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Role of culture in gambling and problem gambling

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Abstract

There has been a significant gap in the gambling literature regarding the role of culture in gambling and problem gambling (PG). This paper aims to reduce this gap by presenting a systematic review of the cultural variations in gambling and PG as well as a discussion of the role cultural variables can play in the initiation and maintenance of gambling in order to stimulate further research. The review shows that although studies investigating prevalence rates of gambling and PG among different cultures are not plentiful, evidence does suggest certain cultural groups are more vulnerable to begin gambling and to develop PG. Significant factors including familial/genetic, sociological, and individual factors have been found in the Western gambling literature as playing important roles in the development and maintenance of PG. These factors need to be examined now in other cultural groups so we can better understand the etiological processes involved in PG and design culturally sensitive treatments. In addition, variables, such as cultural values and beliefs, the process of acculturation, and the influence of culturally determined help-seeking behaviors need to be also examined in relation to the role they could play in the initiation of and maintenance of gambling. Understanding the contribution of cultural variables will allow us to devise better prevention and treatment options for PG. Methodological problems in this area of research are highlighted, and suggestions for future research are included.

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1. Introduction

Gambling appears to be an ancient human activity found in almost all cultures and in most parts of the world (Custer & Milt, 1985). Acceptance of gambling varies from culture to culture. However, currently, in most countries, gambling occurs openly and extensively and, in some countries, is a national pastime. Similar to how gambling exists in almost every culture, it appears problem gambling (PG) does as well (Raylu & Oei, 2002). With over 90 countries having legalized gambling (Lesieur & Rosenthal, 1991), PG is as much a national problem as it is an international one (Lamberton & Oei, 1997).

PG occurs when gambling is out of control and it begins causing individuals social, personal, and interpersonal problems. A number of terms have been used in the gambling literature to indicate PG. This paper, similar to the Raylu and Oei (2002) review, will use PG in a broader sense—as gambling behavior that meets the Diagnostic Statistical Manual IV (DSM-IV) diagnostic criteria (American Psychiatric Association [APA], 1994) as well as those individuals experiencing gambling problems but do not meet the diagnostic criteria.

Problem gamblers (PGs) generally appear to be a heterogeneous group. However, several groups have been reported more likely to gamble and/or develop PG. Our recent review (Raylu & Oei, 2002) highlighted that although some studies suggest that certain demographic characteristics such as gender, socioeconomic status, employment status, marital status, and age may be linked to PG, not all studies are in agreement. However, rates of gambling and PG have been found to vary greatly from country to country as well as in different locations within a country (e.g., states or cities), and there are many anecdotal accounts and media reports of significantly high rates of gambling and PG among certain cultural groups (Murray, 1993; Productivity Commission Report [PCR], 1999; Raylu & Oei, 2002). For example, there have been several media reports of Asians gambling in casinos as well as those committing crimes (e.g., drug dealing and leaving children unattended in casino car parks and homes) as a consequence of their gambling (Courtenay, 1996; Jarrett, 1995; Kim, 1996; Legge, 1992). Despite these reports, currently there are no systematic reviews to support such anecdotal evidence. As PG prevalence studies have mainly been completed with Western samples, only a few studies have looked at gambling and PG among ethnic minority groups (Blaszczynski, Huynh, Dumalo, & Farrell, 1998; GAMECS Project, 1999; Victorian Casino and Gambling Authority [VCGA], 1999; Volberg & Abbott, 1997). Currently, there have been no systematic reviews of these studies to evaluate cultural variations in gambling rates.

Variance in the rates of gambling and PG can be at least partially attributed to the number of ways in which gambling is available and marketed in different locations. Such differences in gambling rates could also be due to cultural differences of the geographical regions. Cultural differences could also influence variations in gambling behaviors between the different cultural groups. These include variations in the functions/objectives of the games, gender differences, and forms of gambling chosen (GAMECS Project, 1999; Goodale, 1987; Heine, 1991; Raylu & Oei, 2002; Sexton, 1987; VCGA, 1999; Zimmer, 1986). Thus, given the variations in rates of gambling and PG and the cultural variations in gambling behaviors, it would be important to also explore cultural factors that could play a role in the initiation and maintenance of gambling. The cultural variables that have been constantly identified in

the gambling literature as playing a role in initiating and maintaining mental health problems (e.g., substance-related problems) include beliefs and values of a cultural group, culturally determined help-seeking behaviors, and the process of acculturation (De-La-Rosa et al., 2000; Escobar, Nervi, & Gara, 2000; Loue, 1998; Westermeyer, 1999).

Exploring cultural variables related to the initiation and maintenance of gambling is important for two main reasons. First, a major limitation in prevalence studies is that they do not consider culture in their investigations (Betancourt & Lopez, 1993). Betancourt and Lopez (1993) provided an evaluation of cultural research in the psychological literature and reported that those that have attempted cross-cultural research have not attempted to explore the cultural factors that may influence relevant behaviors. That is, cultural factors are assumed to be a significant part of the ethnic group under investigation without directly evaluating possible cultural factors that may be involved (Betancourt & Lopez, 1993). Such can also be said for the gambling/PG literature. Second, the gambling literature has already implicated several factors (e.g., cognitions, personality, biological aspects, psychological states, and familial factors) as playing a role in the development and maintenance of gambling (Raylu & Oei, 2002). These factors, however, cannot sufficiently explain the cultural differences in relation to gambling and PG found among different cultural groups. Thus, it is possible that certain cultural variables also play a role in an individual's decision to take up gambling and continue gambling.

Given the cultural gaps in the gambling literature, a review of the cultural variations in gambling and PG rates as well as a discussion of the possible cultural variables that may play a role in the initiation and maintenance of gambling need to be explored before relevant empirical studies in this area are conducted. Thus, in order to target this gap in the literature, this paper aims to systematically examine the literature and discuss (1) whether significant prevalence rates of gambling and PG among certain cultures are supported, (2) how the cultural factors (e.g., cultural beliefs and values, culturally determined help-seeking behaviors and the process of acculturation) implicated in playing a role in other mental health can be applied to PGs, (3) how we can integrate these cultural variables with those found from Western studies (e.g., personality, biochemistry, psychological states, and cognitions) especially in relation to the treatment and prevention of PG, and (4) future research studies (including methodological issues to consider) and recommendations in this area.

It must be noted that due to the lack of research in this area, discussion on the possible cultural variables that influence initiation and maintenance of gambling are based on the cultural variables that have been identified as playing important roles in the development and maintenance of other mental health disorders such as substance-related disorders. The aim of this paper is not to focus on a particular concept but rather to review relevant cultural issues as a whole. Furthermore, it aims not to propose a particular empirical study but rather ideas that can be used as a basis of future research. This is due to a current lack of empirical data to provide a systematic framework that is data driven. Thus, the exact nature of the influences of culture on gambling must await empirical data. Betancourt and Lopez (1993) support this approach, suggesting that a general approach to identify and measure directly the cultural variables that influence a particular behavior (e.g., gambling or PG) is required. They argue

that such hypothesized relations between cultural variables and gambling need to be first explored prior to incorporating within a theoretical framework. Such an approach would “enhance our understanding of both group-specific and group-general (universal) processes as well as contribute to the integration of culture in theory development and practice of psychology” (Betancourt & Lopez, 1993, p. 630). Thus, the review that is provided in this paper is the first step towards achieving this.

The terms “culture,” “race,” and “ethnicity” have often been used interchangeably in the mental health literature. For this review, culture encompasses traditions, social practices, customs, and laws of a group of people. It refers to an intentional world composed of conceptions, evaluations, judgments, goals and other mental representations already embodied in socially inherited institutions, practices, ritual, myths, artifacts, technologies, art forms, texts, and modes of discourse (Shweder, 1991). It is these inherited conceptions, evaluations, judgments, and goals that influence members’ thinking, via which members build their lives, and with respect to which they give substance to their minds, wills, and directed actions. Consequently, culture can affect an individual’s intelligence, cognitive development, personality, sex roles, values, beliefs, identity, and attitudes (Shweder, 1991).

In order to complete this article, relevant databases were searched using terms such as addiction, gambling, culture, ethnicity, and prevalence. All articles that discussed gambling prevalence rates, cultural variations in gambling, and cultural variables that have been found to play a role in the development and maintenance of mental health problems such as substance abuse problems were considered. The databases included *PsychINFO* (1900–2202), *Social Science Abstracts* (1985–in press), *Sociological Abstracts* (1963–in press), *Social Work Abstracts* (1977–in press), *Humanities Index* (1984–2001), *Health and Society Index* (1980–in press) and the Australian database *Austrom* (which includes information related to public affairs, family and society, and multicultural issues in Australia, 1978–in press). These databases gave a broad and wide base for this paper.

2. Rates of gambling and problem gambling among different cultural groups

Studies that have attempted to explore prevalence rates of gambling and PG among different cultural groups have either looked at gambling/PG patterns among indigenous groups or ethnic minorities. In most studies, these rates are compared to those of the dominant cultural group (usually Caucasians) or the general population in the country.

Those studies that have explored gambling and PG among indigenous cultural groups report a higher rate of these in such populations compared to the general population or the dominant cultural group. Zitzow (1996a) compared the gambling behaviors of 115 American Indian adolescents with 161 non-Indian adolescents. American Indian adolescents showed more involvement in gambling, began gambling at an early age, and showed more PG behaviors than non-Indian students. Using a cutoff score of 5 on the South Oaks Gambling Screen (SOGS, Lesieur & Blume, 1987), the most frequently used instrument to assess PG in the gambling literature, 9.6% of American Indians were identified as PGs

compared to 5.6% of non-Indians. This disparity was not only attributed to noncultural factors such as low socioeconomic status, increased exposure to gambling, and gambling availability among Indians, but also to cultural issues. For example, the American Indians cultural acceptance of magical thinking allows such beliefs to be generalized to gambling to try “one’s luck or belief in fate” (Zitzow, 1996a, p. 24). Zitzow (1996b) compared the gambling behaviors of 119 American Indian adults, living on or near a reservation, with those of 102 non-Indian adults adjacent to or within the reservation. Using the SOGS, they identified 4.6% of non-Indians as PGs compared to 9.1% of American Indians. They suggested that variables, such as low socioeconomic status, unemployment, increased alcohol use, depression, historical trauma, and lack of social alternatives may predispose American Indian adults to develop gambling problems. Other similar studies have supported high rates of PG among American Indians (Cozzetto & Larocque, 1996; Peacock, Day, & Peacock, 1999).

Wardman, el-Guebaly, and Hodgins (2001) provided a literature review of empirical studies focusing on aboriginal population gambling. They reported that the aboriginal population in Canada has a PG rate 2.2–15.69 times higher than the nonaboriginal population. Dickerson, Baron, Hong, and Cottrell (1996) reported a survey that found that the rate for PG for indigenous urban aboriginal and Torres Straits Islanders in Australia was 15 times higher than the general population.

Volberg and Abbott (1997) compared results of gambling studies among indigenous groups from New Zealand (Maoris) and North Dakota (American Indians). Analyses showed that gambling involvement, gambling expenditures, and gambling-related problems were higher among indigenous participants than among Caucasian participants in both New Zealand and North Dakota. Lifetime PG rate among Caucasians in New Zealand was 3% compared to 8.7% among the indigenous group. The lifetime PG rates among Caucasians and indigenous participants in North Dakota were 2.5% and 7.1%, respectively. Current PG rates of Caucasians in New Zealand were 1.4% compared to 4.6% among Maoris. Similar differences in current PG rates were found in North Dakota for Caucasians and the indigenous group (1.3% and 5.8%, respectively). The gambling differences between indigenous individuals and Caucasians could be related to variables distinct from culture or milieu (e.g., poor economic status, lower incomes, or even genetic differences) and/or those specific to culture (e.g., cultural norms, beliefs, or values).

Some studies have looked at gambling/PG rates among ethnic minorities groups in a particular country. Wallisch (1996) reported that two studies of gambling among Texas youths found PGs were more likely to be from a minority ethnic group. They also found that Hispanics were more likely to gamble weekly and had higher rates of PG than Caucasians. Stinchfield (2000) explored prevalence of gambling among 78,582 male and female Minnesota public school 9th and 12th graders. Approximately 10% of American Indians, Mexican/Latin Americans, African Americans and mixed-race students gambled daily, compared to only 5% of Asian Americans and Caucasian Americans. However, since this study utilized a questionnaire that had 7 items and only 2 of these items assessed PG, prevalence rates of gambling and PG among the groups cannot be determined. In a similar study, Lesieur et al. (1991) explored gambling patterns among 1771 university students.

Results indicated that Asians had a significantly higher rate of gambling (12.5%) compared to African Americans, Caucasians, and American Indians (rates of 4–5%).

Studies investigating gambling and PG prevalence rates among adults in the community also report higher rates among non-Caucasians/ethnic minorities than Caucasians. [Volberg \(1996\)](#) explored rates in 15 U.S. jurisdictions and reported 36% of PGs in her study were non-Caucasians compared to 16% of non-PGs. [Abbott and Volberg's \(1996\)](#) study of individuals in New Zealand reported that 41% of lifetime PGs were non-Caucasians (mostly migrants from the Pacific Islands and native Maoris) compared to 15% of nonproblem group. [Abbott and Volberg's \(1994\)](#) paper that outlined the findings of a study in New Zealand in comparison with a U.S. study and a Canadian study supported this. They suggested that certain ethnic groups (e.g., those that identified themselves as Maori or Chinese) were at high risk of developing PG.

The Victorian Casino and Gaming Authority ([VCGA, 1999](#)) in Victoria, Australia, investigated the impact of gaming on four ethnic minority groups, including those that spoke Arabic, Chinese, Greek, and Vietnamese. Using the 30 most common surnames associated with each cultural group, telephone numbers were randomly chosen from the electronic telephone White Pages. Telephone interviews were conducted with 664 participants. The VCGA found that the rates of gambling among the participants from the four cultural groups surveyed in this study to be lower than that found for the general community in the VCGA Community Patterns Surveys ([VCGA, 1999](#)), showing that previous evidence on prevalence data may be misleading. However, those who did participate in gambling within the four cultural groups (with the exception of the Arabic-speaking group) spent larger amounts of money per week than the general community. Furthermore, percentages of participants with SOGS scores of 5 or more were found to be significantly greater in all four cultural groups than that of the general community. The obtained rates varied between five to seven times the expected levels within the respective cultural groups.

Our recent study compared Chinese ($n=195$) and Caucasian ($N=306$) gamblers in the general community ([Oei, Lin, & Raylu, submitted for publication](#)). Using a Chinese translation version of the SOGS and a cutoff score of 10, a prevalence estimate of 2.1% was found for the Chinese compared to 1.3% for the Caucasian participants. These results showed a discrepancy of almost 50%, indicating that the Chinese community may be more at risk of developing gambling problems. [Blaszczynski, Huynh, Dumlao, and Farrell \(1998\)](#) explored PG rates within a metropolitan Chinese community. Using a Chinese translation version of the SOGS and a cutoff score of 10, a prevalence estimate of 2.9% for PG was found with males showing a higher rate (4.3%) as compared to females (1.6%). The rate of 2.9% was almost three times greater than the 1.2% reported for the Australian population ([Dickerson et al., 1996](#)). However, the 2.9% rate was similar to the rates found in other studies that have looked at the prevalence of PG among the Chinese community in several countries (e.g., Hong Kong—[Chen et al., 1993](#); Canada—[Chinese Family Service of Greater Montreal, 1997](#); Taiwan—[Yeh, Hwe, & Lin, 1995](#)). Such high rates have also been reported for other cultural groups such as the Jewish ([Lorenz & Shuttlesworth, 1983](#); [Lowenfeld, 1979](#)).

Despite this high rate of gambling and PG among some cultural groups, this trend is not mirrored in the treatment agencies of PG, which is often underrepresented by ethnic minorities (McDonald & Steel, 1997; Minas, Silove, & Kunst, 1993; PCR, 1999; Raylu & Oei, 2002). Ciarrocchi and Richardson (1989) reported profiles of PGs (172 males and 14 females) admitted for inpatient treatment in a private psychiatric hospital. They reported that the sample consisted of 89% Caucasians, 8% African Americans, 2% Asians, and 1% Hispanics. Cuadrado (1999) collected data during years 1992–1998 on 209 Hispanic and 5311 Caucasian PGs calling a PG hotline for help. They reported that only 3.8% of the callers were Hispanics compared to 96.2% of the callers being Caucasians. Volberg and Steadman (1992) reported a 3-year evaluation of treatment programs for PGs based on interviews with treatment professionals in several U.S. states and reviews of the demographic profiles of PGs in treatment and demonstrated that PGs tend to be a heterogeneous group. These authors, however, did not report specific prevalence rates.

There is some inconsistency in the evidence as to whether the rates of PGs presenting for treatment reflect prevalence rates of particular cultural groups in a given community. Breakeven is the main service provider of PG in Victoria, Australia. VCGA (1999) reported that the higher rates of PG among certain ethnic minorities shown in their study did not match the rates of presentations of people from these cultural groups to PG services. This is in contrast to results from analyses of the Victorian Breakeven data. Analysis of the 1996/97 data presented in the Breakeven reports showed that while 23.8% of Victorians were born overseas, 23.1% of those who sought help at Breakeven for their gambling problems were born overseas. The same trend was repeated in the 1997/98 analyzes with the proportion of overseas-born Breakeven clients being 24.4%. For indigenous Aboriginal and Torres Strait Islanders, the presentation at Breakeven services was proportionally small (i.e., 0.5%). Nevertheless, this reflected the 1996 Census report that identified 0.52 of the Victorian population as being of Aboriginal and Torres Strait Islander origin (VCGA, 1999). These trends showed that the countries of birth of people presenting to the Breakeven services closely matched the Victorian population profile.

2.1. Summary

Although studies investigating prevalence rates of gambling and PG in different cultures are not opulent and have methodological problems (e.g., SOGS false positive, not representative of all cultural groups), evidence does suggest that most cultures appear to have gambling as well as the presence of PG. However, research that does exist suggests high rates of gambling among some cultural groups (e.g., Jews and Chinese), ethnic minorities, and indigenous groups (e.g., the Maoris in New Zealand and American Indians in the United States) in several countries. Even prevalence studies (despite under-representation of non-Caucasian samples) report high rates of gambling and PG among ethnic minorities/non-Caucasians (Abbott & Volberg, 1996; Volberg, 1996). Although this review suggests that particular cultural groups have increased likelihood of taking up gambling or developing gambling problems, little is known about the specific cultural variables that contribute to this.

Thus, it is important to explore possible cultural variables that could play a role in initiating and maintaining gambling.

3. Cultural variables that may play a role in initiating and maintaining gambling

Three cultural variables have constantly been identified in the literature as playing a role in the development and maintenance of mental health problems such as substance abuse problems (De-La-Rosa et al., 2000; Escobar et al., 2000; Loue, 1998; Westermeyer, 1999). These variables include cultural values and beliefs, effects of acculturation, and attitudes towards seeking professional help when experiencing problems. Such variables can also be true for the PG. These variables interact with one another rather than working independently. Cultural beliefs and values influence not only gambling behaviors but also help-seeking behaviors. Acculturation in turn can influence an individual's beliefs and values and consequently gambling behaviors and help-seeking behaviors. Currently, there are no studies that have looked at the impact of these cultural variables on gambling behaviors. Thus, the goal of this section is to discuss how these three cultural variables can influence gambling and PG. Each of these is discussed below.

3.1. *Cultural values and beliefs*

Humans encounter risk from birth. The meaning and awareness of these risks for individuals and social groups are related to how they are defined and managed through a cultural system of meaning (Abt & McGurrin, 1992). Culture, through the values and belief systems it passes to its members, provides a collective means by which members decide whether one should acknowledge the risk as primary or secondary, as well as how to deal with the risk (Abt & McGurrin, 1992). The values and beliefs (moral principles and accepted standards of a person or group), therefore, can have an impact on their decision making and evaluation of unpredictable and uncertain outcomes of life situations. Gambling, similar to any social behavior, receives meaning by reference to the contexts in which it occurs (Abt & McGurrin, 1992). It is possible that cultural history and what rationales the culture dictates, influences the meanings that are given to gambling behavior, the motivations for gambling, the monetary costs and benefits of gambling, the advantages and disadvantages of gambling, and the concept of PG (Abt, McGurrin, & Smith, 1985).

Cultural beliefs and values have been found to play a role in the development, maintenance and treatment of mental health problems such as substance abuse problems (Colon & Wuollet, 1994; Jerrell, 1989; McCormick, 2000). Wurzman, Rounsaville, and Kleber (1982–1983) suggested that in order to make treatment appealing to Hispanics that are experiencing substance-related problems, their cultural values need to be recognized in the formulation of treatment goals and strategies (e.g., demonstrating that substance-related problems are directly contradictory to culturally valued goals).

Cultural beliefs and values are passed to members in a number of ways. First, family members (e.g., parents, grandparents, siblings, and other relatives) or other respected

members from an individual's culture (e.g., elders, priests, etc.) can often pass values or beliefs regarding gambling to other family members directly through modelling the behavior. Social learning theory suggests that individuals learn, model, and maintain behaviors that are observable and are reinforced. Limited literature exists on the possible role of members influencing one to begin or continue gambling. Whatever literature exists, concentrates on prevalence of parental gambling. PG appears to be higher among those whose parents gamble (Gambino, Fitzgerald, Shaffer, Renner, & Courtage, 1993; Jacobs, Marston, & Singer, 1985; Lesieur, Blume, & Zoppa, 1986; Lesieur et al., 1991; Lesieur & Heineman, 1988; Lesieur & Klien, 1987; Wallisch, 1996). There is evidence that children who gamble tend to gamble with friends and family members (Daghestani, Elenz, & Crayton, 1996; Gupta & Derevensky, 1997) and are more likely to have begun gambling with parents (Griffiths, 1995). Wynne, Smith, and Jacobs (1996) reported that PGs were more likely to view gambling as part of their family norms. Second, values or beliefs regarding gambling can also be passed to members indirectly (e.g., by showing their approval and tolerance of gambling or by sharing historical texts, stories, and myths with their members that show approval and acceptance of gambling). Positive parental attitudes or approval toward substance use have been found to link to substance use among their children (Kandel, 1978, 1982; Kim, 1979; Newcomb & Bentler, 1986). On the other hand, negative parental attitudes or disapproval toward substance use have been found to link to reduced substance use among their children (Catalano et al., 1992). Barnes and Welte (1986) found that adolescent abstainers from alcohol were more likely to have parents who disapprove of drinking.

There are several ways in which culture could affect family functioning that supports or discourages gambling behaviors. Different cultural groups have distinct family configurations. Traditional family configurations, especially the patriarchal family system and strong family authority, can play a significant role in influencing a family member to take up gambling. In a patriarchal family system, processes such as identification often operate. For example, in the Chinese culture, children in these families have increased exposure to and parental approval of gambling. Thus, if the head of the family gambles regularly, this can significantly increase the likelihood that members, especially children, gamble as well. Culture also influences other family characteristics such as family involvement and attachment (e.g., lack of closeness, lack of parental warmth and support, lack of involvement in activities with children, etc.). These characteristics have been related to initiation of substance abuse (Catalano et al., 1992). There is evidence that substance use related to the closeness to one's family could be affected by an individual's cultural group. Bryam and Fly (1984) found that for Caucasian adolescents, closeness to family was negatively related to alcohol use only when both natural parents were present in the home, whereas for non-Caucasians the relationship was significant only when children were not living with both natural parents. Currently, there are no cross-cultural studies conducted to explore how family functioning may support or discourage gambling behaviors. This would be important to explore because there are significant differences in family characteristics among different cultural groups.

There are several ways in which values and beliefs of the culture can influence the initiation of gambling and/or continued gambling despite losses. Two of these include

influencing their members' gambling patterns and/or help-seeking behaviors when experiencing gambling problems.

3.1.1. Cultural values and beliefs influencing gambling patterns

Cultural values and beliefs can influence gambling patterns in a number of ways. First, they can encourage or discourage involvement in gambling. Different cultures have distinct attitudes about gambling and taking risk. Previous research has reported that positive attitudes toward gambling are related to the tendency to take risks (Kassinove, 1998; Kassinove, Tsytarev, & Davidson, 1998). Patterns of gambling in the general population show that every society has its own ethics in relation to gambling. This varies from total abstinence as in some Moslem groups to qualified endorsement as in American and European societies to a relatively high level of participation as occurs among the Chinese. It has been suggested that gambling by a large number of Chinese has resulted in the perception that this is a way of life for them (Clark, King, & Laylim, 1990). A look through any history book will always reveal references to the Chinese of gambling, especially among males (Clark et al., 1990). Such perception leads to the belief that Chinese are heavy gamblers. It is possible that such cultures perceive gambling as part of their lifestyle, history, and tradition, and have integrated values and beliefs that approve/encourage gambling, which are passed on to their members. In cultures (e.g., Muslims) where gambling is condemned historically, the exposure to gambling has been limited and, thus, its cultural values dictate a disapproval towards gambling. It is also possible that members of collective cultures have a greater influence on gambling behaviors than members in individualistic cultures. Thus, individuals from collective cultures are more likely to initiate and continue to gamble and subsequently develop PG if members of their cultural group (regardless of whether they are family members or other members of their culture group) model or teach them their culture's positive values, beliefs, and attitudes regarding gambling. Furthermore, individuals from collective cultures are less likely to initiate, continue to gamble, and subsequently develop PG if members of their cultural group show disapproval towards gambling.

Second, cultural beliefs and values can determine the kinds of gambling that would be punished and the ones that would be reinforced (Walker, 1992). Evidence suggests that there is a preference for different types of gambling across different cultural groups. The GAMECS Project (1999) was a study that examined gambling activities of regular gamblers in nine ethnic groups in Sydney, Australia, including those that spoke Arabic, Chinese, Croatian, Greek, Italian, Korean, Macedonian, Spanish, and Vietnamese. A total of 976 individuals who participated in some form of gambling of chance at least once a week was interviewed. The GAMECS Project (1999) found that casino gambling was most popular with Vietnamese, Chinese, Korean, and Croatian participants. Cards were most popular with Greek, Italian, and Arabic participants, with cards accounting for 15% of total money spent gambling among this group. Macedonian, Korean, and Spanish participants preferred club gaming machines. Horse race gambling was more prevalent among Croatians and Macedonians. The VCGA (1999) also found clear differences in preferences for modes of gambling and participation in it for different cultural groups. The percentages of participants who used gaming machines outside the casino were much lower within Arabic, Chinese, Vietnamese, and Greek participants in

this study than for the general community. Percentages of participants who used gaming machines at the casino varied widely across the cultural groups. Greek and Chinese community participation rates in this form of gambling matched those of the general community, whereas the Arabic and Vietnamese rates were much lower. Participation in scratch ticket purchase was found to be much lower within the sample groups than for the general community. These differences in the modes of gambling preferred from culture to culture could be related to approval and familiarity of certain games within the culture. Approval and familiarity could be maintained within the culture by passing these values and beliefs about gambling from generation to generation. For example, use of dice and cards may have been in the Chinese culture for centuries. Familiarity and approval of such games in the Chinese culture could be one of the factors that attract Chinese individuals to the casino tables (Clark et al., 1990).

3.1.2. Cultural beliefs and values influencing attitudes towards seeking professional help

Cultural beliefs can affect not only individuals' gambling behaviors but also their utilization of treatment and other health care services (New & Watson, 1983 cited in Cheung, 1990–1991). The apparent reluctance of some cultural groups to seek help has been found for a range of mental health problems such as alcohol and drug problems (Arredondo, Weddige, Justice, & Fitz, 1987; Cuadrado, 1999; Gloria & Peregoy, 1996; Kua, 1994; Natera-Rey, Mora-Rios, & Tiburcio-Sainz, 1999; Panitz, McConchie, Sauber, & Fonseca, 1983). It has already been found that substance abusers who are members of cultural minority groups initiate and complete substance abuse treatment at a lower rate than those of the cultural majority groups (Finn, 1994). During or after treatment they are also less likely to decrease or discontinue substance abuse (Finn, 1994). Few studies in the literature have explored whether presentations to PG services may occur at different rates amongst PGs from different cultural groups, as found for other mental health problems. Studies that have investigated presentation rates to PG services report individuals from some cultural groups (e.g., Arabic, Chinese, Korean, and Vietnamese) as being less likely to seek professional help than other cultural groups despite having higher amounts of unpaid debts, having problems clearing their gambling debts, spending more money than they could afford, or thinking their gambling was a problem (GAMECS Project, 1999; VCGA, 1999).

A number of cultural factors could be attributed to such presentation rates. VCGA (1999) found that shame was claimed to be a major factor preventing ethnic minorities from accessing PG support services. The way shame is interpreted among ethnic minorities differs according to cultural and religious beliefs (Ellias-Frankel, Oberman, & Ward, 2000). For example, among the Arabic and Turkish individuals, shame appears to be related to religious principles as gambling is prohibited in the Islamic religion (GAMECS Project, 1999). On the other hand, in cultures such as the Chinese, shame was associated with losing face and respect amongst members of the cultural group, as mental illness of a family member is a disgrace to the whole family. Maintaining harmony with others and the world around them are the ultimate goals in human relationships, and, thus, they try and avoid conflict as much as possible (Cheung, 1993a). Consequently, they feel that it is important to restrain oneself in behavior and expression as collective needs precede individual needs. They believe that one

should not burden others with one's own troubles and one should restrain from "morbid thoughts" that may cause emotional upset (Cheung, 1993b). Thus, the gambler is likely to be concealed within the family. The head of the family would decide which treatment modality to take and the gambler would not be turned to professionals until the treatment modality (which almost always consists of traditional healing methods and herbal medicines) has been proven ineffective (Cheung, 1993a).

The GAMECS Project (1999) also found that different cultural groups place the responsibility of providing support for PGs and their families into distinct groups. While Arabic, Greek, Italian, Korean, Macedonian, Spanish, and Vietnamese individuals generally felt it was the responsibility of the government or organisations that provide opportunity to gamble (e.g., casinos) to provide support to PGs and their families, the Chinese and Croatians individuals felt it was their own, their family's, or their community's responsibility. Thus, those who do not believe in outside assistance to deal with gambling problems (especially those cultural groups where the concept of counseling is unknown) would be less likely to seek professional assistance (Cheung, 1993a; GAMECS Project, 1999; VCGA, 1999).

Perceptions, beliefs, and attributions related to mental health problems and treatment programs may also influence the degree of service utilization. For cultures with cultural norms that are highly permissive towards gambling, it would be difficult to label certain gambling behaviors as problematic. Consequently, this can reduce the likelihood that members will seek help even when it is needed. Cuadrado (1999) suggested such an explanation for Hispanic males. She further suggested that systems of beliefs related to machismo (important among Hispanics) could play a role in the increased gambling and resistance to seek treatment. Similarly, with cultures where females are expected to be passive/submissive and pure (e.g., Hispanic females), one may expect a tendency for females to hide their gambling problems (Cuadrado, 1999). Thus, treatment approaches that do not recognize these stereotypes of machismo and marianismo may be less attractive to members of cultures that support such systems (e.g., Hispanics).

It is also possible that gambling treatments, which are based on Western models, are not sensitive enough to address the needs of ethnic minorities and indigenous communities (Oei, 1998). Existing mainstream prevention and treatment services using accepted techniques do not generally take cultural variables into account (Goh & Oei, 1998). They fail to consider certain cultures have a strong cultural identity and they represent this identity as being both separate and different from Westerners. Thus, certain cultures may interpret the nature, etiology, and treatment of PG somewhat differently from what Western models assume. Luk and Bond (1992) investigated Chinese lay beliefs about the causes and cures of psychological problems and found that Hong Kong Chinese hold an interactionist model for causality (i.e., believing that problems are caused by an interaction of external and internal factors) but internal attributions for cure in contrast to Westerners. There was also a belief that different values produce different types of problems. The study also confirmed previous studies in showing that the two most preferred coping strategies of the Chinese include high reliance on self-help measures initially and then a turning to ones primary social network for help and support (Cheung, 1986).

Other possible reasons for these different rates may include different inclination to seek assistance, a limited knowledge of the availability of services, insufficient social and financial resources to support treatment entry and behavior change, and language problems (GAMECS Project, 1999; Kaplan, 1985; Varma & Siris, 1996; VCGA, 1999).

3.2. Factors that influence beliefs and values

There are however, several factors that can influence ones beliefs and values and, consequently, gambling behaviors and help-seeking attitudes. First, as discussed earlier, gambling is available and is marketed differently in different locations. Studies from different countries and states have provided evidence that legalization of gambling and increased accessibility to gambling has led to an increase in the number of regular gamblers and PGs (Raylu & Oei, 2002).

Second, changes in an environment can also influence beliefs and values. For example, in two African countries (Cameroon and Senegal), the majority of the population are Muslims, a cultural group that condemns gambling. However, due to limited means of getting richer, Cameroonians and Senegalese turned to lotteries as potential means of improving their financial situations and to deal with the economic crisis that has existed in the countries for a number of years (Brenner & Lipeb, 1993; Brenner, Lipeb, & Servet, 1996). Hayano (1989) completed a 2-year participant observation study investigating card gambling among the Awa, individuals of a rural village in Papua New Guinea. He concluded that since rural villages like the Awa have begun achieving economic growth, card playing has become more of a social, economic, and political activity rather than occurring only at certain times of year and as a form of recreational activity as it had been in the past.

Finally, one of the most important factors that influences cultural beliefs and values discussed in the psychological literature includes the process of acculturation. This occurs when an individual attempts to gradually adopt the cultural values and beliefs of the dominant society.

3.2.1. The process of acculturation

Some immigrants adapt to the mainstream culture faster and to a greater degree than others do, depending on their language abilities, education levels, occupational skills, availability of a cohesive ethnic community, and social networks for emotional and social support (Cheung, 1990–1991; Hyman, Vu, & Beiser, 2000). Thus, in relation to acculturation, increased gambling among particular cultural groups could be attributed to two processes. It is possible that increased gambling/PG is either related to a successful acculturation process (i.e., successfully adapting to a culture that has high acceptance and practice of gambling) or related to problems in the acculturation process (i.e., difficulties in adapting to the mainstream culture). Both these processes have been shown to play a role in the development and maintenance of many health/mental health problems. Low levels or difficulties in the acculturation process have been associated with greater substance-use-related problems and poorer health status in a range of cultural groups (Nemoto et al., 1999; Weber, 1996). Health problems (including mental health disorders such as substance abuse) have been attributed to

“deprivation and the erosion of their cultural integrity (acculturation) as a result of colonization” by many indigenous people (Brady, 1995, p. 1489). However, it is also found that increased acculturation to a habit of the host country can increase a particular behavior. Sabogal et al. (1989) interviewed 263 Hispanic and 150 White smokers and found that increased acculturation among Hispanics led to higher levels of smoking, similar to the Caucasians. Currently, there are no empirical studies that look at the effects of acculturation (successful or unsuccessful) on gambling habits. How the two processes of acculturation could affect gambling patterns among certain cultural groups is discussed in more detail next.

3.2.2. Problems with acculturation process (i.e., difficulties in adapting to the mainstream culture)

When individuals immigrate to a new country, stress and circumstances related to the acculturation process (e.g., stressors encountered when trying to adapt to a new environment/country) could increase the risk of their taking up gambling. A number of changes that an immigrant or refugee undergoes is significant including environmental, biological, political, economic, cultural, social, and psychological (Symposium Paper, 1998). Immigrants with adaptation problems are likely to experience a state of isolation, boredom, loneliness, emotional stress, and depression. These variables have been shown to be important motivators for gambling (Blaszczynski, 1995; Coman, Burrows, & Evans, 1997; Hallebone, 1999; Lesieur & Rosenthal, 1991; Trevorrow & Moore, 1998).

The VCGA (1999) reported that effects of migrating to Australia and the experience of loneliness and boredom were cited amongst the immigrants as common reasons for gambling. These are supported by research that shows that PGs tend to report boredom and loneliness as a major trigger to gambling and continued gambling (Blaszczynski, McConaghy, & Frankova, 1990; Carroll & Huxley, 1994; Dickerson, Hinchy, & Fabre, 1987; Grant & Kim, 2002; Kuley & Jacobs, 1988; Trevorrow & Moore, 1998; Wolfgang, 1988). Ohtsuka, Bruton, Delca, & Louisa (1997) explored gambling among machine PGs and found that self-assessment of propensity for boredom, happiness, and loneliness significantly predicted PG. Furthermore, boredom is a common reason given by older PGs for gambling (Grant, Kim, & Brown, 2001; McNeilly & Burke, 2000).

Immigrants also often report gambling to block out life stress or negative moods (VCGA, 1999). Mood states such as anxiety and depression have frequently been linked to PG (Blaszczynski & McConaghy, 1988, 1989; Blaszczynski, McConaghy & Frankova, 1991; Graham & Lowenfeld, 1985; Griffiths, 1995; Henry, 1996). People who are anxious or depressed may gamble to relieve these negative psychological states, which may be reinforcing in the short term but may make PGs more anxious and depressed in the long term (Raylu & Oei, 2002).

A limited number of studies have shown that stress can play a role in the development and maintenance of gambling problems. Friedland, Keinan, and Regev (1992) tested the hypothesis that stress, which undermines persons' sense of control, would engender illusory perceptions of controllability. Control might then be sought by undertaking acts, the effect of which on the environment is illusory. Results showed that highly stressed (compared lowly stressed) subjects preferred gambling forms that heightened perceptions of control. Research-

ers have often associated stress with PG (Coman et al., 1997; Raylu & Oei, 2002; Taber, McCormick, & Ramirez, 1987; Zuckerman, 1999).

Gambling services such as the Breakeven in Australia have associated gambling with the trauma of migration and the unrealistic expectations of newly arrived migrants in making money in Australia. For example, newly arrived refugees from the former Yugoslavia, Vietnam, and China were reported as having difficulty with gambling due to migration factors (VCGA, 1999). Some immigrants experienced conflicts about their place in society, particularly when linked to feelings of shame and self-doubt regarding their ethnic identity, and this could result in antisocial behavior such as gambling (Kaplan, 1985). Feelings of discrimination and perceived racism are central themes affecting many minorities. Several other factors often associated with refugees or immigrants including low income, lack of employment, and low socioeconomic status have been linked to PG (Albers & Huebl, 1997; Buehringer & Konstanty, 1992; Hraba & Lee, 1995; Ladouceur, 1991; Lesieur & Klien, 1987; PCR, 1999; Shepherd, Ghodse, and London, 1998; Volberg & Steadman, 1988).

Gambling behavior can serve distinct functions for different cultural groups (Abt et al., 1985). It is possible that gambling for some cultures provides an opportunity for people to relieve or reduce aversive stress states by escaping from life problems. For others, it may be a means to become successful, independent, obtain power, and/or gain control. On the other hand, gambling can provide members of some cultural groups a means to conform to the behaviors of other members.

The GAMECS Project (1999) found different motivations towards gambling among different cultural groups. Both Korean and Arabic participants reported using gambling as a source of individual entertainment and to escape from daily lives, although the Arabic participants were ashamed of doing it. Chinese participants regarded gambling as a regular social activity rather than using it to escape from daily life problems. The Vietnamese participants took their gambling seriously, often regarding it as a fast way of making money. The Italian participants reported mostly using gambling as an individual activity, while the Spanish participants regarded gambling as a hobby and a social activity.

These motivations would also influence the modes of gambling chosen. Phong Nguyen, coordinator of Springvale Indo-Chinese Mutual Assistance Association, stated that there are several important variables that encourage members of the Indo-Chinese community to go to the casino rather than the TAB or pubs to gamble. It was suggested that coming from a highly populated country and a community-orientated culture, Vietnamese and Chinese individuals may find casinos a pleasant and attractive environment because individuals from their own cultural background surrounded them. Phong Nguyen suggested that “They don’t go to clubs and pubs because they are scared of racism. They feel alienated from Australian sports, which they don’t understand. Many of them cannot understand English. They are unemployed and have low self-esteem. But they walk into the casino and they are treated like kings. They feel good. They know the rules of the game” (Legge, 1992). Currently there is no direct research that explores why particular modes of gambling are chosen by particular groups of individuals.

The above discussion suggests immigrants who have adapted easily to the host society would be less likely to gamble. Those that are experiencing difficulties in the acculturation

process (i.e., problems adapting to the host culture) and are experiencing increased stress have increased chances to begin gambling and subsequently develop PG. There is no research published in the gambling literature that looks at the direct effect of stress as a result of a difficult acculturation process on PG among immigrants.

3.2.3. *Successful acculturation process (i.e., successfully adapting to a culture that has high acceptance and practice of gambling)*

Problems and patterns tend to change when individuals with different backgrounds in normative gambling behavior interact. Thus, if individuals from a culture with low acceptance and practice of gambling assimilate and identify with a culture that has a high acceptance and practice of gambling, they may be encouraged to take up gambling or continue gambling despite continuous losses. For example, an individual from a particular cultural group (e.g., from a country where gambling is restricted such as Moslem countries) who has no difficulties acculturating to the Australian lifestyle could take up gambling as gambling is more accepted, accessible, and liberalized in Australia.

Goodale (1987) reviewed several studies that looked at gambling among some Pacific Island tribes. She concluded that the phenomenon of PG, as found in Western societies, appeared to be absent in certain cultures such as villagers in the Pacific Islands (e.g., the Tiwi and Gende tribes). There are currently no systematic prevalence studies for these groups to support this conclusion. One explanation for this lack of PG phenomena could be that such examples are of healthy gambling that is controlled by cultural mores and, thus, there are less likely to be PGs. It is possible that it is when a person is taken out of his/her cultural context that PG begins. This has been shown for other mental health problems such as substance abuse disorders. For example, Abbott (1996) investigated the history of alcohol use among Native Americans. Although there were numerous historical accounts of alcohol use among this group, alcohol use was not excessive but rather controlled and supervised (often in highly ritualized contexts). However, after the contact with White Americans dramatic changes occurred in the use and function of alcohol in American Indian and Alaska Native societies.

Acculturation can also lead to the deterioration of one's own cultural values and beliefs, which often results when an individual adopts the values and beliefs of the host country. Tata and Leong (1994) provided evidence for this for Asian Americans. Acculturation can also influence an individual's help-seeking behaviors. Atkinson and Gim (1989) found that acculturation of cultural identity had a direct relationship with attitudes toward help seeking among Asian American University students. It is therefore likely that those more acculturated (i.e., similar to the host country) are more likely to have help-seeking attitudes of the host country than of the origin country (Tata & Leong, 1994). Consequently, if the host country has attitudes that support professional help seeking for problems, these individuals are more likely to seek assistance for their gambling problems at an earlier stage and reduce their chances of developing PG. Thus, it is possible that cultural groups that value abstinence and integrate it into their values and belief systems have low rates of gambling/PG as long as individuals remain within that group. However, if they leave the group and associate with another cultural group, the chance for gambling increases, especially if this other group has high acceptance and practice of gambling.

4. Discussion

Culture and its impact upon gambling participation and PG have not received attention in the published research. This paper aimed to reduce this gap. It reviewed prevalence studies and showed that research on the rates (i.e., both community and treatment samples) of gambling and PG among different cultural groups is far from complete. Gambling patterns for some cultural groups have not yet been investigated, while in others either existing prevalence studies are limited, have not been replicated, or have shown inconsistent results. Furthermore, they are plagued with methodological problems (e.g., lack of representation of all cultural groups in a given community, obtaining high false positives in general population surveys when using the SOGS to identify PGs, using global group comparisons such as Caucasians and non-Caucasians, and not using random sampling techniques). Despite these limitations, research does suggest high rates of gambling among some cultural groups (e.g., Jews and Chinese), ethnic minorities, and indigenous groups (e.g., the Maoris in New Zealand and American Indians in the United States) in several countries.

This review discussed three cultural variables (i.e., cultural beliefs and values, culturally determined help-seeking attitudes, and the process of acculturation) that can play a role in the initiation and maintenance of gambling. These variables have been discussed in the psychological literature as playing a role in the development and maintenance of many mental health problems in relation to gambling and PG. The review highlighted how these three variables could interact with one another and influence gambling behaviors.

Cultural beliefs and values (which are reinforced by members of the family and through the culture's history) can influence not only gambling behaviors (e.g., frequency of gambling, mode of gambling chosen, etc.) but also help-seeking attitudes. It suggested that cultures that have cultural values and beliefs that favor gambling (such as the Chinese) are more likely to gamble or develop PG compared to cultures that do not have values that encourage gambling (e.g., Muslims). Cultures that show high conformity to cultural norms, values, laws, and attitudes and/or follow a collectivistic way of life tend to regard family as important and are more likely to follow the norms, values, laws, and attitudes their cultures dictate (Shweder, 1991). Individuals with values in terms of individualization (giving priority to personal goals over group goals) compared to collectivism (giving priority to group goals over personal goals) would be less likely to have similar attitudes towards seeking professional psychological help as other members. Also, cultures who have negative attitudes towards getting professional help are less likely to try and get help when they initially begin experiencing problems with their gambling and, thus, are more likely to continue gambling and subsequently develop PG.

Acculturation, however, in turn, can influence an individual's beliefs and values and consequently gambling behaviors and help-seeking attitudes. The review suggests that it is possible that cultural groups that value abstinence and integrate it into their values and belief systems have low rates of gambling/PG, as long as individuals remain within that group. However, if they leave the group and associate with another cultural group, the chance for gambling increases if this other group has high acceptance and practice of gambling. It is

therefore possible that those that are more acculturated (i.e., similar to the host country) are more likely to have help-seeking attitudes of the host country than of the origin country.

There are currently no empirical data to differentiate whether increased gambling/PG is related to a successful acculturation process (successfully assimilating to a culture that has high acceptance and practice of gambling) or to difficulties in the acculturation process (e.g., personal difficulties such as depression and stress and sociodemographic determinants such as poverty, unemployment, etc.). It is highly likely that a combination of the two exists. If such hypothesis is tested out, researchers need to be careful about their assumptions about acculturation. Previous acculturation research has assumed that as people become more acculturated with the host culture, they become less acculturated with their own culture (Zane & Huh-Kim, 1998). However, several studies have shed some doubt on such assumptions. Studies on acculturation (Hurh & Kim, 1984) and cultural identity (Oetting & Beauvais, 1990–1991) have shown that immigrants identification with a particular culture may occur separate to the identification with another culture (Zane & Huh-Kim, 1998).

It is now imperative that researchers begin to explore the role of these cultural variables in gambling and PG in order to improve the current models as well as the treatment and prevention of gambling and PG. However, it is important not to ignore the individual differences that even occur within all cultural groups. Blaszczyński and Nower (2002) proposed three different possible means by which gambling can be initiated and maintained. Thus, such individual differences need to be taken into account when incorporating cultural variables into a theoretical framework. The cultural variables, however, should not be considered in isolation but in the context of other possible factors that have been implicated by the gambling literature as playing a role in the cause and maintenance of PG (Raylu & Oei, 2002). It is possible that individuals that develop PG already have a predisposition towards developing the disorder. That is, they have particular individual factors such as personality and biological aspects that have been found in the gambling literature as playing a role in the development of PG. Nevertheless, cultural factors are important to help account for the high rates of gambling and PG among certain cultural groups. These cultural factors, if important, would have significant implications in relation to the prevention and treatment of PG among certain cultures.

In relation to treatment, it would be beneficial for therapists to take the time to learn about the client's culture, understand the history of their culture (including the circumstances that brought them to the country) and the culture's development in that country when presented with non Caucasian clients. This may be important as trust can be built by demonstrating openness and interest as well as by recognising cultural rituals as much as possible (Finn, 1994). As discussed earlier, common stressors among migrants include cultural conflict, minority group status, social change, and lack of language or other marketable skills (Varma & Siris, 1996). Thus, training such gamblers to overcome these deficiencies through language and/or job skills training can be beneficial. Therapists need to work to increase immigrants self esteem and assist them to adapt more easily to their new environments, and consequently, reduce their need to seek solace in gambling (Varma & Siris, 1996).

A family systems approach might have to be taken for treatment if a collective role in PG is implicated. Information and support for the relatives of PGs may be especially important.

There is a great need for culturally relevant, community-based, and supported sources of help rather than clinic- or hospital-based programs. Programs may need to be designed and implemented to address the barriers to seeking help. Many authors have also reported a lower dropout rate with bicultural treatment programs especially in the areas of mental health (Sue & McKinney, 1975; True, 1975). Furthermore, some researchers have also reported that ethnic minorities more frequently utilized a facility if a bicultural program was available (Uba, 1982). It may also be necessary to change processes beyond the specific treatment program that encourage and support culturally and linguistically diverse access. This may include establishing signage for all programs in various languages, culture-specific magazines/pamphlets in the waiting room, and employment of volunteers and/or therapists who have various language skills. Le (1999–2000) in relation to the PG among Vietnamese community in Australia concluded that bicultural professionals are important in providing an effective service to the culturally diverse clients. Evidence for effectiveness in terms of increasing referral rates between two ethnic minority community groups by employing ethnospecific community educational workers was provided by Barrett and Fraser (1999). To attract ethnic minority gamblers to a gambling treatment facility, there may be a need to leave brochures in cultural languages at various sites such as libraries, pizza shops, doctors' surgeries, and senior citizens clubs. Media in all forms need to be targeted (e.g., newspapers, ethnic radio, and public speaking). Furthermore, emphasizing availability of ethno-specific community workers may be beneficial. Community education might be important to attract ethnic minorities to treatment. Self-help groups and/or telephone counseling might be more beneficial to cultures that view professional psychological help as foreign and uncomfortable.

There are several other future research areas important in reducing this cultural gap in the gambling literature. First, although there are high rates of gambling and PG in certain cultural groups, very little is still known about the differences in gambling behaviors in many cultural groups (e.g., the function gambling behavior has for a particular cultural group, the mode of gambling chosen and gender differences in gambling behaviors). Thus, the different roles and meanings gambling has in different cultural groups needs to be explored. This is significant as such knowledge can help develop more sensitive preventative and treatment approaches for those that are experiencing gambling problems.

Second, cultural differences in gambling habits and PG could be accounted by two different processes. First, they could be exposed to different levels of risk factors of gambling (e.g., differences in number of individuals they know that gamble/models of gamblers, number of individuals in their lives that approved gambling, perceived norms (peer or family) of gambling, and differences in the expectations of costs and benefits of gambling). Secondly, they could differ in their susceptibility to risk factors (i.e., whether risk factors are differentially related to gambling in different cultural groups, e.g., correlation between individuals gambling and other adults they know (e.g., friends, peers, and others). Thus, the presence of different susceptibilities implied interactive or moderating effects of risk factors with culture. Knowledge about these possible interactive effects would be valuable in developing effective prevention and treatment programs. It is, however, important that the two processes are not mutually exclusive but both can operate at the same time. Thus, to further understanding of

the sources of cultural differences in gambling, we need to investigate both processes simultaneously.

Third, the Western literature demonstrates that several factors including familial/genetic, sociological, and individual factors (e.g., an individual's personality, biochemistry, psychological states, and cognitions) play important roles in the development and maintenance of PG. Most of the research in the gambling literature is based on Western samples, but the results are often generalized to other ethnic and cultural groups. There are vast differences in individuals from different cultural groups, and generalizing the current literature to all cultural groups is inappropriate. Thus, studies are needed to test whether the variables that have been implicated in playing a role in the development and maintenance of PG (findings come from studies with predominantly nonethnic minority samples; see Raylu & Oei, 2002, for a comprehensive review), can also be applied to other cultural groups. There is now an urgent need for these variables to be validated in different cultural groups, and the interactions of these variables with the cultural variables also require attention.

Finally, future research also needs to look at the impact of family factors on early gambling initiation. Researchers exploring gambling among children and adolescents have suggested that rates of gambling and PG are high among this group. For a significant minority of youth, gambling occurs during preadolescence when family factors are likely to exert a strong influence. Early initiation has also been associated with later problems of abuse. Thus, there is need for studies that look at whether these cultural differences in gambling are due in part to parallel cultural differences in family factors or whether they are due to cultural differences in the ability of the identified family factors to predict gambling. This is especially important as cultural differences among cultural groups are often rooted in family traditions that can enhance or inhibit gambling patterns. However, there is a significant lack of studies exploring the impact of parental/friends attitudes towards gambling or how culture can influence family functioning (e.g., family characteristics such as family involvement and attachment, attitudes of parents/siblings towards gambling family structure/configuration) that support or discourage gambling. This is significant as it has already been found that PGs are more likely to have parents who gamble, have begun gambling with parents, and view gambling as part of their family norm (Raylu & Oei, 2002).

Several methodological issues in this area need to be addressed in future research. The first methodological problem relates to the instruments used to assess PG. The SOGS and DSM IV have been frequently used to assess PG. Although the SOGS has been employed in a variety of settings and in several languages, several studies have raised the issue of its susceptibility to high rates of false positives (Blaszczynski et al., 1998; Dickerson, 1993). Abbott and Volberg (1992) reported that individuals in New Zealand were more likely to respond positively to particular items than individuals in America. Such differences could be due to differences in culture in different countries (Lesieur, 1994). Duvarci, Varan, Coskunol, and Ersoy (1997) investigated the effectiveness of the DSM-IV (APA, 1994) and the SOGS in identifying 59 Turkish gamblers. Four of the 10 DSM-IV criteria and 4 of the 20 items of the SOGS were found to be problematic in the diagnosis of Turkish PGs. Only when the 3 items that failed to discriminate PGs from non-PGs were replaced with 2 culturally relevant items did the resulting 19-item Turkish form of the SOGS (cutoff point for the 19-item) yield lower

false negative and false positive percentages as well as a significant difference between the problem and non-PGs (Duvarci & Varan, 2001). Further research needs to look at the reliability and validity of translated versions of the SOGS that have been used with different cultural groups. Furthermore, in order to investigate factors identified in the Western studies as playing a role in the development and maintenance of PG, researchers need to administer translated measures. These translated measures need to, however, first be evaluated for conceptual equivalence and cultural differences that might affect self-report or self-disclosure as mental health problems such as PG often carry with them great social stigmas.

The second methodological issue relates to categorizing individuals into global ethnic and racial categories. Most prevalence studies have used global group comparisons such as Caucasians and non-Caucasians (Abbott & Volberg, 1996; Volberg, 1996) and thus do not acknowledge that such global categories contain a range of subgroups with very different characteristics. It is important to acknowledge that categorizing individuals in global groups such as Hispanic is not appropriate, as the major ethnic and racial categories contain a range of subgroups with very different characteristics (Krestan, 2000). For example, Latino/Hispanic includes numerous and quite diverse subgroups from the Caribbean and from north central and South America. For example Black Americans include African Americans, African Caribbean's, Africans from Central and South America, and immigrants from America. The American Bureau of the Census has identified more than 20 Asian Pacific groups. The second difficulty is identifying individuals from mixed cultural groups. The diverse nature of these populations is evident on a number of demographic characteristics such as birthplace, age, family income, and educational attainment and achievement. Concomitant with this intergroup diversity are important within-group differences in terms of acculturation level, ethnic identity, primary language dialect, county of origin, and the like.

The third such methodological issue relates to controlling for other independent variables. Cultural or ethnic group is usually only one of the independent variables among a large number explored in a number of studies and, thus, most studies do not look at the various aspects of ethnicity/culture and how they are related to gambling/PG. There are several variables associated with immigrants from certain cultures that need to be treated with caution when investigating the role of cultural variables in the development and maintenance of gambling problems among these groups. First, sociodemographic variables such as poor socioeconomic status, unemployment, and low income levels have been linked to PG (Raylu & Oei, 2002). A significant number of immigrants, refugees, or indigenous groups have this status. Thus, it is difficult to determine whether PG is related more to factors specific to an individual's culture or to associated sociodemographic factors such as poverty. Thus, future research needs help determine the level to which each of the two factors contributes towards the differences in prevalence rates of gambling/PG between certain cultural groups (e.g., between indigenous/ethnic minorities and Caucasians). Furthermore, studies exploring the role of cultural variables in the initiation and maintenance of gambling need to distinguish between the two.

Second, the place of origin of immigrants regardless of the culture they identify with can attribute to differences in gambling and PG rates. For example, in Taiwan gambling is illegal, while in Hong Kong it is not. Thus, it is likely that Taiwanese Chinese are less likely to take

up gambling or develop PG than Hong Kong Chinese? Blaszczynski et al. (1998) found that those Chinese participants in their study who reported a prior history of gambling in their country of origin were more likely to be classified as possible PGs. Further research needs to control for such factors in order to investigate the true contribution of cultural factors to gambling/PG.

In conclusion, gambling and PG are getting more attention from the public, policy makers, and researchers. Roles of culture in PG, compared to other mental health problems, are still under research. A major aim of research is to find solutions for gambling problems for all cultural groups. Researching cultural variables that play a role in the development and maintenance of gambling problems are essential as they can assist in developing prevention and treatment programs for different cultural groups. There is now an urgent need to do research in this area.

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