01	5>2
Constraint	Within	34.92	145	.24			
	Total	38.77	149				
Social Support	Between	.35	4	.088	.38	.83	
	Within	33.68	145	.23			
	Total	34.03	149				
Involvement	Between	.73	4	.18	.80	.53	
Opportunity	Within	33.00	145	.29			
	Total	33.73	149				

Note. 1= Doctorate; 2 = Master; 3 = University; 4 = College; 5 = High School.

*$p < .05$, **$p < .01$.

Occupational Status

There were no significances with occupational status and sport commitment as well as 6 determinants of sport commitment. This suggested that occupational status is not a factor to influence sport commitment in elderly ballroom dancers.

Table 4-7. ANOVA (Independent variable: Occupational Status)

		SS	*df*	MS	*F*	*p*
Sport Commitment	Between	.24	3	.08	.34	.80
	Within	34.78	146	.24		
	Total	35.02	149			
Sport Enjoyment	Between	.09	3	.03	.12	.95
	Within	36.17	146	.25		
	Total	36.26	149			
Involvement	Between	1.26	3	.42	1.37	.25
Alternative	Within	44.79	146	.31		
	Total	46.04	149			
Personal Investment	Between	1.14	3	.38	.87	.46
	Within	63.57	146	.44		
	Total	64.71	149			
Social Constraint	Between	.53	3	.18	.67	.57
	Within	38.24	146	.26		
	Total	38.77	149			
Social Support	Between	.18	3	.06	.26	.86
	Within	33.85	146	.23		
	Total	34.03	149			
Involvement	Between	.16	3	.05	.24	.87
Opportunity	Within	33.57	146	.23		
	Total	33.73	149			

*$p < .05$, **$p < .01$.

Type of Dances

For type of dances there were one significant SCM determinants: personal investment. Scheffé post hoc analysis reveals that elderly participants who put in more personal investment are those who participate in both latin and modern dances; especially those who participate in both type of dances have more personal investment than those who only participate in latin dance.

Table 4-8. ANOVA (Independent variable: Type of Dances)

		SS	*df*	MS	*F*	*p*	Post-hoc
Sport	Between	.25	2	.13	.54	.59	
Commitment	Within	34.77	147	.24			
	Total	35.02	149				
Sport Enjoyment	Between	.07	2	.04	.15	.87	
	Within	36.18	147	.25			
	Total	36.26	149				
Involvement	Between	.28	2	.14	.45	.64	
Alternative	Within	45.77	147	.31			
	Total	46.04	149				
Personal	Between	2.82	2	1.41	3.35	.06	3>2
Investment	Within	61.89	147	.42			
	Total	64.71	149				
Social Constraint	Between	.68	2	.34	1.31	.27	
	Within	38.09	147	.26			
	Total	38.77	149				
Social Support	Between	.58	2	.29	1.28	.28	
	Within	33.45	147	.23			
	Total	34.03	149				
Involvement	Between	.26	2	.13	.58	.56	
Opportunity	Within	33.46	147	.23			
	Total	33.73	149				

Note. 1= modern dance; 2 = latin dance; 3 = modern and latin.

*$p < .05$, **$p < .01$.

Years of Participation

For the years of participation, there was one significant SCM determinants: personal investments. Scheffé post hoc analysis revealed that elderly participants with different years of participation differed on personal investment. Those participants who participated for over 15 years clearly show to have more personal investments put into dance than those who have participated for under 1 year and between 1 to 3 years.

Table 4-9. ANOVA (Independent variable: Years of Participation)

		SS	*df*	MS	*F*	*p*	Post-hoc
Sport Commitment	Between	3.10	5	.62	2.80	.02	
	Within	31.92	144	.22			
	Total	35.02	149				
Sport Enjoyment	Between	2.94	5	.59	2.54	.03	
	Within	33.31	144	.23			
	Total	36.26	149				
Involvement	Between	.85	5	.17	.54	.75	
Alternative	Within	45.20	144	.31			
	Total	46.04	149				
Personal Investment	Between	7.53	5	1.51	3.79**	.01	6>1;
	Within	57.18	144	.40			6>2
	Total	64.71	149				
Social Constraint	Between	.40	5	.08	.30	.91	
	Within	38.37	144	.27			
	Total	38.77	149				
Social Support	Between	1.86	5	.37	1.67	.15	
	Within	32.17	144	.22			
	Total	34.03	149				
Involvement	Between	4.28	5	.86	4.19	.01	
Opportunity	Within	29.44	144	.20			
	Total	33.73	149				

Note. 1= under 1 yr; 2 = 1-3 yrs; 3 = 3-5 yrs; 4 = 6-10 yrs; 5 = 11-15 yrs; 6 = 15 and up.

*$p < .05$, **$p < .01$.

Time Spent per Week

There were three significant SCM determinants for time spent per week: Sport commitment, personal investment, and involvement opportunity. Scheffé post hoc analysis revealed that participants with different levels of dance sport participation differed on Sport commitment, personal investment, and involvement opportunity. Notably, participants who spent more time per week showed to feel more accomplished than those who only dance for less than 2 hours per week.

Table 4-10. ANOVA (Independent variable: Time Spent per Week)

		SS	*df*	MS	*F*	*p*	Post-hoc
Sport	Between	3.37	4	.84	3.86**	.01	5>2
Commitment	Within	31.65	145	.22			
	Total	35.02	149				
Sport	Between	1.83	4	.46	1.93	.11	
Enjoyment	Within	34.42	145	.24			
	Total	36.26	149				
Involvement	Between	1.98	4	.50	1.63	.17	
Alternative	Within	44.06	145	.30			
	Total	46.04	149				
Personal	Between	11.08	4	2.77	7.49**	.01	5>1; 5>2;
Investment	Within	53.63	145	.37			5>3
	Total	64.71	149				
Social	Between	1.63	4	.41	1.59	.18	
Constraint	Within	37.14	145	.26			
	Total	38.77	149				
Social	Between	2.59	4	.65	2.98	.02	
Support	Within	31.44	145	.22			
	Total	34.03	149				
Involvement	Between	3.18	4	.80	3.78**	.01	5>1
Opportunity	Within	30.55	145	.21			
	Total	33.728	149				

Note. 1= under 2 h; 2 = 2-3 h; 3 = 4-5 h; 4 = 6-10 h; 5 = 10 h and up

*$p < .05$, **$p < .01$.

Multiple Regression

This section will help us answer the following research question:

Research Question 4: What is the relationship between sport commitment determinants and sport commitment of elderly ballroom dancers?

A standard multiple regression was performed between sport commitment as the dependent variable and sport enjoyment, involvement alternative, social constraint, social support, personal investments, and involvement opportunity as the independent variables. Analysis was performed using Windows 16.0 for evaluation of assumptions. Overall, the regression model is effective as F value was 29.71 which reached the .05 significance level. Altogether 56% of the variance in sport commitment was predicted by sport enjoyment, social constraints, and involvement opportunity as significant predictors of Sport Commitment. Table 4-11 displays the correlations between the variables, the unstandardized regression coefficients (B) and intercept, the standardized regression coefficients (β), and adjusted R^2. R for regression was significantly different from zero, $F(6, 143) = 29.71$, $p < .01$. Post-hoc analysis revealed that three regression coefficients differed significantly from zero and 95% confidence limits were calculated.

Table 4-11. Multiple Regression for Sport Commitment (Independent variable: Involvement Opportunity, Involvement Alternatives, Social Constraints, Personal Investment, Social Support, and Sport Enjoyment)

		Sum of Squares	*df*	Mean of Squares	F	*p*
1	Regression	19.43	6	3.24	29.71**	.01
	Residual	15.59	143	.11		
	Total	35.02	149			

*$p < .05$, **$p < .01$.

Table 4-12. *Multiple Regression for Sport Commitment (Independent variable: Involvement Opportunity, Involvement Alternatives, Social Constraints, Personal Investment, Social Support, and Sport Enjoyment)*

	Unstandardized		Standardized		
	B	Adjusted	β	t	*p*
Constant	.17	.27		.64	.52
Sport Enjoyment	.29	.08	.29	3.76**	.01**
Involvement Alternatives	-.077	.05	-.09	-1.42	.16
Personal Investment	.01	.05	.01	.010	.99
Social Constraints	.25	.06	.26	4.11*	.02*
Social Support	.14	.07	.14	1.89	.06
Involvement Opportunity	.33	.10	.33	3.43**	.01**

Note: $R^2 = .56$ (N=150)

*$p < .05$, **$p < .01$.

Bivariate Regression

Research Question 5: What is the relationship between sport commitment and behavior of elderly ballroom dancers?

A standard bivariate regression was performed between sport behavior as the dependent variable and sport commitment as the independent variables. Analysis was performed using SPSS REGRESSION and SPSS FREQUENCIES with Windows 16.0 for evaluation of assumptions. Overall, the regression model is effective as F value was 13.66 which reached the .05 significance level and 95% confidence limits were calculated F (1, 148) = 13.66, $p < .01$. Table 4-13 displays the correlations between the variables, the unstandardized regression coefficient (B) and intercept, the standardized regression coefficient (β), and adjusted R^2 (.08).

Table 4-13. Bivariate Regression for Sport Behavior (Independent variable: Sport Commitment)

		Sum of Squares	*df*	Mean of Squares	F	*p*
1	Regression	18.38	1	18.38	13.66*	.01
	Residual	199.07	148	1.35		
	Total	217.44	149			

Note: $R^2 = .09$ (N=150)

*$p < .05$, **$p < .01$.

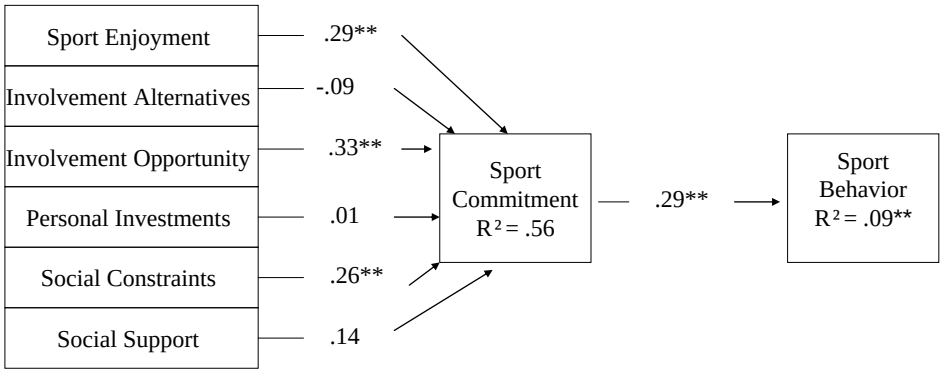
Dependent variable: Hour of participation per week

Table 4-14. Bivariate Regression for Sport Behavior (Independent variable: Sport Commitment)

	Unstandardized		Standardized		
	B	Adjusted	β	t	*p*
Constant	1.34	.60		2.24	.03
Sport Commitment	.72	.20	.29	3.70*	.01

Note: $R^2 = .09$ (N=150)

Dependent variable: Hour of participation per week



*p < .05, **p < .01.

Figure 4-1. *Multiple Regression Analysis of Involvement Opportunity, Involvement Alternatives, Social Constraints, Personal Investment, Social Support, and Sport Enjoyment*

Figure 4-1. shows the total regression (both multiple and bivariate regression) in a coherent format. Overall, involvement opportunity, sport enjoyment and social constraints were significant in the over all sport commitment of elderly ballroom dancers to ballroom dancing. Lastly, sport behavior is significantly related to sport commitment of elderly ballroom dancers.

Chapter V

DISCUSSION

This chapter includes a summary of findings, implications, limitations and recommendations for future research.

Summary of Findings

This study examined elderly adults who are currently active in their participation in ballroom dance and the factors that keep them committed to their activity pursuits and their intention to continue with this activity in the future. Before going further into the discussion, research questions addressed in chapter one must be answered.

RQ1: Do different demographic characteristics result in different Sport Commitment determinants?

Independent *t*-test showed that there were no gender differences in the following determinants of SCM (sport commitment, sport enjoyment, involvement alternatives, involvement opportunities, social constraints and social support). This result was consistent with previous studies which shown no gender differences in sport commitment and exercise commitment. However, personal investment was shown to be significant in this particular study and this finding was not consistent with previous research because Scanlan and her colleagues (1993) found that sport enjoyment was the strongest predictor of sport commitment when they used the Athletes' Opinion Surevey on youth athletes. (Scanlan et al., 1993a, 1993b; Scanlan et al., 2003, Carpenter et al., 1993; Wilson et. al, 2004). This could be that none of the researches in the past was conducted with an elderly population whom, obviously have more financial means and stability than that of the collegiate and youth subjects of all previous studies.

RQ2: Do different dance participation patterns result in different Sport Commitment determinants?

Results using ANOVA indicated that the effects of participation pattern were significant on sport commitment, personal investments and involvement opportunity. Scheffé post hoc analysis revealed that participants who showed significance on sport commitment often participate in ballroom dancing for over 10 hours per week as opposed to just 2 to 3 hours per week. Personal investment was also significant as those who spent more than 10 hours per week showed to have more personal investment than those who participate for less than 5 hours per week. This was contrary to Scanlan's original study in which personal investment was not the primary determinants of sport commitment. The primary determinants for all previous studies were mainly sport enjoyment (Scanlan et al., 1993a, 1993b; Scanlan et al., 2003, Carpenter et al., 1993; Wilson et. al, 2004). Lastly, participants with more than 10 hours of participation per week also showed to have more involvement opportunity indicating that increase in participation rate results in positive self fulfillment in ballroom dance for elderly dance participants.

RQ3: Do different behaviors in ballroom dancing result in different Sport Commitment determinants?

Results using ANOVA indicated that the effects of participation pattern were significant on personal investment. Scheffé post hoc analysis revealed that participants who showed significance on personal investment indicated that those participants who participated in both modern and latin dances showed to have more personal investment than those who only participate in latin dance. This is contrary to previous international and domestic research (Scanlan et al., 1993a, 1993b; Scanlan et al., 2003, Carpenter et al., 1993; Wilson, et al., 2004; Ma, 2005, 2008; He, 2009; Hsieh, 2008; Lin, 2008; Hsu, 2008; Lin, 2007) in which the subjects of the studies were too young to earn the financial means necessary to support their sport of interest.

RQ4: What is the relationship between sport commitment determinants and sport commitment of elderly ballroom dancers?

Results showed that sport commitment was predicted by sport enjoyment, involvement opportunity, and social constraints. This suggested that there were positive correlation between sport behavior and 3 determinants of SCM: Sport enjoyment, involvement opportunity and social constraints. Scanlan and colleagues (1993) found that sport enjoyment was the strongest predictor of sport commitment; the current study showed that, although there was a significant positive correlation between sport enjoyment and sport commitment, it was not the strongest relationship. In fact, it was the second strongest behind involvement opportunity and followed by social constraints. This finding differs from previous research on commitment whereby Scanlan and colleagues (1993a) found that sport enjoyment and personal investments accounted for 58% of the variance in sport commitment.

Research on sport commitment has indicated that enjoyment is often the greatest predictor of sport commitment among youth athletes (Scanlan et al., 1993a, 1993b; Carpenter et al., 1993). Other factors have also been shown to influence an athlete's level of sport commitment, including personal investments, involvement opportunities, involvement alternatives, social constraints, and social support. Unfortunately, research on sport commitment outside of the youth (Scanlan et al., 1993a, 1993b; Carpenter et al., 1993) and college population (Wilson, et al., 2004; Ma, 2005, 2008; He, 2009; Hsieh, 2008; Lin, 2008; Hsu, 2008; Lin, 2007) has been limited. The purpose of this study was to examine the sport commitment model for elderly ballroom dance participants, particularly to find out the key variables that can attract them to join ballroom dancing activities and to find out what keeps them happy in their dancing. Specifically, this study addressed questions based around six different commitment constructs developed with the SCM model with the elderly ballroom dance population. The original SCM determinants by Scanlan and her colleagues did not include social

support (Scanlan et al., 1993a). It was Wilson and his colleagues in 2004 that included social support as one of the SCM determinants (Wilson et al., 2004) which addressed the importance of social support as a significant factor in motivating students to participate in sports.

RQ5: What is the relationship between sport commitment and behavior of elderly ballroom dancers?

The behavior of elderly ballroom dancers was shown to be significantly related to sport commitment to ballroom dancing.

Implications

In the past, majority of the work done on the SCM has been a one-time, survey based study. The overall purpose of this study was to determine what keeps or motivate elderly ballroom dance participants committed to dance as their physical activity of choice. This is important because physical inactivity increases with age and it is a critical health issue as the prevalence of obesity has more than doubled in the past two decades (Le Petit & Barthelot, 2005). There are many noted benefits to remaining active and engaged in physical activity and that's why we need to find out how to keep elderly adults happy and content in their dancing endeavors.

Limitations and Recommendations for Future Research

Limitations

Although the results of this study have important implications regarding the determinants of sport commitment in elderly ballroom dance participants, the study did have several limitations. One limitation with the sample used in this study was the limited amount of places visited where questionnaires can be filled out by elderly ballroom dancers due to time and budget concerns. Moreover, most elderly people complained of the long questionnaire which put strains on their weary and degenerated eyes. Most needed to take out their glasses or have other read to them the questions on the paper which could cause mistakes in filling out the questionnaires.

Another potential limitation with the current sample was that all of the elderly participants were from dance studios in Taichung city. This city and the limited amount of dance studios are not necessarily representatives of the entire Taiwanese population.

Measurement Issues

Serveral potential measurement issues could have influenced the outcome of this study. First, the questionnaire was derived from Wilson's "Exercise Commitment Scale, ECS" (Wilson et. al., 2004) and "Sport Commitment Questionnaire for Elite Volleyball Players" (He, 2009) was not developed specifically for elderly ballroom dance participants. The survey was designed from the general collegiate athlete, without regards to age and has most often been used with youth athletes and not older people. The personal investment factor was problematic with previous studies (Scanlan et al., 1993a, 1993b; Scanlan et al., 2003, Carpenter et al., 1993; Wilson et. al, 2004; He, 2009; Jess, 2009; Boyst, 2009) because most of the questions regarding this predictor were not applicable to collegiate and youth athletes. However this study the "personal investment" determinant fitted perfectly with the age group but there were only two questions (the least amount in comparison to other SCM determinants): 1. I spent a lot of time ballroom dancing; and 2. I invested a lot of money in ballroom dancing.

It seems that modification of the Sport Commitment Model in the future is inevitable. There needs to be changes made in the future if the determinants are to be tested continuously. The SCM needs to be further tested in the elderly population to determine if the model is justifiable with the elderly population in ballroom dance context. Previous research called for continuous research with the relevance of social support or sport enjoyment (Scanlan et al., 1993a, 1993b; Scanlan et al., 2003, Carpenter et al., 1993; Wilson et. al, 2004; Jess, 2009; Boyst, 2009), yet it seemed that when it comes to the elderly population, more emphasis should be put on personal investment and involvement opportunity as the key SCM determinants for sport retention.

Recommendations for Future Research

In this study, personal investment, involvement opportunities and enjoyment emerged as strong predictors of elderly ballroom dance participants' sport commitment. These findings should help to expand the current research on sport commitment as it is the first to use SCM to evaluate the elderly population. While numerous studies have been done on sport commitment with youth and collegiate athletes, these results suggest important differences and a further need to explain the research in sport commitment for the elderly population. Future research should include more longitudinal studies and explore the commitment over time, especially in relation to intentions to see if the level of commitment stays the same, decreases, or increases. Carpenter and Scanlan (1998) demonstrated that the determinants of sport commitment can change gradually over time. The knowledge of this potential change, in combination with the findings of the current study helped to show that there could potentially be different factors that lead to a participant's level of commitment over time. This is also consistent with the findings of the study as most of the active elderly participants fall in the age rage of 55 to 60 years old. Identifying what involvement opportunities are need to keep participants in ballroom dancing could be an important

step for the future. If these experiences can be identified, then dance teachers and fellow dance peers could potentially have new ways to motivate their fellow participants to keep them physically active in dancing for longer period of time. Since sport enjoyment has been identified as a key factor affecting sport commitment in youth and collegiate athletes, ballroom dance teachers should also incorporate this notion with older participants. If personal investments and involvement opportunities are playing an important role in the continuation of ballroom dancing as a physical activity for elders, teachers and studio owners could find ways to use these determinants to their advantage.

References

English References

Ajzen, I., & Fishbein, M. (1980). *Understanding attitudes and predicting social behavior.* Englewood Cliffs, NJ: Prentice Hall.

Barryman-Miller, S. (1988). Benefits of dance in the process of aging and retirement for the older adult. Beal, R. K., & Berryman-Miller, S. (Eds.), *Dance for the older adults (*pp. 28-32). Reston,VA: AAHPERD.

Beal, R. K., & Berryman-Miller, S. (Eds.) (1988). *Dance for the older adults (*pp. 8-10). Reston, VA: AAHPERD.

Boyst, J. P. (2009). *An examination of sport commitment in collegiate athletes*. Unpublished master thesis. The University of North Carolina, Greensboro.

Casper, J. M., & Andrew, D. P. (2008). Sport commitment differences among tennis players on the basis of participation outlet and skill level. *Journal of Sport Behavior, 31*(3), 201-219.

Carpenter, P. J., Scanlan, T. K., Simons, J. P., & Lobel, M. (1993). A test of the Sport Commitment Model using structural equation Modeling. *Journal of sport & Exercise Psychology, 15*, 119-133.

Carpenter, P. J. (1995). Modification and extension of the sport commitment model. *Journal of sport & Exercise Psychology, 17,* S37.

Corbin, D. E., & Metal-Corbin, J. (1983). *Reach for it! A hand book of exercise and dance activities for older adults*. Dubuque, IA: Eddie Bowers Publishing Co.

Craine, D., & Mackrell, J. (2000). *The Oxford Dictionary of dance*. NY: Oxford University Press.

Electronic reference formats recommended by the Directorate-General of Budget, Accounting and Statistics, executive Yuan, R.O.C. (2011). Retrieved November 15, 2011 from http://ebas1.ebas.gov.tw/pxweb/Dialog/Saveshow.asp

Ensign, C. P. (1988). An overview of dance. Beal, R. K., & Berryman-Miller, S. (Eds.), *Dance for the older adults (*pp. 8-10). Reston, VA: AAHPERD.

Fishbein, M., & Ajzen, I. (1975). *Belief, attitude, intention, and behavior: An introduction to the theory and research.* Reading, MA: Addison-Wesley.

George, D., & Mallery, P. (2001). Reliability analysis. *SPSS for Windows step by step: A simple guide and reference* (3rd ed., pp. 207-218). Needham Heights, MA: Allyn and Bacon.

Giordano, R. G. (2008). *Satan in the dance hall: Rev. John Roach Straton, Social dancing and morality in 1920's New York City.* Lanham, MD: Scarecrow Press, Inc.

Hanna, J. L. (1988). *Dance, sex, and gender.* Chicago, IL: The University of Chicago Press.

He, C. Y., & Lin, R. H. (2009). A discussion on the Sport Commitment Model in competitive and fitness exercise. *Quarterly of Chinese Physical, 23(4),* 85-95.

Jess, S. (2009). *Examining sport commitment and intentions to participate inintramural sports: Application of the sport commitment model and the theory ofplanned behaviour in a campus recreational sport setting*. Unpublished master thesis. Brock University, St. Catharines, Ontario.

Jian, H. S., & Ji, L. K. (2005). The predictive utility of Sport Commitment Model on exercise adherence. *Sport Research Review, 81*, 153-158.

Jian, H. S. (2005). *The study of physical fitness using the sport commitment model*. Unpublished master thesis. National Taiwan Sport University, Tao-yuan County.

Kelley, H. H. (1983). Love and Commitment. In H. H. Kelley, E. Berscheid, A. Christensen, J. H. Harvey, T. L. Huston, G. Levinger, E. McClintock, L. A. Peplua, & D. R. Petersen (Eds.), *Close relationship*, 256-314. New York: W. H. Freeman.

Laverie, D. A. (1998). Motivations for ongoing participation in a fitness activity. *Leisure Sciences, 20,* 277-302.

Le Petit, C., & Berthelot, J. M. (2005). Obesity: A growing issue. *Statistics Canada.* Retrieved November 14, 2011, from http://www.statcan.ca/english/research/82-618-MIE/2005003/pdf/82-618-MIE2005003.pdf.

Lopez, R. (1998). Beal, R. K., & Berryman-Miller, S. (Eds.), *Dance for the older adults (*pp. 11-13). Reston,VA: AAHPERD.

Marion, J. S. (2008). *Ballroom: Culture and costume in competitive dance.* UK: Oxford International Publishers, Ltd.

McAdam, M. (1988). Dance as a vehicle to fitness for the healthy older adult. Beal, R. K., & Berryman-Miller, S. (Eds.), *Dance for the older adults (*pp. 16-27). Reston, VA: AAHPERD.

Nunnally, J. C. (1978). *Psychometric theory* (2nd ed.). New York: McGraw Hill.

Paz, A., & Hart, V. (2008). *Gotta Tango*. Champaign, IL: Human Kinetics.

Raedeke, T. D. (1997). Is athlete burnout more than just stress? A sport commitment perspective. *Journal of Sport & Exercise Psychology, 19,* 396-417.

Ramirez, B. (2009). Introduction. Najera-Ramirez, O., Cantu, N. E., & Romero, B. M. (Eds.), *Dancing across borders Danzas y Bailes Mexicanos* (pp. xvii). Champaign, IL: University of Illinois.

Scanlan, T. K., & Simmons, J. P. (1992). The construct of sport enjoyment. In G. C. Roberts (Ed.), *Motivation in sport and exercise,* 199-215. Champaign, IL: Human Kinetics.

Scanlan, T. K., Carpenter, P. J., Schmidt, G. W., Simons, J. P., & Keeler, B. (1993). An introduction to the sport commitment model. *Journal of Sport & Exercise Psychology, 15,* 1-15.

Scanlan, T. K., Russell, D. G., Beals, K. P., & Scanlan, L. A. (2003). Project on elite athlete commitment (PEAK): II. A direct test and expansion of the sport commitment model with elite amateur sportsmen. *Journal of Sport & Exercise Psychology, 25*, 377-401.

Schimidt, G. W., & Stein, G. L. (1991). Sport commitment: A model integrating enjoyment, dropout and burnout. *Journal of Sport and Exercise Psychology, 13*, 254-265.

Serfass, R. C. (1981). Exercise for the elderly: What are the benefits and how do we get started? Smith, E. L., & Serfass, R. C. (Eds.) *Exercise and aging: The scientific basis* (pp. 121-127). Hillside, NJ: Enslow Publishers.

Stenger, L., & Smith, C. M. (1985). *Healthy moves for older adults.* Washington, DC: ERIC Clearinghouse on Teacher Education.

Wilson, P. M., Rodgers, W. M., Carpenter, P. J., Hall C., Hardy, J., & Fraser, S. N. (2004). The relationship between commitment and exercise behavior. *Psychology of Sport and Exercise, 5*, 405-421.

Wright, J. P. (2003). *Social dance: Steps to success* (2nd ed.). Champaign, IL: Human Kinetics.

Wikipedia. (2010). *Cultural revolution*. Retrieved December 2, 2010, from http://en.wikipedia.org/wiki/Chinese_Cultural_Revolution.

Wikipedia. (2010). *Opium War*. Retrieved December 13, 2010, from http://en.wikipedia.org/wiki/Opium_Wars.

Wikipedia. (2010). *White Terror (Taiwan)*. Retrieved December 13, 2010, from http://en.wikipedia.org/wiki/White_Terror_(Taiwan).

Chinese References

林幼萍（1998）。國際標準舞蹈趣味化教學。*國民體育季刊*，*27*（4），38-42 頁。

林幼萍（2003）。以符號互動論與交換理論探討國際標準舞握持動作之社會意涵。*大專體育學刊*，*5*（2），39-49 頁。

李天民（2000）。交際舞的演變發展。*藝術學報*，*66*，75-88。

劉光紅（2006）。*體育舞蹈讀本*。北京：人民體育。

趙援朝（2003）。*體育舞蹈與健美運動*。高雄市：中山大學。

楊昌雄（1991）。*現代交際舞*。北京：眾文圖書。

APPENDIX A 年長者參與國際標準舞之運動承諾量表

敬愛的國標舞者 您好：

這是一份學術調查問卷，其目的在瞭解您日常生活中從事國際標準舞這項運動的狀況，以作為將來協助推動運動舞蹈成為全民運動的參考依據。您提供的寶貴意見僅作為學術研究之用，不做其他用途。此份問卷採無記名方式，答案無對錯，敬請安心填答。感謝您對於此研究的支持與協助。

敬祝

健康快樂 萬事如意

國立臺灣體育學院休閒運動管理研究所

研 究 生：朱瑩 敬上
指導教授：王建興 教授
電話： 04-22213108 #2256

中華民國 100 年 5 月

第一部分：個人基本資料

※各題答案**均為單選**，填答時請在適當選項前的 □ 打“ ∨ ”或填寫適當答案。

一、性　　別：

□ 男　　□ 女

二、年　　齡：

□ 54 歲以下 □ 55-60 歲 □ 61-65 歲 □ 66-70 歲

□ 71 歲以上

三、教育程度：

□ 博士畢業 □ 碩士畢業 □ 大學畢業

□ 專科畢業 □ 高中(職)畢業 □ 其它_____

四、月收入：

□ 10,000 以下　□ 10,001-30,000　□ 30,001-50,000

□ 50,001-70,000

五、身

分：

□ 在職　□ 退休　□ 家管　□ 其他 _____

六、參與年資：

□ 1 年以下　□ 1~3 年　□ 3~5 年

□ 6~10 年　□ 11~15 年　□ 15 年以上

七、主要參與項目：

□ 摩登舞　□ 拉丁舞　□ 摩登舞 + 拉丁舞

八、一個禮拜跳舞時數：

□2 小時以下　□2-3 小時　□4-5 小時　□6-10 小時

□10 小時以上

續下頁

第二部分：國際標準舞承諾量表

【說明】:

以下問題是描述您對國際標準舞參與之認同。

滿意程度有 4 個選擇：您對國際標準舞的認同度為

1.非常不認同 2.有點不認同 3.有點認同 4.非常認同。

請您在適當的□ 打“ ∨ ”。

【例題】:

	認同度			
	非常不認同	不認同	認同	非常認同
01.我喜歡國際標準舞。	□	□	∨□	□

續下頁

一、運動承諾	非常不認同	不認同	認同	非常認同
01.我下定決心要持續參與國際標準舞這項運動。	□	□	□	□
02.我願意奉獻時間、精力持續國際標準舞這項運動。	□	□	□	□
03.我不後悔選擇國際標準舞這項運動。	□	□	□	□
04.我很樂意繼續參與國際標準舞這項運動。	□	□	□	□
05.我打從心理認同國際標準舞這項運動。	□	□	□	□
06.我覺得持續參加國際標準舞這項運動是一種責任。	□	□	□	□
07.我覺得不能持續國際標準舞這項運動是不應該的。	□	□	□	□
08.若我退出國際標準舞這項運動，我的親友或舞伴會對我感到失望。	□	□	□	□
09.若我停止參與國際標準舞這項運動，我會感受到壓力	□	□	□	□
10.若我停止參與國際標準舞這項運動，我將無法滿足他人對我的期望。	□	□	□	□

續下頁

	非常不認同	不認同	認同	非常認同
二、運動樂趣				
11.我喜歡參加國際標準舞時，讓我全神貫注的感覺。	□	□	□	□
12.我喜歡參加國際標準舞時，讓我有一個明確目標的感覺。	□	□	□	□
13.我喜歡參加國際標準舞時,時間總是過的很快的感覺。	□	□	□	□
三、替代選項				
14.相較於國際標準舞，還有其它更具吸引力的活動等我去做。	□	□	□	□
15.從事國際標準舞以外的其它運動，我會比較開心	□	□	□	□
16.我比較喜歡從事國際標準舞以外的其它不同運動項目。	□	□	□	□
17.要我重新選擇，我可能選擇其它運動項目而非國際標準舞。	□	□	□	□
四、個人投資				
18.我投入很多時間在國際標準舞中。	□	□	□	□
19.我投入很多金錢在國際標準舞中。	□	□	□	□
五、社會規範				
20.我感受到來自某些人的壓力才持續參與國際標準舞。	□	□	□	□

續下頁

	非常不認同	不認同	認同	非常認同
21. 我必須持續參與國際標準舞才能受到他人的重視。	□	□	□	□
22. 我必須持續參與國際標準舞以符合自我或他人的期望。	□	□	□	□
23. 當我有退出意圖時，會受到家人、老師或舞伴的反對。	□	□	□	□
24. 持續參與國際標準舞，使我能維持良好的人際關係。	□	□	□	□
25. 我因受他人影響而持續參與國際標準舞。	□	□	□	□
26. 我覺得我必須持續參與國際標準舞，他人才不會認為我是輕易放棄的人。	□	□	□	□
六、涉入機會				
27. 我喜歡參加國際標準舞時，充滿自信的感覺。	□	□	□	□
28. 我喜歡參加國際標準舞時，使我有積極面對的態度。	□	□	□	□
29. 持續參與國際標準舞，使我能取得知名度。	□	□	□	□
30. 持續參與國際標準舞，使我能維持健康的身材。	□	□	□	□
31. 持續參與國際標準舞，使我能獲得成就感。	□	□	□	□
32. 我喜歡參加國際標準舞時，充滿挑戰性的感覺。	□	□	□	□
33. 我喜歡參加國際標準舞時，應付自如的感覺。	□	□	□	□

續下頁

	非常不認同	不認同	認同	非常認同
七、社會支持				
34.當我表現不佳時，家人、朋友、老師或舞伴會給我安慰與鼓勵。	□	□	□	□
35.當我表現良好時、家人、朋友、老師或舞伴會給我讚美。	□	□	□	□
36.家人、朋友、老師或舞伴會提供我運動舞蹈所需要的資源。	□	□	□	□
37.當我參與國際標準舞受傷時、家人、朋友、老師或舞伴會給安慰與鼓勵。	□	□	□	□
38.老師或舞伴會給我技術上的指導，使我持續參與國際標準舞。	□	□	□	□
39.我的家人或朋友會幫我分擔工作，為了讓我去參與國際標準舞。	□	□	□	□
40.家人、朋友、老師或舞伴會提供我關於國際標準舞所需要的訊息。	□	□	□	□
41.我的家人或朋友樂見於我去參與國際標準舞	□	□	□	□

~本問卷到此全部結束，再次感謝您的協助~