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Older Adults and Gambling: A Review

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Abstract This paper uses the social cognitive theory model to review the literature on older adult gambling, and related personal and environment characteristics. Results show that lottery is the kind of gambling most frequently played by older adults, followed by casino games. Older adults take trips to casinos to socialize, find excitement, and win money. Although prevalence estimate studies suggest that older adults exhibit the same gambling problems as other groups, studies on the impact of problem gambling show that older adults who gamble are also faced with health impairment, and social and psychological issues. Future research should focus on theory, prevalence estimates, longitudinal studies of the impact of gambling and problem gambling, online gambling, and cross-cultural research. Harm minimization methods may be used to reduce older adult gambling involvement.

Keywords Older adult gambling · Social cognitive theory · Person variables · Environment variables · Older adult problem gambling · Responsible gambling

A United States (US) national commission noticed a lack of impartial and objective research on the impact of legal gambling and recommended that research be conducted to study problem and pathological gambling among youth, women, older adults and minority groups (National Gambling Impact Study Commission 1999). Whereas researchers found that older adults did not participate more often in (Mok and Hraba 1991) or have greater problems with gambling than any other age groups (Hope and Havir 2002), others called for greater awareness among older adults of the consequences associated with gambling and the risks associated with problem gambling (Parekh and Morano 2009). The need for such awareness is illustrated in the lived experience of older adult gamblers (65+ years) who have lessened ability and time to recover from health complications, psychological and social problems, and financial difficulty that may follow problem gambling (Nixon et al. 2005).

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A decade has passed since the call for research was made by the US commission. A sufficient number of studies have been conducted on older adult gambling for a review of the literature to examine what has been learned of this important public health issue during 1999 and 2009, and to identify what future research is needed.

To review the literature, the author searched Academic Search Premier, Google Scholar, ProQuest Business, PsycINFO, Sage Journal Online, ScienceDirect, SpringerLink, and Wiley Interscience databases for the period 1990–2010, using the key words, "older adults," "elderly," and "gambling," in titles. The age of older adults in the literature was found to be inconsistently defined, ranging from 50 (Christensen and Patdaughter 2004), through 55 (Hirshorn et al. 2007; Philippe and Vallerand 2007) to 65 (Desai et al. 2004; McNeilly and Burke 2001). This review therefore includes 55 articles that refer to their subjects as older adults or elderly, and uses the social cognitive theory model (Bandura 1986) framework to examine personal and environment variables as they are related to older adult gambling behavior, prevalence estimates of problem and pathological gambling among older adults, and the impact of gambling and problem gambling on older adults. The directions of future research and harm minimization methods are discussed in the last paragraphs.

Theoretical Model

Several theories have been used to explain and predict gambling behavior such as Fishbein's theory of reasoned action (Cummings and Corney 1987), Jacob's general theory of addictions (Gupta and Derevensky 1998), theory of total consumption (Ingeborg Lund 2008), extremely frequent behavior theory (Perfetto and Woodside 2009), and modified theory of reasoned action (Thrasher et al. 2010). However, the theory that offers a parsimonious analytical framework to review older adult gambling is social cognitive theory (Bandura 1986). Whereas behavior is hypothesized to be the function of personal characteristics and environment variables, the social cognitive theory argues that each is the function of the other two variables. Thus, social cognitive theory model hypothesizes reciprocal relationships among person characteristics, environment variables and gambling behavior. The review will use the social cognitive theory model framework to examine older adult gambling behavior, and related personal and environment variables.

Person Variables

Reasons to gamble and their prediction of older adult gambling behavior through regression analysis characterize research on personal variables. Excitement, a break from the routine, and a chance to make money are leading personal variables related to older adult gambling, particularly casino gambling. Older adults (65+ years) joined casino excursion to relax and have fun, to get away for the day, to pass the time, and to relieve boredom or feelings of boredom (McNeilly and Burke 2000), and to win money, to seek excitement or challenge, and to socialize (Hong et al. 2009; Moore 2001; Southwell et al. 2008; Wiebe et al. 2004). Older adults (65+ years) were least likely to engage in other creational activities than gambling (Moufakkir 2006). Some older adults (53+ years) moved to Las Vegas after the age of 40 to be near the gambling venues (Hirshorn et al. 2007), and older adult females were more likely to gamble than their younger counterparts (Moseley et al. 2003).

Research on older adults' gambling motivation in various countries indicates a variety of personal variables. Older adults (66–87 years) in New Zealand gambled to release tension

(Clarke 2008), and for curiosity, stimulation, and escape (Clarke and Clarkson 2008). In a separate study, older adults (65+ years) in New Zealand gambled because of the sense of meaninglessness (Clarke and Clarkson 2009). Some Americans (60+ years) were intrinsically motivated to gamble (Martin et al. 2010); others (55+ years) gambled for control, lift, and escape (Loroz 2004). Canadians (55+ years) gambled because of passion (Philippe and Vallerand 2007), and for social contact, food and excitement, chances to give to charity, chances to have an inexpensive holiday, and the need for a safe way to be bad (Hagen et al. 2005). Illusion of control beliefs and risk-taking tendency played a major role in problem gambling among older Greek Australians, 50+ years (Ohtsuka and Karoglidis 2001).

Environment Variables

Socialization at gambling venues is the thrust of research on environment variables. Whereas older adults may buy lottery tickets because they do not exercise their rational judgment, play lottery for fun, and no longer view the lottery as gambling (Ariyabuddhiphongs 2010), older adults in North America go to casinos and bingo halls to socialize.

Gambling has become one of several social activities in which older adults (60+ years) participate (Zaranek and Chapleski 2004). A survey of activity directors from residential and assisted-care facilities found bingo to be the most highly frequented on-location social activity, and casino gambling the most highly frequented day-trip social activity for older adults, 65+ years (McNeilly and Burke 2001). Older adults (71–97 years) went to casinos to meet and talk with friends/family as often as they wished (Bilt et al. 2004). Older women (65+ years) in Alberta, Canada played bingo to socialize and occupy themselves (Cousins and Witcher 2004), and found that bingo suited their sedentary lifestyles (Cousins and Witcher 2007).

Older Adult Gambling Behavior

Research on gambling behavior generally surveys the types of gambling played by older adults, and the percentages of gambling plays are reported. Lottery is the type of gambling most frequently played by American older adults, followed by casino games or sports betting. Thus, 18.9% of 1,512 older adults in Oregon (62+ years) played the lottery, followed by casino games other than video poker at 17.5% and slot machines at 15.4% (Moore 2001). Roughly two-thirds of 762 older adults (60+ years) in Indiana purchased lottery tickets at some point in their lives and about a third purchased them within the past month (Wolf et al. 2005). Older Americans (61+ years) betted heavily on lottery and sports; 55 percent bought lottery tickets and their mean individual outlay was highest at $424 per year, whereas 8% bet on sports and their mean individual outlay was also highest at $728 (Welte et al. 2002).

Older adults in other countries also favor lottery and casino games. Among 1,500 older adults (60+ years) in Ontario, Canada, the most popular gambling activities were lottery (58.0%), raffle tickets (47.9%), electronic machines in casinos (23.0%), and scratch tickets (19.7%; Wiebe et al. 2004). Fifty six percent (56%) of Australians (65+ years) bought lotto and 38% played electronic gaming machines (slots) at the clubs or casinos within the past year (McCormack et al. 2003).

Prevalence Estimates of Older Adults Gambling

With older adults as a target of casino promotion, the claim that they do not have more gambling problems than any other groups (Hope and Havir 2002) needs to be further

examined. Not all prevalence estimate studies give details on the ages of the participants; thus, studies selected for this review are those that report the participants' ages. The studies are classified into four groups.

The first group of studies, Table 1, No. 1, 2 & 3 (Erickson et al. 2005; Ladd et al. 2003; McNeilly and Burke 2000) used the South Oaks Gambling Screen (SOGS) to examine sub-samples of old adults from the community and from gambling sites; the prevalence rates in the combined samples as well as the individual sub-samples are high, ranging from 5.5% to 6.4% for at-risk gambling and from 3.8% to 11.0% for pathological gambling. According to these studies, older adults seem to have more gambling problems. However, the prevalence rates in these studies have to be interpreted with caution; the rates are elevated because data from the community and gambling site samples were combined.

The second group of studies (Table 2, No. 1, 2 & 3) used the SOGS to assess pathological gambling (McNeilly and Burke 2000; Philippe and Vallerand 2007; Wiebe and Cox 2005) and shows that among older adults living in the community the past year prevalence rates range from 1.3% to 1.6% for problem or at-risk gambling, and 1.2–2.7% for probable pathological gambling. Against the un-weighted means of 1.6% for problem gambling, and 1.2% for pathological gambling (Stucki and Rihs-Middel 2007), the proportion of older adults with gambling problem does not seem to be higher than the average of other age groups.

The third group of studies (Table 2, No. 4, 5 & 6) also used the SOGS to assess pathological gambling (Legarda et al. 1992; Volberg et al. 2001; Weis and Manos 2007). The number of older adults who were classified as having problem or pathological gambling was calculated from the percentage presented in the tables. The proportion of older adults with problem or pathological gambling is very small, or zero in a sample of patients at a naval medical center (Weis and Manos 2007).

The fourth group of studies (Table 2, No. 7, 8 & 9) used the DSM-IV to assess pathological gambling (Alegria et al. 2009; Becona 1993; Westermeyer et al. 2005). The proportion of older adults with pathological gambling is again interpreted as small.

Although the number of prevalence estimate studies presented in this review is small and selective, the proportion of older adults with problem or pathological gambling seems to suggest that older adults do not have more gambling problems than any other groups.

Impact of Gambling on Older Adults

Studies on the impact of gambling on older adults do not point to serious consequences of gambling. Casino gambling did not seem to pose a major threat to older adults, 63+ years

Table 1 Prevalence rates of problem and pathological gambling captured with the SOGS among older adults from senior centers and gambling sites

Author, year	*N*	Age	Problem gambling		Pathological gambling		Remarks
			%	*n*	%	*n*	
1. Erickson et al. 2005	343	60+	6.4	na	3.8	na	Combined
2. Ladd et al. 2003	492	65+	6.0	29	4.7	23	Combined
3. McNeilly and Burke 2000	315	65+	5.5	na	11.0	na	Sub-sample

Problem: SOGS score 3–4; Pathological: SOGS score => 5

Table 2 Prevalence rates of problem and pathological gambling among older adults living in the community

Author, year	*N*	Age	Problem gambling		Pathological gambling		Remarks
			%	*n*	%	*n*	
Captured with SOGS							
1. McNeilly and Burke 2000	315	65+	1.3	na	2.7	na	Sub-sample
2. Philippe and Vallerand 2007	810	55+	1.6	13	1.2	10	
3. Wiebe and Cox 2005	1,000	60+	1.6	16	1.2	12	
4. Legarda et al. 1992	557	57+	0.7	4	0.7	4	Sub-sample
5. Volberg et al. 2001	6804	65+			0.1	6	Sub-sample
6. Weis and Manos 2007	515	50+	0	0			Sub-sample
Captured with DSM-IV							
7. Alegria et al. 2009	43,093	65+			0.1	50	Sub-sample
8. Becona 1993	1,615	65+			0.2	3	Sub-sample
9. Westermeyer et al. 2005	1,228	60+			1.1	13	Sub-sample

Problem: SOGS score 3–4; Pathological: SOGS score => 5

Pathological: DSM-IV 5 or more

(Stitt et al. 2003). Black older adults (50–88 years) did not perceive any negative effect of gambling on their health (Christensen and Patdaughter 2004). Recreational gambling in older adults (65+ years) was not associated with negative measures of health and well-being (Desai et al. 2004). Older adult problem gamblers (55–78 years) were less likely to report gambling-related anxiety, family problems, illegal behaviors and arrests, drug problems, indebtedness to bookies or acquaintances, and family histories of drug abuse (Potenza et al. 2006).

Impact of Problem Gambling on Older Adults

Studies on the impact of problem gambling on older adults on the other hand present a different picture; older adults who have gambling problems also experience health problems, and social and psychological difficulties. Among a sample of 80 Black African-American older adults (60+ years), pathological gambling behaviors were associated with anxiety, obsessive-compulsive symptoms, perceived health status, health locus of control, religiousness, and stressful life-events (Bazargan et al. 2001). Older adult gamblers (60+) who had a later age of onset of gambling developed pathologic gambling over a long period of time compared to younger gamblers (Grant et al. 2001), and were more likely to have an anxiety disorder (Grant et al. 2009). Older adult gamblers' (50+ years) current gambling problems were significantly related to worse self-rated health (Hong et al. 2009). Old adult gamblers (60+ years) were just as likely as the younger gamblers to have a lifetime history of serious suicidal ideation (Kausch 2004). The severity of gambling problems was associated with increased psychosocial distress in older adults, 60+ years (Pietrzak and Petry 2006).

The National Epidemiologic Survey on Alcohol and Related Conditions data on 8,205 older adults (65+ years) indicated that gambling was associated with nicotine dependence, alcohol abuse/dependence, obesity, any chronic medical condition and physical and mental

health SF-12 scores (Desai et al. 2007). Older adults with lifetime pathological gambling had a high level of psychiatric co-morbidity including depression, alcohol dependence, panic, generalized anxiety disorder, obsessive compulsive and avoidant personality disorders (Kerber et al. 2008). Among a sample of elderly patients (65+ years), at-risk gambling was associated with binge drinking, presence of current posttraumatic stress disorder symptoms, minority race/ethnicity, and being a veteran administration clinic patient (Levens et al. 2005).

Compared with non/infrequent gamblers, disordered gamblers reported increased severity of medical, family/social, psychiatric, and alcohol problems on the Addiction Severity Index (ASI). They also scored higher on depression, anxiety, paranoid ideation and psychoticism subscales of the Brief Symptom Inventory (BSI), and lower on vitality, physical functioning, role-physical, general health, and social functioning subscales of the Short Form-36 Health Survey (Pietrzak et al. 2005). Data from the National Epidemiologic Survey on Alcohol and Related Conditions on U.S. older adults (60+ years) revealed that life time disordered gamblers had a range of lifetime psychiatric disorders and were more likely than non-regular gamblers to have past-year diagnoses of angina and arthritis (Pietrzak et al. 2007).

Directions of Future Research

Older adults gambling studies are likely to increase and there is a need for directions for future research.

Theory

Adolescent gambling studies are said to be atheoretical (Blinn-Pike et al. 2010), and the same may be said of older adult gambling. Only a few studies on older adult gambling motivation seem to have been based on a theory or concept. For example, tension release of gambling motivation theory predicted SOGS-Revised scores among older adults (Clarke 2008), and obsessive passion was higher for pathological gamblers than for at-risk and non-problematic gamblers (Philippe and Vallerand 2007).

Social cognitive theory model (Bandura 1986) hypothesizes three two-way relationships among personal, environment, and behavior variables. This review shows that studies on older adult gambling have examined only one-way relationships between person and environment variables, and older adult gambling. To contribute to a better understanding of older gambling motivation and behavior, more studies on the mediated influence of personal and environment variables on gambling behavior are needed.

The mediated effect of personal and environment variables on gambling behavior may be examined using statistical mediation methods. Mediation is a relationship where an independent variable is said to cause a mediating variable that causes a dependent variables (MacKinnon 2008). Examination of the mediating effects may yield information crucial to the development of theory and practice (MacKinnon and Luecken 2008). For example, the effect of socialization in the casinos on older adults' excitement may explain their frequency of gambling, the amounts of money they spend, and the extent of their gambling problem.

The pathways model (Tirachaimongkol et al. 2010) may also be useful in the examination of older adults gambling behaviors. Similar to social cognitive theory, the pathways model hypothesizes relationships among three clusters of factors: individual vulnerability, social and environmental, and behavioral regulation.

There are older adults who gamble and there are those who do not. A theory that can explain the difference between the two groups could complement existing research by focusing on the motivation to not gamble. Self-efficacy to control (May et al. 2003) or refuse (Casey et al. 2008) gambling holds promise for research into the motivation of older adults who do not gamble.

Online Gambling

Gambling on the internet has become a major problem; 42.7 percent of internet gamblers could be classified as problem gamblers (Wood and Williams 2007). Studies of online gambling have so far involved adolescents or students (Griffiths and Barnes 2008), although older adults of 65+ years represented 11.9% of participants in online gambling, and 5.3% were problem gamblers (McBride and Derevensky 2009). There are opportunities for studies of online gambling that focuses exclusively on samples of older adults. Cognitive theory variables such as entrapment and perceived luckiness (Rogers 1998), and habit and satisfaction (Jolley et al. 2006) offer potential for future research on online gambling among older adults.

Prevalence Estimate of Older Adult Gambling

The number of prevalence studies that exclusively examine older adult gambling has been small. There is clearly a need for more studies to confirm the finding that problem and pathological gambling in older adults are not higher than the average of other age groups.

The age of older adults in the studies reviewed was not consistently defined and older adults in some studies included individuals of 50 years old (Christensen and Patdaughter 2004; Hong et al. 2009). An agreed upon age for older adult gambling research purpose is needed and this review suggests the age of 60 and over. The suggested age conforms to standard census age bracket, represents a standardized definition of older adults in gambling research, and facilitates comparison of prevalence estimates across studies.

Impact of Gambling and Problem Gambling on Older Adults

Studies on these topics although many were well-designed and involved large samples have been cross-sectional and correlational; longitudinal research is needed to show the effects of gambling and the progress of symptoms associated with problem and pathological gambling.

Cross-Cultural Research

Similar to research on pathological gambling (Raylu and Oei 2002), research on older adults gambling has been conducted mainly in western countries among English speaking, Anglo-Saxon older adults (Munro et al. 2003). The lack of such research in developing countries is due perhaps to the sensitivity of the topic (Lai 2006), as well as the lack of interest in gambling research in developing countries. With the opening of large casinos in Macau and Singapore, the image of Chinese older adults spending their leisure time watching television and playing Chinese mahjong tile cards (Chou et al. 2004) may be replaced by casino gambling when the channels and venues for gambling become available (Lai 2006). Future research needs to examine the impact of legal gambling among older adults in developing countries.

Discussion

Past research has shown the lottery to be the kind of gambling most frequently played by older adults but has shed little light on the motivation of their gambling. Socialization, excitement, and winning money are short-term fun activities they engage in during their casino visits. To fill the void in their free time seems to be the major reason for older adults to join casino trips to gamble (McNeilly and Burke 2002).

Older adults (60+ years) represent an increasing percentage of the population in the United States as well as in other countries (U.S. Census Bureau 2010). At the same time, gambling is becoming a world-wide phenomenon and increasingly accepted as a legitimate business (Eadington and Cornelius 1997). With older adults beginning to gamble at an average age of 55 years (Petry 2001), there are concerns that the number of older adults with problem gambling may grow (McNeilly and Burke 2002).

Old age is the time when executive functioning is on the decline (Von Hippel et al. 2009), and the ability to decide advantageously may become impaired (Denburg et al. 2005). Poor health, decreased mobility, and fewer options for activities to excite the senses, make older adults who are advanced in age vulnerable to the appeal of the casino's stimulating environment (Zaranek and Lichtenberg 2008). The increasing dependence of older adults' organizations on gambling revenues (Community Links 2010), and the legitimization of gambling (Cosgrave and Klassen 2001) may also exacerbate problem gambling among older adults.

Gambling opportunities and frequency are predictive of at-risk gambling problems. The length of time living in Las Vegas predicts at-risk behavior (Preston et al. 2007). Gambling frequency, participation in more types of gambling, and spending more on gambling are significant correlates of gambling problems (McCready et al. 2008). Older adults who begin gambling early in life wager more frequently and have more severe medical and psychiatric problems (Burge et al. 2004). Inexpensive or free pleasure trips to casino may be costly and unpleasant; frequency of visits to casino is related to increased physical and mental health disability, smaller and less satisfying social network, and less transportation and money (Lichtenberg et al. 2009).

Although prevalence study data may indicate that older adults do not have more gambling problems than other groups, reducing their involvement would further prevent problems associated with their gambling. Unfortunately, in the US few policies exist at the state and national levels to protect older adult gamblers (Bjelde et al. 2008). The ban on gambling availability, though effective in reducing highly involved gamblers' gambling participation, gambling frequencies and gambling problems (Ingelborg Lund 2009), may be difficult to implement. Self-exclusion (Nower and Blaszczynski 2008) measure may be too late because it is initiated only after older adults have encountered financial difficulty that may follow gambling problems.

To reduce older adult gambling, the gambling institutions may help by installing warning messages during gambling sessions. Warning messages that encourage self-appraisal result in self-reported thoughts and behaviors during the experimental session and in actual gambling, and are effective as a harm-minimization method (Monaghan and Blaszczynski 2010). Harm minimization methods also include self-exclusion (Hayer and Meyer 2010), and structural changes to the electronic gaming machines such as reduction of the maximum bet size, reduction of reel spin, and removal of large note acceptors (Sharpe et al. 2005). The last harm minimization method is for older adults to remind themselves to gamble responsibly (Blaszczynski et al. 2004): walking away from the gambling machine.

Conclusion

Research results indicate that older adults prefer lottery and bet more heavily on lottery and sports. Older adults are offered cheap or free trips to casinos and they have been using casinos as a venue for a short break from monotony to socialize with family and friends, to find excitement, and to win money. Studies on prevalence estimates of problem and pathological gambling among older adults suggest that older adults do not have more gambling problems than other group. Studies on older adult gambling do not show relationships between older adult gambling and negative measures of health and well-being. However, studies on problem gambling show associations between older adult gambling and worse physical and psychosocial health. Gambling opportunities are related to at-risk gambling and older adults' gambling involvement should be reduced by introducing harm minimization methods.

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