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ABSTRACT

Casino gaming is an emerging leisure activity for as a leisure activity for the senior population. Finding out important motivations for older adults spending time in casino gaming is the fundamental way to determine their future casino patronage intention. 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 model was parsimonious and captured various dimensions of senior casino gaming motivation.

Keywords: *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 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, 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).

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. 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; McNeilly and Burke, 2001). 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; 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. 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 (Lee et al., 2007). 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; Loro, 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. International CHRIE Conference-Refereed Track, Event 4 [2009]

Casino gaming 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 which can assist casino operators to develop products that 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

Senior Gaming Motivation

Some previous qualitative studies and observation-based reports can provide a base for developing a more structured research to better understand the motivations of seniors' casino gaming behavior. Various existing senior gambling studies have mentioned that escape, social interaction, fun and excitement, shows and entertainment, and winning money are some of the motivation factors.

For escape factor, 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 (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 (Smith and Abt, 1984). 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). 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 Havar, 2002). Indeed, the National Gambling Impact Study (1999) reported that the vast majority of seniors visited casinos for fun and excitement. 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 Havar'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. Many studies indicated that the prospect of winning money has very little to do with seniors' reasons to visit casinos.

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 9 (least important) and provided the mean of each item. The problem with this approach is that two motivations suggest the same dimension, yet one was ranked high and the other was ranked as less important. 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. The study extracted five motivation factors, 'risk taking/gaming as a rush,' 'learning/cognitive self-classification,' 'escaping everyday problems,' 'communing,' and 'emotional self-classification', using exploratory factor analysis. 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 generated four dimensions. They were designated socialization/learning, challenge, escape, and winning.

METHODOLOGY

Senior Casino Motivation Measurement Development Procedure

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 the 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.

The procedure collected 44 initial motivation items. A pilot test was conducted on these items by using an online survey of faculty and staff at the same 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. 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 was purchased for a fee from an external marketing research service provider. An online survey instrument was developed, then sent out to the panelists using email invitations. This study used the term 'senior' for those who are 65 years and older. The mailing list criteria for this study included people who are 65 years or older currently residing in the United States. 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, 681 complete surveys were collected and used for the data analysis. Scale purification consists of a series of tests to purify the measurement items and to examine the scale's psychometric properties (Churchill, 1979).

RESULTS

From the online questionnaire, 681 collected samples were completed and used in the analysis. 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. In subsequent section, the test results are reported in the order of items in the step 5 Scale purification of scale development. Close to 58% of the respondents visited casinos less than three months. Over half of the respondents reported that they are not regular casino visitors (58%) and 42% said that they visit casino regularly. Forty seven percent of respondents reported that they live less than 50 miles from the closest casino and 26% said that they live more than 100 miles away from a casino.

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 hypothesized dimension, and correlations with

the other remaining dimensions were examined. From this process, 7 items with low correlations (.5 or less) were deleted. International CHRIE Conference-Refereed Track, Event 4 [2009]

Table 1 Exploratory Factor Analysis for Casino Gaming Motivation Items

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%		

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 1. 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 and 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). 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, three items were deleted from the analysis. The item ‘to make money easily’, ‘to relax’, and ‘to learn how to play casino games’ 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 five motivation dimensions and provides good domain representation (Arnold and Reynolds, 2003) (Table 2).

Table 2 Confirmatory Factor Analysis of Senior Casino Gaming Motivation

Latent Variables	Standardized Factor Loadings	<i>t</i> -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	-

Note: 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.

Unidimensionality and Reliability

Unidimensionality, meaning that each item reflects one underlying construct, was evident through different tests. First, Table 2 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. As shown in Table 3, Cronbach’s alpha estimates, ranging from .70 to .87, were marginally acceptable (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 (Table 3). In addition, each observed variable's factor loading on the underlying construct was significant as shown in Table 2 (Anderson and Gerbing, 1988). 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) in Table 3. Thus, discriminant validity was evident.

Table 3 Standardized Correlations, Composite Reliability, and 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

Note: 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.

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 2), 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). 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. 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.

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. 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). This would be very important information with which casino operators could assess market segmentation and marketing communications. 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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