SENIOR CASINO MOTIVATION AND GAMING INTENTION: AN EXTENDED THEORY OF PLANNED BEHAVIOR MODEL

by

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B.S., Kansas State University, 2000
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AN ABSTRACT OF A DISSERTATION

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Department of Hospitality Management and Dietetics
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Abstract

Senior casino gaming has been appearing as a leisure activity for the senior population as well as a research topic for many researchers from various academic disciplines. Finding out important reasons or motivations for older adults spending time in casino gaming will be the one of the fundamental ways to determine their future casino patronage intention. Accordingly, this study identifies a comprehensive inventory of senior casino gaming motivations by way of an exploratory approach. Followed Churchill's (1979) scale development procedure, the study generated a to find five distinctive senior casino gaming motivation dimensions: winning and thrill, socialization, escape, enjoyment, and curiosity. Ultimately, confirmatory factor estimates supported that the finalized measure was unidimensional, reliable, and valid while the measurement scale was parsimonious and captured various dimensions of senior casino gaming motivation.

The second part of this study investigated the applicability of an extended theory of planned behavior (TPB) with motivation component attached in context of senior casino gaming behavior. Seniors' past casino visit was also tested for a moderator effect between the major predictor variables (attitude, subjective norms, perceived behavioral control, and motivation) and seniors' casino behavioral intention. The findings of a structural equation modeling suggested that all predictable variables of TPB had positive effects on seniors' casino gaming intention. Among senior casino gaming motivation, 'winning and thrill' and 'enjoyment' had direct positive effects on behavioral intention. The results of metric invariance test for moderating role of past casino visit showed that there was no indication of seniors' past casino visit having any influence on their intention to participate in casino gaming. The overall study results suggested that the proposed extended model is a useful tool to use in studying of senior casino gaming behavior. In conclusion, theoretical and practical implications of the study findings were discussed.

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CHAPTER 1 - INTRODUCTION

The U.S. Department of Health (2008) reported about 12.4% of the U.S. population who was 65 years or older in 2006, and this number is expected to grow. Not only because of the substantial growing population of older adults in the U.S., but also because of the unique characteristics shared by this group, this demographic has emerged as a very important market segment. Unlike their predecessors, older adults today are healthier, more active and affluent, have fewer parental responsibilities, and have more leisure time (Longino, 1994). With these combined factors, this age cohort seeks more leisure activities such as casino gaming. Furthermore, with an increasing amount of legalized gambling in the U.S., more casino gaming has been accessible and available to the senior population. Currently, there are 28 states where casino gaming is legal (Zaranek, and Chapleski, 2005). Clearly, casino gaming has been an attractive form of leisure and entertainment for seniors (O'Brien Cousins, et al., 2002), especially with the incentives (e.g., free bus transportation, inexpensive or free buffets, discounted hotel accommodations, and even reduced prices on prescription drugs) that are tailored to the senior age group (Gosker, 1999; Nicol, 2000). In fact, much of the literature has reported the increasing gambling popularity among senior persons in recent years (Hirsh, 2000; Moore, 2001; Wiebe, 2000).

It has been recognized that the underlying motives to participate in gaming are critical in any study of gaming behavior (Cotte, 1997; Jang et al., 2000; Lee et al., 2006; Park et al., 2002; Tarras et al., 2000). In general, motivation is defined as a state of need or a condition that drives an individual toward certain types of action that are seen as likely to bring satisfaction (Moutinho, 2000). Therefore, motivation can be viewed as any reasons for people to engage in certain behavior.

There are several issues with existing senior gaming motivation studies. First, much of the attention has been in finding reasons for senior pathological gaming, rather than identifying why people participate in gaming as leisure, especially casino gaming. However, viewing pathological and leisure gambling as deriving from the same motives might be a concern because of the obvious differences between the two. People who gamble as a leisure activity focus more on the social, entertainment, and fun aspect of gaming, while pathological gamblers place more

emphasis on the escape aspects of gambling (Hagen et al., 2005; Hirsh, 2000; McNeilly and Burke, 2001; Wiebe, 2000). Since the most senior gaming is considered non-problem gaming or social gaming (Hope and Havir, 2002; McNeilly and Burke, 2000; Tarras et al., 2000; Sitt et al., 2003), applying motivation for pathological gambling will not explain much about non-problem gaming behavior. Second, many gambling motivation studies have dealt with the general population rather than specializing in the senior population. However, studies have shown that age appears to be the most important demographic factor in gaming behavior (Feeney and Maki, 1997; Kallick et al., 1979; Mok and Hraba, 1991; Petry, 2002). This is an important fact in that different age cohorts engage in different gaming behaviors and therefore have different reasons and motives to play. McPherson (1983) stated that older people are less competitive in gamblers and more motivated to maintain social relationships, while middle-aged players want to increase their financial rewards and are willing to take more risks. Thus, there is a need to identify those specific motivations that are more suitable to describe seniors' leisure casino gaming behaviors. Lastly, even with a flood of senior gaming studies, a valid and reliable tool to measure specifically senior casino motivation has not been suggested in the literature. Some gambling motivation literature has attempted to identify different dimensions of gambling motivations using more constructive and methodologically sound analysis (Chantal, et al., 1995; Jang, et al., 2000; Lee and Lee, 2003; Lee et al., 2007; Neighbors et al., 2002). However, none of these studies specifically targeted the senior market, but rather other age cohorts or the general population. On the other hand, most senior gambling motivation studies were based on observational and descriptive reports (Cotte, 1997; Hagen et al., 2005; Loroz, 2004; Sigh et al., 2007) without any validated and reliable measurement instruments. Ultimately, a measurement scale with a methodological procedure is necessary to identify the nature of complex senior casino gaming motivations and to measure more them appropriately.

Many researchers have attempted to discover the major behavioral antecedents and their roles in seniors' casino gaming behaviors to understand the behaviors. To change or reshape senior gaming behaviors based on the strengths and effects of antecedents, it would be essential to investigate causes of seniors' gaming behaviors. Predicting or investigating human behavior based on attitude is the most prevalent approach to studying human behavior. Ajzen's (1991) theory of planned behavior (TPB) is the most widely known attitude-based behavior model for explaining human behavior. This theory assumes that human behavior is affected by behavioral

intention, which refers to the likelihood to act (Fishbein and Ajzen, 1975), and people usually engage in acts as they intend. This means that intention is a dependable predictor of actual behavior. The theory of planned behavior (TPB) (Ajzen and Fishbein, 1980) offers a framework to explain most of the volitional and non-volitional behaviors based on an individual's behavioral intention, which is determined by three major antecedents: attitude (AT), subjective norm (SN), and perceived behavioral control (PBC). Indeed, the TPB has been operationalized and tested empirically in describing a wide range of behavioral intentions and behaviors (Ajzen, 1991; Conner and Armitage, 1998; Sparks, 1994). The roles of AT and SN in explaining general gambling behaviors have been supported (Cumming and Corney, 1987), but not for the targeted senior population, however. In the context of senior casino gaming behaviors, a positive senior attitude of casino gaming would lead to more participation in casino gaming. In turn, senior attitude toward casinos generally might also affect seniors' casino patronage decisions. The same is true with the subjective norm. Even with much change and an improved image of traditional casino gaming, what others think of the activity might be an important influence on seniors' decision to play casino games. They still want to ensure support from other people who are important to them. The additional antecedent PBC makes the TPB more useful especially when predicting non-volitional behaviors. Since not all gaming behavior is volitional (Evans, 2003; Warshaw and Davis, 1985), applying PBC is necessary for different levels of gaming behaviors. Thus, seniors who play casino games more for leisure would have more volitional control, whereas seniors who play more seriously and habitually would not have complete volitional control; might feel that they almost must participate in casino gaming. Further, attitude, subjective norm, and perceived behavioral control are derived from beliefs. First, attitude is founded on salient beliefs (BB) about consequences of performing the behavior and evaluation of those outcomes and subjective norm are determined by normative beliefs (NB) and motivation to comply with the salient referent (Ajzen and Fishbein, 1980). Next, perceived behavior control is a function of control beliefs (CB), which are measured by the perceived frequency of occurrence of facilitating or inhibiting factors multiplied by the power of those factors to inhibit or facilitate the behavior in question. Additional to the major antecedents of behavioral intentions, finding out the sources of each antecedent will provide more specific and practical information on the causes of gaming behaviors.

In addition, the three determinants of behavioral intention in the TPB supposedly provide informational factors on behaviors, and the behavioral intention in the model reflects one's motivation to engage in a behavior (Ajzen, 1991). However, the TPB model does not take into account the motivation factor itself in measuring behavioral intention or the actual behaviors in context. Since motivation is what prompts individuals to act on the behavior (Petri, 1981), it can be the more direct and specific influence on behavior. Thus, inclusion of motivation factors as another antecedent in the model would provide additional explanations as to seniors' casino gaming behavioral intention. Past experience or behavior has also been treated as an important predictor of behavioral intention and behavior in the TPB model (Bagozzi, 1981; Bentler and Speckart, 1981; Quellette and Wood, 1998). The idea of including past behavior in the equation is that behavior that is more habitual than planned can be measured directly from the repeated past performance of the behavior. Thus, if a senior is in a habit of engaging in casino gaming, there is no need for that individual to perform the evaluation and reasoning; he or she can just participate in gaming without a second thought. However, there is an issue of reducing the predictive power of the major antecedents (AT, SN, PBC) when past casino gaming experience is included in the model (Trafimow, 2000). Literature suggests that the inclusion of past experience would improve the predictive power for more habitual behaviors rather than novel behaviors (Conner and Armitage, 1998). Thus, seniors' past casino gaming experience might able to explain the intent of more regular casino goers. However, seniors' past casino gaming experience still could provide additional explanation of gaming behaviors; therefore, it must be included in the model. Investigating the differences in how the major antecedents affect behavioral intention based on the level of seniors' casino gaming experience would provide more meaningful insight into seniors' casino gaming intention. Without reducing the predictive power of the major antecedents, seniors' past casino gaming experience can still provide additional information.

Statement of Problem

The growth trend of senior gambling has triggered researchers' interest in investigating this market. However, in spite of the growing popularity of casino gambling, there has been relatively little theory-based research focusing on senior casino gaming behavior. A few studies

have demonstrated some efforts to learn more about senior gambling behavior. However, these are mostly based on observational and descriptive reports (Cotte, 1997; Hagen, et al., 2005; Loroz, 2004; Singh, et al., 2007). Most senior gambling studies traditionally have focused on the consequences of gambling behavior and the problematic gambling behavior, rather than exploring casino gambling as a recreational or leisure activity (Cotte, 1997).

While some gaming motivation literature can be found (Chantal, et al., 1995; Fisher, 1993; Jang, et al., 2000; Lee and Lee, 2003; Lee, et al., 2006; Lee, et al., 2007; Neighbors et al., 2002, Park et al., 2002, Platz and Millar, 2001), none is specifically focused on the senior population. Many of these studies tried to identify various dimensions of gambling motivations. However, either they targeted the general population, not specifically senior casino game players, or they dealt with pathological gamblers' motivations. As motivation is assumed to vary by different age cohorts, the casino gaming motivations might be different. For example, Lee, et al., (2006) found four dimensions of casino gaming motivations among general populations: socialization/learning, challenge, escape, and winning. Out of these four motivation dimensions, the dimensions of challenge and winning might not be as critical to seniors as to younger casino game players. McPherson (1983) claimed that older people are less competitive in participating in gaming and are more motivated to maintain social relationships, while middle-aged players want to increase their financial rewards and are willing to take the risks. Abt and McGurrin (1992) claimed that older adults accept casino activity not as a risky behavior but as a socially acceptable pastime in which they cautiously set their boundaries to risk taking. This illustrates that there are differences in gambling motivations among age groups. Thus, a valid motivation measurement that is more specific to the senior population is necessary.

Furthermore, empirical evidence of the influences of motivations on gaming behaviors and behavioral intentions seems to be lacking in gambling motivation studies. It would be valuable to determine whether motivation has direct impact on gambling behavior or not. Clearly, more research is needed to investigate how the senior casino gaming behaviors are formed and to learn what key determinants are influential on gaming behaviors by applying a robust theoretical framework. To date, the theory of planned behavior (TPB) has never been applied in studying senior casino gaming behavior. Specifically, a study done by Oh and Hsu (2001) applied TPB in general gambling behavior, not targeting the senior population, and found out that the model is useful to studying gambling behavior generally. However, the study did not include motivation

in the model. Inclusion of motivation will improve the explanatory power of the model significantly. Ultimately, more empirical studies with a valid theory such as TPB will help researchers to better understand this unique market segment.

Significance of Study

The results of this study will have significant implications for both researchers and casino venues. Establishing a reliable and valid measurement scale specifically for senior casino gaming motivation will provide a useful diagnostic tool for accessing general senior casino gaming studies. This scale will help with future research that tries to provide more integrative theories in explaining senior casino behaviors. Furthermore, exploring various dimensions of motivations may provide insights into more complicated dimensions of senior casino gaming motivations. The results of this research also will extend the current body of knowledge about the multiple factors that influence senior casino gaming behavior intentions. Application of an extended theory of planned behavior (TPB) with additional variables such as past experiences and motivation will establish a sound network of the existing theoretical frameworks, which also helps increase our understanding of senior casino gaming behaviors. A simultaneous inclusion of additional constructs and moderating variables to the model also will provide additional information on casino gaming behaviors.

Additionally, the results of this study will benefit casino venues. The additional information and knowledge gained from this study can help casino marketers to develop or enhance their marketing strategies to retain regular senior visitors or attract seniors who have not displayed interest in casino patronage. Understanding the effects of AT, SN, and PBC on behavior gaming intentions might be useful for casino venues when creating different incentive programs for senior patrons. They can continuously put their efforts towards improving the image of casinos so that they can attract those who have never been to casinos because of their previous negative beliefs about casinos. Consequently, casino facilities can provide more common areas where senior visitors can spend their time even though they do not engage in gaming. More entertainments might also help bring new visitors to casinos.

Purposes and Objectives

The overall purposes of this study were to establish a measurement scale that can appropriately measure casino gaming motivation specifically for seniors; to investigate the suitability of an extended theory of planned behavior (Ajzen, 1991) in the study of senior casino gaming behavior; and to test the relationships among three determinant variables(attitude, subjective norm, and perceived behavioral control), motivation, past casino experience, and behavioral intention in the senior casino gaming setting. The specific objectives of this study follow:

1) to establish a reliable and valid measurement of senior casino gaming motivations
2) to reveal underlying dimensions of senior casino gaming motivations
3) to apply an extended theory of planned behavior with motivation to test its appropriateness in predicting senior casino gaming intention
4) to test the predictive power of each determinant variable (attitude, subjective norm, perceived behavioral control, and motivation) on senior casino gaming intentions and
5) to test the moderating effects of seniors' past casino experiences on the relationships between each of the four determinant variables (attitude, subjective norm, perceived behavioral control, and motivation) and the behavioral intentions.

Research Model and Hypotheses

The theory of planned behavior (Ajzen, 1991) was used as a theoretical framework for the second part of this study. Figure 1.1 illustrates the hypothesized relationships among the study variables in an extended theory of planned behavior. An external variable (motivation) was added to the original theory of planned behavior to predict senior casino gambling intention. Additionally, this research model also examines the past casino visit as a moderator on the relationships between the four direct predictors of intentions and behavioral intentions. The detailed explanations of each of these hypothesized paths will be presented in Chapter 2 Literature Review.

The following hypotheses were established to achieve the objectives of this study.

H 1: Behavioral belief (BB) is a significant predictor of attitude.

H 2: Attitude (AT) toward casino gaming is a significant predictor of casino gaming intention.

H 3: Normative belief (NB) is a significant predictor of subjective norm

H4: Subjective norm (SN) is a significant predictor of casino gaming intention

H 5: Control belief (CB) is a significant predictor of perceived behavioral control

H 6: Perceive behavioral control (PBC) is a significant predictor of casino gaming intention

H 7: Casino gaming motivation (CGM) is a significant predictor of casino gaming intention.

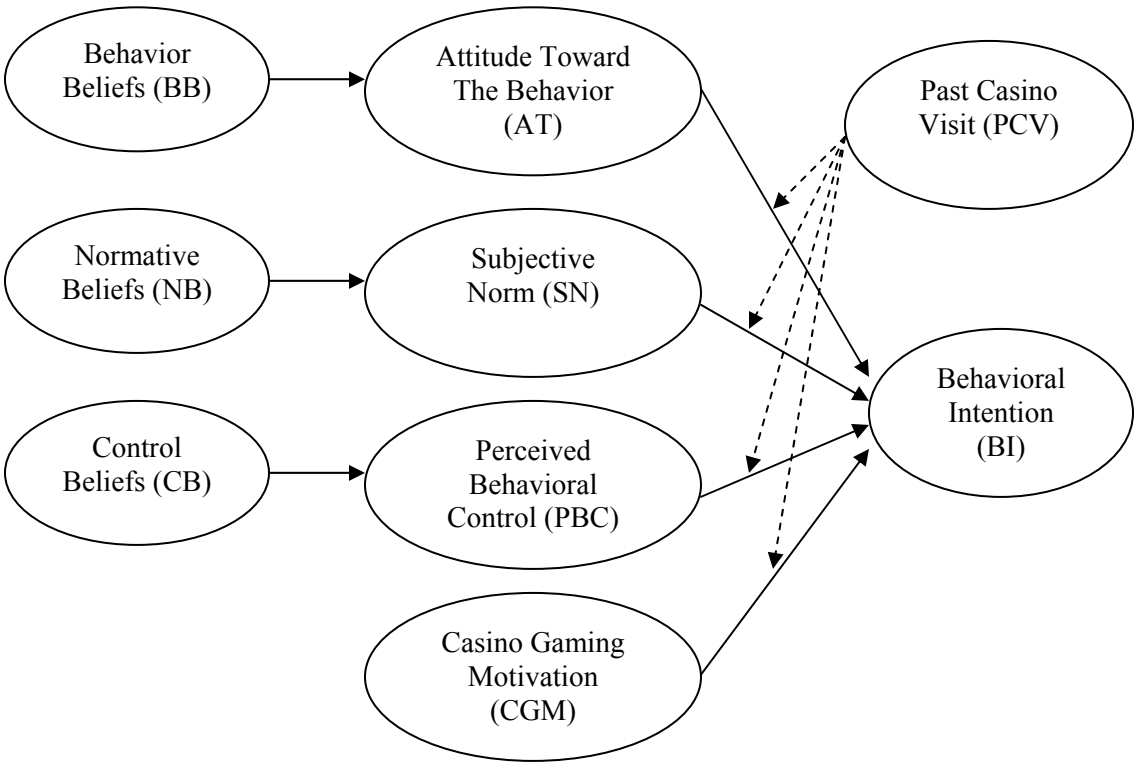
H 8a: Past casino visit has a moderating effect between attitude and casino gaming intention.

H 8b: Past casino visit has a moderating effect between subjective and casino gaming intention.

H 8c: Past casino visit has a moderating effect between perceive behavioral control and casino gaming intention.

H 8d: Past casino visit has a moderating effect between motivation and casino gaming intention.

Figure 1.1 A Conceptual Research Model of an Extended Theory of Planned Behavior for Senior Casino Gaming Intention



Limitations of the Study

This study was not free of limitations. One of the major limitations would concern generalizability. The web-based questionnaire used in this study could only reach those who have access to a computer and the Internet and who are regular computer users. Those senior persons who do not have a computer and Internet access and who are not computer literate have to be excluded. People who were not comfortable and familiar with a computer-based questionnaire might become fatigued easily; thus, not completing the survey would be another problem with a web-based questionnaire.

Definition of Terminology

Attitude towards a behavior: The individual's personal judgment about whether a specific behavior is desirable or not, based on his/her pre-existing beliefs about the desirability of different kinds of behaviors (Ajzen and Fishbein, 1980).

Behavior: according to the theory of reasoned action, behaviors are observable acts of study objects (Fishbein and Ajzen, 1975).

Behavioral beliefs: The set of personal beliefs about the kinds of behaviors that is desirable in general that an individual uses to help decide whether a specific behavior is desirable or not (Ajzen and Fishbein, 1980).

Behavioral Intention: The indications of how hard people are willing to try, of how much of an effort they are planning to exert, in order to perform the behavior (Ajzen and Driver, 1991).

Control beliefs: The individual's evaluation of the likelihood that factors out of his/her control will prevent successful use of the behavior to achieve a specified outcome (Ajzen, 1991).

Gaming : The practice of gambling. (Merriam-Webster Online Dictionary, 2008)

Gambling : The act of playing for stakes in the hope of winning (Merriam-Webster Online Dictionary, 2008)

Motivation: A state of need or a condition that drives an individual toward certain types of action that are seen as likely to bring satisfaction (Moutinho, 2000).

Normative beliefs: The set of beliefs about what constitutes desirable behavior as defined by individuals and groups that are important to the individual, such as peers, superiors, or the organization in which the individual functions (Ajzen and Fishbein, 1980).

Perceived behavioral control: The individual's perception of the ease (or difficulty) of performing a specific behavior. This includes two major sub-components. Self-efficacy refers to the individual's confidence that he/she can perform the behavior satisfactorily to achieve a specified outcome (Tylor and Todd, 1995).

Subjective norms: The specific behavioral norms that an individual sets for him/herself; what an individual believes that he/she should do (Ajzen and Fishbein, 1980).

Senior: An individual who is 65 years or older.

Theory of Planned Behavior (TPB): An extension of the theory of reasoned action. The only difference between the TRA and the TPB is that the TPB accounts for non-volitional control, named 'actual control', over the behavior (Ajzen, 1985).

Theory of Reasoned Action (TRA): An expectancy value model to predict and understand and individual's behavior. The theory assumes that human beings are rational and motivation-based and thus a person's behavior is determined by his/her intention to perform the behavior and that this intention is, in turn, a function of his/her attitude toward the behavior and his/her subjective norm (Ajzen and Fishbein, 1980).

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CHAPTER 2 - REVIEW OF LITERATURE

This chapter reviews related literature on the overall older casino market and motivation of senior casino visitors, with a focus in casino gaming as a new leisure activity. The conceptual framework and hypotheses based on an extended theory of planned behavior model to understand senior patronage intention are also discussed in detail. The pertinent concepts of seniors' attitudes, subjective norm, perceived behavioral control, past casino experience, and behavior intention are reviewed.

Senior Population and Casino Gaming

It comes as news to no one that the U.S. population is getting older as the Baby Boomers who were born between 1946 and 1964 are now reaching their retirement years. About 12.4 percent of the U.S. population was 65 years or older in 2006 (U.S. Department of Health, 2008), and this percentage is expected to increase in the future to 13.2% in 2010 and to 16.5% in 2020 (U.S. Census Bureau, 2000).

Common practice is to define older individuals or seniors as 65 years and older in the field of gerontology. However, a review of literature shows a lack of consistency in defining 'senior' in the field of tourism, leisure, and hospitality, especially in gaming studies. Different studies have used different ages to define senior gaming market depending on the study conducted or on the researchers conducting the study. This makes it difficult to profile senior casino goers. However, using the age of 65 and older to define the older casino market is typical. This might be due to the fact that most people retire at age of 65. Terminologies that have been used for this market also have varied throughout the years and various studies. Some of the terms that have been used follow: "mature market", "older market", "senior market", "elderly", "senior citizens", "old adults", and "senior adults" (Allan 1981; Lazer, 1985; McNeilly and Burke, 2001; Shoemaker, 1989; Whitford, 1998). In the end, since the term "senior" has appeared the most frequently in gaming studies, for this study, "senior" will be used.

The senior market represents a very important demographic segment of the U.S. population. In comparison to their past counterparts, the present senior population is more likely

to be healthier, to be more affluent, and to have more time, energy, and money (Longino, 1994). Therefore, members of this group are more likely to seek leisure activities that they can enjoy. This growing age group typically has much more leisure time for activities such as casino gaming. With limited physical and/or financial constraints, many seniors appear to find gaming an attractive form of leisure and entertainment (O'Brian Cousins, Withcer, and Moore, 2002). Additionally, as many states have legalized casino gaming, casino gaming has become more available and accessible to the elderly population. At one time, between 1931 and 1976, Nevada was the lone state where casino gaming was legal. As of 2004, 11 states contained commercial casinos, 28 had Native American tribal casino operations, and six states had casinos at racetracks (Griswold and Nichols, 2006). Accordingly, an increasing number of seniors have participated in casino gaming as a new type of leisure or social activity in recent years. Indeed, it has been reported that half of the U.S. seniors who are 65 years and older have participated in casino gaming. That amounts to approximately 16 million in 1998 (Singh, et al., 2007). The percentage of seniors who have gambled at least once in their lifetime increased from 38% in 1975 to 80% in 1998 (NORC, 1999). That number has been growing dramatically in the last decade.

One study revealed that older gamblers tend to gamble less often than younger gamblers, and they participate in certain types of gaming and avoid risky types; older adults (65 to 74 years) were likely to participate in casino gaming as the other younger age groups (Mok and Hraba, 1991). Furthermore, studies have found that a higher percentage of elderly females are more likely to play games in casinos than elderly males (Moseley et al., 2003). Similarly, another study claimed that the percentage of women who had gambled has increased by 20% from 1994 to 1998 (NORC, 1999). This is twice the percentage of men in that same period. A profile of elderly casino visitors showed that most elderly respondents are first time visitors (Singh et al., 2007). This means that not all the elderly casino visitors gamble excessively. Another study done in 1994 in Minnesota supports this view showing that half of elderly casino visitors claimed that they only visited a casino once in the previous two months, while another 36% visited two or three times. Additionally, only 4% went to a casino more than 10 times in the past two months (Minnesota State Lottery, 1994). A study among Florida seniors showed similar results. Only 20% of the survey respondents reported that they gambled weekly, while 40% have gambled in the last year (Volberg, 2003). Researchers also found that these elderly casino visitors tend to play certain types of casino games. For instance, the Las Vegas Convention and Visitor

Authority (1996) found that about 68% of older adults play the slot machines. The same results were found from data collected by the Iowa Gambling Treatment Program (1998). The most popular gambling activity among older adults was playing slot machines (59%), followed by table games (11%), and video games (11%). Particularly, elderly women enjoy slot machines the most (81.5%), and they rank Blackjack as their second favorite casino game (18.9%; Tarras, Singh, and Moufakkir, 2000). A director of Chicago riverboat casino also stated that most of their older female patrons play slot machines exclusively (Triplett, 1994). The reason most elderly casino visitors prefer to play slot machines might be the ease of playing. These machines do not require the high level of skill that some of the other types of games, such as table games, do. For most senior adults, a casino visit is a day-trip event (Singh et al., 2007). To make the day-trip easier for the elderly casino visitors, many casino venues now offer retirement residential facilities or senior centers promotional trips for seniors (McNeilly and Burke, 2001). Most of the promotional offers come through these facilities which accept the offers and make arrangements for the seniors to visit the casino. Studies also found that a day-trip to a casino is the most common day-trip for these seniors. Some of the tailored incentives offered to this market include free or inexpensive bus service to casinos, discounted food, free entertainment (shows), other promotional coupons, discounts on hotel accommodations, and even discounts on prescription drugs (Gosker, 1999; Gambling, 1998). A gambling executive in Las Vegas stated that three quarters of their casino patrons are retired people and that this age groups provides a steady customer base for the casino (Klepacki, 1995). Researchers predicted that the number of older patrons visiting casinos will continue to grow in the future due to the growing number and availability of casinos, and the illusion of inexpensive fun with the possibility of winning money (Cox et al., 2005; Gosker, 1999).

Gaming Motivation

Literature related to senior gaming motivations is reviewed in this section. A review of the general leisure motivations prior to looking into gaming-specific motivations could help to widen our viewpoints of senior casino gaming. Since casino gaming is considered to be a leisure activity, some of the general leisure motivations can provide a basis for identifying senior casino gaming motivations.

Senior Leisure Motivation

Leisure is defined as what people do voluntarily during their free time, as opposed to work time for pay (Nilson et al., 1996; Hills et al., 2000). Activities for leisure have been identified in a wide range in leisure literature. For instance, some commonly known senior leisure activities are socializing, gardening, reading, TV watching, going shopping, club and organization participations, and telephone conversations (Alberta Recreation and Parks, 1988; House, 2003; McAvoy, 1979; McGuire, 1980; Menec, 2003; Searle, 1987; Verbrugge et al., 1996). Ultimately, any activity can be added to the list as leisure as long as one utilizes free time. For instance, senior casino gaming can be a leisure activity as long as an individual participates in casino gaming activities during free time. Moreover, a variety of leisure motivations might lead to different types of leisure. In leisure context, motivation is defined as an "inner state which energizes, channels, and sustains human behavior to achieve goals" (Pizam et al., 1979, p. 196). Although people can have various motivations for different types of leisure activity, several motivation dimensions have been identified for general leisure activities.

Leisure motivation has been well documented in the leisure. One of the earliest studies viewed functions of leisure as self-determination and the encouragement of commitment, and opportunities of recreation, personal growth and service to others (Kaplan, 1975). Later, Crandall (1980) identified 17 motivation items for engaging in leisure activities. Some of the items included achievement, altruism, creativity, self-actualization, social contact, and avoiding boredom. One of the widely known motivation theories about leisure is the intrinsic and extrinsic motivations (Deci and Ryan, 1985). This research defined intrinsic motivation as engaging in an activity solely for the pleasure of doing the activity. Further, leisure motivation could defined by three major intrinsic motivations, stimulations, accomplishment, and the acquisition of knowledge and by three extrinsic motivations, social development, the constructive use of free-time, and avoidance of doing something else (Pelletier et al., 1996). They also argued that people could engage in a leisure activity without any sense of purpose of intent, which was referred to as 'amotivation'. Nilson and Weaver (1996) found six leisure motivation factors by surveying Canadian older adults. The six motivations included achievement, personal development, change of pace, social, solitude, and escape. They confirmed that these factors were very similar to those found in earlier studies (Lounsbury and Hoops, 1988; Driver et al., 1991). Other studies found that family ties, health and exercise, and desire to belong to and interact with nature were also

important underlying leisure motivation for older adults (Riddick and Daniel, 1984; Kelly et al, 1987). More activity-specific motivations were found in senior travel studies. Thus, motivation has been treated as a critical variable in understanding reasons people participate in recreational or pleasure travel because it is the driving force behind travel behavior (Crompton, 1979). Some widely known senior traveling motivations include rest and relaxation, family and friends, physical excise, learning experience, self-fulfillment, accomplishment (Guinn, 1980), knowledge, escape, and kinship (Kim et al., 1996). Stone and Nicol (1999) also identified similar motivations in senior travelers: escape, self-esteem, and recreation. As discussed here, senior travel-specific motivations still share the majority of general leisure motivation dimensions, such as social contacts, personal achievement, escape, and learning.

Senior Gaming Motivation

As casino gaming has gained exposure as a new form of recreation and entertainment for the senior population in the last couple of decades, many researchers and marketers have initiated studies to learn more about this market. While profiling the older casino gaming market, researchers have prolifically debated the underlying motives of senior casino gamblers. Motivation has been treated in the literature as an important driving force to encourage participants to in different types of behaviors. A better understanding of senior casino gaming motivation will assist casino operators' efforts to meet senior casino visitors' diverse needs, and is the key element influencing the seniors' decision-making process when deciding whether to patronize to casinos. However, much of the previous literature on senior casino gaming has been based solely on observational data and reports.

Much of senior gaming studies has not been too long since researchers first began to investigate the gaming motivations of elderly gamblers. It was only in the late the 90's when the majority of researchers started to turn their interests toward this area. The significant increasing numbers of elderly gamblers in the late 90's might have contributed to this research trend. All but a few of these studies were done by field observations or a small number of interviews of elderly gamblers (Cotte, 1997; Hope and Havir, 2002; McNeilly and Burke, 2001, 2002; Loroz, 2004; Wiebe et al., 2001). Some of the studies did not focus on the exact age bracket of 65 years or older, and some of them included the general gaming motivation rather than just casino-

specific gaming motivation. Other studies did not have an adequate number of samples. Most of all, these previous studies did not utilize consistent measurement items to measure senior casino gaming motivations. This indicates that more methodologically sound and structured studies are needed to learn more about the underlying senior casino gaming motivations. However, these studies do provide a base for developing more structured research to better understand the motivations of older adult casino visitors. Some of the reasons identified in the literature as to why older adults visit casinos to play games were to escape from stressful life events, anxiety, daily routine and loneliness; to relax; to win money; to regain social contacts; to seek something new; to define and classify themselves; and for entertainment, fun, excitement, socialization, and inexpensive food (Cotte, 1997; Hagen et, al., 2005; Loroz, 2004;).

Some of the commonly mentioned motivational factors are discussed in detail here to better explain senior gaming motivation. Escape, social interaction, fun and excitement, shows and entertainment, and winning money are some of the factors mentioned repeatedly in various studies, and they are tied to the demographic of aging. Aging is associated with many changes in older people's lives, such as retirement, widowhood, structural changes in society, declining health, and fixed income. These life events that accompany aging can be stressful for older people. They also can lead to negative feelings such as unresolved grief after loss of a spouse, family member, or special friend; anxiety and depression resulting from changes in health and finances and other changes after retirement; and loneliness and boredom from changes in living conditions and loss of social and community involvement (Gatz et al., 1996; Sullivan, 2001). Some seniors reported that they go to casinos just to get away from their homes or retirement communities and daily routine-- to do something different and new. Thus, seniors might be attracted to casino gaming as a form of leisure to release some of their negative feelings and boredom. Researchers have argued that these stressful life events are predictive of senior gaming behaviors (Blaszczynski, et al., 1986; McNeilly and Burke, 2002). Generally, gambling can provide an outlet for humans to shift into a fantasy world and might release some real life stresses temporarily (Kusyszyn, 1984; Smith and Abt, 1984). Seniors can get away from the problems they have at home and stop feeling negatively about their problems while they play in a casino. Some have voiced concern that the need to escape these dysphoric feelings and moods might contribute to the development of problem gambling among seniors (Sullivan, 2001; McNeilly and Burke, 2002). Chrostowski (1997) stated that the fastest growing group who

gamble to relieve feelings of isolation, loneliness, or boredom is middle-aged to older women. However, studies repeatedly reported that problem gambling for seniors is far from significant (Hope and Havir, 2002; Munro et al., 2003; Tarras, Singh, and Moufakkir, 2000; Stitt et al., 2003; Wiebe, 2000). Indeed, most senior casino gamblers are social gamblers (Hope and Havir, 2002; McNeilly and Burke, 2001). Senior gambling as a social activity leads to the next casino motivational factor, the social interaction.

Various studies in senior gambling reported that one of the main reasons seniors choose to visit casinos is the opportunity for social interaction. For example, the majority of 132 Michigan elderly women viewed the casino trips as social occasions (Tarras, Singh, and Moufakkir, 2000). These respondents indicated that casino trips provide them with an opportunity to watch people and a break from their routine. A study conducted by Arizona Council on Compulsive Gambling (2000) explained that interacting with other people at gaming sites may help to combat loneliness and relieve the stress from life's problems. By surveying 1,410 Detroit elderly residents, researchers found that the respondents participated in casino gambling as they do in other social activity and that an occasional casino visit is just one of many other social activities and that respondents visited casinos primarily for social reasons (Zaranek and Chapleski, 2005). McNeilly and Burke (2001) surveyed activity directors from different retirement facilities and senior centers representing senior citizens' social activities. They indicated that with recent increasing local casino availability, more seniors visited casinos than any other day-trip type of social activity such as trips out-of-town, trips to shopping malls, local restaurants, local museums, libraries, zoos, churches, local theaters, and sporting events. This study also claimed that modern older adults now find casino gambling, which they might have considered sinful in their earlier life, a typical day-trip social activity. Another small, phenomenological-hermeneutic study with 12 elderly participants confirmed this view on casino gaming as a social activity. The most common reason for these participants to go to casinos was the social aspect of gambling (Hagen, Nixon, and Solowoniuk, 2005). Some of the participants from this study viewed gambling as a 'pleasant social activity' and indicated that the social aspects of gambling helped to combat their loneliness. The authors were not sure about what part of gambling activities exactly linked to the social aspect. They concluded that gambling activity itself does not offer seniors much socializing, but other activities associated with gaming, such as the bus trip, entice seniors. Another study summed up the important role of casino trips for

seniors in regaining social contact (Loroz, 2004). Through a small sample of ethnographic participation observation and in-depth interviews with older gamblers, the author emphasized the social functions of casino gaming activity that offer seniors opportunities to get out of their limited living environment and reestablish social contacts. Research in psychology and gerontology has suggested that maintaining social contacts and outlets is one of the most important factors that influence older adults' psychological well-being (Heidrich and Ryff, 1993; Kuypers and Bengston, 1973; Lemon, Bengston, and Peterson, 1972).

Not surprisingly, the biggest attraction for older adults to visit casinos is the fun and excitement aspect of the casino experience. Casino gambling is an occasional form of excitement and entertainment (Las Vegas Convention and Visitor's Authority, 1996). A study by Hope and Havir (2002) found that 36% of the senior participants visit casinos for fun. America Gaming Association also indicated in the 1999 National Gambling Impact Study Commission Final Report (2002) that the vast majority of seniors visited casinos for the fun and excitement. Similar results were reported in a study of Oregon seniors. About 60% of 1,512 of these seniors stated that they gamble for entertainment and fun (Moore, 2001). Volberg (2003) also found that frequent gamblers were most likely to claim that entertainment and fun are a major reason to gamble. As McNeilly and Burke (2001) stated, casino gambling certainly has become a new form of recreation activity and entertainment for many seniors. Others also commented that gambling offers a very attractive form of leisure and entertainment for retired older adults (O'Brien Cousins, Withcer, and Moodie, 2002). For seniors, the casino experience provides an exciting form of entertainment. As they walk into a casino facility, everything that is happening is excitement for them. One participant of a study (Hagen, Nixon, and Slolowoniuk, 2005) indicated that just watching other people winning and getting excited, the bright lights, and all the sounds and noises can make the participant excited. Thus, just being in a casino can be excitement and entertainment for older adults. Similarly, Loroz (2004) stated that casino gambling provides a multi-sensory experience with the flashing lights, singing slot machines, the smell of cigarette smoke, alcoholic and nonalcoholic beverages, and the feeling of exhilaration and that these contribute to the fun aspect of gaming for casino participants. She also asserted that these fun aspects of casino gambling meet the conditions for experiential consumption.

Other factors that influence older adults to visit casino venues that are worthwhile to mention are quality foods, watching shows, and winning games. Indeed, many senior casino

participants visit casinos for the inexpensive and quality food. About 24% of senior participants in Hope and Havir's (2002) study reported casino food is one of their motivations to go to casinos. Seniors might view the variety and inexpensive food many casinos offer as good value for their money. For most seniors with fixed income after retirement, inexpensive food can be very attractive. In some cases, seniors make special trips to casinos just to dine out with their spouses and family members (Hagen, Nixon, and Slolowoniuk, 2005).

Many studies indicated that actually winning money is a small part of casino gaming for seniors. This is because senior motivation to visit casinos is centered on the activities available at a casino, rather than any actual winnings (Campbell, 1976). Only 6.2% of Minnesota survey respondents claimed that they go to casinos to win money or that they just like to gamble (Hope and Havir, 2002). The same study also found that men tended to be more curious and more likely to go to win money than women, who were more likely to go for fun. This older adults view on winning money from gaming is quite different from that in other age groups. Apparently, young people are more attracted to the gambling experience itself, whereas middle-age casino goers want to increase their financial rewards and are willing to take risks on casino games (McPherson, 1983). On the other hand, older adults are usually less competitive and are more motivated to maintain social relationships than by the gaming experience itself or the potential to win money. Interestingly, older adults view the money they lose at a casino as entertainment costs that they have to spend regardless of the type of leisure and recreational activities they choose. Most interviewees in Loroz's (2004) study indicated that they are not being deceived into overplaying nor are they being irrational about the fantasy of winning. They are well aware that the odds are against them and tend to gamble rationally by setting spending limits.

Pathological versus Recreational (Social) Gaming Motivation

Seniors' motivations for casino gaming can also be categorized into two main views. Because of the differences in characteristics of the majority of recreational casino visitors and pathological gamblers, most often their motivations for casino gaming are viewed differently. These two opposing points of view can have totally different influences on senior gambling behavior and consequences of gambling. Even though, the focus of this study is the recreational aspect of senior gambling, it is worthwhile to look into the differences between problem and

recreational gambling. The two categories of senior gambling motivation are based on the differences in characteristics of the two groups. Senior gambling motivations can be divided into problem gamblers and non-problem gamblers. The non-problem gamblers focus their motives on the social, entertainment, and fun aspect of gambling. Meanwhile, the problem gamblers place more emphasis on the escape aspects of gambling (Hagen et al, 2005; Hirsh, 2000, McNeilly and Burke, 2000; Wiebe, 2000).

The first group views casino gaming as a recreational or social activity. As discussed earlier, this group of seniors participates in casino gaming for mostly fun, excitement and pleasure, the opportunity for socializing, entertainment, and recreation. The APA (American Psychiatric Association) defines social gambling as gambling that lasts for a limited time with predetermined acceptable losses. Thus, this group views casino gambling as an activity that is enjoyable and considers the money they lose in playing games as the cost of the activity. Hope and Havir (2002) claimed that some of their study respondents did not really enjoy the aspect of gaming but went out for companionship with their spouses, friends, and family. This view reflects that seniors see visiting casinos as a leisure activity that they can enjoy with their family and friends.

The second group's view is derived from the need to escape life's problems and related stresses seniors might have. Some of the specific reasons for this group to participate in casino gaming are chronic pain and health problems, grief, isolation, a controlling or domineering spouse, relationship difficulties or abuse, loss of finances or home, stress, lack of leisure activities and hobbies, lack of identity, boredom, loss of youth, and depression (Munro, et al, 2003). Pathological gambling or problem gambling is defined as persistent and recurrent maladaptive gambling behavior that disrupts personal, family, or vocational pursuits (APA, 1994). This motivation was also viewed as an indicator of problem gambling behaviors (Sullivan, 2001). A minor observation in a study done by the Addictions Foundation of Manitoba found that problem gamblers were most likely to be male and most likely to have feelings of anxiety and depression (Munro, et al, 2003). Seniors who are motivated by these reasons to participate in casino gambling might believe that they can get away from their problems and issues while gaming. Therefore, seniors use gambling as a temporal solution to the problems and issues they face in their lives.

Most casino gambling impacts on elderly participants have tended to be viewed as negative rather than positive. However, many researchers have found that casino gambling is a form of positive social event or entertainment for most elderly persons who visit casinos. Furthermore, while the majority of senior gaming concerns non-problem gaming or social gaming, yet most senior gambling studies have been focused on problem or pathological gambling. Only a low rate of this age cohort is actually at risk of pathological gambling, and so overall, gambling is not a major threat to the elderly. (Hirsch, 2000; Hope and Havir, 2002; McNeilly and Burke, 2001; Tarra, Singh, and Moufakkir, 2000; Sitt, Giacopassi, and Nichols, 2003; Wiebe, 2000). Also the American Psychiatric Association (APA, 1994) stated that only one to three percent of senior gambling has been reported as problematic, pathological, or compulsive in nature and asserted that senior gambling is not a significant problem of concern. Interestingly, a majority of senior casino visitors fully acknowledge the potential risk of casino gambling and use several control strategies to keep themselves from losing control. Studies have listed some of these strategies such as setting spending limits before going to the casino, not playing alone, not reinvesting their winnings, not bringing credit or ATM cards, using techniques that make money and time last longer, and reminding themselves that the odds really are against them (Hagen et al., 2005; Loroz, 2004; Singh et al., 2007).

Age and Gaming Motivation

Other demographic factors also influence gambling behaviors. Generally, demographic factors such as gender, age, education level, income, and socio-economic are important influences on gambling behavior. When dealing with a particular age cohort, 65 or older here, it is also important to build a knowledge base of how age factor influence gambling. In this section, the effects of age on gambling will be discussed.

A study of annual random samples of Minnesota respondents from 1993 to 1997 (Feeney and Maki, 1997) found that age appeared to be the most important demographic determinant of gambling behavior. Generally, the available literature shows that chronological age has an inverse relationship with gambling behaviors (Hirsch, 2000; Kallick, Suites, Dielman, and Hybels, 1979; Li and Smith, 1976; Mok and Hraba, 1991; National Gambling Impact Study Commission, 1999; Petry, 2002; Stitt, Giacopassi, and Nichols, 2003). This means that older

people participate in gambling proportionally less than their younger counterparts, and gambling interest tends to lessen as one ages. Similarly, a sample of U.S. adults aged 18 and older showed a negative relationship between age and the rate of gambling in the previous year (Welte et al, 2002). A Minnesota State Lottery (1994) survey found that about 50 percent of older people who visited casinos in the previous two months visited just once, and 36 percent visited two or three times. A small number (4 percent) reported that they visited a casino more than 10 times in the previous two months. The National Opinion Research Center (1999) showed that even with the increased senior participation in lottery and casino gaming during the last decade, doubling the rate of elderly participation from 1974 to 1999 (NORC, 1999), the senior gambling participation rate is still the lowest when compared to that of other age groups. Not only does the participation rate tend to be lower with age, but also seniors tend to participate in different types of gambling activities than other age groups. Mok and Hraba (1991) found that Iowa residents who are 65 and older pull themselves away from various types of gambling and only focus on more limited types of gambling activities. They found also that older gamblers are more likely to participate in less risky types of gambling, such as bingo. McPherson (1983) echoed that older people are less competitive participants gaming and are more motivated to maintain social relationships, while middle-aged players want to increase their financial rewards and are willing to take more risks. Abt and McGurrin (1992) claimed that older adults accept casino activity not as a risky behavior but as a socially acceptable pastime in which they cautiously set their boundaries of risk taking. Because of this difference in views of casino activity between older and younger age groups, the consistent low rates of pathological gambling in older adults compared to younger age groups (Ladd et al., 2003; Petry, 2002; Shffer, Hall, and Vander Bilt, 1999; Stitt, Giacopassi, and Nichols, 2003) seems to be reasonable. Other studies also found that most older adults control their gambling behaviors so as not to destroy their lives (Sanchez, 2001; Wiebe, 2000).

The different viewpoints and behaviors of the older age group regarding casino gaming might be drawn from their life experiences during a particular era which the younger generation never experienced. For example, many seniors 65 years and older were raised under the effects of the economic hardship of the Great Depression Era. They did not have anything to waste and they worked hard for their money. It was unimaginable to spend money for any type of entertainment or recreation when they hardly made enough to make ends meet. They not only had little money to spend on gambling, but also gambling was regarded as sinful under the

cultural norms of the time. Even after providing for all the needs of their families, having more time and disposable income, and with availability of casino gambling in their later life, they are still reluctant to gamble more than they can afford because of the life experiences that they had growing up (Hope and Havir, 2002). Therefore, they view casino gaming as a social activity, and not as gambling. They do not believe gambling is worth the risk of throwing away what they worked so hard for all of their lives. Such people only use casino gaming as an opportunity to reconnect with the community and to socialize.

Gaming Motivation Measurement Scale

Again, the majority of the senior targeted gaming studies mentioned above is based on observational and/or descriptive data and reports. Unfortunately, a valid measurement scale for testing senior specific casino gaming motivation is lacking in the literature. As this study intends to establish a reliable measurement scale to assess senior casino gaming motivation more accurately and systematically, any existing literature related to gaming motivation might be helpful in helping develop a motivation scale. Therefore, a few studies extracted from literature will be discussed in this section. Most of these studies are not directed at the senior casino population who are over 65 years old, and not all of the studies are specific to casino gaming.

The study most closely related to senior gambling measurement items was conducted by Tarras et al., (2000). They surveyed 2,000 female residents who were over 60 years of age in Michigan and profiled the respondents' casino gambling behavior, including frequency of casino visits, gambling experiences, duration of each visit, favorite games, and reasons to gamble (motivations). They gave the respondents a total of 19 gambling motivation items on a 5-point Likert scale and asked them to rank the top three reasons to gamble. The responses were categorized into three groups; primary motivations, neutral factors, and less important motivations. Primary motivations included 'entertaining,' 'exciting,' 'people watching activity,' and 'an escape from routine'. Neutral factors contained items like 'something to fill time,' 'a convenient getaway,' and 'winning provides a feeling of achievement'. Less important motivations included 'meeting different people,' 'to test my abilities,' 'to win a lot of money,' and 'keeps me socially active'. The authors ranked all 19 items from 1(most important) to 19 (least important) and provided the mean of each item. The sources for the 19 motivation

statements are unknown in this study. The ranking analysis really did not provide the different dimensions of these motivations. Items like 'people watching activity' in the primary motivations and 'meeting different people' in the less important motivations might identify the same aspect of casino gambling. The problem with this view is that sometimes, as in this case, two or more variables are basically the same, yet one was ranked high and the other was rank as less important.

Walker and his colleagues (2005) surveyed 900 adults (age varied) in Canada and tested their motivation for casino gambling based on 14 motivation items that they obtained from a gambling study (Cotte, 1997) and a recreational study (Manfredo et al., 1996). They extracted five motivation factors using exploratory factor analysis. They named the five factors as 'risk taking/gambling as a rush,' 'learning/cognitive self-classification,' 'escaping everyday problems,' 'communing,' and 'emotional self-classification'. The authors asserted that the development of the motivation scale could be the biggest limitation of their study since they were unable to create acceptable motivation items for each of the dimensions they identified.

Chantal et al. (1994) have developed a gambling motivation scale that is derived from the self-determination theory (Deci and Ryan, 1985, 1991). The scale contains 28 items representing reasons why people gamble. This scale is not specifically directed to casino gambling; it can be used with any form of gambling. The items are measured on a 7-point Likert scale and comprised seven subscales that correspond to the seven types of motivation based on the theory. They are intrinsic motivation to know, intrinsic motivation toward accomplishment, intrinsic motivation to experience stimulation, extrinsic motivation-identified, extrinsic motivation-introjected, extrinsic motivation-external regulation, and amotivation.

Lee et al. (2007) assessed gambling motivation by 240 Korean college students on 51 measurement items that were extracted from 34 graduate students and 32 horseracing gamblers reasons for gambling in general. They refined the items to a final 35 items and five factors. Factor one contained items related to thrill, tension, and excitement. Factor two had items like social gathering, interactions, and enjoying the social atmosphere. Factor three was avoidance motive, and factor four was monetary motives. Finally, factor five had items related to fun, enjoyment, and pleasure called the amusement motive.

Similarly, Lee et al. (2006) investigated underlying gambling motivation for Korean casino gamblers with 30 motivation items from previous literature. A factor analysis was

performed on these 30 initial motivation items then reduced to final 23 items, which generated four dimensions. They were designated socialization/learning, challenge, escape, and winning. The four dimensions accounted for 72.43% of the total variance and all had high reliability coefficients ranging from .77 to .94.

Theory of Planned Behavior

Theoretical Framework

Along with senior casino patronage motivation, the major part of this study aims to investigate the seniors' casino patronage intention. To do this, the research adapts the theory of planned behavior (Ajzen, 1988, 1991), which is known as an extension of the theory reasoned action (TRA), as the theoretical framework. The TRA has probably been the most widely applied model in studying human behavior and behavioral dispositions in the last three decades. The theory has been suggested as a good model to explain gambling phenomena and methodological framework and to measure factors affecting gambling behavior (Cumming and Corney, 1987). The model has also been supported by a wide variety of empirical studies (Armitage and Conner, 2001; Brinberg and Durand, 1983; Buttle and Bok, 1996; Conner et. al., 2001; Fagerstrøm, 2005; Olson and Zanna, 1993; Ryan, 1982; Sheppard, Hartwick and Warshaw, 1988; Van den Putte, 1991; Warshaw, 1980). The key assumption of the theory states that most human actions are under volitional control. This means that human social behavior is controlled by the actor's conscious motives or overpowering desires (Ajzen and Fishbein, 1980). The theory holds that human volitional behavior is affected by behavioral intention, which refers to a person's subjective probability that he or she will perform the behavior in question. Thus, intention is the likelihood to act (Fishbein and Ajzen, 1975) and the immediate determinant of a behavior (Ajzen, 1985). The theory does not claim that there will always be a perfect match between a person's intention and behavior; rather the theory claims that people usually do what they intend to do. This means that if intention is measured accurately, it will provide the best predictor of behavior (Fishbein and Ajzen, 1975). While human intention can predict the actual behavior, intention does not explain much about the reasons for the behavior. According to TRA, behavioral intention is a function of a person's attitude toward the behavior and subjective norm (Fishbein,

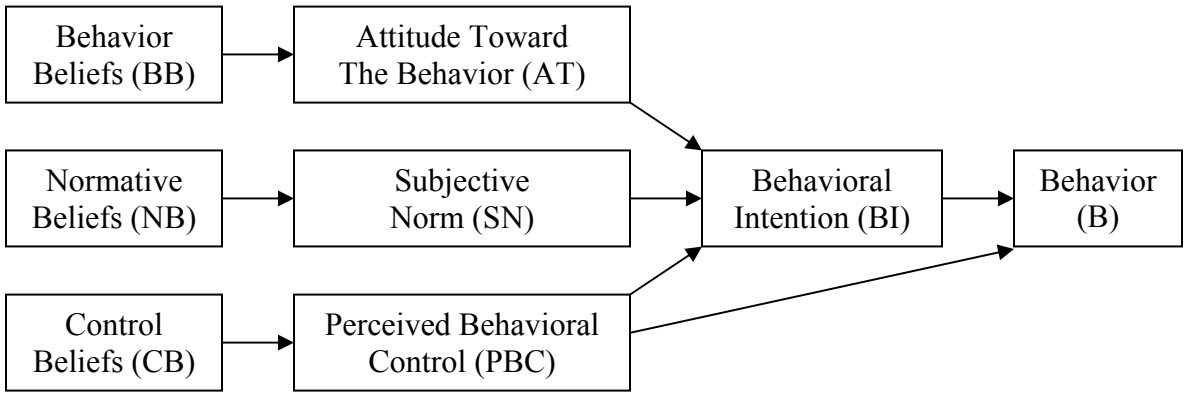
1967). As a personal factor, attitude toward the behavior refers to the individual's positive and negative evaluation of performing the behavior. Thus, a person will decide whether to perform the behavior or not to perform it dependent on that person's judgment of performing the behavior. Generally, a positive attitude leads to intention to perform the behavior, and a negative attitude leads to intention not to perform the behavior. The second determinant of intention is the subjective norm (SN). Reflecting social influence, subjective norm refers to the person's perception of the social pressures from important others put on the person to perform or not perform the behavior. Generally, a person will intend to perform the behavior in question if he or she believes that the other important people around think that he or she should perform it. Both attitude toward the behavior and subjective norm are a function of beliefs. Attitudes are derived from salient beliefs about consequences of performing the behavior in question and evaluation of those outcomes, while subjective norm is determined by normative beliefs (NB) and motivation to comply with the salient referents (Ajzen and Fishbein, 1980).

What differentiates the theory of planned behavior (TPB) from the theory of reasoned action (TRA) is that the former includes another variable, perceived behavioral control (PBC) (Ajzen, 1991). Many have criticized the theory of reasoned action for the limitations in predicting behavioral intentions and behaviors that are not totally volitional and voluntary (Ajzen, 1991; Taylor and Todd, 1995). The measurement of perceived behavioral control is included in the original model to address the criticism that TRA purely deals with volitional behaviors (Fishbein and Ajzen, 1975; Ajzen, 1988, 1999). The theory of planned behavior with perceived behavioral control has been used and supported in predicting a wide range of behavioral intentions and behaviors (Ajzen, 1991; Conner and Armitage, 1998; Godin and Kok, 1996; Sparks. 1994). Perceived behavioral control refers to a person's perceptions about his or her capability of successfully engaging in the behavior (Ajzen, 1985). It adds more predictive power for both behavior and intention as it acts in parallel with attitudes and subjective norms as determinants of intentions (Armitage and Conner, 1999). Meanwhile, perceived behavioral control has to do with perceived available resources and opportunities (Lika, 1984) and the existence or absence of perceived constraints (Dawson, et al., 2001). The TPB postulates that perceived constraints decrease perceptions of control over the behavior and therefore decrease the intention to perform the behavior (Ajzen and Driver, 1991b). As attitude toward behavior and subjective norms were explained by behavioral beliefs, and normative beliefs respectively, the

perceived behavioral control is explained by control beliefs. Control beliefs (CB) are the perceived frequency of occurrence of salient facilitating or inhibiting factors multiplied by the power of those factors to inhibit or facilitate the behavior in question.

Figure 2.1 illustrates the theory of planned behavior (TPB). Performing a specific behavior is influenced by the behavioral intention. Attitude and subjective norm do not directly predict the behavior; rather they affect behavior indirectly through behavioral intention. Furthermore, they are immediate determinants of behavioral intention. In contrast, perceived behavioral control directly influences not only behavioral intention but also behavior itself. The behavior beliefs lead to a positive or negative attitude toward the behavior, normative beliefs result in perceived social pressure or subjective norm, and control beliefs give rise to perceived behavioral control.

Figure 2.1 Theory of Planned Behavior



Applications of TRA or TPB in Gaming Behavior

A few gambling studies have adopted the TRA and/or TPB. Moore and Ohtsuka (1999) tested the TRA for gambling attitude and social norms among adult Australians. They found that the theory is a good tool to predict the adults gambling behavior and problem gambling. They found that both attitude and social norms predicted gambling intentions and intentions predicted gambling behaviors (frequency and problem gambling). The model found that 30% of the variance in adolescent gambling behavior could be explained by intentions, attitudes, and

subjective norms. Cummings and Corney (1997) suggested that the TRA model can integrate other external variables (e.g., demographics and personality) to explain gambling behavioral intention. However, this was only a proposition, and the study did not provide any empirically-derived test results. Oh and Hsu (2001) found that both theory of reasoned action and theory of planned behavior can be useful tools in studying adult gambling behavior. Among 226 Iowa residents, they found attitude has a direct influence on behavioral intention but not on target behavior. Attitude only influences behavior through intention. Similarly, subjective norm and perceived resources and opportunities also had direct and positive relationships with behavioral intention. Most recently, Evans (2003) discussed relevancy of the TRA and TPB as a theoretical foundation for developing prevention programs for adolescent problem gambling. The author argued that care must be taken when utilizing the TRA as a framework for excessive gambling prevention programs, because not all levels of gambling behavior are either completely volitional or non-volitional. He claimed that gambling behavior is more volitional to recreational gamblers than to pathological gamblers and that TPB can address this issue.

An Extended Theory of Planned Behavior Model

Even though the theory of planned behavior has received substantial empirical support with strong predictive utility (Ajzen and Drive, 1991a; Ajzen, Timko, and White, 1982; Conner, Warren, and Close, 1999), many studies have already attempted to extend and enrich the model by including additional explanatory variables (Broonen, 2001; Conner and Araham, 2001; Perugini and Bagozzi, 2001; Sutton, 1998). Even Ajzen (1991) who introduced the theory proposed that the TPB is open to the inclusion of predictions, "if it can be shown that they capture a significant proportion of the variance in intention or behavior after the theory's current variables have been taken into account" (p.199). These external variables indicate any independent variables that are not included in the theory. Demographic variables (e.g., age, gender, occupations, education, and religion), attitude toward target, and personality traits are some of the external variables mentioned in the theory (Ajzen and Fishbein, 1980). The primary concern with these external variables is that even though they may be related to the behavior in question, they do not directly influence behavior (Ajzen and Fishbein, 1980). In addressing this concern, many studies have integrated some of these external variables in either the TRA or the

TPB model to see their indirect or intervening effects in the final determination of intention to enact the behavior.

Van Hoof and his colleagues (2006) studied the influences of ethnicity and gender in the job applicant's decision-making processes using TRA. They discovered that the job applicants' attitude and subjective norm toward intention to apply for a job were no different among six ethnic groups. However, a significant difference was found between the male and female groups. The male job seekers' were more influenced by attitude than their female counterparts, while the female group was influenced by subjective norm more than the male group. Another study by Chiou (1998) investigated to determine any attitude, subjective norm, and perceived control differences on consumers' purchase intention by different levels of consumer product knowledge and attention to social comparison information. The study found that product knowledge did not moderate the relationship among the three antecedents (attitude, subjective norm, and perceived behavior control) and purchase intention. However, the attention to social comparison information did have strong moderating effects on the relationship among the three antecedents and consumer purchase intention. For example, Lee et al. (2007) studied online travel search and purchase intention among Korean travelers by applying TRA to see if travelers' attitude and subjective norm have different effects depending on the level of personal innovativeness. Their results indicated that personal innovativeness interacts with attitude to influence both search and purchase intention. Specifically, personal innovativeness only interacted with subjective norm to influence the online search intention, but the interaction did not influence the purchase intention. Finally, Gordon, Courneya, and Deng (2006) studied whether ethnicity and gender moderate the relationship among the three antecedents of intention and lottery playing behavior. The study concluded that ethnicity and gender may play very important roles in intervening attitudes, subjective norms, and perceived control on lottery playing behavior. Based on these studies, external variables stated outside of the theory can count for additional variance to explain behavioral intention and behavior in question.

While these additional variables have been considered as *indirect* effects on the behavioral intention and behavior itself, others have attempted to extend the theory by including other independent variables that have been found to be related to behavioral intention or behavior. Broonen (2001) suggested goal orientation, interest, past behavior, and academic self-concept as additional variables to be included in the TPB in the area of student academic performance

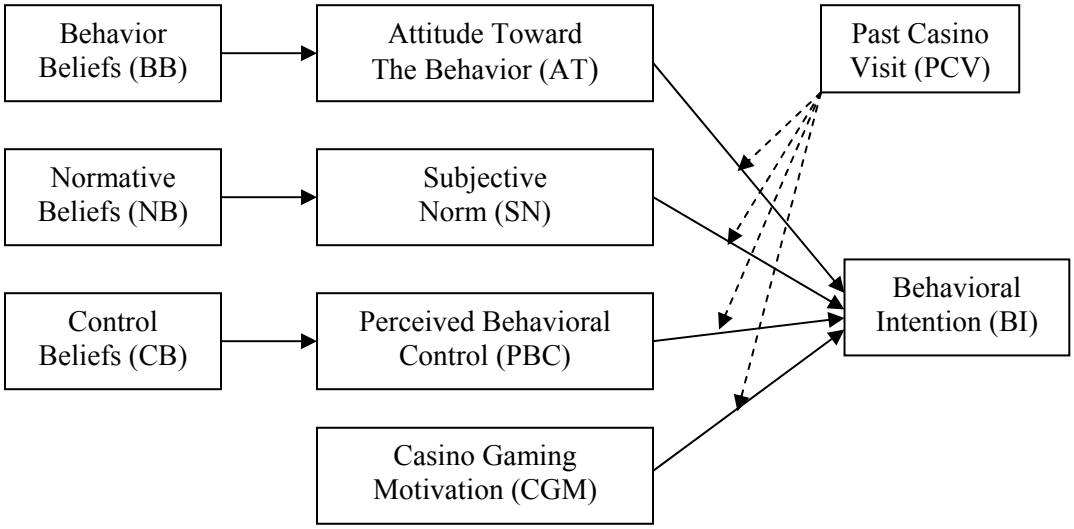
behavior. Out of several suggested independent variables such as self identity (Shaw and Shiu, 2002), self-efficacy and barriers (Fila and Smith, 2006), social support (Rhodes et al., 2002), descriptive norms (Rivis and Sheeran, 2003) and anticipated regret (Sheeran and Orbell, 1999), past behavior has probably received the most attention from researchers in the context of TPB.

Application of an Extended Theory of Planned Behavior

When applied to senior casino gambling, the theory of planned behavior can assist in explaining seniors' intention to participate in casino gaming as a leisure activity. Specifically, the theory of planned behavior is superior to the theory of reasoned action when predicting a behavior that is not fully under volitional control (Madden, et al., 1992). As Warshaw and Davis (1985) claimed casino plying is not totally under volitional control, the TPB will be a better model for investigating the senior casino gaming behaviors. Seniors' intention to participate in casino gambling can be predicted by the three major determinants (attitude toward casino gaming, subjective norm regarding casino gaming, and perceived behavioral control) of behavioral intention. These indicators of casino gaming behavioral intention can then be understood in light of the behavioral beliefs about the consequences of casino gaming participation and the evaluation of those consequences, by the normative beliefs that important referents (e.g., family members, friends, and relatives) hold concerning whether one should or should not participate in casino gaming, and by the control beliefs about resources and opportunities for casino gaming participation.

Beyond the effects of the TPB components, this study attempts to extend the original TPB model by including two additional predictor variables in the model to explain the seniors' casino patronage intention. Seniors' casino gaming motivation (CGM) is included in the model as a direct antecedent to seniors' casino gaming intention. This study is also interested in testing senior past casino experience (PE) as a moderator rather than as a direct predictor of intention. Figure 2.2 exhibits the extended TPB model to explain senior casino patronage intention. Each of the paths in the TPB model is explicated in the context of senior casino gaming behavior in the subsequent section. Each antecedent and the related belief construct (AT-BB, SN-NB, and PBC-CB) and two additional variables (PE and CGM) are explained in detail.

Figure 2.2 Extended Theory of Planned Behavior for Senior Casino Patronage Intention



Behavioral Intention

Algebraically, the theoretical relationships between senior casino gaming intention and predictor variables in the extended TPB model then can be expressed as follows:

$$B \approx BI = (AT)\, w_1 + (SN)\, w_2 + (PBC)\, w_3 + (PE)\, w_4 + (CPM)\, w_5$$

where B is the expected casino gaming behavior, BI is the casino gaming intention. As the theory suggests, the proximal cause of behavior is the intention to enact the behavior (Fishbein and Ajzen, 1975) and behavior is under the control of intentions. Thus, the approximate sign '≈' between and B and BI indicates that a measurement of casino gaming intention can predict the senior casino gaming only if the intention does not change from the antecedents of intention. This means that an accurate measurement of behavioral intention can determine the expected future behavior. However, as Ajzen and Fishbein (1980) indicated, behavioral intentions can change as time passes, and a substantial amount of time between when an intention was measured and the time when the actual behavior is observed will reduce the accuracy of the behavioral intention as the determinant of the behavior. In general, it is not always easy and feasible to reduce this time interval between intention and behavior measurement. The longer

one waits to measure the behavior from the time when the intention is measured, the less accurate the behavior measurement is. Under this time restriction, this study only aims to accurately measure the senior casino gaming intention. As specified, AT is the senior attitude toward casino gaming, SN is the subjective norm, PBC is the perceived behavior control, PE is seniors' past casino experiences, CGM is seniors' casino gaming motivation, and $w_1 - w_5$ are empirical weights indicating the relative importance of the five terms.

Attitude toward Intention

As discussed briefly earlier, the TPB is incorporates both personal factors and social influences as predictors of behavioral intention. As the personal factor, attitude toward the behavior refers to a person's general feeling of favorableness or unfavorableness in performing the target behavior (Fishbein and Ajzen, 1975; Ajzen and Fishbein, 1980; Ajzen, 1988). Generally, when one believes that enacting a specific behavior will lead to mostly positive outcomes that person will possess a favorable attitude toward performing the behavior. On the contrary, when one believes that enacting a specific behavior will lead to mostly negative outcomes that person will possess an unfavorable attitude (Ajzen and Fishbein, 1980). The relationship between a person's attitude toward performing a behavior and his or her intention to perform the behavior has been supported through numerous empirical studies. As Fishbein and Ajzen (1974) discussed, behavioral intention is regarded as the "conative component of attitude". This indicates the strong relation between attitude and intention.

Based on the general principle of subjective expectancy-value theories, the TPB asserted that attitude toward the behavior is at the most basic level of explanation a function of behavioral beliefs and outcome evaluations. A behavioral belief refers to a person's subjective probability that a behavior will lead to a certain consequence (Ajzen and Fishbein, 1980), and they are salient beliefs about the perceived consequences of performing the behavior. Each of these beliefs is associated with the probabilities the person attaches to the consequence. Next the outcome evaluation refers to the person's evaluation of each consequence, and the value from outcome evaluation contributes to the attitude toward the behavior. Then, the behavioral beliefs are usually calculated by multiplying the strength of each behavioral belief and the evaluation of

its consequences. This means that even two people who have the same set of beliefs about a behavior, can have a totally different attitude.

In the context of senior gaming behavior studies, seniors who hold positive consequences about going to casinos would have a favorable attitude toward casinos. They might evaluate casinos as places where they can have fun, excitement, and meet people giving them positive attitudes toward casinos and therefore making them more likely to intend to visit casinos. In contrast, a senior who believes that casinos are noisy and dirty, or sinful and immoral, and a way to take old people's money will have negative attitudes toward casinos, and will therefore be less likely to visit casinos. For instance, Oh and Hsu (2001) found that Iowa gamblers' attitudes had a significant positive association with behavioral intention. However, the study did not find any significant relationship between attitude and actual behavior. Meanwhile, Wood and Griffiths (2004) found that attitude toward gambling can predict a person initiating gambling behavior. Moore and Ohtsuka (1999) indicated that their general adult participants' attitude toward general gambling (not particularly casino gambling) had a strong influence on future gambling intention. Based on the results of empirical tests, the first two hypotheses can be proposed as below.

Hypothesis 1: Behavioral belief (BB) is a significant predictor of attitude.
Hypothesis 2: Attitude (AT) toward casino gaming is a significant predictor of casino gaming intention.

Subjective Norms

Social influences as a second predictor of intention in the model is conceptualized in terms such as subjective norm, which refers to the perceived social pressure from important others to perform or not perform the behavior (Ajzen and Fishbein, 1980). According to the theory, the more an individual believes that people who are important to him or her (e.g., parents, friends, or colleagues) think that he or she should perform the behavior, the more likely the individual intent to perform the behavior. In contrast, when an individual believes that his or her important referents think that he or she should not perform the behavior, the individual is less likely to intend to perform the behavior. This second predictor of behavior intention is more dependent on important others' beliefs about enacting the behavior than the actor's own beliefs.

In most cases, the relationship between subjective norm and behavioral intention is straightforward as described above. The results are more about intention to perform behavior that gains favorable reactions from important referents and less about intention to perform behavior that gains unfavorable reactions (Ajzen and Fishbein, 1980).

Subjective norm is determined not only by an individual's normative beliefs, which refers to the perceptions of important others' preferences about whether an individual should perform or not perform the behavior (Ajzen and Fishbein, 1980), but also the individual's motivation to comply with the important other's beliefs. Normative beliefs are the individual's beliefs that each of his or her significant others expects him or her to act in a certain way. For example, 'my spouse thinks that I should/should not go to casinos for my leisure'. Motivations to comply are the individual's tendency to conform to the expectations of the important others, which basically explains the level of willingness to act in the ways their referents want the individual to act. For example, 'I want to do what my spouse thinks that I should do'.

The relationship between an individual's subjective norm and behavioral intention has been successfully supported in the area of hospitality. Lee et al. (2007) found that travelers' subjective norms have a strong, positive, direct effect on their online purchase intention. This means that when travelers purchase travel-related products online, they consider their referents' opinions as an important source. Lee and Back (2008) found that subjective norm has a significant positive effect on professional meeting participants' intentions in all three models (TRA, TPB, and Meeting Participation Model: MPM). This means that opinions from meeting participants' referents such as family members, colleagues, and advisors, have important roles for their intention to attend professional meetings. However, a gambling study by Oh and Hsu (2001) found that only a fraction of Iowa residents' intention to gamble was influenced by gamblers' subjective norms. In applying a modified theory of reasoned action with additional variables, past behavior and the four perceived behavior control measurement variables, they found that the subjective norm has the weakest influence among other predictors on behavioral intention. This can be explained by the arguments from Ajzen and Fishbein (1980) that behavioral intention is not always simple to predict based on subjective norm. A person's intention to act on a specific behavior might depend not only on the subjective norm (social influences) but also on his or her own attitude (individual factor) about performing the behavior. The individual's final decision on engaging the behavior might be dependent on the relative

importance of other components. For example, when a person holds a positive attitude toward a behavior, but believes that his or her important referents do not approve of the behavior, the individual's intention to perform the behavior depends on the subjective norm over attitude. The opposite is also true. Thus the theory allows analysts to test the relative important weights among predictors of behavioral intention. For instances, as in Oh and Hsu's study (2001), the opinions from their referents might not be the most important given other determinants of intention to gamble. Specifically, the senior population that this study is investigating is from the generation that used to regard gambling as a sinful activity. Even though group members' perception of gambling has changed over the years, it is highly likely that they are still carefully considering what other people believe about casino gaming especially those people who are important to them. Based on the discussion above, the second set of hypotheses is proposed below.

Hypothesis 3: Normative belief (NB) is a significant predictor of subjective norm
Hypothesis 4: Subjective norm (SN) is a significant predictor of casino gaming intention

Perceived Behavior Control

The theory of reasoned action was extended by adding another determinant of behavior intentions and behavior. Perceived behavioral control was added to the original theory to address the issues of the theory applicability to the behaviors under incomplete volitional control (Ajzen, 1985). Perceived behavior control refers to the degree to which an individual feels that performance or nonperformance of the behavior in question is under his or her volitional control (Ajzen, 1985, 1988). The more resources and opportunities that one believes he has, the higher level of control he thinks he has (Madden et al., 1992). Ajzen explained perceived behavior control as "the person's belief as to how easy and difficult performance of the behavior is likely to be" (Ajzen and Madden, 1986, p.457). Here, the behavior that is regarded by the actor as easy to perform is one that is high in perceived behavioral control, whereas the behavior that is regarded as difficult to perform is one that is low in perceived behavioral control. Ajzen (2002) argued that with everything else being equal, having a high level of perceived control will reinforce an individual's intention to perform the behavior and increase his or her effort and determination to act on the behavior. This means that an individual will not have as strong

intentions to perform a behavior as when the person believes s/he does not have the resources and opportunities even when the person has a positive attitude and has obtained favorable reactions from his or her important referents. The theory states that perceived behavioral control has an indirect effect on behavior through intentions and, thus, a direct effect on behavioral intention (Ajzen, 1991) and can have added predictive power to explain many intentions and behaviors. He also proposed that perceived behavioral control can be the most important determinant of intention when an individual has past knowledge and experience of the particular behavior (Ajzen, 1988; Fredricks and Dossett, 1983). In contrast, perceived behavioral control would have little influence on behavioral intention when the behavior in question is unfamiliar and novel to an individual (Ajzen, 1985).

Thus, perceived behavioral control is a function of control beliefs, which refers to an individual's beliefs about the presence of factors that may facilitate or impede performance of the behavior (Ajzen, 2001). Based on the general expectancy- value theories, perceived behavioral control is measured by multiplying beliefs strength and power of control factor to facilitate or inhibit the performance of behavior; then the resulting products can be summed up across all control beliefs.

In the context of the senior casino gaming behaviors, many perceived constraints and barriers limit seniors' leisure activities such as casino gaming. Some of these inhibiting factors can be either internal (e.g., poor skills, abilities, health) or external (e.g., insufficient time, transportation, financial resources). Even when a senior has an overall positive attitude toward going to casinos and believes that all the important people around him (spouse, children, and friends) have favorable reactions towards the individual going to casinos for leisure, not having reliable transportation to a casino would make it difficult for the individual to go. TO suppoer this, Ajzen and Driver (1991a) found that perceived behavioral control plays a significant role in predicting leisure behaviors. Oh and Hsu (2001), in their gambling behavior study, investigated the participants' perceived behavioral control by measuring four control factors (budgetary affordability, time availability, self-controllability, gambling skills) and found out that excluding budgetary affordability, the other three control factors have significant effects on gambling behavioral intentions. Based on discussion on perceived behavioral control, the next set of hypotheses is proposed below.

Hypothesis 5: Control belief (CB) is a significant predictor of perceived behavioral control
Hypothesis 6: Perceived behavioral control (PBC) is a significant predictor of casino gaming intention

Motivation to Intention

As discussed extensively earlier in this chapter regarding senior casino gambling motivation, there are different motivational factors for seniors to go to casinos to play games. Escape, social interaction, fun and excitement, shows and entertainment, and winning money are some of these motivational factors (Cotte, 1997; Hagen et, al., 2005; Loroz, 2004; McNeilly and Burke, 2001, 2002). Motivation has been treated as an important driving force and determinant of various types of behaviors in the literature. In fact, various motivation definitions in literature indicate that motivation is one of the most important factors that regulate human behaviors. Moutinho (2000) defined motivation as a state of need or a condition that drives an individual toward certain types of action that are seen as likely to bring satisfaction. Motivation is also the force that initiates, directs, and sustains behavior (Petri, 1981). Motivation is regarded as the internal and/or external force that triggers, directs, intensifies, and leads to the persistence of a behavior (Weiner, 1980). Backman, et al. (1995) defined motivation as a state of need, a condition that serves as a driving force to display different kinds of behavior toward certain types of activities, developing preference, arriving at some expected satisfactory outcome. All other definitions of motivation also suggest similar concepts that human motivation is one of the most important determinants of behavioral intention and behaviors. The strong relationships between motivation and human behavior have been well documented in literature. In the context of hospitality, much of the research studied the influence of travelers' motivation on their decisions to travel to specific destinations (Coltman, 1989; Mansfeld, 1992; Turnbull and Uysal, 1995), which can then indicate a travelers' intention to visit the destination. Similarly, several studies have tried to evaluate people's gambling behaviors based on various motivation theories. Understanding gambling participations by participants' motivation has been the most widely used approach (Chantal, Vallerland, and Vallieres, 1995; Cotte, 1997; Dumont and Ladouceur, 1990). These studies assert that motivation is what leads people to participate in gambling. The most widely mentioned motivation theory in studies of leisure activities is the theory of self-

determination (Deci and Ryan, 1985). According to the self-determination theory, different motivations underlie human behaviors, and the differences in the motivation are based on the levels of self-determination. From high to low levels of self-determination, the theory explains there are three different motivations: intrinsic motivation, extrinsic motivation and amotivation. Intrinsic motivation is the most self-determined type and amotivation is the least self-determined. In general, the more self-determined a behavior, the more positive the outcome must be (Deci and Ryan, 1991). This theory has been adapted in several leisure studies (Losier et al., 1993; Pellertier et al., 1995). Chantal et al. (1994, 1995) applied the theory to gambling behavior and found out that people who are motivated by a more intrinsic level of self-determination are more likely to participate in gambling because of the enjoyment and excitement it provides than those who are motivated by a more extrinsic level of self-determination such as a potential monetary reward. This can effectively explain the senior casino behavior especially when a majority of senior casino goers go for fun, excitement and pleasure rather than for financial reward. From the study results, the researchers conclude that gambling participants' motivation is a major determinant of gambling involvement (Chantal et al., 1995).

As illustrated earlier, the TPB is a widely used theoretical model for explaining informational and motivational influences on behavior focusing on intention reflecting one's motivation to engage in a behavior (Ajzen, 1991). However, the three determinants of behavioral intention in the model may not be sufficient enough to capture the whole motivation; in short, the model really does not include actual motivation factors. Therefore, based on the importance of motivation to human behavior, this study proposes to include casino patronage motivation as an additional determinant variable of intention. As an expectancy-value based model, the TPB has been challenged by Hagger et al. (2002), who claim that human behaviors are not always a function of calculational evaluations as in the expectancy-value model. As intrinsic motivation suggests, people might engage in a behavior for their own self and for pleasure that can be experienced while performing the act. As suggested by Ajzen (1991) the theory is open to external variables that "can capture a significant proportion of the variance in intention or behavior after the theory's current variables have been taken into account" (p. 199). Because of the significance of motivation to behavior, it is necessary to incorporate motivation in the model, and the additional external variable will contribute to explain more variance in casino behaviors. Based on this discussion, the next hypothesis is proposed.

Hypothesis 7: Casino gambling motivation is a significant predictor of casino gaming intention.

Past Casino Experience

Numerous empirical studies have supported the inclusion of past behavior as a predictor of behavioral intention and future behavior (Bagozzi, 1981; Bentler and Speckart, 1981; Quellette and Wood, 1998; Sutton and Hallett, 1989) in the TPB. The root of the idea to include past behavior in the TPB is from Triandis (1980) who suggested that a learned behavior from repeated performance is another cause of behavior. This line of theoretical development considers that if an individual habitually engages in a particular behavior, there is no need for that person to perform the evaluations and reasoning assumed by the TPB. Instead, behaviors that are more habitual than planned can be measured directly from the repeated past performance of the behavior. Trafimow (2000) claimed that when a person engages in novel behaviors, the variables (AT, SN, PBC) by the TPB will be good predictors of intention. However, when a person engages in a behavior out of habit, the predictive power of variables will be reduced.

Generally, analyses from studies indicated that inclusion of past behavior to the model improved prediction of behavioral intention and behaviors that are relatively habitual. Conner and Armitage (1998) indicated that the addition of past behavior to the TPB variables explains, on average, an additional 7% of the variance in behavioral intention and 13% of the variance in behavior. Past behavior as an additional variable in explaining intention and behavior also has been supported in the area of hospitality. Lam and Hsu (2006) studied Taiwanese tourists' behavioral intention of choosing a travel destination by applying the TPB. They included past behavior as a direct predictor of behavioral intention and found that, along with subjective norm and perceived behavior control, it had direct impact on tourists' behavioral intention. Lee and Back (2007) compared three competing models, TRA, TPB, and MPM (meeting participation model; Oppermann and Chon, 1997), which is a systematic integration of major meeting participation factors based on the TPB. The MPM differentiates itself from the TPB by including two additional variables, destination image and past participation experience, as direct antecedents of behavioral intention to the TPB to better capture association meeting participation intention. The study results indicated that the MPM can explain the process of association

meeting participation. They also determined that the association members' past meeting participation experience is the most important predictor variable for meeting participation intention (Lee and Back, 2007). Finally, past behavior also has been investigated in the TPB model as it applies to casino gambling behavioral intention and actual behavior (Oh and Hsu, 2001). Past gambling behavior proved to be highly correlated with the direct antecedents (attitude, subjective norm, and three perceived control variables) of behavioral intention and has significant positive impact on gambling behavioral intention and gambling behavior. They concluded that based on the respondents' past casino play behaviors, some of the reasons for development of pathological gambling can be learned. In the context of senior casino gaming behaviors, the direct effect of past casino experience on intentions means that seniors who have been to casinos in the past and who are regular casino goers are more likely to visit casinos without any hesitancy. They will be more familiar with various facilities, services, types of machines and games, and even people in the casinos than people who have not visited casinos at all or do not go to casinos regularly. Thus, they will be more inclined to visit casinos without any hesitations. Based on the Trafimow (2000), who made the claim that the predictive variables of TPB might be weakened with past experience in the model, seniors who have more past casino experiences might not choose to go to casinos based on the three predictors of the TPB.

This research is interested in investigating whether the influence of attitude, social norm, perceived control, and the additional variable motivation on seniors' casino patronage intentions will be different when seniors have casino experiences in the relatively recent past versus when they do not have recent casino experience. As Ajzen (1991) explained, the relative importance of attitude, subjective norm, and perceived behavioral control in the prediction of behavioral intention is expected to vary across behaviors and situations; thus, investigating the moderating effects of seniors' past casino experiences in the model will enhance the knowledge of senior casino patronage behaviors. As explained earlier, habitual behaviors based on repeated performance might not be influenced so much by the controlled processes involved in the TPB, but they might be influenced more by automatic habitual responses (Eagly and Chaiken, 1993). Thus, the predictive power of the three predictors of intentions in the TPB might be different among people who have visited casinos regularly in recent years and those who have not visited a casino in recent years. A few studies have demonstrated some evidence of this argument. Quellett and Wood (1998) found that past behavior is a stronger predictor than intention of

frequently performed behaviors, and intention is a stronger predictor for infrequently performed behaviors. Some researchers have tested the moderating effect of past behavior on the relationship between intention and behavior (Kashima et al., 1993; Norman et al., 2000; Verplanken et al., 1998). Such studies found different results; some found significant moderating roles and some did not find any moderating effect of past behavior. Specifically, a couple of studies unrelated to seniors and casino gambling have tested the moderating effects of past behavior on the relationships of attitude-intention and subjective norm-intention. One study found that the habit of using a condom has a moderating role on attitude-intention and subjective norm-intention (Trafimow, 2000). The researcher interpreted the results as each relation of attitude-intention and subjective norm-intention being insignificant with a high level of habit and relations being significant with a low level of habit. Norman and Conner (2006) also tested the moderating roles of young adults' past binge drinking behavior between attitude and intention and subjective norm and intention. They found that past behavior moderates the relationship between attitude and intention. Clearly, inclusion of past behavior in the TPB model has demonstrated the reduced power of antecedents leading directly to intention (Lam and Hsu, 2006; Oh and Hsu, 2001). Because of the strong direct effects on intention and its ability to withdraw the predictive power of other variables, Lam and Hsu (2006) argued that past behavior has to be carefully considered for testing as a direct antecedent of intention or a moderator that interacts between variables and intentions.

As one of the objectives of this study stated in Chapter 1, this study is really about testing the suitability of the TPB model for measuring senior intention to participate in casino gaming as a leisure activity. Further, this study is also about finding the predictive power of each determinant variable (AT, SN, PBC, and Motivation). Inclusion of seniors' past casino experience as a direct antecedent of intention might reduce the predictive powers of the other determinant variables (AT, SN, PBC, and Motivation). This would not allow present research to achieve its objectives: to test suitability of the model and predictive power of determinant variables. As participating in casino gaming can be a more habitual behavior based on past experience for some seniors, they do not have to go through the decision-making process of making evaluations (AT, SN, and PBC) (Quellette and Wood, 1998). No doubt determining the importance of the past behavior or experience on behavioral intention and future behavior will serve as a valuable tool to test senior casino gaming behavior based on their past experiences.

However, this study rather tests senior past casino experience as a moderator between four antecedents of casino intention and behavioral intention itself in the extended TPB model. Thus, testing past experience as a moderator will allow this study to find out the predictive weight of each direct variable of intention for seniors who have more casino experience and for those who do not have much casino experience without drainage of each variable's predictive power. This practice also will reveal the differences in predictive power of each variable for two different groups (experienced and non-experienced). The effects of each variable on predicting the seniors' intention to participate in casino gaming will be very valuable information for developing more practical marketing strategies for casino venues.

Based on these arguments, this study proposes the next hypothesis.

Hypothesis 8: Past casino experience has a moderating effect among antecedents (AT, SN, PBC, and Motivation) regarding intention and casino gaming intention.

Summary

In this chapter, senior casino motivation, behavior, the theoretical framework, and the theory of planned behavior, were discussed. In summary, this study tests paths among three antecedents (AT, SN, PBC) and senior casino gaming intention and paths among the three beliefs (BB, NB, CB) and relevant antecedents (AT, SN, PBC). Additionally, senior motivation is included in the model as a direct predictor of behavioral intention. It also tests past behavior as a moderator among all four antecedents (AT, SN, PBC, and motivation) and behavioral intention. Below are the summaries of the proposed hypotheses.

H1: Behavioral belief (BB) is a significant predictor of attitude (AT).
H2: Attitude (AT) toward casino gaming is a significant predictor of casino gaming intention.
H3: Normative belief (NB) is a significant predictor of subjective norm (SN)
H4: Subjective norm (SN) is a significant predictor of casino gaming intention
H5: Control belief (CB) is a significant predictor of perceived behavioral control (PBC)
H6: Perceived behavioral control (PBC) is a significant predictor of casino gaming intention
H7: Casino gaming motivation is a significant predictor of casino gaming intention.

H8a: Past casino experience (PE) has a moderating effect between attitude and casino gaming intention.

H8b: Past casino experience (PE) has a moderating effect between subjective and casino gaming intention.

H8c: Past casino experience (PE) has a moderating effect between perceived behavioral control and casino gaming intention.

H8d: Past casino experience (PE) has a moderating effect between motivation and casino gaming intention.

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CHAPTER 3 - METHODOLOGY

The primary objectives of this study were to develop senior casino patronage gaming motivation measurement, to investigate senior casino gaming intention based on the determinants in the theory of planned behavior (Ajzen, 1991) and an additional variable, senior casino motivation, and to test moderating roles of past casino experiences. Consequently, this chapter includes a description of the study designed to achieve the study's objectives: motivation scale development and theoretical model testing. The development of a senior casino scale based on the findings in literature was the first focus of this study. Testing the paths between beliefs and intention determinant variables (AT, SN, and PBC) and the paths between the determinant variables and behavioral intention was another goal of the study. An additional variable, the motivation from scale development was also tested as a direct predictor variable to behavioral intention. Finally, the moderating effect of seniors' past casino experience was tested on the relationships between the four predictor variables (AT, SN, PBC, and Motivation) and intention. Descriptions of the sample selection and survey procedure, scale development, and data analyses are discussed in this chapter.

Sample Population and Survey Procedure

As mentioned earlier, in Chapter 1, a senior is defined, for the population of this study, as an individual who is 65 years and older. Thus, the population for this study includes seniors who are 65 years or older residing in the United States. A web-based self-report questionnaire was distributed to an electronic mailing list purchased from a marketing research provider. This firm only uses by-invitation panels for their databases, which are based on members who provided information of their own will. Once a person becomes a panelist or member of this firm, he or she has to provide 300 or more profile items. This private marketing research firm was chosen for this study for a variety of reasons. The biggest advantage of using the database from the research firm was that the nationwide database enabled sampling from across the nation. Since it covers senior population from different parts of country, the results of this study were more applicable to the general U.S. senior population than when results are based on samples from a

particular region of the country. Secondly, the detailed criteria for each panel profile allows researchers (clients) to select any data set with the criteria that is needed for their studies. Another good reason to use the database from this firm was the convenience that the service provides for the incentives for panelists who participate in studies in the form of firm credits or points. This means researchers only pay the firm for the number of completed responses and do not have to offer separate incentives to the respondents.

Before launching the questionnaire, a pilot test was conducted by using an online survey of faculty and staff at a major university to ensure the accuracy of survey items for distribution in the questionnaire. A total of 68 people completed the questionnaire. Once the response rate was checked and a screening was done to determine the data quality in terms of response variability on the survey items, the necessary modifications were made.

For the main survey, a total of 5,000 invitations were sent out to the panelists from the marketing research company with a target of receiving 500 completed surveys, which would be adequate sample size for testing structural equation modeling (Hair et al., 1998). The mailing list criteria for this study included people who are 65 years or older and currently reside in the United States. The mailing list criteria for this study included people who are 65 years or older and currently reside in the United States. Each e-mail contained a URL link for the survey and a unique Personal Identification Number (PIN). Each respondent was requested to provide his or her PIN ID at the beginning of the survey, so that each could receive the proper number of points for completing the survey.

The survey consisted of three major parts: senior casino motivation items, variables in the theory of planned behavior (AT, SN, PBC, BB, NB, CB, and Intention), and items to determine respondents' demographics including past casino experiences. Respondents were asked questions on a 7-point Likert scale (1= extremely disagree, 7= extremely agree) for all motivation items and either a 7-point Likert scale (e.g., 1= extremely disagree, 7= extremely agree) or 7-point semantic differential scale (e.g., -3 = extremely disagree, +3= extremely agree) on TPB variables.

Study 1: Senior Casino Gaming Motivation Scale Development

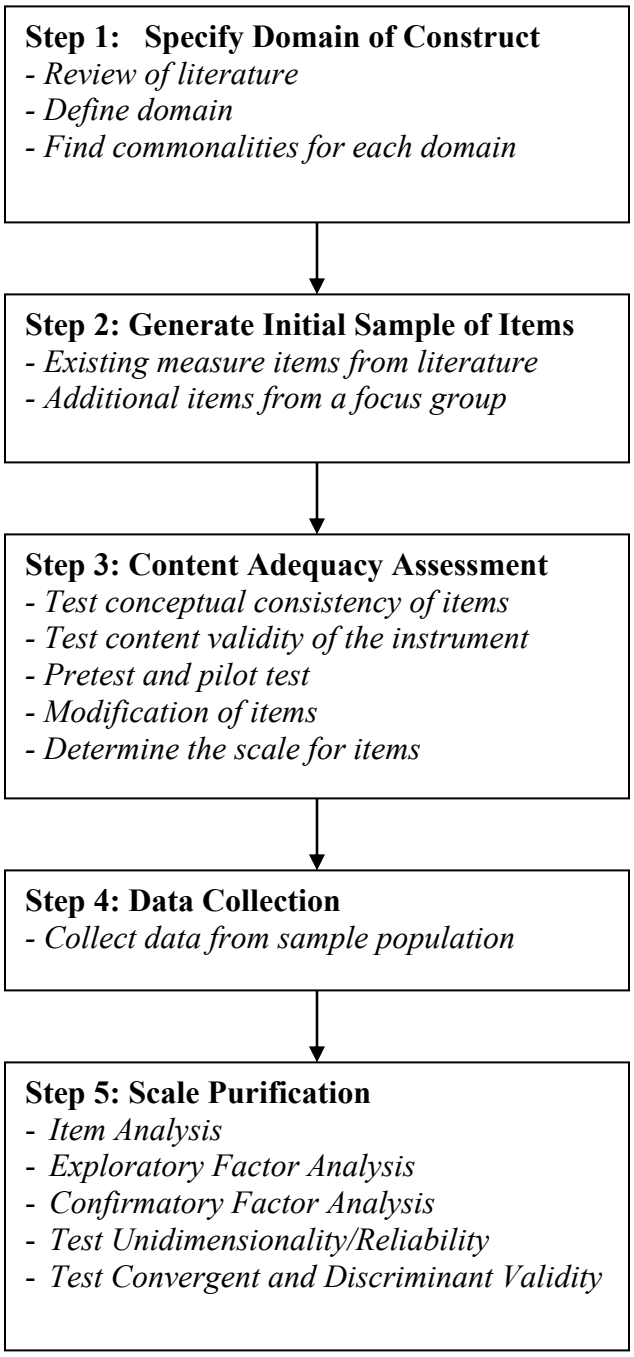
This study substantially followed the suggested measurement developing procedures from Churchill (1979) and Arnold and Reynolds (2003). Other suggestions by widely cited construct measurement development literature such as Bentler and Bonnet (1980), Gerbing and Anderson (1988), and Peter (1981) were also incorporated in developing the senior casino motivation scale. The motivation scale development procedure involved five steps as shown in Figure 3.1, and each step is described in detail.

Step 1: Specify Domain of Construct

The first step involved identifying the domain of the construct, which meant explaining what was included in the definition and what was not included (Churchill, 1979) in the construct. Although there are many definitions of motivation in the literature, it is difficult to identify a definition that is senior casino-specific or widely accepted in senior casino motivation literature. Consequently, a general definition might help to start this procedure. This study views motivation as the internal and/or external forces that trigger, direct, intensify, and lead to the persistence of a behavior (Vallerand and Thill, 1993; Weiner, 1980). Thus, gaming motivation is what leads seniors to become involved in casino gaming and to come to casinos for their leisure. In other words, the senior gaming motivations were regarded as reasons why seniors visit casinos as a form of leisure activity.

Arnold and Reynolds (2003) suggested that the main objective of this step was to find the commonalities of each domain by conducting content analyses of relevant literature. This process should identify the most accurate representation of each domain and help to develop precise conceptual definitions of the motivations. Based on the comprehensive literature review on senior gaming motivations, five major domains of casino motivation for seniors (i.e., socialization, entertainment/excitement, escape, winning, and learning) were identified. In other words, seniors visit casinos primarily for the above five reasons. These categories could be considered as labels for each domain.

Figure 3.1 Scale development Procedures



Step 2: Generate Initial Sample of Items

Identifying the major domains for the senior motivation led to the next step in the scale development procedure. Sample measurement items for each domain were generated in this step whose main objective was to develop a list of items that explicate each of the dimensions that emerged from step 1. Churchill (1979) suggested a few productive techniques to collect measurement items that can capture the domain as specified. Thus, literature reviews, experience surveys, insight-stimulating examples, and focus groups could be used in this item generation stage (Selltiz et al, 1976). For this study, an extensive review of literature and a focus group were done to generate items that reflected the dimensionality of the senior casino patronage motivation. Based on a review of previous studies, a few more than 30 items could be utilized in this study.

Personal interviews with 10 acquaintances, 65 years or older, were conducted to refine the questionnaire to identify any unusable items, ambiguous/redundant items, and gather additional motivation items that might missed from the review of literature. The participants were asked some of the reasons why they might have visited casinos or whether they might visit casinos in the future depending on their past casino experiences. The list of items from the review of literature was presented to the participants to stimulate open discussion. They were offered a gift certificate from a coffee house as the incentive for their participation.

Step 3: Content Adequacy Assessment

Based on the first two steps, the preliminary scale items were generated. Examining the initial items for validity was the next step in the process requiring six faculty members from a hospitality program at a university to evaluate the items for content and face validity. These faculty evaluated the items for their accurate representation of the motivation domains. During this process, the faculty identified items that were ambiguous in wording, not very representative of the domain, redundant, or misleading (Arnold and Reynolds, 2003; Babin et al., 1994). These items were considered for deletion from the measurement item set. This process then led to development of the questionnaire to test the items.

A pilot test on the items was also conducted by obtaining 50 members of seniors who are 65 years or older from a market research company. Once the data were collected, coefficient

alpha and factor analysis were conducted. Based on these tests, more modifications were made, and items with low coefficients and low factor loadings were considered for deletion. With necessary modifications, the items were then processed for multi-sample scale purification and validation (Arnold and Reynolds, 2003).

Step 4: Data Collection

Churchill (1979) suggested that a set of data could further improve the measures in the scale development procedure. Thus, a questionnaire was developed with the motivations items from the previous steps. Survey respondents were asked to rate their agreement for each of the item statements using 7-point Likert scale (1= extremely disagree, 7 = extremely agree). Each scale also included an option of "N/A" for items that respondents have no opinions about. Then, a web-based survey was conducted as described in 'Sample Population and Survey Procedure' earlier in this chapter.

Step 5: Scale Purification

The last step of scale development procedure was scale purification, which consisted of a series of tests to purify the measurement items and to examine the scale's psychometric properties (Anderson and Gerbing, 1988; Churchill, 1979; Hair et al., 1998). This process included several tests such as item analyses, exploratory factor analyses, confirmatory factor analyses, and assessments of scale reliability, unidimensionality, and convergent and discriminant validity (Arnold and Reynolds, 2003) . Each of these tests is described in detail.

Item analyses

Item analyses involved two tests: testing the corrected item-total subscale correlations and comparing between item correlations with the hypothesized dimension and correlations with the other remaining dimensions (Arnold and Reynolds, 2003; Bearden et al, 1989; Tian et al, 2001). First, items that were supposed to represent senior casino motivation and have corrected item-total correlations below .50 were deleted (Tian et al., 2001). If the correlation of an item was not statistically higher compared to correlations of other dimensions, it was also deleted.

Exploratory Factor Analysis

After low correlation items were deleted, the reduced number of items was then conducted for exploratory factor analysis with principle factoring. The exploratory factor analysis was done to identify the number of factors to extract (Bearden et al., 1989; Nunnally and Bernstein, 1994). Hair et al., (1998) suggested that items having low factor loading (less than .4) and high cross-loadings (higher than .4), or low communalities (less than .3) should be considered for deletion. Once items were deleted, factor analysis was repeated for item trimming. Following the exploratory factor analysis, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of Sphericity were conducted to check the adequacy of the distribution of values for conducting factor analysis.

Confirmatory Factor Analysis

A confirmatory factor analysis was conducted to investigate whether the established motivation dimensions and factor-loading pattern fit a sample from a new population. Therefore, a factor covariance structure measurement model was estimated to refine the manifest variables using a maximum likelihood technique with AMOS 5.0 (Arbuckle, 2007). The analysis also examined the model fit with various indices such as Chi-square, comparative fit index (CFI), normed- fit index (NFI), and root mean squared error of approximation (RMSEA). From careful inspection of modification index and theory based suggestion, modifications were made for model improvement. The confirmatory model fitting process was repeated until it reached a satisfactory fit. The final model from this process would be one that parsimoniously represents senior casino motivations.

Unidimensionality and Reliability

From the confirmatory factor analysis, the unidimensionality also could be inspected. The unidimensionality of measures means that the each item reflects only one underlying construct (Bollen, 1989; Gerbing and Anderson, 1988). Therefore, each measure item loaded to one dimension of motivation without significant cross loading to other dimensions would establish the unidimensionality. Coefficient alpha estimates, composite reliability estimates, and average variance extracted (AVE) estimates were used to check the consistency of multiple indicators for

each construct (Fornell and Larcker, 1981; Nunnally and Berstein, 1994). The common threshold value for acceptable reliability is .7 (Anderson and Gerbing,, 1988; Fornell and Larcker, 1981).

Convergent and Discriminant Validities

The purpose of testing model convergent and discriminant validity was to establish the construct validity. Having acceptable construct validity means that each construct actually measures what it originally intends to measure (Churchill, 1979). Evidence of convergent validity could be found when each indicator-estimated maximum likelihood loading on the underlying construct was significant (Anderson and Gerbing, 1988; Peter, 1981). From the confirmatory factory analysis, each factor loading and its *t* values were accessed for the convergent validity. The average variance extracted estimates that exceeded the .5 threshold value were recommended (Fornell and Larcker, 1981) for convergent validity. The discriminant validity was related to the extent to which a measure was unique and did not reflect any other variables other than the one hypothesized. Discriminant validity was examined by checking whether each of AVE exceeds all the squared correlations between the two associated latent constructs (Fornell and Larcker, 1981; Netemeyer et al., 1991).

Study 2: Testing Relationships among Variables

Measurement of Variables

The survey consisted of three major parts: senior casino motivation items, variables in the theory of planned behavior (AT, SN, PBC, BB, NB, CB, and Intention), and items about respondents' demographics including past casino gaming experiences. The motivation measurement items were taken directly from the scale development procedure in the first part of this study. The measurement items of hypothetical constructs were extracted from a variety of studies.

Senior Casino Gaming Motivation

After the motivation scale development from study one was completed, the construct dimensions were defined. Depending on the number of sub-dimensions the process produced, the relevant numbers of measurement items were used for the model testing.

Attitude

A set of five 7-point semantic differential scales was used to assess attitude toward casino gaming. Each of the five scale items was stated as "All things considered, I think casino gaming would be_____". The bipolar adjectives of the semantic differential scales included enjoyable-unenjoyable, positive-negative, fun-boring, pleasant-unpleasant, and favorable-unfavorable.

Subjective Norm

The subjective norm was accessed with three 7- point disagree - agree statements (1: strongly disagree, 7: strongly agree). These items were to ask respondents whether their important referents would approve or disapprove of their patronage to casinos. An example of statements was "people (e.g., spouse/partner, children, and friends) who are important to me approve/ disapprove of me doing casino gaming".

Perceived Behavioral Control

Three items for perceived behavioral control (PBC) were developed to capture seniors' confidence in participating in casino gaming. The PBC measurement included items to capture both seniors' sense of self-efficacy in visiting casinos and their beliefs that they have control over the behavior (casino patronage). For example, PBC was measured with statements such as "I have resources and time to go to casinos (self-efficacy)" and "whether or not I visit to casinos is completely up to me (controllability)". Both items were measured on a 7-point scale.

Behavioral Beliefs

Two items (fun and excitement, escape from boredom) were extracted from literature for measuring behavioral beliefs toward casino patronage. Since belief-based attitude was the sum of the belief strength multiplied by outcome evaluation, two questions were asked for each of the

two items. First, the respondents were asked to rate the strength of their belief about each of the two items on a 7-point scale ranging from strongly disagree (1) to strongly agree (7). A statement such as "Doing casino gaming will provide fun and excitement" was used. Second, respondents were also asked the outcome evaluations with statements like "Having fun and excitement is important / unimportant" on a 7-point scale.

Normative Beliefs

Three relevant referent groups or individuals (children, spouse/partner, and friends) were first identified through literature review. Similar to measuring behavioral beliefs, respondents were asked to rate the strength of influence of each relevant referent on their decision to visit a casino on a 7-point Likert scale ranging from extremely unlikely (1) to extremely likely (7). Sample statements like "My children (spouse/partner, friends) think that I should / should not do casino gaming". Motivation to comply was measured by asking respondents' general motivation to comply with respect to each referent. For example, respondents were asked to rate their agreement on a statement such as "Generally speaking, how much do you want to do what your children (spouse/partner, friend) think you should do?"

Control Beliefs

The three most mentioned control belief items in relation to senior leisure activities were identified as perceived health, transportation, and proximity to the location in literature. Control beliefs were measured by asking participants to rate how likely their casino gaming decisions are to be affected by each belief item on a 7-point scale ranging from extremely disagree (1) to extremely agree (7). For example, respondents rated a statement such as "I have to consider my health (transportation and distance to casinos) to go to casinos. Perceived control power was measured by asking respondents to rate how much control they believe they have over each control belief on a 7-point scale ranging from strongly disagree (1) to strongly agree (7). An example would be "Not having transportation would make it hard for me to do casino gaming". The belief-based perceived behavioral control was the sum of the control beliefs multiplied by perceived control power.

Behavioral Intention

Seniors' intention to visit casinos was measured by three items; "I intend to do casino gaming in the near future", "I would like to do casino gaming in the near future", and "I plan to do casino gaming in the near future". For acceptable use, these items must have acceptable psychometric qualities like having high correlations with each other (Ajzen, 2002) from the pilot test. These three items were anchored by scale items like 'extremely unlikely- extremely likely', 'definitely true - definitely false', and 'strongly disagree- strongly agree'.

Past Experience

Senior past casino experience was measured by asking respondents directly whether or not they have ever visited casinos in the previous twelve months. For those who have past casino experiences, the frequency of visitations was further measured.

Measuring Demographic Variables

Seniors' age (65 years or older), gender, education level, annual household income, marital status, and living arrangements were included for their socio-demographics.

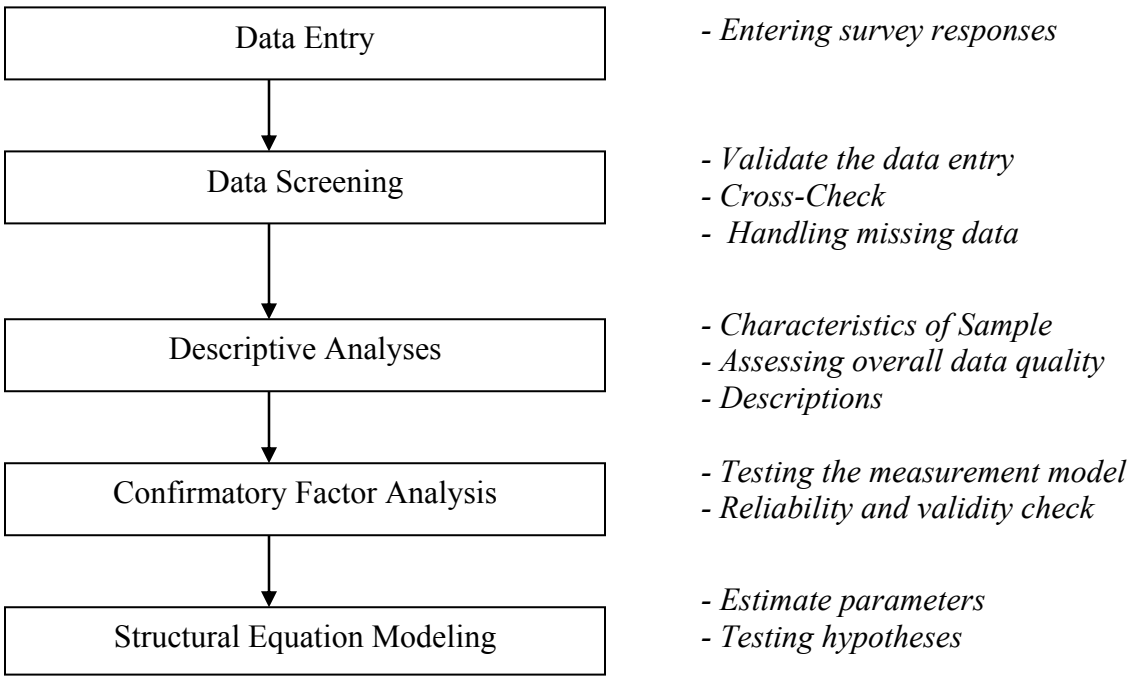
Data Analysis for Study 2

The data analysis for the second part of this study was performed using SPSS 16.0 and AMOS 16.0 (Arbuckle, 2007). As shown in Figure 3.2. prior to the main part of the analysis, the data was treated with a series of tests for data snooping and screening. The missing data and poor quality response were treated as commonly recommended procedures. The data was also checked for any multivariate and univariate outliers, violations of normality, linearity, multicollinearity, and homoscedasticity. Descriptive statistics showed the overall characteristics of respondents based on the demographic information such as age, gender, annual household income, education, and past casino experiences. It also summarized the frequencies of categorical data and means and standard deviations for all continuous variables.

The proposed path model analysis by the two-step approach suggested by Anderson & Gerbing (1998) was the second part of this study. The covariance structure measurement model

was first estimated to refine the manifest variables and to assess the model fit, reliability, and construct validity using confirmatory factory analysis. All reliability and validity (refer to step 5 in scale development procedure) must reach a satisfactory level before the study proceeds to test the causal relationships among the constructs in the structural model. The main purpose of the confirmatory factor analysis was to ensure each of the observed indicators serves as a measurement for the latent variables (Jöreskog & Sörbom, 1984).

Figure 3.2 Data Analysis Procedure for Study



Once the measurement model was established, then the structural equation modeling (SEM) with latent variables was conducted to test the research hypotheses. The SEM allowed for the estimate of path coefficients and to test the significance of each causal path simultaneously (Bentler, 1980; Lee and Green, 1991). The overall fit of the model was expressed by various indices including chi-square statistic (χ^2), goodness-of-fit index (GFI), root mean square error of approximation (RMSEA), normed fit index (NFI), comparative fit index (CFI), and parsimony

normed fit index (PNFI). The three belief constructs (BB, NB, and CB) were predictor variables to the three core variables (AT, SN, and PBC), which were the predictors, in turn, of behavioral intention (endogenous variable). The dimensions of senior motivations and senior past casino experience were also treated as predictor variables for behavioral intention.

In addition, the hypothesized moderating role of senior past casino experience in determining casino gaming intention was tested with a series of modeling tests for metric invariance. The data was divided into two groups: the casino-experienced and the non-experienced group during the previous 12 months. The significant difference of the chi-square between the non-restricted model and the full metric invariance model was assessed. Finally, evidence of significant chi-square difference between the full metric invariance model and the coefficients invariance model would indicate the moderating effect of past casino experience on the relationships between determinant variables of intention and behavioral intention.

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CHAPTER 4 - SENIOR CASINO GAMING MOTIVATION

Abstract

Senior casino gaming is as a leisure activity for the senior population as well as a research topic for many researchers from various academic disciplines. Finding out important reasons or motivations for older adults spending time in casino gaming will be the one of the fundamental ways to determine their future casino patronage intention. Accordingly, this study identifies a comprehensive inventory of senior casino gaming motivations by way of an exploratory approach. The research also generated a scale development procedure to find five distinctive senior casino gaming motivation dimensions: winning and thrill, socialization, escape, enjoyment, and curiosity. Ultimately, confirmatory factor estimates supported model unidimensionality, reliability, and validity while the measurement scale was parsimonious and captured various dimensions of senior casino gaming motivation.

Key words: Senior Leisure, Casino Gaming, Gaming Motivation, Motivation Scale Development

Introduction

The synergy of the growing number of aging population members and the number of states that have legalized casino gaming in the United States has intensified casino gaming marketers' and researchers' interests in mature casino gaming market in the last couple of decades. Older market or mature market members, often defined as individuals who are 55 years and older (Moschis, et al., 1993; Price, et al., 2000), are the fastest growing population in the United States. Particularly, those who are 65 years and older are expected to account for 20.7% of the total U.S. population by 2050 (U.S. Census Bureau, 2005). Concurrently, as many states have legalized casino gaming, this activity has become more available and accessible to the elderly population. As of 2004, 11 states had commercial casinos and 28 states had Native American tribal casino operations (Griswold and Nichols, 2006). Reports have indicated that half of U.S. seniors who are 65 years and older participate in casino gaming, totaling approximately 16 million in 1998 (Singh, et al., 2007). Also, the percentage of seniors who have gambled at least once in their lifetime has increased from 38% in 1975 to 80% in 1998 (NORC, 1999). Indeed, the number of senior casino visitors has been growing dramatically in the last decade.

Finding the underlying motives to participate in gaming has been recognized as a critical factor in the study of gaming behavior (Cotte, 1997; Jang et al., 2000; Lee et al., 2006; Park et al., 2002; Tarras et al., 2000). In general, motivation is defined as a state of need or a condition that drives an individual toward certain types of action that are seen as likely to bring satisfaction (Moutinho, 2000). Thus, motivation can be regarded as the reasons for people to engage in certain behavior. Although gambling motivation has been identified as an important factor influencing seniors' gaming behaviors, there are several issues with existing senior gaming motivation studies. First, many of the gaming motivation studies have focused on finding reasons for pathological gaming, rather than identifying why people participate in gaming as leisure, especially casino gaming. However, viewing motivations for pathological and leisure gambling as the same might be a concern because of the obvious difference in motives. While people who gamble as a leisure activity focus more on the social, entertainment, and fun aspects of gaming, pathological gamblers place more emphasis on the escape aspects of gambling (Hagen et al., 2005; Hirsh, 2000; McNeilly and Burke, 2001; Wiebe, 2000). Since the majority of senior

gaming is considered non-problem gaming or social gaming (Hope and Havir, 2002; McNeilly and Burke, 2000; Tarras et al., 2000; Sitt et al., 2003), applying motivation for pathological gambling will not explain much about non-problem gaming behavior. Second, many gambling motivation studies have dealt with the general population rather specializing in the senior population, yet studies have shown that age appeared to be the most important demographic factor in gaming behavior (Feeney and Maki, 1997; Kallick et al., 1979; Mok and Hraba, 1991; Petry, 2002). This is an important fact in that different age cohorts engage in different gaming behaviors; therefore, each cohort has different reasons and motives to play. For example, McPherson (1983) stated that older people are less competitive in participating in gambling and more motivated to maintain social relationships, while middle-aged players want to increase their financial rewards and are willing to take more risks. Thus, there is a need to identify those specific motivations that are more suitable for seniors' leisure casino gaming behaviors. Lastly, even with a flood of senior gaming studies, a valid and reliable tool to measure specifically senior casino motivation has not been suggested in the literature. Some gambling motivation literature has attempted to identify different dimensions of gambling motivation using more constructive and methodologically sound arguments (Chantal, et al., 1995; Jang, et al., 2000; Lee and Lee, 2003; Lee et al., 2007; Neighbors et al., 2002). However, none of these specifically targeted the senior market, but instead focused on other age cohorts or the general population. On the other hand, a majority of senior gambling motivation studies were based on observational and descriptive reports (Cotte, 1997; Hagen et al., 2005; Loroz, 2004; Singh et al., 2007) without validated and reliable measurement instruments. Clearly, a measurement scale with a methodological procedure was necessary to identify the nature of complex senior casino gaming motivations and to measure them more appropriately.

The smoke-filled gaming halls, unremitting loud noise, and dynamic crowds in casinos certainly are not the most desirable atmosphere for many older individuals. In spite of these unpleasant environments, casino gaming still has emerged as one of the most popular leisure activities among the older population. Consequently, a thorough understanding of the underlying motives for seniors to participate in casino gaming will provide useful information. This information can assist casino operators to develop products that will target the senior market better and thus meet senior casino visitors' diverse needs. The current study attempted to fill some of the gaps in senior gaming motivation literature by accomplishing two major objectives:

to establish a reliable and valid measurement of senior casino gaming motivations and to reveal underlying dimensions of senior casino gaming motivations by using a methodological sound measurement development procedure.

Review of Literature

Literature related to senior gaming motivation is reviewed in this section. A review of the general leisure motivations prior to looking into gaming-specific motivations could help to widen our viewpoints of senior casino gaming. Since casino gaming is considered to be a leisure activity, some of the general leisure motivations can provide a basis for identifying senior casino gaming motivations.

Senior Leisure Motivation

Leisure is defined as what people do voluntarily during their free time, as opposed to work time for pay (Nilson et al., 1996; Hills et al., 2000). Activities for leisure have been identified in a wide range in leisure literature. For instance, some commonly known senior leisure activities are socializing, gardening, reading, TV watching, shopping, participating in other club and organizations, and conversing on the telephone (Alberta Recreation and Parks, 1988; House, 2003; McAvoy, 1979; McGuire, 1980; Menec, 2003; Searle, 1987; Verbrugge et al., 1996). Ultimately, any activity can be added to the list as leisure as long as one utilizes free time. For instance, senior casino gaming can be a leisure activity as long as an individual participates in casino gaming activities during his/her free time. Moreover, a variety of leisure motivations might lead to different types of leisure activities. In leisure context, motivation is defined as an "inner state which energizes, channels, and sustains human behavior to achieve goals" (Pizam et al., 1979, p. 196). Although people can have various motivations for different types of leisure activity, several motivation dimensions have been identified for general leisure activities. Reviewing the general leisure motivations can help to widen our viewpoints of senior casino gaming as a leisure activity.

Leisure motivation has been well documented in the literature. One of the earliest studies viewed functions of leisure as self-determination and the encouragement of commitment, and opportunities of recreation, personal growth and service to others (Kaplan, 1975). Later, Crandall (1980) identified 17 motivation items for engaging in leisure activities. Some of the items

included achievement, altruism, creativity, self-actualization, social contact, and avoiding boredom. One of the widely leisure known motivation theories is the intrinsic and extrinsic motivations (Deci and Ryan, 1985). This research defined intrinsic motivation as engaging in an activity solely for the pleasure of doing the activity. Further, leisure motivation could defined by three major intrinsic motivations: stimulations, accomplishment, and the acquisition of knowledge and by three extrinsic motivations: social development, the constructive use of free-time, and avoidance of doing something else (Pelletier et al., 1996). They also argued that people could engage in a leisure activity without any sense of purpose of intent, which was referred to as 'amotivation'. Nilson and Weaver (1996) found six leisure motivation factors by surveying Canadian older adults. The six motivations are achievement, personal development, change of pace, social, solitude, and escape. They confirmed that these factors were very similar to those found in earlier studies (Lounsbury and Hoops, 1988; Driver et al., 1991). Other studies found that family ties, health and exercise, and desire to belong to and interact with nature were also important underlying leisure motivation for older adults (Riddick and Daniel, 1984; Kelly et al, 1987). More activity-specific motivations were found in senior travel studies. Thus, motivation has been treated as a critical variable in understanding reasons people participate in recreational or pleasure travel because it is the driving force behind travel behavior (Crompton, 1979). Some widely known senior traveling motivations include rest and relaxation, family and friends, physical exercise, learning experience, self-fulfillment, accomplishment (Guinn, 1980), knowledge, escape, and kinship (Kim et al., 1996). Stone and Nicol (1999) also identified similar motivations in senior travelers: escape, self-esteem, and recreation. As discussed here, senior travel-specific motivations still share the majority of general leisure motivation dimensions, such as social contacts, personal achievement, escape, and learning. Furthermore, some of these general leisure motivations can build the base for identifying senior casino gaming motivations if casino gaming is viewed as a leisure activity. This study takes some of these general leisure motivations into consideration to include a more broad range of motivations in identifying gaming motivation.

Senior Gaming Motivation

Previous studies included general gambling motivation rather than just a casino-specific gambling motivation. In addition, most gaming motivation studies did not utilize consistent

measurement items to focus on senior casino specific gaming motivations. However, some previous studies can provide a base for developing a more structured research to better understand the motivations of seniors' casino gaming behavior.

Escape, social interaction, fun and excitement, shows and entertainment, and winning money are some of the motivation factors repeatedly mentioned in various studies. These are related to aging, which is associated with many changes in older people's lives, such as retirement, widowhood, structural changes in society, declining health, and fixed income. These life events that accompany aging can be stressful for older people. They also can lead to negative feelings such as unresolved grief after loss of a spouse, family member, or special friend; anxiety and depression resulting from changes in health and finances and other changes after retirement; and loneliness and boredom from changes in living conditions and loss of social and community involvement (Gatz et al., 1996; Sullivan, 2001). Some seniors reported that they go to casinos just to get away from their homes or retirement communities and the daily routine in order to do something different and new. Some researchers have argued that certain stressful life events are predictive of senior gaming behaviors (Blaszczynski, et al., 1998; McNeilly and Burke, 2002). General gambling can provide an outlet for humans to shift into a fantasy world and might relieve real life stresses temporarily (Kusyszyn, 1984; Smith and Abt, 1984). Seniors can get away from the problems they have at home and stop feeling negatively about their problems while they play in a casino. Chrostowski (1997) stated that the fastest growing group who gamble to relieve feelings of isolation, loneliness, or boredom is middle-aged to older women.

Another reason for seniors to choose to participate in gambling is the opportunity for social interaction. The majority of 132 Michigan elderly women viewed casino trips as social occasions (Tarras et al., 2000). They stated that casino trips provided them an opportunity to watch people and get away from their routine. Another study that surveyed elderly residents in Detroit found that the respondents participate in casino gambling as they do in any other social activity and that an occasional casino visit is just one of many social activities. Thus, they go to casinos mainly for social reasons (Zaranek and Chapleski, 2005). Even though the gambling activity itself does not offer seniors much socializing, other activities associated with gambling, such as the bus ride itself, entice seniors for the social interaction (Hagen et al., 2005). Loroz (2004) also emphasized that the social functions of casino gambling offer opportunities for seniors to get out of their limited living environment and re-establish social contacts.

Not surprisingly, visiting casinos for fun and excitement was another important reason for seniors. For many, casino gambling is an occasional form of excitement and entertainment (Las Vegas Convention and Visitors Authority, 1996). One study found that 36% of senior participants visit casinos for fun (Hope and Havir, 2002). Indeed, the National Gambling Impact Study (1999) reported that the vast majority of seniors visited casinos for fun and excitement. Other studies made similar claims that the biggest reason for seniors to go to casinos is for fun and excitement (Moore, 2001; Volberg, 2003; McNeilly and Burke, 2001). Others asserted that casino gambling offers a very attractive form of leisure and entertainment for retired older adults (Loroz, 2004). Apparently, just being in a casino can be exciting and entertaining for older adults. Perhaps this is because casino gambling provides a multi-sensory experience with the flashing lights, the singing slot machines, the smell of cigarette smoke, the alcoholic and nonalcoholic beverages, and the feeling of exhilaration all of which contribute to the fun aspect of gambling for casino participants.

Some of the other important motives for visiting casinos that have been mentioned were quality foods, watching shows, and winning games. Surprisingly, many seniors visit casinos for the inexpensive and quality food many casinos offer. For example, about 24% of seniors in Hope and Havir's (2002) study reported casino food is one of their motivations to go to casinos. For most seniors with fixed income after retirement, inexpensive food can be very attractive. In some cases, seniors make special trips to casinos just to dine out with their spouses and family members (Hagen et al., 2005). Many studies indicated that the prospect of winning money has very little to do with seniors' reasons to visit casinos. In fact, senior motivation to visit casinos is centered on the activities available at the casino, rather than any actual winnings (Campbell, 1976). Only 6.2% of Minnesota respondents to a survey claimed that they go to casinos to win money or that they just like to gamble (Hope and Havir, 2002). This may be because older adults are usually less competitive and more motivated to maintain social relationships and not motivated by the gambling experience itself or the potential to win money. Interestingly, older adults view the money they lose at a casino as entertainment costs that they will spend regardless of the type of leisure and recreational activities they choose. They are also well aware of the fact that the odds are against them and tend to gamble rationally by setting spending limits or using other tactics so that they do not lose control.

Gaming Motivation Measurement

A valid measurement scale for testing senior-specific casino gaming motivation is lacking in the literature. Most of the studies mentioned are based on observational and/or descriptive data and reports. However, existing literature related to gambling motivation will help build the basis for more reliable and useful measurements to assess senior casino gaming motivation more accurately and systematically. While several existing gaming studies have tried to identify some of the important motivation factors, the majority of these studies are not directed at the senior casino population over 65 years old, nor do they target casino gaming motivation specifically.

A study most closely related to senior gambling measurement items was conducted by Tarras et al., (2000), who provided 19 gambling motivation items on a 5-point Likert scale to 2,000 female residents over 60 years old and asked them to rank the top three reasons to gamble. The responses were categorized into three groups: primary motivations, neutral factors, and less important motivations. The primary motivations included 'entertaining,' 'exciting,' 'people watching activity,' and 'escape from routine'. Neutral factors included items like 'something to fill time,' 'convenient getaway,' and 'winning provides a feeling of achievement'. Less important motivations included 'meeting different people,' 'to test my abilities,' 'to win a lot of money,' and 'keeps me socially active.' The study ranked all 19 items from 1 (most important) to 19 (least important) and provided the mean of each item. The ranking analysis did not really provide different dimensions of these motivations. For instance, items like 'people watching activity' in the primary motivations and 'meeting different people' in the less important motivations might explain the same aspect of casino gambling. The problem with this approach is that both motivations suggest the same dimension, yet one was ranked high and the other was ranked as less important. Thus, such a scale offered no differentiation among seemingly related motivations.

Similarly, Neighbors et al. (2002) asked 184 undergraduate students to rank the 16 motivation items elicited from their qualitative study. The top reasons for the college students to participate in gambling were money, enjoyment/fun, social reasons, excitement, occupy time/boredom, winning, and conformity.

Walker and his colleagues (2005) surveyed 900 adults (age varied) in Canada and examined motivations of their respondents to participate in casino gambling based on 14

motivation items, which were obtained from a gambling study (Cotte, 1997) and a recreational study (Manfredo et al., 1996). The study extracted five motivation factors using exploratory factor analysis. The researchers named the five factors as 'risk taking/gaming as a rush,' 'learning/cognitive self-classification,' 'escaping everyday problems,' 'communing,' and 'emotional self-classification'. The study concluded that the development of the motivation scale could be the biggest limitation of their study since the study was unable to create acceptable items for all the motivations they identified.

Chantal et al. (1994) developed a gambling motivation scale that is derived from the self-determination theory (Deci and Ryan, 1985, 1991). The scale contained 28 items representing reasons why people gamble. This scale is not specifically directed to casino gambling; it can be used with any form of gambling. The items were measured on a 7-point Likert scale and comprised seven subscales that correspond to the seven types of motivation based on the theory. The seven dimensions were intrinsic motivation to know, intrinsic motivation toward accomplishment, intrinsic motivation to experience stimulation, extrinsic motivation-identified, extrinsic motivation-introjected, extrinsic motivation-external regulation, and amotivation. Intrinsic motivation is the most self-determined type and amotivation is the least self-determined. Deci and Ryan (1991) claimed that the more self-determination acts on a behavior, the more positive the outcome must be. Example items for intrinsic motivation to know would be 'for the pleasure I get from improving my knowledge of the game,' 'for the satisfaction of learning new ways of playing my favorite game,' 'for the curiosity of knowing what can happen in the game'. For amotivation, some items are 'I play for money but sometimes I feel I am not getting a lot out of it,' and 'I play for money but I sometimes ask myself if it is good for me'.

Lee et al. (2007) examined gambling motivation of 240 Korean college students concerning 51 motivation items that were extracted from 34 graduate students and 32 horseracing gamblers' reasons for gambling in general. The researchers refined the items to a final 35 items and five factors. The first factor contained items related to thrill, tension, and excitement. Factor two had items like social gathering, interactions and enjoying the social atmosphere. Factor three was avoidance motive, and factor four was monetary motives. Finally, the last factor concerned fun, enjoyment, and pleasure and was called amusement motive.

Similarly, Lee et al. (2006) investigated underlying gambling motivation for Korean casino gamblers with 30 motivation items then reduced the number to a final 23 items, which

Table 4.1 Summary of Literature in Gaming Motivation

Authors	Sample Population/ Type of game	Motivational Dimensions	Number of Items
Chantal, Vallerand, & Vallieres (1994)	General population/ General Gambling Activities (cards, slot machines, lotteries)	Intrinsic motivation to know Intrinsic motivation toward accomplishment Intrinsic motivation to experience stimulation Extrinsic motivation –identified Extrinsic motivation –introjected Extrinsic motivation –external regulation Amotivation	28
Tarras, Singh, & Moufakkir (2000)	2,000 female 60 years and older/ Casino games	Primary Motivators Neutral Factors Less important motivators	19
Neighbors, Lostutter, Cronce, & Larimer (2002)	184 college students	Money Enjoyment/Fun Excitement Social Occupy time/Boredom Winning Competition Conformity Risk Skill Interest Coping Challenge Drinking Luck chasing	16
Walker, Hinch, & Weighill (2005)	900 Canadian adults/ Casino games	Risk/rush Learn cognitive self-classification Escape problems Emotional self-classification	14
Lee, Lee, Bernhard, & Yoon (2006)	399 Korean adults/ Casino games	Socialization/learning Challenge Escape Winning	23
Lee, Chae, Lee, & Kim (2007)	240 undergraduate students / General Gambling activities	Excitement motive Socialization motive Avoidance motive Monetary motive Amusement motive	35

generated four dimensions. They were designated socialization/learning, challenge, escape, and winning. The four dimensions accounted for 72.43% of the total variance, and all had high reliability coefficients ranging from .77 to .94.

Table 4.1 shows the summary of these studies, which are more constructive and theoretically sound than senior gambling motivation studies, which are more observational as described earlier.

Methodology

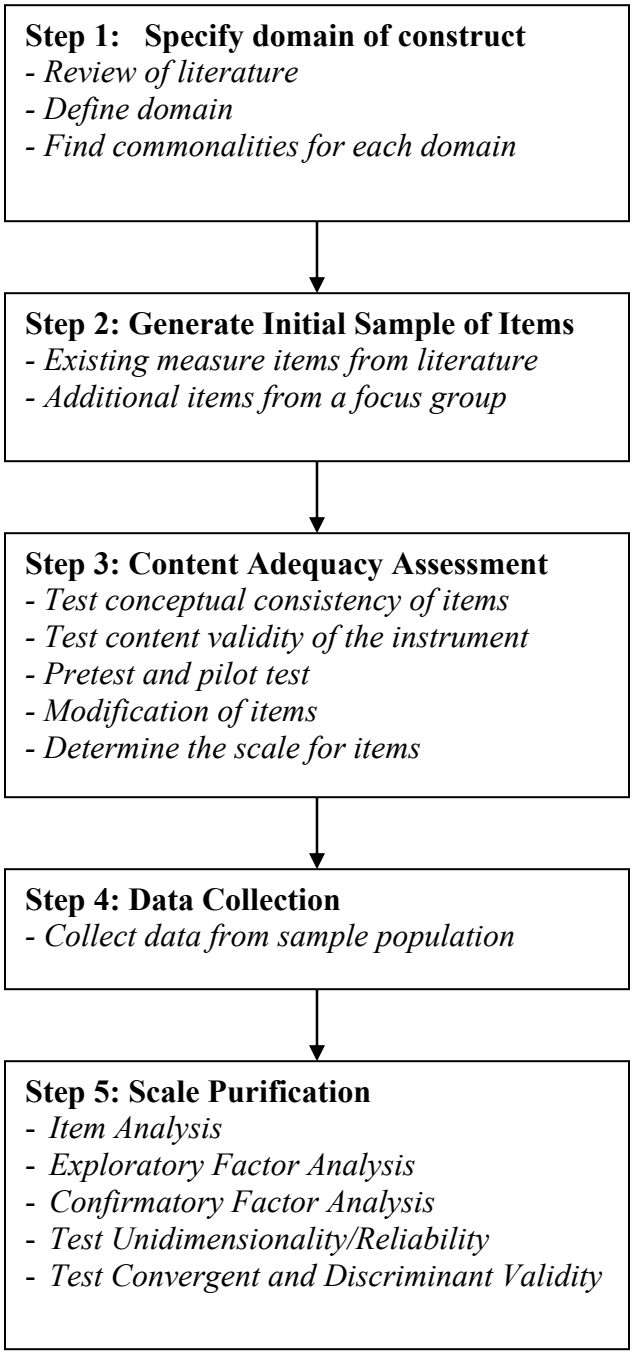
Senior Casino Motivation Measurement Development Procedure

Even though this study was taking a more exploratory approach to define senior casino gaming motivation dimensions, to be more constructive and more theoretically sound, this study substantially follows the suggested measurement developing procedures from Churchill (1979) and Gerbing and Anderson (1988). Procedure guidelines from these two studies are most widely accepted and used. The procedures are rigorous in that they require examining internal consistency and external consistency of scale items through both the exploratory and confirmatory factor analysis approach. Other suggestions by widely cited measurement development literature such as Bentler and Bonnet (1980), Peter (1981), and Arnold and Reynolds (2003), were also taken into consideration in developing a senior casino gaming motivation measurement. The summary of the suggested measurement development procedure is shown in Figure 4.1, each of the steps in the procedure is described in detail.

Step 1: Specify Domain of Construct

The first step in the procedure involves identifying the domain of the construct, which means explaining what is included in the definition and what is not included (Churchill, 1979). Although there are many definitions of motivation in the literature, it seems to be difficult to identify a definition that targets senior casino gaming specifically. A general definition can help launch the first step. Accordingly, this study views motivation as the internal and/or external forces that trigger, direct, intensify, and lead to the persistence of a behavior (Vallerand and

Figure 4.1 Procedures for Exploring Senior Casino Gaming Motivation Construct



Thill, 1993; Weiner, 1980). Thus, gaming motivation is what leads seniors to become involved in casino gaming and to visit casinos. Arnolds and Reynolds (2003) suggested that the main goal of the first step is to find the commonalities of each domain by conducting content analyses of relevant literature. This process should identify the most accurate representation of each domain and help to develop precise conceptual definitions of the motivations. From the literature review on gaming motivations, five major domains of gaming motivation that might be related to senior casino gaming are identified. They are socialization, entertainment/excitement, escape, winning and learning.

Step 2: Generate Initial Sample of Items

Sample measurement items for each of the domains for senior casino gaming motivation were identified in the second step. The main objective of this step was to develop a list of items that explicate each of the dimensions that emerged from step 1. Churchill (1979) suggested a few useful techniques to collect measurement items that can capture the domain as specified such as literature reviews, experience surveys, insight-stimulating examples, and focus groups (Selltiz., 1976). For this study, an extensive literature review and personal phone interviews with 10 acquaintances and their referred friends who are all over 65 years or older were used. A personal phone interview was chosen rather than a focus group due to the distance each interviewee lived from another. Therefore, in a personal phone interview, each participant was asked some of the reasons why he or she might have participated in casino gaming or might participate in casino gaming in the future. The phone interview was employed to help identify additional motivation items that might be missed from the literature review. Based on the previous literature and the phone interview, 44 items were collected.

Step 3: Content Adequacy Assessment

Based on step 1 and 2, the preliminary scale items were generated, and the initial items for validity were tested. Six faculty and staff at a university evaluated the items for content and face validity. Each of the conceptual definitions for the senior casino motivation domains was evaluated relative to the items for accurate representation of the motivation domains. Thus, the faculty identified items that were ambiguously worded, not very representative of the domain,

redundant, or misleading (Arnold and Reynolds, 2003; Babin et al., 1994). These items were considered for deletion from the measurement item pool. This process then led to development of the questionnaire to test the items.

A pilot test was conducted on these items by using an online survey of faculty and staff at a major university to ensure the accuracy of these items for distribution in the questionnaire. A total of 68 people completed the questionnaire, after which coefficient alpha and exploratory factor analysis were conducted. The results of the assessment helped to detect items with low coefficients and low factor loadings. With necessary modifications and deletions of items, 34 motivation items were retained for multi-sample scale purification and validation (Arnold and Reynolds, 2003).

Step 4: Data Collection

A questionnaire was developed with items that represent the five domains (socialization, entertainment/ excitement, escape, winning and learning) of senior casino motivations from previous steps. Given that a set of data could improve the measures in the scale development procedure (Churchill, 1979), a set of consumer database data was purchased for a fee from an external marketing research service provider. An online survey instrument, which was developed by using the university online survey system, was then sent out to the panelists using email invitations. The mailing list criteria for this study included people who are 65 years or older currently residing in the United States. Even though it is very common to define older individuals or seniors as 65 years and older in the field of gerontology, there is a lack of consistency in defining 'senior' in the tourism, leisure, and hospitality studies (Lazer, 1985; Pol et al., 1992). Different studies have used different ages to define senior market depending on the study conducted or on the researchers conducting the study. Some will categorize 55 as senior (Hong et al., 1999) while some define senior as 65 years or older (Abdel-Ghany & Sharpe, 1997; Jang et al., 2007). Using the age of 65 and older to define the older casino market is typical; this might be due to life course changes such as retirement and government policies and programs that apply at or near 65 years of age (Schaninger and Danko, 1993). Terminologies that have been used for this market also vary throughout years and various studies. Some terms that have been used are 'mature market,' 'older market,' 'senior market,' 'elderly,' 'senior citizens,' and

'senior adults' (Allan 1981; Lazer, 1985; McNeilly and Burke, 2001; Shoemaker, 1989; Whitford, 1998). In the end, the term 'senior' has appeared the most frequently in gaming studies. Thus, this study used the term 'senior' for those who are 65 years and older. Each email contained a URL link for the survey and a unique PIN. Each respondent was requested to provide the PIN at the beginning of the survey, so that he or she could receive points for completing the survey from the marketing research firm. The inclusive fee, paid by the researcher, included the cost of the database and for the incentive which was paid to each participant who completed the survey in the form of credit points, which then can be redeemed to purchase consumer products. A total of 5,000 invitations were sent out for the survey. Survey respondents were asked to rate their agreement for each of the item statements using a 7-point Likert scale (1= strongly disagree, 4= neutral, 7= strongly agree). Ultimately, a total of 681 complete surveys were collected and used for the data analysis.

Step 5: Scale Purification

Scale purification consists of a series of tests to purify the measurement items and to examine the scale's psychometric properties (Anderson and Gerbing, 1988; Churchill, 1979; Hair et al., 1998; Sweeney and Soutar, 2001). This last step included several tests such as item analyses, exploratory factor analyses, confirmatory factor analyses, and assessments of scale reliability, unidimensionality, and convergent and discriminant validity (Arnold and Reynolds, 2003).

Item Analyses

Item analyses included two tests: testing the correlated item-total subscale correlations and comparing between correlations with the hypothesized dimension and correlations with the other remaining dimensions (Arnold and Reynolds, 2003; Bearden et al., 1989; Tian et al., 2001). First, items that are supposed to represent senior casino motivation and have correlated item-total correlations below .50 were deleted (Tian et al., 2001). If the correlation of an item was statistically higher than correlations of other dimensions, it also was deleted.

Exploratory Factor Analysis (EFA)

Once low correlated items were deleted, the reduced number of items were then submitted for exploratory factor analysis with principle factoring. The EFA was done to identify the number of factors to extract (Bearden et al., 1989; Nunnally and Bernstein, 1994). Hair et al. (1998) suggested that items having low factor loading (less than .4) and high cross-loadings (higher than .4), or low communalities (less than .3) were all considered for deletion. The remaining items were subject to more EFA. In addition, the Kaiser-Meyer-Olkin (KMO) measure of sampling adequacy and Bartlett's test of Sphericity were conducted to check the adequacy of the distribution of values for conducting factor analysis.

Confirmatory Factor Analysis (CFA)

A confirmatory factor analysis was conducted to investigate whether the established motivation dimensions and factor-loading pattern fit the data set. First, a factor covariance structure measurement model was estimated to refine the manifest variables using the maximum likelihood technique with AMOS 16.0 (Arbuckle, 2007; Byrne, 2001). Then, the EFA examined the model fit with various indices such as Chi-square, comparative fit index (CFI), normed-fit index (NFI), and root mean squared error of approximation (RMSEA). From careful inspection of modification index and theory based suggestion, several modifications were made for model improvement. The confirmatory model fitting process was repeated until it reached a satisfactory fit. The final model from CFA would be a parsimonious model representing senior casino motivations.

Unidimensionality and Reliability

From the CFA, the unidimensionality was also inspected. The unidimensionality of a measure means that each item reflects only one underlying construct (Bollen, 1989; Gerbing and Anderson, 1988). Therefore, each measured item loaded to one dimension of motivation without significant cross loading to other dimensions would establish the unidimensionality. Next, coefficient alpha estimates, composite reliability estimates, and average variance extracted (AVE) estimates were checked for consistency of multiple indicators for each construct (Fornell and Larker, 1981; Nunnally and Berstein, 1994). The average variance extracted (AVE) and composite reliability were calculated as follow;

$$\textit{Average Variance Extracted} = (\sum \textit{squared standardized loadings}) \div [(\sum \textit{squared standardized loadings}) + (\sum \textit{measurement error})]$$

$$\textit{Composite Reliability} = (\sum \textit{standardized loadings})^2 \div [(\sum \textit{standardized loadings})^2 + (\sum \textit{measurement error})]$$

Convergent and Discriminant Validities

Testing model convergent and discriminant validity was done to establish the construct validity. Having acceptable construct validity means that each construct actually measures what it originally intends to measure (Churchill, 1979). Evidence of convergent validity presents when each indicator-estimated maximum likelihood loading on the underlying construct was significant (Anderson and Gerbing, 1988; Peter, 1981). From the CFA, each factor loading and its *t* values were accessed for the convergent validity. The average variance extracted estimated that exceeingd the .5 threshold value is recommended (Fornell and Larcker, 1981) for convergent validity. Next, discriminant validity is related to the extent to which a measure is unique and does not reflect any other variables other than the one hypothesized. Discriminant validity was examined by evaluating whether or not each AVE exceeded all the squared correlations between the two associated latent constructs (Fornell and Larcker, 1981; Netemeyer et al., 1990).

Results

From the online questionnaire, 681 collected samples were completed and used in the analysis. Table 4.2 shows the sample characteristics of the respondents. Since this study is targeting the senior population, the survey was distributed only to those who are 65 years and older. The majority of respondents were highly educated (53.2%), married (72.1%), female (61%), White (92%), earned more than $40,000 in the previous year (64.4%), owned homes (90.4%), and were retired (54.1%) seniors. Seventy eight percent of respondents had visited casinos during the previous 12 months.

Item Analysis

All 34 motivation items in the questionnaire were included for scale purification tests. First, correlated item-total subscale correlations, item correlations compared with the

Table 4.2 Characteristics of Respondents (N=681)

Characteristics	Frequency	Percentage
Gender		
Female	418	61.1%
Male	263	38.5%
Ethnicity		
African American	9	1.3%
Asian	13	1.9%
White	629	92.0%
Hispanic	7	1.0%
Education		
High School Diploma or GED	93	13.3%
Vocational or Technical School	26	3.8%
Some College Degree	193	28.2%
4-year College Degree	136	19.9%
Some Graduate School or Graduate Degree	228	33.3%
Marital Status		
Married	493	72.1%
Single	42	6.1%
Widowed	61	8.9%
Divorced	73	10.7%
Household Income		
Under $20,000	12	1.7%
$20,001 - $40,000	63	9.2%
$40,001 - $60,000	84	12.3%
$60,001 - $80,000	99	14.5%
$80,001 - $100,000	88	12.9%
$100,001 - $120,000	76	11.1%
$125,000 or more	93	13.6%
Prefer not to respond	166	24.3%
Employment		
Employed full time	182	26.6%
Employed part time	99	14.5%
Retired	370	54.1%
Unemployed	17	2.5%
Living Situation		
Own home	618	90.4%
Rent	49	7.2%
Live with children or other family members	3	.4%
Live in a retirement community	8	1.2%
Visited a casino during the last 12 months		
Yes	533	77.9%
No	148	22.1%

hypothesized dimension, and correlations with the other remaining dimensions were examined. From this process, 7 items with low correlations (.5 or less) were deleted.

EFA

An exploratory factor analysis with varimax rotation was conducted on the remaining 27 items. The number of factors was identified by the eigenvalue and variance explained the EFA. After a series of EFA, items with low communalities, high cross-loadings and low loadings, six more items were deleted from the list. They are 'to pass the time,' 'to enjoy the uncertainty of gaming,' 'to avoid boredom,' 'to have fun in predicting the results of gaming,' 'to practice gambling,' and 'to energize my life'. Finally, 21 final items remained for the final EFA and were represented by five factors. The results of the five-factor structure by EFA are shown in Table 4.3. Factors had an eigenvalue greater than one and factor loading .50 or greater remained for each factor grouping. Furthermore, each factor was labeled according to its characteristics. The five factors are winning & thrill, escape, socializing, enjoyment, and curiosity. The cumulative percentage of total variance explained approximately 67.93% of the factors, with a Kaiser-Meyer-Olkin (KMO) measuring of sample accuracy of .90, which is well over the recommended index of .60 (Tabachnick & Fidell, 2001). The Bartlett Test of Sphericity was 4,843.6 ($p < .01$), and all five factors had Cronbach's alphas of greater than .70 indicating good reliability (Hair et al., 1998). All 21 items were loaded to each assigned construct, ranging from .65 to 83, which indicate a reasonably high correlation between the delineated dimensions and the individual items.

CFA

A 21-item five-dimension, confirmatory factor model using the maximum likelihood method, was estimated using AMOS 16 (Arbuckle, 2007) to improve measurement properties in the proposed scale (Anderson and Gerbing, 1988; Bagozzi, 1980; Gerbing and Anderson, 1988; MacCallum, 1986). The result of this first CFA showed that model fit indices were not at generally acceptable thresholds (χ^2 (121) = 487.58, p = .000; NFI = .88; CFI= .91; RMSEA = .082). After a careful inspection of item squared multiple correlations and modification indices,

Table 4.3 Exploratory Factor Analysis for Casino Gaming Motivation Items (N=681)

Motivation Factors (Reliability Alpha)	Factor Loadings	Eigen-values	Variance Explained	Item Means	S.D.
Factor 1: Winning & Thrill (.89)		7.68	18.51		
to win big money with little investment	.85			3.66	1.86
to win big money immediately	.79			3.36	1.85
to make money easily	.79			3.05	1.76
to feel triumph when winning	.70			4.72	1.74
to enjoy the thrill of taking risks	.70			3.88	1.76
to enjoy the intense feelings I get while gaming	.64			3.50	1.78
Total Mean				3.70	
Factor 2: Escape (.84)		2.05	14.36		
to release tension and stress	.77			3.44	1.80
to escape problems or responsibilities at home	.77			2.44	1.67
to take a break from burdensome routines	.67			3.91	1.76
to change my mood	.64			3.11	1.70
to forget about stressful realities	.63			3.99	1.83
Total Mean				3.38	
Factor 3: Socializing (.83)		1.80	13.41		
to socialize with others	.85			3.87	1.63
to increase friendship or kinship	.72			3.21	1.69
to meet new people and make new friends	.72			2.89	1.62
to be with people who enjoy the same things I do	.72			3.83	1.68
Total Mean				3.45	
Factor 4: Enjoyment (.74)		1.61	12.09		
to enjoy the freedom to do what I want to do	.78			5.07	1.53
to experience fun and excitement	.75			5.16	1.48
to relax	.66			4.96	1.61
Total Mean				5.07	
Factor 5: Curiosity (.74)		1.12	9.56		
to learn how to play casino games	.78			3.26	1.77
to satisfy my curiosity	.76			3.33	1.68
to try something new	.69			3.81	1.68
Total Mean				3.47	
Total Variance Explained			67.93%		

three items were deleted from the analysis. The item 'to make money easily' dimension, 'to relax', and 'to learn how to play casino games' from winning, enjoyment, and curiosity dimension were deleted respectively.

A second CFA was conducted on the remaining 18 items, and indicated improvement of model fit (χ^2 (117) = 383.01, p = .000; NFI = .91; CFI= .93; RMSEA = .07). The modification indices were once again inspected, ensuring low modification indices, and no further items were removed. The final confirmatory factor model with 18 items parsimoniously represents the 5 motivation dimensions and provides good domain representation (Arnold and Reynolds, 2003). Table 4.4 shows the summary of the CFA results, and Figure 4.2 shows the five underlying latent factors and the standardized factor loadings of 18 senior casino motivation indicators.

Unidimensionality and Reliability

Unidimensionality, meaning that each item reflects one underlying construct, was evident through different tests. First, Table 4.4 showed that the standardized factor loadings of each observed item on the latent constructs all met the suggested minimum criterion of .40, and ranged from .64 to .83 (Ford et al., 1986). As shown in Table 4.5, Cronbach's alpha estimates, ranging from .70 to .87, were marginally acceptable (Fornell and Larker, 1981; Nunnally and Bernstein, 1994). Also, the composite reliability ranged from .70 to. 86, indicating acceptable reliabilities. Finally, all average variance extracted (AVE), ranging from .51 to .60, indicated a marginal acceptable threshold of .50 (Fornell and Larcker, 1981).

Convergent and Discriminant Validity

Convergent and discriminant validity were inspected by examining the average variance extracted (AVE) which presents the overall amount of variance in the observed variables accounted for by the latent construct (Hair et al., 1998). All AVEs of five dimensions exceeded the suggested minimum thresholds of .50 (Fornell and Larcker, 1981), ranging from .51 to .60. In addition, each observed variable's factor loading on the underlying construct was significant as shown in Table 4.4 (Anderson and Gerbing, 1988; Netemeyer et al., 1990; Peter, 1981). Comparing the AVE with the squared correlations between constructs tested discriminant

validity (Fornell & Larcker, 1981). The results show all squared correlations (ranged .12 to .28) between each pair of constructs were less than the AVE (ranged from .51 to .60). Thus, discriminant validity was evident.

Table 4.4 Confirmatory Factory Analysis of Senior Casino Gaming Motivation (N=681)

Latent Variables	Standardized Factor Loadings	*t*-value
Winning & Thrill		
to win big money with little investment	.73	22.04
to win big money immediately	.69	13.07
to feel triumph when winning	.76	15.03
to enjoy the thrill of taking risks	.83	15.96
to enjoy the intense feelings I get while gaming	.72	-
Escape		
to release tension and stress	.81	15.73
to escape problems or responsibilities at home	.67	13.09
to take a break from burdensome routines	.66	13.05
to change my mood	.69	13.86
to forget about stressful realities	.72	-
Socializing		
to socialize with others	.77	15.18
to increase friendship or kinship	.73	14.22
to meet new people and make new friends	.65	12.71
to be with people who enjoy the same things I do	.76	-
Enjoyment		
to enjoy the freedom to do what I want to do	.64	11.82
to experience fun and excitement	.82	-
Curiosity		
to satisfy my curiosity	.64	10.12
to try something new	.83	-

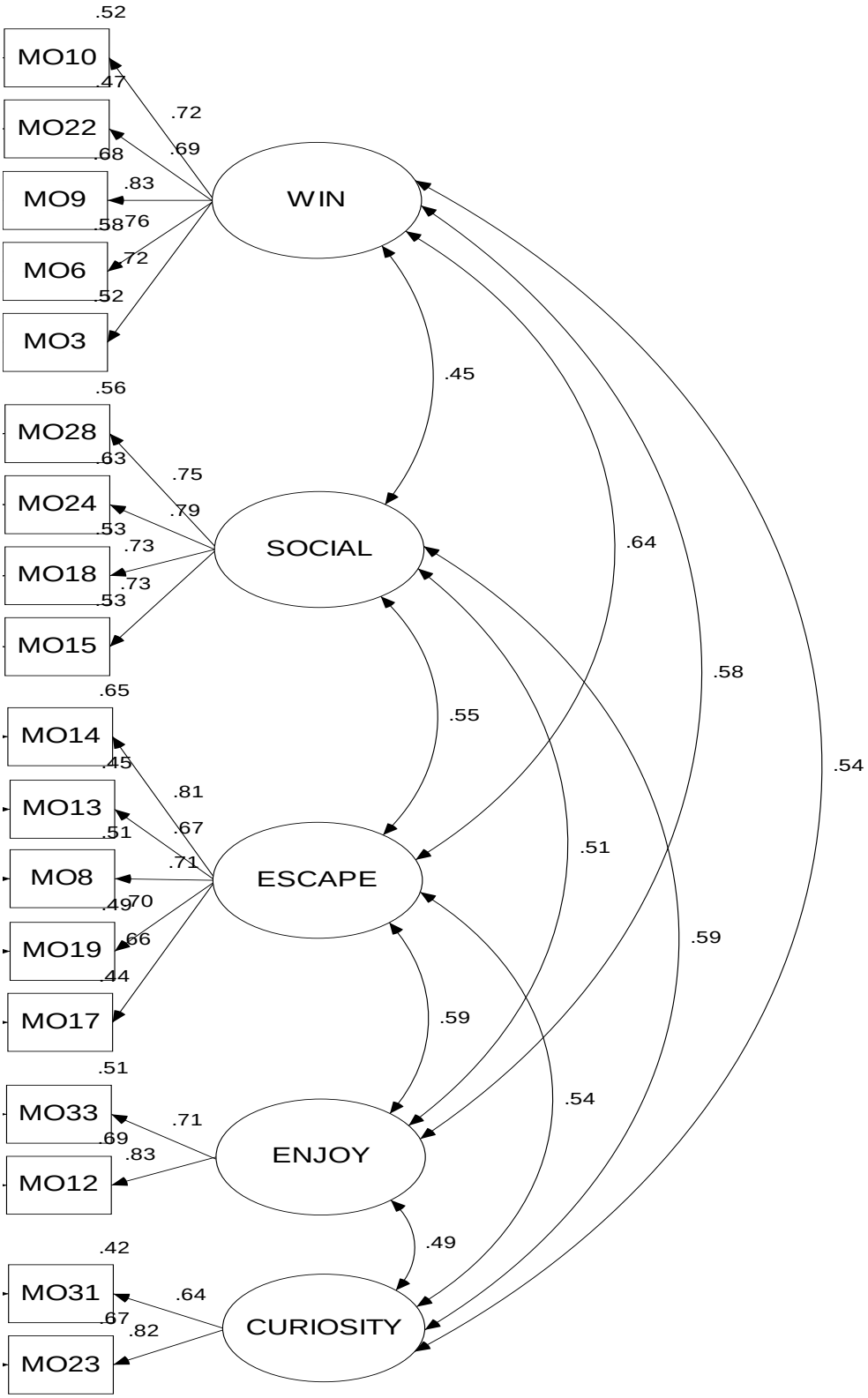
All were significant at .001 level. ** $p < .001$. Model measurement fit indices: χ^2 (117) = 383.01, $p < .001$; Non-normed Fit Index (NFI) = .91; Comparative Fit Index (CFI) = .93; Root Mean Squared Approximation (RMSEA) = .07.

Table 4.5 Standardized Correlations, Composite Reliability, and Average Variance Extracted (AVE) for Senior Casino Gaming Motivation (N=681)

Correlations Among Latent Constructs (Squared Correlation)					
	Winning	Escape	Socializing	Enjoyment	Curiosity
Winning & Thrill	1				
Escape	**0.53(.28)	1			
Socializing	**0.37(.14)	**0.47(.22)	1		
Enjoyment	**0.45(.20)	**0.39(.15)	**0.40(.16)	1	
Curiosity	**0.44(.19)	**0.42(.18)	**0.46(.21)	**0.35(.12)	1
Cronbach's Alphas	.87	.84	.83	.70	.75
Composite Reliability	.86	.84	.84	.70	.75
AVE	.56	.56	.51	.54	.60
Mean	3.90	3.59	3.45	5.19	3.65
Standard Deviation	1.47	1.39	1.37	1.33	1.48

All were significant at .001 level. ** p< .001. Model measurement fit indices: χ^2 (117) = 383.01, p < .001; Non-normed Fit Index (NFI) = .91; Comparative Fit Index (CFI) = .93; Root Mean Squared Approximation (RMSEA) = .07.

Figure 4.2 Standardized CFA Model of Five Senior Casino Gaming Motivation Dimensions



Discussion and Conclusions

This study attempted to identify various dimensions of senior casino gaming motivations by utilizing a measurement developing procedure. The motivation scale captured five dimensions of reasons seniors participate in casino gaming: winning and thrill, escape, socializing, enjoyment, and curiosity. From the results of factor analyses, the 'enjoyment' dimension showed the highest mean value was 5.19 (Table 4.5), meaning that the key motivation for senior gaming at casinos was enjoyment. This result is somewhat consistent with previous literature that suggested that most seniors participate in gaming for fun and excitement (Hope and Havir, 2002; McNeilly and Burke, 2001; Moore, 2001; Volberg, 2003). As Loroz (2004) stated, being in a casino itself can be very entertaining and fun for seniors. Unexpectedly, the other motivation dimensions revealed all low mean values. Early on, most of the senior gaming literature indicated that seniors go to casinos and participate in gaming for the opportunity for social interaction (Zaranek and Chapleski, 2005). However, the respondents for this study did not score the social aspect of casino gaming high (3.45). This indicates that seniors do not participate in casino gaming to meet and socialize with other people. As Hagen et al. (2005) suggested that gaming activity itself does not provide socialization opportunity, seniors might just spend their time playing games rather than associating with others. The escape motivation also showed low mean values. This could mean that people can easily retreat into a world of fantasy, and this can provide an outlet for releasing real life stresses by casino gaming. Thus, escape motivation was claimed to be one of the potential motives for problem gambling. However, escaping their problems, responsibilities at home, and stresses were not primary motivators for the senior respondents to participate in casino gaming. From this, it can be concluded that senior casino visitors are more practical and realistic about casino gaming and are being cautious so that they do not slip into gambling problems. Since over 77% of the respondents have visited a casino within the previous 12 months, casino gaming is not something new to most of them. This fact might explain the low mean values. Simply, casino gaming is not a new activity that seniors are curious about. Even with a low mean value (3.90), the 'winning and thrill' dimension revealed the largest proportion of the total variance at 18.51, which means that winning money and feeling the thrill of taking a risk while playing can explain why a considerable number of seniors surveyed go to casinos. From this, it can be concluded that winning money and feeling the thrill aspect of casino gaming are also important to senior casino goers, even though previous

literature asserted that actually winning money is not an important reason for seniors to participate in casino gaming (Campbell, 1976).

The results of this study showed some meaningful and useful theoretical and practical implications. First, the measurement scale can be useful for exploring relationships between senior casino gaming motivation and other constructs such as senior casino gaming intention. Since motivation is an important driving force in human behaviors, the scale will be useful in measuring seniors' intention or casino gaming behavior itself based on the five major motivation dimensions.

Secondly, the five dimensions of senior casino gaming motivations can also be used as the base in finding the differences in casino gaming motivations between habitual and casual casino visitors might be also useful in providing additional information in literature. Some of the habitual visitors might have clearly different motivations because of associated potential gambling problems. In fact, the degree of seniors' casino gaming involvement might directly be influenced by their motivations. The more motivated, the more likely one will be involved in casino gaming.

Third, casino practitioners also can benefit from this study by developing their casino gaming products specifically toward providing seniors opportunities with enjoyment experiences. Casinos need to know the factors that make seniors excited and the activities that they find most fun. Further, casinos can focus on providing more entertainment opportunities for seniors. If there are particular entertainments that senior customers like, casinos should put more weight on those types of entertainments or shows. Casinos also can periodically survey their older visitors about particular entertainments they would like to see at the casino. In addition, casino operators should remember that even though seniors participate in casino gaming mostly for fun, they still like to win money. Since most seniors like to play slots, casinos can encode those popular machines for seniors in ways to pay out more frequently. This will provide their senior customers more winning experiences and therefore extended time to play. Casinos also can utilize the scale to investigate their senior customer bases. Depending on the motivations, operations can develop products or marketing strategies that are specific and suitable for a particular senior market segment.

Due to the exploratory nature of this study, there are some theoretical and methodological limitations that need to be mentioned. One of the weaknesses of the study is that it treated the

senior samples as a homogenous group and did not consider the age cohort effects among the senior samples. Cohort or period effects which refers to the general impact of experiences and major events or the historical impacts of events and occurrences on a particular age cohort (Mehta, 2004). The casino motivations could well differ among various ages of seniors depending on their life experiences, particular events (e.g., World War II) and other sociocultural impacts. The samples for this study included seniors who were 65 years or older without categorizing them into smaller sub-age groups such as young-old, old, old-old, and oldest-old. Many studies in gerontology, psychology, and consumer behavior have claimed differences among the subsets of older adults. Three general older adult subsets have been defined in literature; young-old (65-74 years old), old (74-84 years old), and oldest-old (85 years and older) (Abdel-Ghany and Sharpe, 1997; McGuire et al., 2004; Rapoport and Rapoport, 1975; Riley and Riley, 1986; Sherman and Schiffman, 1984). A 65 years old person might have totally different aspects of life such as income, education, cognitive and physical health, living arrangements, social services, and other sociocultural factors that could influence them differently than 85 year old individuals. Moschis (1996) asserted that different gerontographic characteristics of different generation cohorts would bring different consumption and behavior pattern. A few studies revealed some differences of gaming patterns between young-old and old-old adults (Mok and Hraba, 1991). They found that young-old (65 to 74 years) tended to participate in casino gaming as other young generations (non-elderly) and that old-old were not as healthy and affluent to participate in gaming as the young-old (65 to 74). Zaranek and Chapleski (2005) found a similar study result in that the youngest age cohort (60 to 74 years) was more likely to visit casinos compared to old-old age groups. Thus, it is important that future senior casino research could take into account the age cohort effects among the senior age subsets to find out the heterogeneity of senior motivation in casino gaming. One must also be cautious when applying the scale in other senior gaming contexts. Based on the demographics of the respondents in this study, a majority of the sampled respondents were highly educated, White and visited casinos recently. Thus, applying this scale to a population that comprises more multi ethnics or senior groups that have not visited casinos recently might produce different results. For example, the scale has to be altered for some Native American Casinos where more customers might from the indigenous tribe (Taylor, 1998).

This study also did not consider separating the samples between problem and recreational senior gamblers to identify the motivation differences. However, for future studies, senior casino gaming motivations can be divided into problematic and casual. As suggested, the leisure casino gaming players focus more on the social, entertainment, and fun aspect of gaming whereas the problem gamblers place more emphasis on the escape aspects of gaming (Hagen et al., 2005; Hirsh, 2000; McNeilly and Burke, 2000; Wiebe, 2000). This would be very important information with which casino operators could assess market segmentation and marketing communications. A scale like the fourth edition of the Diagnostic and Statistical Manual of Mental Disorder (DSM-IV-TR; American Psychiatric Association, 2000) could screen for pathological gambling problems (Gerstein et al., 1999).

Notably, even with the diverse collections of senior casino gaming motivations from qualitative studies, the motivation scale might miss other possible motivations or reasons for seniors to participate in casino gaming. For example, motivations like inexpensive foods casinos offer and shows/entertainments at casinos were not included in the scale. However, future studies could examine further motivation dimensions that were uncovered in this study. More focus group studies or personal interviews might help to collect richer and more detailed information.

In summary, findings of the measurement developing procedure revealed five dimensions of senior casino gaming motivation; winning and thrill, escape, socializing, enjoyment, and curiosity. The parsimonious five motivation model could be used in future studies to measure seniors' casino gaming motivations. It also could provide the base for building a more concrete senior casino gaming motivation scale with additional motivation dimensions.

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CHAPTER 5 - TESTING EXTENDED THEORY OF PLANNED BEHAVIOR FOR SENIOR CASINO GAMING INTENTION

Abstract

This study investigated the applicability of an extended theory of planned behavior (TPB) with motivation component attached in the context of senior casino gaming behavior. Seniors' past casino visits were also tested for a moderator effect between the major predictor variables (attitude, subjective norms, perceived behavioral control, and motivation) and seniors' casino behavioral intention. The findings of a structural equation modeling suggested that all predictable variables of TPB had positive effects on seniors' casino gaming intention. Among senior casino gaming motivations, WIN and ENJOY had direct positive effects on behavioral intention. Next, the results of metric invariance test for moderating role of past casino visits showed that there was no indication of seniors' past casino visits having any influence on their intention to participate in casino gaming. The overall study results suggested that the proposed extended model is a useful tool for studying senior casino gaming behavior. To support this suggestion, some of the theoretical and practical implications for casino operations were discussed.

Key words: Theory of Planned Behavior (TPB), Senior Casino Motivation, Casino Behavioral Intention, Past Casino Experience, Metric Invariance

Introduction

Much of the senior leisure literature has reported the growing popularity of casino gaming as an attractive form of leisure and entertainment for seniors (Hirsh, 2000; Moore, 2001; Wiebe, 2000). Despite the harsh casino environments with smoke, loud noise, and crowds, many older people still sit in casinos for extended hours and spend significant amounts of money on casino gaming. Consequently, many researchers have been interested to discover the major behavioral antecedents and their roles in seniors' casino gaming behaviors as efforts to understand the behaviors themselves. Obviously, then, to try to change or reshape senior gaming behaviors based on the strengths and effects of antecedents, investigating causes of seniors' gaming behaviors would be essential.

Specifically, the theory of planned behavior (TPB) (Ajzen and Fishbein, 1980) offers a framework to explain most of the volitional and non-volitional behaviors based on an individual's behavioral intention, which is determined by three major antecedents: attitude (AT), subjective norm (SN), and perceived behavioral control (PBC). The TPB has been operationalized and tested empirically in describing a wide range of behavioral intentions and behaviors (Ajzen, 1991; Conner and Armitage, 1998; Sparks, 1994). The roles of AT and SN in explaining general gambling behaviors have been supported (Cummings and Corney, 1987) in general, but not targeted at the senior population, however. In the context of senior casino gaming behaviors, a positive senior attitude to casino gaming would lead to more participation in casino gaming. Thus, seniors' attitudes toward casino gaming might be a critical factor when they make decisions to participate in casino gaming, especially since they grew up in a generation when casino gaming was illegal and not well accepted. The same is true with the subjective norm. Even with many changes and an improved image of traditional casino gaming, what others think of the activity might be an important influence on seniors' decisions to play casino games; they still want to ensure receiving support from other people who are important to them. The additional antecedent PBC makes the TPB more useful especially for predicting non-volitional behaviors. Since not all gaming behavior is volitional (Evans, 2003; Warshaw and Davis, 1985), applying PBC is necessary for different levels of gaming behaviors. For instance, seniors who play casino games more for leisure would have more volitional control, where as seniors who play more seriously and habitually would not have complete volitional control, as

they tend to feel that they almost must participate in casino gaming. Depending on the level of perceived behavioral control, their intention or behavior might differ from that of the first group. In addition, the three determinants of behavioral intention in the TPB supposedly provide informational factors on behaviors, and the behavioral intention in the model reflects one's motivation to engage in a behavior (Ajzen, 1991). However, the TPB model does not take into account the motivation factor itself in measuring behavioral intention or the actual behaviors in context. Since motivation is what prompts individuals to act on a given behavior (Petri, 1981), it can be all the more direct and specific an influence on behavior. Thus, inclusion of motivation factors as another antecedent in the model would provide additional explanation for seniors' casino gaming behavioral intention.

Past experience or behavior has also been treated as an important predictor of behavioral intention and behavior in the TPB model (Bagozzi, 1981; Bentler and Speckart, 1981; Quellette and Wood, 1998). The idea of including past behavior in the equation is that behavior that is more habitual than planned can be measured directly from the repeated past performance of the behavior. Thus, if a senior is in a habit of engaging in casino gaming, there is no need for that person to perform the evaluations and reasoning: he or she can just participate in gaming without a second thought. However, there is an issue of reducing the predictive power of the major antecedents (AT, SN, PBC) when past casino gaming experience is included in the model (Trafimow, 2000). Literature suggested that the inclusion of past experience would improve the predictive power for more habitual behaviors rather than for novel behaviors (Conner and Armitage, 1998). Thus, seniors' past casino gaming experience might able to explain more regular casino goers' actions. However, seniors' past casino gaming experience still could provide additional explanation for gaming behaviors so it must be included in the model. Investigating the differences in how the major antecedents affect behavioral intention based on the level of seniors' casino gaming experience would provide more meaningful insight into seniors' casino gaming intention. Without the cost of reducing the predictive power of the major antecedents, seniors' past casino gaming experience can still provide additional information.

This study attempts to extend the current knowledge on seniors' casino gaming behaviors by applying an extended TPB model. Both senior leisure and human behavior studies will benefit from the extended knowledge. Also, future senior casino research would have a theory-based framework with which to measure seniors' gaming behaviors. Specifically, researchers in human

behaviors could include additional empirical evident of the applicability of the TPB and the value of added variables of motivation components. Casino operations also can utilize the information on antecedents and their effects on seniors' casino gaming behavioral intention. Based on the information gained, casinos could modify their current marketing strategies or develop new marketing communication to better target senior population.

Thus, this research seeks to achieve three specific objectives. First, this study applies an extended TPB with motivation to investigate the applicability of the model in predicting senior casino gaming behaviors. Second, this study also examines the predictive power of each determinant variable (AT, SN, PBC, and Motivation) on senior casino gaming intention. Lastly, this study explores the moderating effects of seniors' past casino gaming behavior on the relationships between each determinant variable and seniors' behavioral intentions.

Review of Literature and Hypotheses

Theory of Planned Behavior (TPB)

The theory of planned behavior (TPB) provided the theoretical framework for examining the seniors' evaluations of casino gaming, which then influences seniors' intentions to visit casinos for gaming. The theory of planned behavior (TPB) originated from the theory of reasoned action (TRA), which is probably the most widely applied theory in studying human behavior and behavioral dispositions. The main concept of the theory is that most human behavior is under volitional control. In other words, people engage in actions because of their desire to act in a certain behavioral way, and their conscious motives trigger them to engage in the action (Ajzen and Fishbein, 1980). Volitional behaviors, then, are influenced by behavioral intention, which is the likelihood to act (Fishbein and Ajzen, 1975) and the immediate determinant of a behavior (Ajzen, 1985). In other words, people usually do what they intend to do. Thus, it is highly probable that human intention can be a measure for the actual behavior if that intention is analyzed correctly and properly. Indeed, Fishbein and Ajzen claimed that behavioral intention is the best predictor of human behavior (1975). However, even if behavioral intention plays a very critical role in predicting the actual behavior, intention itself does not provide much information about the behavior, unfortunately. This is where the three antecedents

play their roles in predicting intention. In the TRA, intention is a function of an individual's attitude toward the behavior and subjective norm (Fishbein and Ajzen, 1975). Attitude is the individual's positive and negative evaluation of performing the behavior in question: meanwhile, the subjective norm is the individual's perception of the social pressures from important others put on the person to perform or not perform the behavior. Generally, most people intend to perform an action that they have a positive attitude towards and that they believe other important people think they should perform. Further, attitude and subjective norm derive from beliefs. Attitude correlates with salient beliefs (BB) about consequences of performing the behavior and evaluation of those outcomes, and subjective norm is determined by normative beliefs (NB) and motivation to comply with the salient referent (Ajzen and Fishbein, 1980). Due to the many criticisms of TRA excluding behaviors that are not always volitional (Ajzen, 1991; Taylor and Todd, 1995), TRA was extended with an additional variable, perceived behavior control (PBC) (Ajzen, 1991), and theory of planned behavior (TPB) was introduced. Perceived behavior control is an individual's perceptions about his or her capability of successfully engaging in a given behavior (Ajzen, 1985). PBC deals with the individual's perceptions of how much resource, opportunity (Lika, 1984), and constraint (Dawson, et al., 2001) he or she has in performing the behavior. Generally, the more resources and opportunities an individual has, the more likely he or she will intend to engage in the behavior and the more constraints an individual has, the less likely he or she will intend to perform the action (Ajzen and Driver, 1991). Perceived behavior control is a function of control beliefs (CB) just as attitude and subjective norm were functions of behavior beliefs (BB) and normative beliefs (NB), respectively. Control beliefs are measured by the perceived frequency of occurrence of facilitating or inhibiting factors multiplied by the power of those factors to inhibit or facilitate the behavior in question.

The TPB has been operationalized and supported in predicting a wide range of behavioral intentions and behaviors (Ajzen, 1991; Conner and Armitage, 1998; Godin and Kok, 1996; Sparks, 1994). A few gaming studies also have attempted to apply either TRA or/and TPB (Moore and Ohtsuka, 1999; Oh and Hsu, 2001; Evans, 2003).For example, Moore and Ohtsuka (1997) found that both attitude and social norms predicted Australian adults' gaming intentions, which predicted gambling behavior. The model found that 30% of the variance in adolescent gaming behavior was explained by intentions, attitude, and subjective norm. Also, Oh and Hsu (2001) found that Iowans' attitudes towards casino gaming had a direct effect on their behavior

intention, but not on behavior itself, and attitude only influenced behavior through the behavioral intention. Cummings and Corney (1987) proposed that other external variables such as demographics and personality could be integrated in to the TRA to explain gaming behavioral intention. Additionally, while not empirically tested, Evans (2003) most recently suggested that TPB is more useful than TRA for studying adult gaming behavior because not all levels of gambling behavior are either completely volitional or non-volitional. Specifically, gambling behavior is more volitional to recreational players than to pathological gamblers. Warshaw and Davis (1985) also agreed that casino game playing behavior is not totally under volitional control. Madden, et al. (1992) claimed that TPB would be superior to TRA in predicting a behavior that is not fully volitional control. Thus, TPB is a better model for investing the senior casino gaming behavior for this study.

In the next section, an extended TPB model is explicated in the context of senior casino gaming behavior. Each of the paths between predictor constructs and the corresponding belief construct and two additional variables are described in detail.

An Extended Theory of Planned Behavior

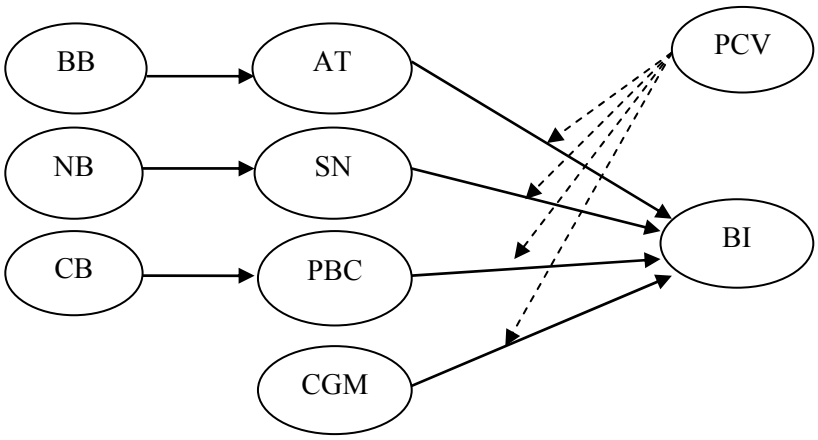
An external variable in the TPB refers to any independent variables that are not included in the theory. Despite strong empirical support of the theory, numerous studies have tried to extend and enrich the model by including external variables (Broonen, 2001; Conner and Abraham, 2001; Perugini and Bagozzi, 2001; Sutton, 1998). Ajzen (1991) himself was also open to the inclusion of external variables, "if it can be shown that they capture a significant proportion of the variance in intention or behavior after the theory's current variables have been taken into account" (*p.* 199). As a result, various external variables have been included in the model of TPB. Some of the examples of external variables suggested are respondents' demographics such as age, gender, occupation, education level, religion, ethnicity, personality traits, and past behavior (Ajzen and Fishbein, 1980; Broonen, 2001; Van Hooft et. al., 2006).

However, some researchers have raised concerns about external variables. This is because while many external variables might be related to the behavior in question, they usually do not directly influence behavioral intention or behavior itself. Thus, it has been suggested that it is best to treat the external variables as indirect or intervening effects in the final determination

of intention to enact the behavior. (Ajzen and Fishbein, 1980). Out of many external variables, individuals' past behavior has probably been mentioned the most in the context of TPB. Therefore, for the current study, seniors' past casino visit experience is added into the model as a moderator between all the predictor variables and seniors' casino gaming intention.

More importantly, the role of senior casino gaming motivation on their gaming intention is also the one of the major interests of this study. It is expected that senior motivation will have a direct influence on senior gaming intention when the motivation factors are incorporated with the predictor variables in the model. Thus, motivation is also included in the model of TPB. Figure 5.1 exhibits the extended TPB model to explain senior casino gaming intention. Each of the paths in the extended model is explicated in the context of senior casino gaming behavior next.

Figure 5.1 Theoretical Model



Note: BB= Behavior Beliefs, NB=Normative Beliefs, CB= Control Beliefs, AT= Attitude SN= Subjective Norm, PBC= Perceived Behavior Control, CGM= Casino Gaming Motivation, BI= Behavioral Intention, PCV= Past Casino Visit.

Behavioral Intention (BI)

The theoretical relationships between senior casino gaming intention and predictor variables in the proposed extended TPB model can be expressed in the following algebra equation;

$$B \approx BI = (AT)\, w_1 + (SN)\, w_2 + (PBC)\, w_3 + (CGM)\, w_4$$

where B is the expected casino gaming behavior, BI is the senior casino gaming intention. The approximate sign (≈) between B and BI indicates that measuring the gaming intention can predict the seniors' gaming behavior only when the intention does not change from the predictors of intention. Since Fishbein and Ajzen (1975) suggested that the proximal cause of behavior is the intention to enact the behavior, an accurate measurement of casino gaming intention can inform researchers about much of the seniors casino gaming behavior. However, as Ajzen and Fishbein (1980) indicated, behavioral intentions can change as time passes, and a substantial amount of time between when an intention was measured and the time when the actual behavior is observed will reduce the accuracy of the behavioral intention as the determinant of the behavior. In general, it is not always easy and feasible to reduce this time interval between intention and behavior measurement. The longer one waits to measure the behavior from the time when the intention is measured, the less accurate the behavior measurement is. The gap between intention and behavior is explained by persons who intend to act, but fail to carry out their intentions (Orbell and Sheeran, 1998; Sheeran, 2002). There has been some criticism that the TPB model does not really explore how intentions translate into behavior and why people do not always act according to their intentions (Bagozzi, 1992; Eagly and Chaiken, 1993). Some suggestions have been made for aiding in closing the intention-behavior gap. One example is implementation intentions (Gollwitzer, 1993) which identify processes that help individuals to enact their intentions, thus minimizing the size of the gap. Or adding a mediating variable such as action planning between intention and behavior would also help to bridge the gap (Sutton, 2008). Investigating the intention-behavior gap according to these suggestions is beyond the scope of the current study. However, they can be a potential future research topic to build on senior casino gaming behavior studies. Due to these restrictions and Ajzen's (1991) theory of planned behavior, the antecedents of intentions are better understood than the antecedents of behavior, this study only aims to accurately measure the senior casino gaming intention.

AT in the equation is the senior attitude toward casino gaming, SN is the subjective norm, PBC is the perceived behavior control, and CGM is senior casino gaming motivation, which will have five different dimensions that are abstracted from first part of this study. The signs from w_1 through w_4 are empirical weights indicating the relative importance of the four terms in the model.

Attitude and Behavioral Beliefs

Attitude toward a behavior is defined as a person's general feeling of favorableness or unfavorableness in performing the behavior in question (Fishbein and Ajzen, 1975; Ajzen and Fishbein, 1980; Ajzen, 1988). Generally, the theory proposes that when an individual believes that engaging in a specific behavior leads to mostly positive outcomes, there is a favorable attitude toward performing the behavior. On the other hand, when one believes that engaging in a behavior will lead to mostly negative outcomes, the individual will possess an unfavorable attitude (Ajzen and Fishbein, 1980).

According to the general principle of subjective expectancy-value theories (Fishbein and Raven, 1962; Fishbein, 1968; Palmgreen, 1984), the TPB claims that attitude toward the behavior is at the most basic level of explanation a function of behavioral beliefs and outcome evaluations. A behavioral belief refers to a person's subjective probability that a behavior will lead to a certain consequence and as such is a salient belief about the perceived consequences of performing the behavior (Ajzen and Fishbein, 1980). Next, the outcome evaluation means the person's evaluation of each consequence. The value from outcome evaluation contributes to the attitude toward the behavior. The behavioral beliefs are usually calculated by multiplying the strength of each behavioral belief and the evaluation of its consequences. This could mean that even with a same set of beliefs on a particular behavior, a different individual can have a totally different attitude from another individual toward the behavior.

When this is applied to senior casino gaming, a senior who has very positive consequences about going to casinos would have a favorable attitude toward casino gaming. He or she might evaluate casino gaming as an activity that provides fun, excitement, and people meeting opportunities. That individual thus holds a positive attitude toward casino gaming and is more likely to intend to participate in casino gaming. On the other hand, a senior who believes

that casino gaming activity as sinful and immoral and a way to take people's money away will hold a negative attitude toward casino gaming. Thus, he or she is less likely to participate in casino gaming.

The relationship between attitude and intention was empirically proven by Oh and Hsu (2001) when they found out Iowa gamblers' attitudes had a significant positive impact on behavioral intention. However, the study found no significant relationship between attitude and the actual behavior. Similarly, Wood and Griffiths (2004) found that attitude toward gambling could predict a person who would initiate gambling behavior. Moore and Ohtsuka (1999) also pointed out that adults' attitudes toward general gambling had a strong influence on future gambling intention. Based on information provided above, this study proposed the following two hypotheses:

Hypothesis 1: Behavioral belief (BB) is a significant predictor of attitude (AT).

Hypothesis 2: Attitude (AT) toward casino gaming is a significant predictor of casino gaming intention.

Subjective Norms and Normative Beliefs

As a social influence, subjective norms are also conceptualized in the TPB model. A subjective norm refers to the perceived social pressure from important others to perform or not perform the behavior (Ajzen and Fishbein, 1980). Thus, an individual is more likely to engage in a behavior that other important people (referents) in his or her life think that the individual should perform. On the other hand, the individual is less likely to perform the behavior when his or her referents think the actor should not perform the behavior. In sum, people are more likely to perform the behavior when they get support from their referents than when they do not get support from their referents (Ajzen and Fishbein, 1980).

Just as attitude is controlled by two belief dimensions, subjective norm is also determined by an individual's normative beliefs and motivation to comply with the important others' beliefs. Normative beliefs are the perceptions of important others' preferences about whether an individual should perform or not perform the behavior (Ajzen and Fishbein, 1980). An example of normative beliefs can be measured by rating the statement 'my spouse thinks that I

should/should not do casino gaming'. The motivations to comply are the individual's tendency to conform to the expectations of the important others. It is the level of a persons' willingness to act in the ways referents want them to act. For example, one can measure the level of motivations to comply by rating the statement "I want to do what my spouse thinks that I should do"

The relationship between subjective norm and behavioral intention has been empirically supported throughout hospitality studies. For example, Lee et al. (2007) indicated that travelers' subjective norms influence their online travel purchase intention. Lee and Back (2008) also found that subjective norm has a significant positive effect on professional meeting participants' intentions.

Ajzen and Fishbein (1980) claimed that behavioral intention is always simple to predict based on one predictor. In other words, the final decision to perform or not perform might all depend on the more one weighs one factor over another. An example might be when a person holds a positive attitude toward a behavior, but believes that his or her important referents do not approve of the behavior. When this individual decided not to perform the behavior, his intention depended on the subjective norm over attitude. To clarify, the TPB model allows testing the relative important weights among predictors of behavioral intention. Specifically, the senior target market for this study is from the generation that used to regard gambling as a sinful activity. Even with changes in their perception of gambling over the years, it is still very likely that they take others' opinions on casino gaming into account when they make decision to participate in casino gaming. Based on the information provided above, the second set of hypotheses follows:

Hypothesis 3: Normative belief (NB) is a significant predictor of subjective norm (SN).
Hypothesis 4: Subjective norm (SN) is a significant predictor of casino gaming intention.

Perceived Behavior Control and Control Beliefs

Perceived behavioral control was added to the TRA to address the issue of the theory of applicability to the behaviors under incomplete volitional control (Ajzen, 1985). Perceived behavior control is the degree to which an individual feels that performance or nonperformance of the behavior in question is under his or her volitional control (Ajzen, 1985; 1988). It is "the

person's belief as to how easy and difficult performance of the behavior is likely to be" (Ajzen and Madden, 1986, *p.* 457). A behavior is regarded as easy to perform when an individual is high in control, whereas a behavior is regarded as difficult to perform when one is low in perceived behavioral control. The more resources and opportunities that one believes himself to have, the higher the level of control he thinks he has (Madden et al., 1992). Ajzen (2002) asserted that with everything else being equal, having a high level of perceived control would reinforce an individual's intention to perform the behavior and increase his or her effort and determination to act on the behavior. This could mean that even if a person has a positive attitude and obtains support from his or her referents about acting on a behavior, he or she still might not strongly intend to take the action if that person believes himself not to have the resources and opportunities to perform the behavior. Ajzen (1991) asserted that perceived behavioral control has an indirect effect on behavior through behavioral intentions and a direct effect on behavioral intention. It is also proposed that perceived behavioral control could be the most important determinant of intention when an individual has past knowledge and experience of the particular behavior (Ajzen, 1988; Fredricks and Dossett, 1983). Conversely, perceived behavioral control would only explain a small part of behavioral intention when the behavior in question is unfamiliar and novel to an individual (Ajzen, 1985).

As it was the case with attitude and subjective norm, perceived behavioral control is determined by control beliefs, which refers to a person's beliefs about the presence of factors that may facilitate or impede performance of the behavior (Ajzen, 2001). According to the general expectancy-value theories (Fishbein and Raven, 1962; Fishbein, 1968; Palmgreen, 1984), perceived behavioral control is measured by multiplying beliefs strength and the power of control factor to facilitate or inhibit the performance of behavior; then the resulting products can be summed up across all control beliefs.

Various perceived constraints and barriers could limit seniors' casino gaming activities. Inhibiting factors could be either internal (e.g., skills, abilities, poor health) or external (e.g., time, transportation, insufficient financial resource). Oh and Hsu (2001) studied the role of perceived behavioral control by measuring four control factors (budgetary affordability, time availability, self-controllability, gambling skills) and found out that except for budgetary affordability, three control factors have significant effects on gambling behavioral intentions. According to this discussion on perceived behavioral control, the following two hypotheses are proposed.

Hypothesis 5: Control belief (CB) is a significant predictor of perceived behavioral control (PBC).

Hypothesis 6: Perceived behavioral control (PBC) is a significant predictor of casino gaming intention.

Motivation to Intention

Motivation has been treated as an important driving force and determinant of human behaviors in the literature. In fact, most motivation-related studies agree that motivation is one of the most important factors regulating human behaviors. A few definitions of motivation indicate the role of motivation in human behaviors. Moutinho (2002) suggested a definition for motivation as a state of need or a condition that drives an individual toward certain types of action that are seen as likely to bring satisfaction. Motivation also has been said to be the force that initiates, directs, and sustains behavior (Petri, 1981). Another definition by Weiner (1980) states motivation is the internal and/or external force that triggers, directs, intensifies, and leads to the persistence of a behavior. The strong relationship between motivation and human behavior has been well documented in the literature. Indeed, measuring gaming participation based on various motivation theories has been the most widely used approach in past (Chantal et. al., 1995; Cotte, 1997; Dumont and Ladouceur, 1990). The main finding of these studies was that motivation is what leads people to participate in gambling. Another widely mentioned motivation theory in studies of leisure activities is the self-determination theory (Deci and Ryan, 1985). The theory asserts that different motivations underlie human behaviors, and the different motivations are based on levels of self-determination. Intrinsic motivation is the most self-determined type, and amotivation is the least self-determined. Deci and Ryan (1991) claimed that the more self-determination acted on a behavior, the more positive the outcome must be. Chantal et al. (1994, 1995) applied self-determination theory to gambling behavior and found out that people who are motivated by a more intrinsic level of self-determination are more likely to participate in gambling because of the enjoyment and excitement it provides than those who are motivated by a more extrinsic level of self-determination such as a potential monetary reward. This might especially be true in the case of senior casino goers when a majority of them go to

casinos for fun, excitement, and pleasure rather than for financial rewards. The study concluded that gambling participants' motivation is a major determinant of gaming involvement (Chantal et al., 1995).

As an expectancy-value based model, the TPB has been challenged by Hagger et al. (2002) who claim human behaviors are not always a function of calculation evaluations as in the expectancy-value model. They argue people might engage in a behavior for their own self and for pleasure that can be experienced while performing the act. Ajzen (1991) indicates that behavioral intention reflects one's motivation to engage in a behavior, and while the TPB model tends to explain both informational and motivational influences on behavior, the model does not really include the actual motivation factors. The three determinants of behavioral intention in the TPB model might just be sufficient to capture the actual motivation. Clearly, adding motivation components to the model will provide predictive power for seniors' casino gaming intentions. As suggested by Ajzen (1991), the TPB theory is open to external variables that "can capture a significant proportion of the variance in intention or behavior after the theory's current variables have been taken into account" (*p.* 199). Based on this discussion, another hypothesis is proposed.

Hypothesis 7: Casino gaming motivation is a significant predictor of casino gaming intention.

Past Behaviors

Triandis (1980) first suggested the idea to include past behavior in the TPB model, asserting a learned behavior from repeated performance is another cause of behavior. Various studies have supported the inclusion of past behavior as a predictor of behavioral intention and future behavior (Bagozzi, 1981; Bentler and Speckart, 1981; Quellette and Wood, 1998; Sutton and Hallett, 1989). Most of these studies claim that if an individual is in the habit of engaging in a behavior, that individual sees no need to perform the evaluations and reasoning assumed by the TPB. This means that behaviors that are more habitual than planned can be measured directly from the repeated past performance of the behavior. Trafimow (200) stated that when an individual acts on a novel behavior, the variables (AT, SN, and PBC) in the TPB model would be good predictors to measure the intention. However, when a person engages in a behavior out of habit, the predictive power of these predictor variables will be reduced. Oh and Hsu (2001)

investigated the role of past gambling behavior in TPB model to measure casino gaming behavioral intention and behavior. They learned that past gaming behavior had high correlations with the predictor variables (AT, SN, and PBC) and had a significant positive impact on gambling behavior intention and behavior. They concluded that based on the respondents' past casino gambling behaviors, some of the reasons for development of pathological gambling can be learned.

In senior casino gaming behavior, there are regular casino goers who consider casino gaming as their routine leisure activity. They are more likely to visit casinos without any evaluations, since they are most familiar with casino settings, atmosphere, services, and even people in the casinos. For these people, habitual behaviors based on repeated performance might not be influenced so much by the controlled processes involved in the TPB; they might be influenced more by automatic habitual responses (Eagly and Chaiken, 1993). For this reason, inclusion of senior past casino visits in the TPB model might weaken the predictive power of the three predictors of behavioral intention especially when the sample contains more regular casino visitors. In turn, the model would not provide much information on the behavioral intention, which is a function of attitude, subjective norm, and perceived behavioral control (Fishbein and Ajzen, 1975). The predictive power of these variables might be different depending on inclusion of past behavior. However, because of the significance of past gaming behavior to predict behavior intention, understanding the role of past casino visit experience in this study is critical. Since this study targets not only regular casino goers, but also those who do not go to casinos often, inclusion of past visits as a direct variable for behavior intention would not explain much about the infrequent goers. However, testing the moderating effect of past casino visits between the predictor variables and intention can achieve the objectives of this study, determine the role of predictor variables relative to intention, and at the same time gain more meaningful information on the role of seniors' past casino visits.

Based on this discussion, anther objective of the current study is to test senior casino past experience as a moderator on the relationships between predictor variables in the extended TPB model and behavioral intention. Thus, the last hypothesis for this study follows,

Hypothesis 8: Past casino visit experience has a moderating effect between antecedents (AT, SN, PBC, and Motivation) and casino gaming intention.

Methodology

The target population for this study was a consumer database of U.S. citizens who are 65 years and older. Via the university online survey system, the questionnaire was sent out to a random sample from this database. Respondents were asked to rate the three major constructs (attitude, subjective norm, and perceived behavior control) of the theory of planned behavior, their motivation level, and their future intention to visit casinos.

Measurement of Variables

The questionnaire was comprised of three major parts; one part assessed the theory of planned behavior model based on the three levels, the behavior intention being based on the three predictor variables (attitude, subjective norm, and perceived behavioral control) which were rooted in each relevant belief (behavioral beliefs, normative beliefs, and control beliefs, respectively). For attitude, respondents were to assess their attitude toward casino gaming based on a statement "All the things considered, for me, going to a casino would _____." A set of six bipolar adjectives were provided for respondents to complete the sentence: not enjoyable/ enjoyable, unpleasant/ pleasant, bad/ good, boring/ fun, harmful/ beneficial, and foolish/ wise. They were extracted from a previous review of literature. Behavior belief, which the attitude construct is based on, is a sum of the belief strength multiplied by outcome evaluation ($\sum bb_i\, be_i$). Thus, two questions were asked for each of the four items based on a 7-point Likert scale. For behavioral beliefs (bb_i), respondents evaluate their belief strengths on four benefits of visiting casinos. For the outcome evaluations (be_i), respondents were asked to evaluate the four salient beliefs about visiting casinos.

Subjective norm was tested by asking respondents to rate their relevant referents' level of approval of respondent's casino patronage. Three relevant referents were extracted from most older adult leisure literature: spouse, children, and friends. Both 7-point Likert and semantic differential scales were used. Next, subjective norm was represented by a belief construct called normative belief, which is the sum of normative beliefs (nb_i) multiplied by the motivation to comply (mc_i) with each referent group ($\sum nb_i\, mc_i$). The normative beliefs (nb_i) were measured by asking respondents to rate the level of influence that each referent group has on the respondents' decision to visit casinos based on a 7-point scale ranging from strongly disagree and strongly

agree. Motivation to comply (mc_i) was measured by respondents' general motivation to comply with their referents' opinion using a 7-point scale ranging from not at all to very much.

Perceived behavioral control questions about respondents' confidence in visiting casinos was determined by testing respondents' self-efficacy for, and control over, going to casinos using both 7- point Likert and semantic differential scales. The point of self-efficacy was to measure how easy or hard it was to go to a casino and, the point of controllability was to measure how much personal control respondents have over going to casinos. Perceived behavioral control was also based on the belief construct, specifically, control belief. From older adult leisure literature, three control belief items were identified (transportation, proximity to the closest casino to where they live, and health condition). Control belief is what reflects perceived behavioral control, and it consists of two parts, control beliefs (cb_i) and perceived control power (pp_i). Control beliefs (cb_i) were measured by asking respondents to rate how each of the control belief items influenced their decisions to go to casinos using a 7-point Likert scale ranging from extremely unlikely to extremely likely. On the other hand, perceived control power (pp_i) was measured by asking respondents the level of self control they believe they have over each of the control beliefs using a 7-point Likert scale ranging from strongly disagree to strongly agree. The control belief construct is also the sum ($\sum cb_i pp_i$) of control beliefs (cb_i) multiplied by perceived control power (pp_i).

Another part of the questionnaire asked respondents to evaluate the level of their motivation to go to casinos. The 18-item, five-factor motivation scales from Chapter 4 were used to measure reasons for older adults to visit casinos. These items were based on relevant previous published research findings. Respondents were asked to evaluate each of the items using 7-point disagree - agree statements (1= strongly disagree, 4= neutral, 7= strongly agree). The five motivation dimensions (win, socialize, escape, enjoy, and curiosity) were used as exogenous variables in the proposed model.

Respondents' intention to visit casinos in the future was measured by three questions that probed their likelihood of visiting casinos in the near future. Three questions were provided: I would like to visit a casino in the near future; I intend to visit a casino in the near future; and, I plan to visit a casino in the near future. These items were adopted and modified from Ajzen's study (Ajzen, 2002). All items were tested on a 7-point scale ranging from strongly disagree to strongly agree. Next, respondents' past casino visit was measured by asking whether they had

visited casinos or not. That was one of the screening questions for the online survey process, which is discussed next.

The last part of the questionnaire included respondents' demographic information such as gender, ethnic background, education, and annual income. Respondents' age was asked as one of the screening questions, since this study targets those who are 65 years and older.

Data Collection

After the questionnaire had been accepted as having an 'exemption' status from the university Institutional Review Board (Appendix A), an online survey was administered using an external market research service provider who maintains a by-invitation-only panelist database. Accordingly, a set of consumer database data was purchased for a fee for this study. The online survey instrument, which was developed using the university online survey (Appendix C) system was then sent out to the panelists using email invitations. The inclusive paid fee was for the database and incentives for the participants. An incentive was paid to each participant who completed the survey in the form of credit points, which then can be redeemed to purchase consumer products. First, a soft launch was conducted to ensure the proper functioning of the survey and emailing system. Once the soft launch was begun, within a few hours, 61 completed responses were collected, which were used in a pilot test for the study. The correlations among variables showed evidence of convergent validity. All Cronbach's alphas ranged from .95 (intention) to .72 (behavioral belief), which is sufficient for internal consistency (Nunnally, 1978). Thus, no revision or change was made to the survey. The main launch then proceeded to target 500 complete and useful samples. In the end, a total of 681 complete samples were collected and used for the data analysis.

Data Analysis

Data was first screened for any violations of underlying assumptions by conducting descriptive statistics using the Statistical Package for the Social Sciences (SPSS v. 17). The data was then analyzed according to Anderson and Gerbing's (1988) two-step approach, which involves a preliminary step of confirmatory factory analysis (CFA) to test whether the measured

variables reliably reflect the hypothesized latent variables using AMOS16 (Arbuckle, 2007). In this first step, the construct reliability and validity of construct measurements were all tested as well as the overall fit of the measurement model. Once the adequacy of the measurement model was established, the structural model could be tested in step two to investigate the relationships among the constructs. Furthermore, metric invariance (i.e., measurement and structural invariance) tests were also conducted to assess the moderating effect of senior's past casino experience on the relationships between the predictor variables (AT, SN, and PBC) and motivation and casino gaming intention.

Results

Measurement Model

To test the measurement model fit for the collected data, a series of CFA using maximum likelihood estimation on the covariance matrix was first conducted following recommendations of Bagozzi (1980), Anderson and Gerbing (1988), and Arnold and Reynolds (2003). To make the model simpler and more meaningful, a simple independent test was first done to determine whether all five motivation factors were regressed to senior casino visit intention. The test showed that socializing and escape dimensions did not influence casino visit intention significantly. Thus, two motivation constructs, socializing and escape, were deleted from the model for further analyses. The initial confirmatory factor analysis including 36-items and 10 constructs then was estimated to refine the manifest variables and to assess the model fit, reliability, and construct validity. An inspection of the model fit indicated that indices did not meet the generally acceptance cutoffs ($\chi^2_{(550)} = 3078.18$, $p = .00$; NFI= .85; CFI= .87; RMSEA= .07). After cautious inspection of modification indices, items with low loadings to the corresponding latent variables were revealed and removed from the model. This procedure was repeated a few times (Arnold & Reynolds, 2003), and a final confirmatory model with 30-items and 10 dimensions was then estimated. The model showed an acceptable level of fit indices ($\chi^2_{(355)} = 1230.9$, $p = .00$; NFI= .93; CFI= .95; RMSEA= .05).

Convergent validity was assessed by the significant loadings between the observed variables and each latent variable (Anderson & Gerbing, 1988). All observed variables were

loaded at least .50 on their delegated latent variables and were statistically significant (p<.01). As shown in Table 5.1, all average variance extracted (AVE) were greater than the recommended threshold value of.50 (Fornell & Larcker, 1981), ranging from .55 to.88, which support adequate internal consistency. Next, composite reliabilities of constructs, also shown in Table 5.1, all exceeded the cutoff value of .70 (Hair, Anderson, Tatham, & Black, 1998; Nunnally, 1978), ranging from .71 to .96. Thus, the multiple item scales were acceptable in measuring each of the constructs. Since AVE assesses the amount of variance captured by a construct's measure relative to measurement error between each pair of constructs, comparing the AVE with the squared correlations between constructs tested discriminant validity (Fornell & Larcker, 1981). All squared correlations between each pair of constructs were less than the AVE. Thus, discriminant validity was satisfied. Overall, the measurement model shows a good fit to the data. Once the measurement model fit the data, the structural model was tested.

Structural Model

A structural model was estimated to examine the hypothesized relationships in the extended theory of planned behavior model with external constructs of senior casino gaming motivations. The results show the goodness-of-fit indices (Goodness of fit statistics: $\chi^2_{(375)} = 1519.43$, $p <$ .001, CFI = .93, NFI = .91, RMSEA = .06) exceeded their acceptance level suggesting that the model is adequate to explain study variables. Behavioral beliefs explained about 41% of the variance in seniors' attitude towards casino. Normative beliefs explained right around 31% of variance in subjective norm. However, control beliefs only explained 1% of variance in PBC, indicating no association between CB and PBC even though control beliefs have a positive significant relationship with PBC. Finally, the predictor variables explained 37% of variance in overall intention. Standardized path coefficients and t values for the hypothesized paths were examined next. Table 5.2 demonstrates that all t-values were significant at the .01 level except the path from perceived behavioral control (PBC) to behavioral intention (BI).

Table 5.1 Measure Correlations, the Squared Correlations, and Measurement Properties (N=681)

Correlations among Latent Constructs (squared)											
Measures	BB	NB	CB	AT	SN	PBC	WIN	ENJOY	CURIO	BI	AVE
BB	1										0.61
NB	.32(.10)	1									0.61
CB	.23(.05)	.17(.03)	1								0.65
AT	.49(.24)	.28(.08)	.20(.04)	1							0.68
SN	.40(.16)	.55(.31)	.14(.02)	.36(.13)	1						0.79
PBC	.35(.12)	.29(.08)	.03(.00)	.26(.07)	.36(.13)	1					0.54
WIN	.41(.17)	.10(0.1)	.14(.02)	.32(.10)	.18(.03)	.10(.01)	1				0.55
ENJOY	.56(.31)	.21(.04)	.19(.04)	.44(.19)	.37(.14)	.26(.07)	.43(.18)	1			0.61
CURIOSITY	.21(.04)	.03(.00)	.12(.01)	.15(.02)	.13(.02)	.00(.00)	.39(.15)	.34(.12)	1		0.55
BI	.55(.30)	.31(.10)	.19(.04)	.51(.26)	.37(.14)	.36(.13)	.39(.15)	.40(.16)	.12(.01)	1	0.88
Mean	5.6	5.13	4.7	5.41	5.17	6.10	3.9	5.19	3.65	5.64	
S.D.	0.92	0.95	1.6	1.21	1.38	1.01	1.47	1.33	1.48	1.5	
Composite Reliability	0.75	0.82	0.79	0.91	0.92	0.78	0.86	0.76	0.71	0.96	

Note: BB= Behavior Beliefs, NB=Normative Beliefs, CB= Control Beliefs, AT= Attitude SN= Subjective Norm, PBC= Perceived Behavior Control, Motivation Factors (WIN, ENJOY, and CURIOSITY), BI= Behavioral Intention, AVE= Average Variance Extracted. Model measurement fit: $\chi^2 = 1230.93$ (*d.f.* = 355, $p<.001$), RMSEA = 0.052, CFI = 0.95, NFI = 0.93.

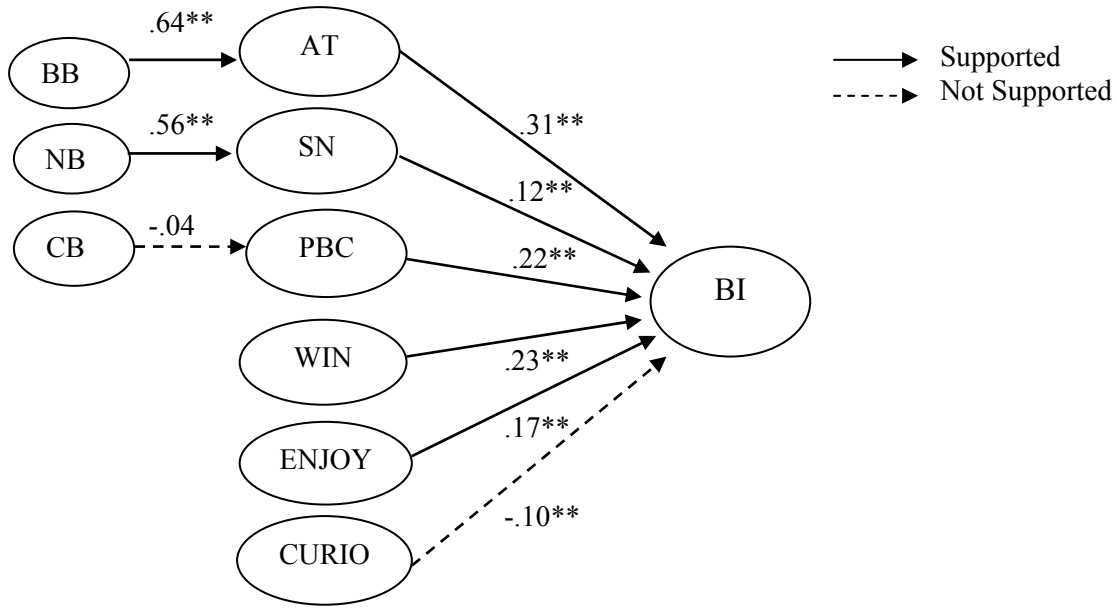
Table 5.2 Standardized Maximum Likelihood Parameter Estimates (N=681)

Paths			Standardized Coefficients	*t*-value	Results
BB	-->	AT	0.64	15.42**	Supported
NB	-->	SN	0.56	15.24**	Supported
CB	-->	PBC	-0.04	-.98	Not Supported
AT	-->	BI	0.31	8.87**	Supported
SN	-->	BI	0.12	4.22**	Supported
PBC	-->	BI	0.22	7.85**	Supported
WIN	-->	BI	0.23	5.49**	Supported
ENJOY	-->	BI	0.17	3.37**	Supported
CURIOSITY	-->	BI	-0.10	-2.55**	Not Supported
R^2 (AT)			0.41		
R^2 (SN)			0.31		
R^2 (PBC)			0.01		
R^2 (Intention)			0.37		

Note: BB= Behavior Beliefs, NB=Normative Beliefs, CB= Control Beliefs, AT= Attitude SN= Subjective Norm, PBC= Perceived Behavior Control, Motivation Factors (WIN, ENJOY, and CURIOSITY), BI= Behavioral Intention. Goodness of fit statistics: $\chi^2 = 1519.43$(*d.f.* = 375, $p<.001$), χ^2 / *d.f.* = 4.05; CFI = .93, NFI = .91, RMSEA = .06. *p<.05; **p < .01

The *t* values of coefficients between behavior beliefs and attitude ($\beta_{BB\ AT} = .64$, $t = 15.42$) and normative beliefs and subjective norms ($\beta_{NB\ SN} = .56$, $t = 15.24$) indicated a significant positive relationships. However, the control beliefs did not influence perceived control ($\beta_{CB\ PBC} = -.04$, $t = -0.98$). Therefore, hypotheses 1 and 3 were all supported and hypothesis 5 was not supported. All three predictor variables for behavioral intention in the TPB model were found to have positive significant influences on gaming behavioral intention ($\beta_{AT\ BI} = .31$, t = 8.87; $\beta_{SN\ BI} = .12$, $t = 4.22$; $\beta_{PBC\ INT} = .22$, $t = 7.85$). Thus, hypotheses 2, 4, and 6 were all supported. Lastly, not all three senior casino gaming motivation constructs had positive significant relationships with casino gaming intention. Thus, only WIN and ENJOY motivation constructs had positive significant effects on gaming intention ($\beta_{WIN\ BI} = .23$, $t = 5.49$; $\beta_{ENJOY\ BI} = .17$, $t = 3.37$), indicating support for hypothesis 7A and 7B. However, the last motivation factor CURIOSITY was negatively associated with casino gaming intention ($\beta_{CURIO\ BI} = -.10$, $t = -2.55$). Thus, hypothesis 7C was not supported. Figure 5.2 depicts the strength of each of the proposed paths.

Figure 5.2 Causal Relationships among Latent Variables



Note: BB= Behavior Beliefs, NB=Normative Beliefs, CB= Control Beliefs, AT= Attitude SN= Subjective Norm, PBC= Perceived Behavior Control, Motivation Factors (WIN, ENJOY, and CURIOSITY), BI= Behavioral Intention. *p<.05; **p < .01

The unexpected negative significant relationship between motivation CURIOSITY and intention needs further attention and discussion. Many times an unexpected negative significant relationship between variables can be explained by a suppressed variable that has a positive correlation with the dependent variable, but has negative beta weights in a regression equation (Darlington, 1968). This negative relationship is affected by a suppressor variable, which changes the relationship that is originally insignificant when a simple regression is run to negative and that is significant when all independent variables in the model regressed to the dependent variable. In order to find out if the negative relationship between CURIOSITY and intention was affected by a suppressor, a series of regression analyses was employed. Table 5.3 shows the results of regression analyses.

Table 5.3 Summary Results of Regression of Suppressor Effect

Regression	R^2	Unstandardized β	Standardized β	Significance
DV: BI (Behavioral Intention)				
Regression 1	.40			
AT		.38	.31	.00
SN		.13	.12	.00
PBC		.28	.19	.00
WIN		.26	.25	.00
ENJOY		.18	.16	.00
CURIOSITY		-.16	-.15	.00
Regression 2	.12			
CURIOSITY		.12	.12	.00
Regression 3	.26			
CURIOSITY		.05	.05	.12
AT		.63	.50	.00
Regression 4	.38			
CURIOSITY		.07	.07	.02
SN		.39	.36	.00
Regression 5	.38			
CURIOSITY		.12	.12	.00
PBC		.53	.36	.00
Regression 6	.40			
CURIOSITY		-.04	-.04	.24
WIN		.42	.41	.00
Regression 7	.36			
CURIOSITY		-.26	-.25	.00
ENJOY		.59	.50	.00

*p<.05; **p < .01

The negative significant relationship between CURIOSITY and intention was shown in regression one. However, the analysis showed that CURIOSITY and intentions had a positive relationship (β= .12) when CURIOSITY was the only independent variable. This does not match with the ideal situation to identify the suppressor variable. However, analysis showed that the two other motivation factors, WIN and ENJOY, have something to do with the suppressed effect. When these two variables were regressed along with CURIOSITY, WIN made the relationship between CURIOSITY and intention insignificant (β= -.04) and ENJOY made the relationship even more negatively significant (β= -.25). Thus, it can be concluded that ENJOY has a stronger negative effect than WIN as a suppressor variable. Even though the relationship between CURIOSITY and intention showed significant, because of the negative suppressed effect CURIOSITY is considered not to be significant in explaining the overall intention.

Testing Moderating Effect of Senior Past Casino Visit

The last part of analyses for this study tested for hypothesis 8 and investigated for moderating effect of seniors' past casino visit on the relationships between predictor variables and intention. This was done by testing the measurement invariance first. With a support of measurement invariance and then structural invariance was also examined. In order to test the invariance tests, the sample data was split between respondents who have visited a casino during last 12 months and who have not visited casino during last 12 months. Out of 681 total samples, 533 were selected as visitors and 148 were included as non-visitors.

Measurement Invariance

The measurements of observing and settings for this study should engender the same attributes under different conditions (Horn & McArdel, 1992). Therefore, a measurement invariance test was conducted to examine whether the measurement model is invariant across two groups (visitors vs. non-visitors). According to Steenkamp & Baumgartner (1998), significant structural invariance results are meaningless without a measurement invariant across groups. The measurement invariant was accessed by conducting chi-square difference tests. The model is said to be invariant and the full invariance is supported when there is no significant chi-square difference between non-restricted model and full metric invariance model (restricting factor loadings across two groups) (Yoo, 2002). As proposed in hypothesis 8, the moderating effects of past casino visits between predictor variables (AT, SN, PBC, and Motivations) and intention was the interest of this study. Therefore, AT, SN, PBC, and three motivation factors (WIN, ENJOY, and CRUIOSITY) and the intention were included in the chi-square testing model.

Table 5.4 shows the results of the measurement invariance test. The chi-square difference was significant between the freely estimated base model and fully restricted model ($\Delta\chi^2(16) = 46.5$, $p<.01$), not supporting full metric invariance. This means that the factor loadings between casino visitors and nonvisitors were not the same. When a full metric invariance is not supported, a partial invariance test is recommended (Steenkamp & Baumgartner, 1998; Yoo, 2002). With a careful examination of the modification indices and changes in parameter, four of the invariance constraints across two groups were relaxed and a partial metric invariance model was supported

($\Delta\chi^2(12) = 17$, $p>.01$). Table 5.4 also shows that both the non-restricted base model and the partial metric invariance model had good model fit.

Table 5.4 Measurement Invariance Test

MODELS	χ^2	*d.f.*	$\Delta\chi^2$	Δ*d.f.*	NIF	CFI	RMSEA
Base Model	955.5	408	-	-	.93	.96	.04
Full Metric Invariance of CFA	1002.0	424	46.5[1]	16	.93	.96	.04
Partial Metric Invariance of CFA	972.45	420	17.0[2]	12	.93	.96	.04

Table 5.5 Structural Invariance Test

MODELS	χ^2	*d.f.*	$\Delta\chi^2$	Δ*d.f.*	NIF	CFI	RMSEA
Partial Metric Invariance of Structural Model	972.5	420	-	-	.93	.96	.04
Full Path Invariance Model	991.9	426	19.4[3]	6	.93	.96	.04

Structural Invariance

A structural invariance test was to assess if the parameter estimates were equivalent across two groups. The test was performed in a similar manner as the measurement invariance test. First, to create the base model, a structural equation model (partial metric invariance) was simultaneously estimated across casino visitor and non-visitor groups. A chi-square difference test between the base model (the partial metric invariance of CFA) and a full metric invariance structural model in which all proposed causal paths were fixed to be invariant across groups was conducted. As shown in Table 5.5, both models showed good fit to the data. The results showed that the chi-square difference between the partial metric invariance SEM and the full path invariance model was insignificant ($p>.05$), indicating that paths across casino visitors and nonvisitors were not different. Thus, it can be concluded that seniors' past casino visits did not

[1] Chi-square difference test $\Delta\chi^2$ (16) =46.5, $p<.01$ (significant), full metric invariance is not supported.
[2] Chi-square difference test $\Delta\chi^2$ (12) =17.0, $p>.01$ (insignificant), thus partial metric invariance is supported.
[3] Chi-square difference test $\Delta\chi^2$ (6) =19.4, $p>.01$(insignificant), thus paths across two groups are not different.

have any moderating effect on the relationships between predictor variables (AT, SN, PBC, WIN, ENJOY, and CURIO) and casino visit intention.

Discussion and Conclusions

This study proposed and tested an extended theory of planned behavior (TPB) (Ajzen, 1985) to understand seniors' casino gaming behavior intention. The TPB model was extended by adding a senior's motivation component as another direct effect on seniors' casino gaming intention. As an important determinant of human behavior, the motivation variable was expected to add more predictive power for seniors' casino gaming intention as it acts in parallel with attitudes, subjective norms, and perceived behavior control as determinants of intention. The results of structural equation modeling showed all causal paths in the TPB model were significant in the senior casino gaming context, except the paths between control beliefs and perceived behavioral control. The extended model also showed that two (WIN and ENJOY) out of three senior motivation factors had significant influences on senior casino gaming behavior intentions. The moderating role of seniors' past casino visits in forming intention to participate in casino gaming in the future was tested by metric invariance tests. The structural invariance test indicated that seniors' past casino visits did not make any difference to their future intention to participate in casino gaming based on the predictors (AT, SN, PBC, WIN, ENJOY, and CURIOSITY). Thus, no moderating role was detected.

From the study results, some implications can be drawn. From the theoretical viewpoint, the overall extended TPB model suggests it is to be a valuable tool with which to study senior gaming behavior. Also, all four constructs (AT, SN, PBC, and Motivation) are good indicators to detect seniors' gaming behavioral intention. This means that not only the three predictors of TPB but also senior motivation components should be included in studying senior gaming behaviors. By including motivation component in the theory, this study contributes additional knowledge to the existing body of literature of the TPB and confirms the important role of motivation in human behavior, especially in senior casino gaming behaviors.

Usually, testing TPB can take two different approaches: direct measure of determinants of behavior or indirect measure of salient beliefs relevant to each determinant. This study adopted the full-model test, which included the salient belief structures to provide a

comprehensive understanding of senior casino gaming intention. As suggested in TPB, the belief constructs were treated as unidimensional belief structures ($\sum bb_i be_i$, $\sum nb_i mc_i$, and $\sum cb_i pp_i$), which supposedly provide the foundations for the determinants of behavior intention (attitude, subjective norm, and perceived behavioral control).

This study confirmed that attitude is derived from beliefs about the behavior's consequences, and that subjective norm is derived from the normative expectations of significant others. Shown in Table 5.6 , the descriptive results of behavior belief items indicated that benefits of having fun and excitement in participating casino gaming are the two biggest influences on seniors' attitude towards casino gaming. Clearly, casinos targeting seniors need to emphasize that the consequences of casino gaming can be fun and exciting and offer a chance to get away from their routine. Also based on this study, casinos can provide more activities that create a fun and exciting atmosphere for their senior visitors. Since it was found that many senior customers visit casinos to take breaks and get away from their daily routines, casinos could provide various types of entertainment for a day so that senior patrons can just forget about life back home and enjoy the day.

Table 5.6 Descriptive Summary of Belief Items for Senior Casino Gaming Behavior

Belief Items	Strength (Mean)	Evaluation (Mean)	Overall Beliefs (Mean)
Behavioral Beliefs	bb_i	be_i	$bb_i be_i$
Having fun and excitement	5.77	5.66	32.66
Getting away	5.32	5.66	30.11
Socializing and meeting new people	4.10	4.83	19.80
Relieving worries	3.90	4.91	19.15
			$\sum bb_i be_i = 101.72$
Normative beliefs	nb_i	mc_i	$nb_i mc_i$
Spouse or partner	5.67	5.20	29.48
Children	5.45	4.58	24.96
Friends	5.70	4.16	23.71
			$\sum nb_i mc_i = 78.15$
Control Beliefs	cb_i	pp_i	$cb_i pp_i$
Transportation	4.64	4.57	21.20
Proximity to casino	4.62	4.94	22.82
Health	5.15	5.17	26.63
			$\sum cb_i pp_i = 70.65$

Note: *bb* = behavioral beliefs, *be* = behavioral beliefs evaluation, *nb* = normative beliefs, *mc* = motivation to comply, *cb* = control beliefs, *pp*= perceived power.

The normative belief items in Table 5.6 also showed that seniors' spouses or partners have the most significant influence on whether seniors participate in casino gaming compared to their children and friends. This means casinos can create programs or activities that senior couples can enjoy together, so that the casino- participating spouse can invite the partner to the casinos. Promotion programs like couple's bingo nights or special dinners for two can at least entice spouses who usually do not patronize casinos.

This study found that the perceived behavioral control is not derived from the beliefs about the facilitating or impeding factors in engaging casino gaming. Nonetheless, the insignificant relationship between control beliefs and seniors' perceived behavioral control deserves some attention. The sum of control belief strength and power did not provide the basis for perceived behavioral control (β= -.04, t =-.98). This means that respondents did not think that the three control belief items (transportation, proximity and health condition) could make it any easier or more difficult for them to participate in casino gaming. The correlation between the control beliefs and perceived behavioral control was also notably insignificant (r = .03). Since many of these items were extracted from senior leisure literature, they might not specifically explain the control beliefs for engaging casino gaming for seniors. A summative measurement approach between control belief strength and power sometimes can be problematic since each control belief item measures different aspects of the control beliefs (Oh and Hsu, 2001). For example, a senior can have transportation to go to a casino but is not in good health or does not have a casino close to where he lives. One of these might be the reason for the low reliability. In order to establish a better baseline model and to avoid the low liability issue, each measurement item has to be assessed separately as Oh and Hsu (2001) suggested. The issues of the insignificant low correlation between control beliefs and perceived behavioral control also might be related to the low variance explained in perceived behavioral control by control beliefs (1%), indicating no association between the two constructs. Ultimately, however, it does not seem that seniors evaluate the easiness or difficulty of participating in casino gaming based on the three control beliefs items (transportation, proximity to casino, and health condition). Despite the importance of the three items for patrons participating in leisure activities (Jackson, 1993), they might not be critical for seniors to decide how easy or hard it is to participate in casino games. Therefore, more elicitation studies need to be done to identify salient control beliefs for senior casino gaming behaviors. Older people are challenged by internal and external changes, which

might influence the sense of control they have over life in general. The physiological and physical changes that come with aging might be perceived as uncontrollable stressors for seniors. Literature in gerontology claim that the age-related changes in control beliefs also influence the elderly psychological well being (Perrig-Chiello et al., 1999). Literature suggested that considering more specific life topics are necessary to measure control beliefs of elderly (Beisecker, 1988; Lachman, 1986). They asserted that control beliefs do not become necessarily more external with aging, but it is more topic-specific. Incorporating these factors is important in order to learn more about the senior control beliefs and perceived behavioral control and apply these to casino gaming behaviors. More research is needed first to refine the definition of perceived behavioral control and secondly to develop more reliable measurement items for control beliefs.

Casino operations, especially those that target seniors, need to put more effort into building positive messages about casinos and casino games. Since the seniors' attitude had the biggest influence on senior casino gaming intention, it is important that the casino operations build seniors' positive perceptions about casinos. The industry can accomplish this by either promoting the positive components of casino gaming as an enjoyable leisure activity in their advertising messages or by eliminating the negative images such as images associated with problem and pathological gambling. Campaign messages claiming in the moderation, casino gaming can be fun entertainment with low expenditure can help to build more a positive attitude toward casino gaming.

Casinos can implement promotions that utilize their existing senior customers as their marketing tool. Given that current senior customers can be a good influence on spouses and friends, casinos can encourage the current regular visitors to bring their friends and spouses to the casino with free meals at restaurants, chips to play slot machines, and other types of incentives. This would be a useful tactic since seniors' social norm is an important factor for them to decide whether to participate in casino gaming or not. When seniors' important referents (spouses and friends) participate in casino gaming, most likely they too will participate consider participating in casino gaming, despite any negative opinion about casino.

The easier it is, and the more perceived control there is, the more likely seniors will participate in casino gaming. Accordingly, casinos could create a more senior-friendly atmosphere, so that senior customers would feel that they are in complete control playing casino

games. This idea would be helpful for those casinos located close to many seniors. Additionally, casinos could provide easier directions to the casino and locate themselves where they are easily accessed from major highways. Obviously, making facilities more conveniently available for senior customers would entice more senior gamers. Another improvement concerns table games, which, senior customers traditionally have been inclined to stay away from because of the greater skill level required. Offering smaller betting opportunities at table games just for senior customers might help them to learn more about table games. This would help to increase their confidence level and enable more playing choices. Creating these types of opportunities could boost seniors' overall control in participating in casino gaming.

Senior gaming literature frequently states that the biggest motivation for seniors to engage in casino gaming is the socializing factor (Hagen et al., 2005; McNeilly and Burke, 2001; Terras et al., 2000; Zaranek and Chapleski, 2005). However, the results of the current study indicated that winning money and enjoying the casino experience are the most important variables influencing seniors. Given this result, casinos could provide chances for senior players to win more frequently. Frequent smaller payouts rather than an infrequent big jackpot can create the perception of more chances to win, and publicizing these more frequent winnings might help to get more players to participate.

Regarding the robustness of the methodology, this study still has some limitations even after careful design and assessment. First, the study samples might be biased against fully representing the general U.S. senior population. Even though the web-based data did not designate any particular regions of the U.S., the demographics of the data sample showed that the majority of the respondents were highly educated White. Therefore, higher education might be linked to greater accessibility to the computer and Internet for these respondents. Moreover, since this study collected data from a web-based questionnaire, only those who had access to computers and the Internet were able to participate. In spite of the convenience of online surveys and the speedy data collection time, it would be good practice to collect data from different sources. For future study, combining web-based and traditional paper-based questionnaires might be better address the issue of not including people who do not have computer and Internet access.

Second, adding senior casino gaming motivation as another direct antecedent of casino gaming behavior in the TPB model, this study found out that only two motivation dimensions

WIN and ENJOY had direct positive effects on seniors' casino gaming intention. However, the dimension CURIOSITY showed a negative significant effect on casino gaming intention. The CURIOSITY dimension included two measurement items (to satisfy my curiosity and to try something new). From the suppressed effect tests, the two other motivation dimensions, WIN and ENJOY were identified as factors suppressing CURIOSITY negatively. Of the two, ENJOY has a more suppressing effect on CURIOSTIY. This might be due to some multicollinearity or highly correlated independent variables that do not provide exclusive information to explain the model (Cohen and Cohen, 1983). Multicollinearity can be a threat to the stability of the model and weaken the predictive power (Kidwell and Brown, 1982). To address this issue, future studies need to explore the suppressor variables further to find out if they measure some of the variance in the predictor measures, and then researchers can decided whether or not to include them in the model. Also, further studies can include each of the motivation structures in the model one at a time to find out what role each dimension plays in the model. Ultimately, even though not all the motivation constructs influenced senior gaming intention, inclusion of motivation provides empirical evidence that some aspects of seniors' casino gaming motivation plays an important role in explaining senior gaming intention.

Third, it must be noted that the findings of metric invariance testing indicated that seniors' past casino visits did not moderate between predictor variables and casino gaming behavioral intention. This result might be related to the fact that a majority of the respondents (77%) visited casinos during the last 12 months prior to the survey. Thus, the study results really represent more casino users than non-users. Since respondents visited casinos recently, they might already have established their attitude, social norm, and behavioral control on casino gaming and thus have different intentions from those of non-visitors. There is a great possibility that the result might be different if the sample size between the two groups was balanced. However, due to the limited control authors had in collecting the data using an external marketing research firm, balancing the numbers of samples of recent casino visitors and non-visitors was difficult. Future study is suggested to test the model with more balanced sample sizes to examine the differences between the two groups more accurately. Nonetheless, even with the insignificant results, researching past experience in the TPB model (as opposed to taking the traditional research viewpoint) as another antecedent of behavioral intention deserves some credit. Another issue to consider is that dividing casino visitors and non-visitors by casino

experiences that took place within 12 months might be too long for seniors to remember their experience. Future studies might ask the seniors about their last visit to a casino and divide the groups into smaller timeframe, such as six or three months. Keaveney (1995) claimed that people reliably could recall service experiences within the previous six months; however, maybe an even smaller timeframe is needed for seniors to recall their last casino experiences.

Another future research idea would be to test other external variables for moderating effects between predictor variables and seniors' casino gaming intention. Many studies have already attempted to extend and enrich the TPB model by including additional explanatory variables (Broonen, 2001; Conner and Araham, 2001; Perugini and Bagozzi, 2001; Sutton, 1998). Even Ajzen (1991) who introduced the theory proposed that the TPB is open to the inclusion of predictions, "if it can be shown that they capture a significant proportion of the variance in intention or behavior after the theory's current variables have been taken into account" (p.199). External variables indicate any independent variables that are not included in the theory. Demographic variables (e.g., age, gender, occupations, education, and religion, attitude toward target, and personality traits) are some of the external variables mentioned in the theory (Ajzen and Fishbein, 1980). The primary concern with these external variables is that even though they may be related to the behavior in question, they do not directly influence behavior (Ajzen and Fishbein, 1980). In addressing this concern, many studies have integrated some of these external variables in either the TRA or the TPB model to see their indirect or intervening effects in the final determination of intention to enact the behavior. Specifically, differences might exist among subsets of the senior age group (young-old, old, and old-old) or gender in senior casino gaming intention. Findings from these external variables should provide more practical marketing implications.

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CHAPTER 6 - SUMMARY AND DISCUSSION

Casino gaming has emerged as one of the most popular leisure activities among the U.S. senior population during the last three decades. With the consistent revenues and the market base created by senior customers, this clientele has become the backbone of many casino operations. Clearly, the senior casino market is not likely to diminish. Industry experts predict that the senior market will continuously grow and will be a significant source of revenue for most casino venues. For this reason, casinos have been trying to increase market share by investigating the market more extensively and creating effective marketing tools that are more solidly directed to the senior market. Despite the increasing trend in senior casino attendance, the research in senior casino gaming is in its infancy. While some research has attempted to profile senior casino customers generally, more theoretically-sound targeted research is still needed. However, any intention to change or create seniors' gaming behaviors or intentions in ways that will attract more seniors into casino gaming requires that casinos first know seniors' existing casino gaming behaviors. Consequently, identifying factors that influence seniors' gaming behavioral intentions and behaviors is inevitable. In turn, adequate measurements of senior casino gaming behaviors based on these factors will help casinos develop more effective marketing strategies and build casino products that meet senior customers' needs. The current study recognized the need for more theory-based research and attempted to identify some of the factors influencing senior casino gaming behaviors by exploring senior gaming motivations and applying an extended theory of planned behavior (TPB) (Ajzen and Fishbein, 1980), which is the most prevalent human behavior theory currently in use.

This study was designed to establish a basis for a senior casino gaming motivations measurement scale and to integrate the motivation aspect from Ajzen and Fishbein's (1980) theory of planned behavior model and examine the relationships between these variables and seniors' casino gaming intentions. Thus, this study included two major phases. The first phase explored the potential casino gaming motivations of a senior population by following a scale development procedure (Anderson and Gerbing, 1988; Churchill, 1979). The second phase dealt with testing the relationships among the gaming motivation, antecedents (attitude, subjective

norm, and perceived behavioral control) within the theory of planned behavior, and the senior casino gaming intentions using structural modeling.

This final chapter summarizes the key findings of the both phases along with the theoretical and practical implications and suggestions for future studies in senior casino gaming.

Major Findings

Phase One (Motivation Scale)

The first phase established a valid and reliable senior casino gaming motivation scale. Following the scale development procedure (Anderson and Gerbing, 1988; Churchill, 1979), a total of 34 motivation items were collected through previous literature and personal interviews. After the initial examination of item-correlations, 27 items remained for an exploratory factor analysis with varimax rotation, which identified five motivation dimensions. A series of exploratory factor analyses resulted in 21-items and a five-factor structure. The five factors were labeled as 'winning and thrill,' 'escape,' 'socialization,' 'enjoyment,' and 'curiosity' and explained 67.93% of the total variance. The 21 items were further analyzed via a confirmatory factor analysis to improve measurement properties by using AMOS 16 (Arbuckle, 2007). After the initial confirmatory factor analysis, three items were deleted from the measurement structure after inspection of item squared multiple correlations and modification indices. A final confirmatory factor was estimated for the remaining 18 items. In the end, the model fit indices indicated an adequate model fit ($\chi^2_{(117)} = 383.01$, $p = .000$; NFI = .91; CFI= .93; RMSEA = .07).

Unidimensionality of the structure was tested to ensure each item reflected only one underlying construct (Bollen, 1989; Gerbing and Anderson, 1988). The standardized factor loadings showed evidence of unidimensionality, ranging from .64 to .83, which met the minimum criterion of .40. Cronbach's alpha (ranging from .70 to .87); finally, the composite reliability (ranging from .70 to .86 for each factor) also supported unidimensionality (Fornell and Larcker, 1981; Nunnally and Bernstein, 1994).

Convergent and discriminant validity was determined to establish the construct validity. They were inspected by examining the average variance extracted (AVE), which represents the

overall amount of variance in the observed variables accounted for by the latent construct (Hair et al., 1998). All AVEs of five dimensions exceeded the suggested minimum thresholds of .50 (Fornell and Larcker, 1981), ranging from .51 to .60. These AVEs then were compared with the squared correlations between constructs to test for discriminant validity (Fornell and Larcker, 1981). All squared correlations (ranged from .12 to .28) between each of the constructs were less than the AVE (ranged from .51 to .60), satisfying the discriminant validity.

The results of the first part of this study showed that the motivation scale for senior casino gaming was valid, reliable, and parsimonious, and captured five dimensions of motivation well.

Phase two (Testing an Extended Theory of Planned Behavior)

The second part of this study involved establishing the relationships between the three antecedents (attitude, subjective norm, perceived behavioral control, and casino gaming motivation) of the extended theory of planned of behavior and seniors' casino gaming intentions. The relationships each of the major antecedents (attitude, subjective norm, and perceived behavioral control) in the theory of planned behavior and their corresponding belief constructs (behavioral beliefs, normative beliefs, and control beliefs respectively) were also tested. In summary, the following hypotheses were proposed to test relationships among constructs.

Hypothesis 1: Behavioral belief (BB) is a significant predictor of attitude (AT).

Hypothesis 2: Attitude (AT) toward casino gaming is a significant predictor of casino gaming intention.

Hypothesis 3: Normative belief (NB) is a significant predictor of subjective norm (SN).

Hypothesis 4: Subjective norm (SN) is a significant predictor of casino gaming intention.

Hypothesis 5: Control belief (CB) is a significant predictor of perceived behavioral control (PBC).

Hypothesis 6: Perceived behavioral control (PBC) is a significant predictor of casino gaming intention.

Hypothesis 7: Casino gaming motivation is a significant predictor of casino gaming intention.

The three motivation dimensions (winning and thrill, enjoyment and curiosity) from phase one were included in hypothesis 7; thus it had three sub-hypotheses.

Hypothesis 7a: Motivation 'winning money and feeling thrill' is a significant predictor of casino gaming intention.

Hypothesis 7b: Motivation 'enjoyment' is a significant predictor of casino gaming intention.

Hypothesis 7c: Motivation 'curiosity' is a significant predictor of casino gaming intention.

Structural equation modeling (SEM) was used to test the causal relationships. First, the *t* values of coefficients between behavior beliefs and attitude ($\beta_{BB\ AT}$ = .64, *t* = 15.42) and normative beliefs and subjective norms ($\beta_{NB\ SN}$ = .56, *t* = 15.24) indicated a significant positive relationship. However, the control beliefs did not influence perceived control ($\beta_{CB\ PBC}$ = -.04, *t* = -0.98). Therefore, hypotheses 1 and 3 were all supported, but hypothesis 5 was not supported. Second, all three predictor variables for behavioral intention in the TPB model were found to have positive significant influences on gaming behavioral intention ($\beta_{AT\ BI}$ =.31, t = 8.87; $\beta_{SN\ BI}$ = .12, *t* = 4.22; $\beta_{PBC\ INT}$ = .22, *t* = 7.85). Thus, hypotheses 2, 4, and 6 were all supported. Only 'winning and thrill' and 'enjoy' motivation constructs had positive significant effects on gaming intention ($\beta_{WIN\ BI}$ = .23, *t* = 5.49; $\beta_{ENJOY\ BI}$ =.17, *t*= 3.37), indicating support for hypotheses 7a and 7b. However, the last motivation factor, 'curiosity,' was negatively associated with casino gaming intention ($\beta_{CURIO\ BI}$ = -.10, *t* =-2.55); therefore, hypothesis 7c was not supported. hypothesis 7c.

Additional Findings

The unexpected negative significant relationship between motivation 'curiosity' and intention was further investigated. Many times an unexpected negative significant relationship between variables can be explained by a suppressed variable that has a positive correlation with the dependent variable but has negative beta weights in a regression equation (Darlington, 1968). To determine if the negative relationship between 'curiosity' and intention was affected by a suppressor, a series of regression analyses were employed. The results of the analyses showed a positive relationship (β= .12) when 'curiosity' was the only independent variable; however, the analysis showed that the two other motivation factors, 'winning and thrill' and 'enjoy' had

something to do with the suppressed effect. When these two variables were regressed along with 'curiosity,' 'winning and thrill' made the relationship between 'curiosity' and intention insignificant (β= -.04), and 'enjoy' made the negative significant relationship even stronger (β= -.25). Thus, the data showed that 'enjoy' has a stronger negative effect as a suppressor variable.

In addition to testing the seven hypotheses, this study also tested moderating effects of seniors' past casino gaming experience on the relationships among the four antecedents (attitude, subjective norm, perceived behavioral control, and motivation) and seniors' casino gaming behavioral intentions. Essentially, this was to examine whether past casino experience modified the relationships among four antecedents and the intentions. The samples was divided between seniors who visited casinos during the previous 12 months and those who did not visit casinos. The results of metric invariance tests showed that the chi-square difference between the partial metric invariance and the full path invariance model was insignificant ($p>.05$), indicating that paths for casino visitors and non-visitors were not different. Thus, the seniors' past casino visits did not have any moderating effect on the relationships between predictor variables (attitude, subjective norm, perceived behavioral control, winning & thrill, enjoy and curiosity) and casino visit intention.

Conclusion and Implications

This study attempted to identify various dimensions of senior casino gaming motivations by utilizing a measurement developing procedure. The motivation scale captured five dimensions of reasons seniors participating casino gaming: winning and thrill, escape, socializing, enjoyment, and curiosity. From the results of factor analyses, the 'enjoyment' dimension showed the highest mean value at 5.19, which means that the key motivation for seniors casino gaming was enjoyment. This result is somewhat consistent with previous literature that suggested that most seniors participate in gaming for fun and excitement (Hope and Havir, 2002; McNeilly and Burke, 2001; Moore, 2001; Volberg, 2003).

This study also proposed and tested an extended theory of planned behavior (TPB) (Ajzen, 1985) to understand seniors' casino gaming behavior intention. The TPB model was extended by adding senior's motivation component as another direct effect on seniors' casino gaming intention. The motivation variable was expected to add more predictive power for

seniors' casino gaming intention as it acts in parallel with attitudes, subjective norms, and perceived behavior control as determinants of intentions. The results of structural equation modeling showed all causal paths in the TPB model were significant in senior casino gaming context, except the paths between control beliefs and perceived behavioral control. The extended model also showed that two ('winning and thrill,' and 'enjoy') out of three senior motivation factors had significant influences on senior casino gaming behavior intentions.

From the results of this study, researchers can draw some meaningful and useful theoretical and practical implications. First, the motivation scale can be utilized in examining relationships between senior casino gaming motivation and other constructs such as seniors' intention in the context of casino gaming. Since motivation is an important driving force in human behavior, the scale will be useful in measuring seniors' intention or casino gaming behavior itself based on the five major motivation dimensions. Second, finding the differences in casino gaming motivations between habitual and casual casino visitors would also provide additional information in the literature. Some of the habitual visitors might have clearly different motivations because of the potential associated gambling problems. The degree of seniors' casino gaming involvement might directly be influenced by their motivations. The more motivated the person is, the more likely that person will be involved in casino gaming. Third, casino operations can develop their casino gaming products to be more geared toward providing seniors opportunities to have enjoyable experiences. To do this, casinos need to know the factors that make seniors excited and the activities that they would most enjoy. Casinos also can periodically survey their older visitors about particular entertainments they would like to see at the casino. In addition, casino operators should remember that even though seniors participate in casino gaming mostly fun, they still like to win money.

The overall extended TPB model suggests it will be a valuable tool with which to study senior gaming behavior. Specifically, this study confirmed that attitude is derived from beliefs about the behavior's consequences, and that subjective norm is derived from the normative expectations of significant others. Behavior belief items indicated that the benefits of fun and excitement from participating in casino gaming are the two biggest influences on seniors' attitude towards casino gaming. This means casinos targeting seniors need to emphasize that the consequences of casino gaming are fun and exciting and a chance for getting away from routines. Casinos also can provide more activities that create a fun and exciting atmosphere for their

senior visitors. Many senior customers visit casinos to take breaks and get away from their daily routines. Beside playing game itself, casinos can provide various entertainment for a day so that senior patrons can just forget about life back home and enjoy the day. The normative belief items also showed that seniors' spouses or partners have the most significant influence on whether seniors participate in casino gaming compared to the influence of their children and friends. Accordingly, casinos can create programs or activities that senior couples can enjoy together, so that the casino participating spouse can invite their partner to the casinos. Promotion programs like couple bingo nights or special dinner for two can at least bring the spouses or partners in the door who usually do not patronize casinos. Next, this study found that the perceived behavioral control is not derived from the beliefs about the facilitating or impeding factors in engaging in casino gaming. Indeed, the sum of control belief strength and power did not provide the basis for perceived behavioral control (β= -.04, t =-.98). This means that respondents did not think that the three control belief items (transportation, proximity and health condition) could make it any easier or more difficult for them to participate in casino gaming.

Clearly, all four constructs (attitude, subjective norm, perceived behavioral control, and motivation) are good indicators to detect seniors' gaming behavioral intention. This means that not only the three predictors of TPB but also senior motivation components should be included in studying senior gaming behaviors. Casino operations, especially those targeting seniors need to put more efforts into building positive messages about casinos and casino games. Since the seniors' attitude had the biggest influence on senior casino gaming intention, it is important that the casino operations positively build seniors' perception about casinos. The industry can accomplish this either by promoting the positive components of casino gaming as an enjoyable leisure activity in their advertising messages or by eliminating the negative images such as images associated with problem and pathological gambling. Campaign messages claiming that moderate casino gaming can be a fun entertainment with low expenditure can help to build a more positive attitude toward casino gaming. Furthermore, casinos can encourage the current regular visitors to bring their friends and spouses and give them free meals at restaurants, chips to play slot machines, and offer other types of incentives. This will be a useful tactic since seniors' social norm is an important factor for seniors deciding whether to participate in casino gaming or not. In addition, the easier it is and the more perceived control there is, the more likely the seniors will participate. Thus, casinos can create more senior- friendly atmosphere in their

facilities, so that senior customers will feel that they are in complete control playing casino games. Additionally, casinos can offer smaller betting table game opportunities just for senior customers and help them to learn more about table games. This will help to increase confidence and enable more choices to play. Creating these types of opportunities can boost seniors' overall control in participating in casino gaming.

The results of the current study indicated that winning money and enjoying the casino experience are the most important influences for seniors to decide to participate in casino gaming. Given this result, casinos can provide chances for senior players to win more frequently. Frequent, smaller payouts rather than an infrequent big jackpot can create the perception of more chances to win, and publicizing these more frequent winnings might help to get more s players to participate.

Limitations and Suggestions for Future Research

Even with careful design and assessment, this study still contains some limitations. First, the sample might be biased against representing the general U.S. senior population fully. Even though the web-based data did not designate any particular regions of the U.S., the demographics of the data sample showed that the majority of the respondents were highly educated White. The higher education might be linked to greater accessibility to the computer and Internet for these respondents. Since this study collected data from a web-based questionnaire, only those who had access to a computer and Internet were able to participate. However, in spite of the convenience of online surveys and the speedy data collection time, it would be good practice to collect data from different sources. For future study, combining web-based and traditional paper based questionnaire might better address the issue of not including people who do not have computer and Internet access.

Due to the homogeneous sample of highly educated White, one has to be cautious when applying the motivation scale to any other senior gaming context. Doing so might produce different results for a more multi- ethnic. For example, the scale must be altered for a Native American Casino where most customers are from the tribe that owns the casino. This study also did not consider dividing the samples between problem and recreational senior gamblers to identify the motivation differences. For future studies, senior casino gaming motivations should

separate problematic and casual players. As suggested, the leisure casino gaming players focus more on the social, entertainment, and fun aspects of gaming, whereas the problem gamblers place more emphasis on the escape aspects of gaming (Hagen et al., 2005; Hirsh, 2000; McNeilly and Burke, 2000; Wiebe, 2000). This would be very important information for casino operators in their marketing analyses and communications. Using a scale like that in the Diagnostic and Statistical Manual of Mental Disorder (DSM-IV; American Psychiatric Association, 1994) can enable screening for seniors with pathological gambling problems (Gerstein et al., 1999). However, even with the diverse collection of senior casino gaming motivations from qualitative studies, the motivation scale might miss other possible motivations or reasons for seniors to participate in casino gaming. For instance, possible motivations like inexpensive foods casinos offer and shows/entertainments at casinos were not included in the scale. Thus, future studies could examine further motivation dimensions that were uncovered in this study. For example, more focus group studies or personal interviews might help to collect richer and more detailed information.

In regards to the homogenous sample, another weakness of this study is that it treated the senior samples as a homogenous group and did not consider the age cohort effects among the senior samples. Cohort or period effects refers to the general impact of experiences and major events or the historical impacts of events and occurrences on a particular age cohort (Mehta, 2004). The casino motivations well could be different among various ages of seniors depending on their life experiences, particular events (e.g., World War II) and other sociocultural impacts. The samples for this study included the seniors who were 65 years or older without categorizing them into smaller sub-age groups such as young-old, old, old-old, and oldest-old. Many studies in gerontology, psychology, and consumer behavior claimed the differences among subsets of the older adults. Three general older adult subsets have been defined in literature; young-old (65-74 years old), old (74-84 years old), and oldest-old (85 years and older) (Abdel-Ghany and Sharpe, 1997; McGuire et al., 2004; Rapoport and Rapoport, 1975; Riley and Riley, 1986; Sherman and Schiffman, 1984). A 65 years old person might have totally different aspects of life such as in income, educations, cognitive and physical health, living arrangements, social services, and other sociocultural factors that could influence them differently than 85 year olds. Moschis (1996) asserted that different gerontographic characteristics of different generation cohorts would bring different consumption and behavior patterns. A few studies revealed some

differences of gaming patterns between young-old and old-old adults (Mok and Hraba, 1991). They found that young-old (65 to 74 years) tended to participate in casino gaming as other young generations (non-elderly) do and that old-old were not as healthy and affluent to participate in gaming as the young-old (65 to 74). Zaranek and Chapleski (2005) found a similar study result found that the youngest age cohort (60 to 74 years) was more likely to visit casinos compared to old-old age groups. Thus, it is important that future senior casino research could take into account the age cohort effects among the senior age subsets to find out the heterogeneity of senior motivation in casino gaming.

As discussed earlier, while both seniors' attitude and subjective norms were formed based on behavioral belief (β= .64, t = 15.42) and normative belief (β= .56, t = 14.24) respectively as the theory proposed, the sum of control belief strength and power, however, did not provide the basis for perceived behavioral control (β= -.04, t =-.98). This means that respondents did not think that the three control belief items (transportation, proximity and health condition) could make it any easier or more difficult for them to participate in casino gaming. The correlation between the control beliefs and perceived behavioral control was also notably insignificant (r = .03). Since these items were extracted from senior leisure literature, they might not exactly explain the control beliefs for seniors engaging in casino gaming. The summative measurement approach between control belief strength and power sometimes can be an issue since each control belief item measures different aspects of the control beliefs (Oh and Hsu, 2001). For example, a senior can have transportation to go to a casino but not be in good health or not have a casino close by. This might be the reason for the low reliability. In order to establish a better baseline model and to avoid the low liability issue, each measurement item has to be assessed separately as Oh and Hsu (2001) suggested. The issues of the insignificant low correlation between control beliefs and perceived behavioral control also might be related to the low variance explained in perceived behavioral control by control beliefs (1%), indicating no association between the two constructs. Notably, it does not seem as though seniors evaluate the ease or difficulty of participating in casino gaming based on the three control beliefs items (transportation, proximity to casino, and health condition). Despite the importance of the three items for seniors participating in leisure activities (Jackson, 1993), they might not be all that critical for seniors to decide how easy or hard it is to participate in casino games. More elicitation studies need to be done to identify salient control beliefs for senior casino gaming

behaviors. As Oh and Hsu (2001) suggested, to solve these problems with control beliefs and perceived behavioral control, more research is needed, first to refine the definition of perceived behavioral control, and second to develop more reliable measurement items for control beliefs.

By adding senior casino gaming motivation as another direct antecedent of casino gaming behavior in the TPB model, this study found that two motivation dimensions 'winning and thrill' and 'enjoy' had direct positive effects on seniors' casino gaming intention. However, the dimension 'curiosity' showed a negative significant effect on casino gaming intention. The 'curiosity' dimension included two measurement items (to satisfy my curiosity and to try something new). From the suppressed effect tests, the two other motivation dimensions, 'winning and thrill' and 'enjoy' were identified as suppressing 'curiosity' negatively. Between two, 'enjoy' had a more suppressing effect on 'curiosity'. This might be due to some multicollinearity or highly correlated independent variables that do not provide exclusive information to explain the model (Cohen and Cohen, 1983). Multicollinearity can be a threat for the stability of the model and weaken the predictive power (Kidwell and Brown, 1982). To address this issue, future studies need to explore the suppressor variables further to find out if they measure some of the variance in the predictor measures, and then researchers can decide whether or not to include them in the model. Also, future studies can include each of the motivation structures in the model one at a time to find out what role each dimension plays in the model. Even though not all motivation constructs influenced senior gaming intention, inclusion of motivation provides empirical evidence that some aspects of seniors' casino gaming motivation plays an important role in explaining senior gaming intention.

Third, and notably, the findings of metric invariance testing indicated that seniors' past casino visits did not have moderating effect between predictor variables and casino gaming behavioral intention. This result might be related to the fact that a majority of the respondents (77%) visited casinos during the previous 12 months prior to the survey. Thus, the study results really represent more casino users than non-users. Since these older patrons visited casinos recently, they might already have established their attitude, social norm, and behavioral control about casino gaming and thus have different intentions from those of non-visitors. There is a great possibility that the result might be different when the sample sizes of the two groups are balanced. However, due to the limited control authors had in collecting the data using an external marketing research firm, balancing the numbers of samples between recent casino visitors and

non-visitors was difficult. Future study is suggested to test the model with a more balanced sample size to examine the difference between the two groups more accurately. Nonetheless, even with the insignificant results, assessing past casino experience in the TPB model differently (as opposed to taking the traditional viewpoint), as another antecedent of behavioral intention, deserves some credit. Another issue to consider is that dividing casino visitors and non-visitors by casino attendance in the previous 12 months might be too long for seniors to remember their experience. Future studies might ask about the seniors' last visit to a casino and divide the groups into smaller timeframe such as three or six months. Keaveney (1995) claimed that people reliably can recall service experiences within the previous six months; however, maybe an even shorter timeframe is needed for seniors to recall their most recent casino experiences.

Another future research idea could be testing other external variables for moderating effects between predictor variables and seniors' casino gaming intention. Many studies have already attempted to extend and enrich the TPB model by including additional explanatory variables (Broonen, 2001; Conner and Araham, 2001; Perugini and Bagozzi, 2001; Sutton, 1998). Even Ajzen (1991) who introduced the theory proposed that the TPB is open to the inclusion of predictions, "if it can be shown that they capture a significant proportion of the variance in intention or behavior after the theory's current variables have been taken into account" (p.199). External variables indicate any independent variables that are not included in the theory. Demographic variables (e.g., age, gender, occupations, education, and religion), attitude toward target, and personality traits are some of the external variables mentioned in the theory (Ajzen and Fishbein, 1980). The primary concern with these external variables is that even though they may be related to the behavior in question, they do not directly influence behavior (Ajzen and Fishbein, 1980). In addressing this concern, many studies have integrated some of these external variables in either the TRA or the TPB model to see their indirect or intervening effects in the final determination of intention to enact the behavior. Specifically, differences might exist among subsets of senior age (young-old, old, and old-old) or gender in senior casino gaming intention. Findings from these external variables should provide more practical marketing implications.

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Appendix A - Kansas State University Institutional Review Board (IRB) Exemption

K-STATE
Kansas State University
University Research Compliance Office
203 Fairchild Hall
Lower Mezzanine
Manhattan, KS 66506-1103
785-532-3224
Fax: 785-532-3278
http://www.ksu.edu/research/comply

TO: Deborah Canter
HRIMD
104 Justin

Proposal Number: 4745

FROM: Jerry Jaax, University Compliance Officer
Committee on Research Involving Human Subjects

DATE: May 22, 2008

RE: Proposal Entitled, "Senior Casino Motivation and Patronage Intention: An Extended Theory of Planned Behavior Model"

The Institutional Review Board (IRB) for Kansas State University has reviewed the proposal identified above and has determined that it is exempt from further review.

This exemption applies only to the proposal currently on file with the IRB. Any change affecting human subjects must be approved by the IRB prior to implementation and may disqualify the proposal from exemption.

Exemption from review does not release the investigator from statutory responsibility for obtaining the informed consent of subjects or their authorized representatives, as appropriate, either orally or in writing, prior to involving the subjects in research. The general requirements for informed consent and for its documentation are set forth in the Federal Policy for the Protection of Human Subjects, 45 CFR 46.116-117, copies of which are available in the University Research Compliance Office and online at http://ohrp.osophs.dhhs.gov/humansubjects/guidance/45cfr46.htm#46.116. In cases of remote oral data collection, as in telephone interviews, oral consent is sufficient and the researcher is required to provide the respondent with a copy of the consent statement only if the respondent requests one. The researcher must, however, ask the respondent whether he or she wishes to have a copy. The initiative in requesting a copy must not be left to the respondent. Regardless of whether the informed consent is written or oral, the investigator must keep a written record of the informed consent statement, not merely of the fact that it was presented, and must save this documentation for 3 years after completing the research.

The identification of a human subject in any publication constitutes an invasion of privacy and requires a separate informed consent.

Injuries or any unanticipated problems involving risk to subjects or to others must be reported immediately to the Chair of the Committee on Research Involving Human Subjects, the University Research Compliance Office, and if the subjects are KSU students, to the Director of the Student Health Center.

Appendix B - Questionnaire Cover Letter

Dear Participants,

We are conducting a research project to better understand what influence people to patronage casinos for leisure. The results of this study can offer better understanding of these age groups' attitude, beliefs and intention in participating casino activities.

Your help is important for the success of this study. Please take about 15 minutes to complete this questionnaire. Your participation is strictly voluntary. You must be at least 18 years old age to participate. All responses will remain confidential and anonymous. No individual responses will be reported. Only aggregate responses will be reported.

Your cooperation and contribution to this study is greatly appreciated.

Sincerely,

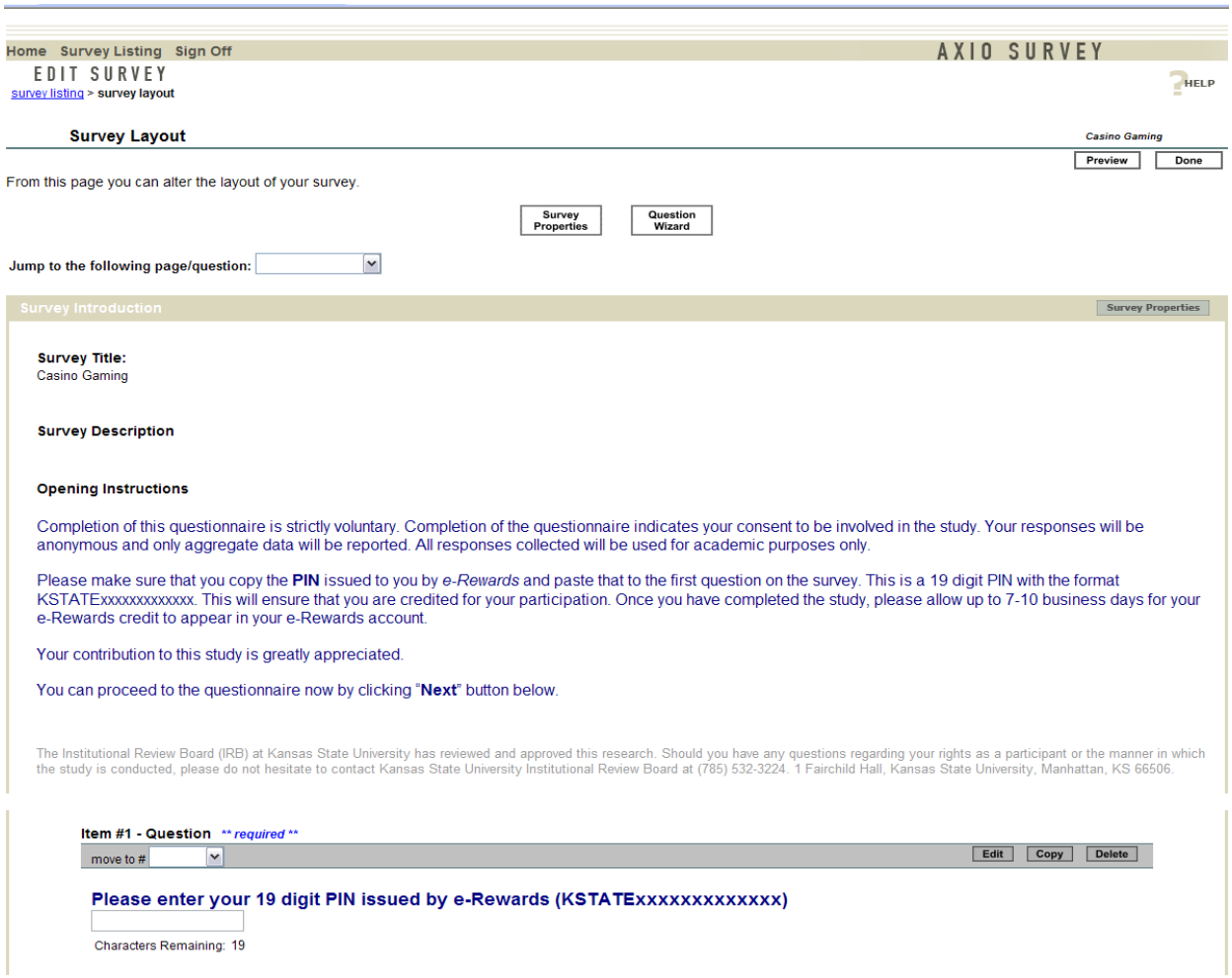
WooMi Phillips
Ph.D. Candidate

Deborah Canter
Co-Major Professor

Dr. Jan SooCheong
Co-Major Professor

For additional information about the research study, please feel free to contact WooMi Phillips at (701) 231-7358 or woomi @ksu.edu or Dr. Deborah Canter at (785) 532-5507 or canter@ksu.edu. If you have any questions regarding your rights as a participant or the manner in which the study is conducted, please contact the Kansas State University Institutional Review Board at (785) 532-3224. 1 Fairchild Hall, Kansas State University, Manhattan, KS 66506.

Appendix C - Online Survey Instrument (Screen Shot)



Item #2 - Question *** required ***

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What is your gender?

- ○ **Female**
- ○ **Male**

insert the following here:

scale | multi-choice | ranking | semantic differential | short answer | header | page break

Item #3 - Question *** required ***

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Into which age group do you fall?

- ○ **Under age 18**
- ○ **Age 18 - 24**
- ○ **Age 25 - 34**
- ○ **Age 35 - 44**
- ○ **Age 45 - 54**
- ○ **Age 55 - 64**
- ○ **Age 65 or older**

Item #4 - Question *** required ***

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During the past 12 months, have you done any of the following? (Check all that apply)

- ☐ **Attended a professional sporting event**
- ☐ **Traveled abroad for business or leisure purposes**
- ☐ **Visited a casino**
- ☐ **Attended a musical concert**
- ☐ **Taken a vacation using your automobile**
- ☐ **None of the above**

Item #5 - Question ** required **

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DIRECTION: Think about the primary reasons you had for going to a casino in the past or that might influence your decision to go to a casino in the future.

Please mark one response to complete the following sentence according to level of your agreement with each statement.

(1=Strongly Disagree; 2 =Moderately Disagree; 3 =Slightly Disagree; 4=Neutral; 5 =Slightly Agree; 6 =Moderately Agree; 7=Strongly Agree)

If I were to go to a casino, I would go there _____.

1 - Strongly Disagree
2 - Moderatly Disagree
3 - Slightly Disagree
4 - Nuetral
5 - Slightly Agree
6 - Moderatly Agree
7 - Strongly Agree

	1	2	3	4	5	6	7
5.1 to enjoy the freedom to do what I want	○	○	○	○	○	○	○
5.2 to learn how to play casino games	○	○	○	○	○	○	○
5.3 to enjoy the intense feelings I get while gambling	○	○	○	○	○	○	○
5.4 to watch shows/entertainment at the casino	○	○	○	○	○	○	○
5.5 to relax	○	○	○	○	○	○	○
5.6 to feel triumph when winning	○	○	○	○	○	○	○
5.7 to pass the time	○	○	○	○	○	○	○
5.8 to forget about stressful realities	○	○	○	○	○	○	○
5.9 to enjoy the thrill of taking risks	○	○	○	○	○	○	○
5.10 to win big money with little investment	○	○	○	○	○	○	○
5.11 to escape from loneliness	○	○	○	○	○	○	○
5.12 to experience fun and excitement	○	○	○	○	○	○	○
5.13 to escape problems or responsibilities at home	○	○	○	○	○	○	○
5.14 to release tension and stress	○	○	○	○	○	○	○
5.15 to increase friendship or kinship	○	○	○	○	○	○	○
5.16 to enjoy the uncertainty of gaming	○	○	○	○	○	○	○
5.17 to take a break from burdensome routines	○	○	○	○	○	○	○
5.18 to meet new people and make new friends	○	○	○	○	○	○	○
5.19 to change my mood	○	○	○	○	○	○	○
5.20 to have fun while competing with others	○	○	○	○	○	○	○
5.21 to enjoy the food at the casino	○	○	○	○	○	○	○
5.22 to win big money immediately	○	○	○	○	○	○	○
5.23 to try something new	○	○	○	○	○	○	○
5.24 to be with people who enjoy the same things I do	○	○	○	○	○	○	○

5.25	to be with family and friends	○	○	○	○	○	○	○
5.26	to avoid boredom	○	○	○	○	○	○	○
5.27	to have fun in predicting the results of gambling games	○	○	○	○	○	○	○
5.28	to socialize with others	○	○	○	○	○	○	○
5.29	to make money easily	○	○	○	○	○	○	○
5.30	to practice gambling	○	○	○	○	○	○	○
5.31	to satisfy my curiosity	○	○	○	○	○	○	○
5.32	to energize my life	○	○	○	○	○	○	○
5.33	to enjoy leisure time and activities	○	○	○	○	○	○	○
5.34	to win back previous losses	○	○	○	○	○	○	○

Item #6 - Question *** required ***

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DIRECTION:

Please complete the phrase

"All things considered, for me, going to a casino would be_____".

Click on the button in each row that best reflects your opinion. (Each button represents numeric value as shown in EXAMPLE; -3= Extremely Negative; 0= Neutral; 3=Extremely Positive)

For example, If you think that going to a casino is unpleasant, you will chose one of the buttons on left side of the scale (-3,-2,-1) depending on level of your agreement. If you think that going to a casino is pleasant, you will chose one of the buttons on right side of the scale (1, 2, 3) depending on the level of your agreement. If you don't have an opinion, click on "0".

EXAMPLE

	-3	-2	-1	0	1	2	3	
Negative	○	○	○	○	◉	○	○	Positive

Not enjoyable	○	○	○	○	○	○	○	Enjoyable
Unpleasant	○	○	○	○	○	○	○	Pleasant
Bad	○	○	○	○	○	○	○	Good
Boring	○	○	○	○	○	○	○	Fun
Harmful	○	○	○	○	○	○	○	Beneficial
Foolish	○	○	○	○	○	○	○	Wise

Item #7 - Question *** required ***

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Please indicate a point along the scale from left to right that matches how you think people who are important to you (e.g., family member) feel about you going to a casino.

Most people who are important to me think that I "_____" visit a casino.

Should not	○	○	○	○	○	○	○	Should

Item #8 - Question *** required ***

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Please indicate your level of agreement with each of the following statements.

1 - Strongly Disagree
2 - Moderatly Disagree
3 - Slightly Disagree
4 - Nuetral
5 - Slightly Agree
6 - Moderatly Agree
7 - Strongly Agree

	1	2	3	4	5	6	7
8.1 Most of the people in my life whose opinions I value would approve of me visiting a casino.	○	○	○	○	○	○	○
8.2 Most of the people who are important to me would visit a casino.	○	○	○	○	○	○	○
8.3 Most of the people in my life whose opinions I value would visit a casino.	○	○	○	○	○	○	○
8.4 It is easy to vist a casino in the near future if I chose.	○	○	○	○	○	○	○
8.5 It is up to me whether or not I visit a casino in the near future.	○	○	○	○	○	○	○

Item #9 - Question *** required ***

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Please indicate a point along the scale from left to right to complete the following phrase:

It would be _____ for me to visit a casino.

EXAMPLE

-3 -2 -1 0 1 2 3

Negative ○ ○ ○ ○ ◉ ○ ○ Positive

Very Difficult ○ ○ ○ ○ ○ ○ ○ Very Easy

Item #10 - Question *** required ***

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Please indicate a point along the scale from left to right that corresponds with your answer to the following question:

How much personal control do you have over whether you would visit a casino in the near future?

EXAMPLE

-3 -2 -1 0 1 2 3

Negative ○ ○ ○ ○ ◉ ○ ○ Positive

No Control At All ○ ○ ○ ○ ○ ○ ○ Complete Control

Item #11 - Question *** required ***

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Please mark on the scale where best it reflects your opinion.

1 - Strongly Disagree
2 - Moderatly Disagree
3 - Slightly Disagree
4 - Nuetral
5 - Slightly Agree
6 - Moderatly Agree
7 - Strongly Agree

	1	2	3	4	5	6	7
11.1 **Visiting a casino would be fun and exciting.**	○	○	○	○	○	○	○
11.2 **Visiting a casino would enable me to get away from my daily routines.**	○	○	○	○	○	○	○
11.3 **Visiting a casino would allow me to socialize and meet other people.**	○	○	○	○	○	○	○
11.4 **Visiting a casino would enable me to forget about my worries and relieve stress.**	○	○	○	○	○	○	○

Item #12 - Question *** required ***

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Please mark one response to complete the each of the following statements.

(1= Not Very Important At All; 2= Not Very Important; 3= Not Important; 4= Neutral; 5= Important; 6= Moderately Important; 7= Very Important).

1 - Not Important At All
2 - Not Very Important
3 - Not Important
4 - Nuetral
5 - Important
6 - Moderatly Important
7 - Very Important

	1	2	3	4	5	6	7
12.1 **Having fun and excitement in my life is _____.**	○	○	○	○	○	○	○
12.2 **Getting away from my daily routines every once in a while is _____.**	○	○	○	○	○	○	○
12.3 **Socializing and meeting other people is _____.**	○	○	○	○	○	○	○
12.4 **Relieving my worries and stress is _____.**	○	○	○	○	○	○	○

Item #13 - Question *** required ***

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Please mark one response according to level of your agreement with each statement.

1 - Strongly Disagree
2 - Moderatly Disagree
3 - Slightly Disagree
4 - Nuetral
5 - Slightly Agree
6 - Moderatly Agree
7 - Strongly Agree

	1	2	3	4	5	6	7
13.1 **My spouse or partner approves of me going to a casino.**	○	○	○	○	○	○	○
13.2 **My children approve of me going to a casino.**	○	○	○	○	○	○	○
13.3 **Most of my friends approves of me going to a casino.**	○	○	○	○	○	○	○

Item #14 - Question *** required ***

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Please mark on the scale where it best reflects your opinion.

(1= Not At All; 2= Not Much; 3= Little; 4= Neutral; 5= Somewhat; 6= Most of the Time; 7= Very Much)

1 - Not At All
2 - Not Much
3 - Little
4 - Nuetral
5 - Somewhat
6 - Most of the Time
7 - Very Much

	1	2	3	4	5	6	7
14.1 **Generally speaking, how much do you want to do what your spouse or partner thinks you should do?**	○	○	○	○	○	○	○
14.2 **Generally speaking, how much do you want to do what your children think you should do?**	○	○	○	○	○	○	○
14.3 **Generally speaking, how much do you want to do what your friends think you should do?**	○	○	○	○	○	○	○

Item #15 - Question *** required ***

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Please mark one response according to level of your agreement with each statement.

1 - Strongly Disagree
2 - Moderatly Disagree
3 - Slightly Disagree
4 - Nuetral
5 - Slightly Agree
6 - Moderatly Agree
7 - Strongly Agree

	1	2	3	4	5	6	7
15.1 **Going to a casino would be difficult when I don't have transportation.**	○	○	○	○	○	○	○
15.2 **Going to a casino would be difficult when there is no casino close by where I live.**	○	○	○	○	○	○	○
15.3 **Going to a casino would be difficult when I am not in good health.**	○	○	○	○	○	○	○

Item #16 - Question *** required ***

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Please mark on the scale where best it reflects your opinion.

1 - Extremely Unlikely
2 - Moderatly Unlikely
3 - Somewhat Unlikely
4 - Nuetral
5 - Somewhat Likely
6 - Moderatly Likely
7 - Extremely Likely

	1	2	3	4	5	6	7
16.1 **The availability of transportation to a casino would influence my decision to go to a casino.**	○	○	○	○	○	○	○
16.2 **The proximity of the closest casino would influence my decision to go to a casino.**	○	○	○	○	○	○	○
16.3 **My health condition would influence my decision to go to a casino.**	○	○	○	○	○	○	○

Item #17 - Question *** required ***

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Please mark one response according to the level of your agreement with each statement.

1 - Strongly Disagree
2 - Moderatly Disagree
3 - Slightly Disagree
4 - Nuetral
5 - Slightly Agree
6 - Moderatly Agree
7 - Strongly Agree

	1	2	3	4	5	6	7
17.1 I would like to visit a casino in the near future.	○	○	○	○	○	○	○
17.2 I intend to visit a casino in the near future.	○	○	○	○	○	○	○
17.3 I plan to visit a casino in the near future.	○	○	○	○	○	○	○

Item #18 - Question *** required ***

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State of Residency (e.g., NY)

insert the following here:
scale | multi-choice | ranking | semantic differential | short answer | header | page break

Item #19 - Question *** required ***

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What is your ethnic background?

- ○ African American
- ○ Asian
- ○ Caucasian/White
- ○ Hispanic
- ○ Other
- ○ Prefer not to respond

Item #20 - Question *** required ***

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What is the highest level of education you have completed?

- ○ Grade school
- ○ High school diploma or GED
- ○ Vocational or Technical school
- ○ Some college degree
- ○ 4-year college (Bachelor's) degree
- ○ Some Graduate dchool or Graduate degree
- ○ Prefer not to respond

insert the following here:
scale | multi-choice | ranking | semantic differential | short answer | header | page break

Item #21 - Question *** required ***

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What is your marital status?

- ○ Married
- ○ Single
- ○ Widowed
- ○ Divorced
- ○ Prefer not to respond

Item #23 - Question *** required ***

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What was your annual income level during 2007 calendar year?

- Under $10,000
- $10,001 - $20,000
- $20,001 - $40,000
- $40,001 - $60,000
- $60,001 - $80,000
- $80,001 - $100,000
- $100,001 - $120,000
- $125,000 or more
- Prefer not to respond

Item #24 - Question *** required ***

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What is your employment status?

- Employed full-time
- Employed part-time
- Retired
- Unemployed
- Prefer not to respond

insert the following here:

scale | multi-choice | ranking | semantic differential | short answer | header | page break

Item #25 - Question *** required ***

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Have your ever visited a casino?

- Yes
- No

Item #26 - Question *** required ***

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When was your most recent trip to a casino?

- Less than a week ago
- Less than two weeks ago
- Less than a month ago
- Less than three months ago
- Less than five months ago
- Less than seven months ago
- Less than nine months ago
- Less than eleven months ago
- It's been more than twelve months since I visted a caino last
- I have never been to a casino

Closing Page — Survey Properties

Closing Statement

THANK YOU FOR YOUR PARTICIPATION !!

Please allow up to 7-10 business days for your e-Rewards credit to appear in your e-Rewards account.

top of survey

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