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## The Impact of Gambling on Rural Communities Worldwide: A Narrative Literature Review

### **Abstract**

Gambling has become a popular activity in both urban and rural settings. Although the prevalence and participation of gambling is well known, little has been reported regarding the impacts of gambling on rural communities. Therefore, a narrative literature review approach was adopted to examine what is known regarding gambling in rural communities. This article describes the prevalence and types of gambling that are popular in rural communities around the world. It identifies the benefits and highlights the potential harm caused by a person's gambling and the impact this has on families and the wider rural community. There are both benefits and risks associated with increased availability of gambling opportunities. Specific vulnerable groups within rural populations are identified within this context and how different countries respond to rural gambling is explored. A number of strategies based on a public health approach are recommended to ensure that gambling remains as harmless an activity as possible in rural communities.

**Key words:** gambling; rural; health inequity; public health

## **The Impact of Gambling on Rural Communities Worldwide:**

### **A Narrative Literature Review**

There are accounts of people gambling from the dawn of recorded history in the ancient civilizations of China, sub-continental India, Egypt, Greece, and Rome (Ferenzy & Turner, 2013). The earliest forms of gambling often involved something akin to dice, such as animal bones, shells, or nuts. In time, with the development of paper, the use of playing cards and lotteries began to emerge (Schwartz, 2007). However, just about anything has been used for gambling purposes, from traditional parlour games such as billiards to “cow chip bingo” (Fund, 2011) and “tic-tac-toe” played against live chickens (Bihm, Gillaspay, Lammers, & Huffman, 2011). Gambling may be viewed as a useful way of raising revenue by governments without directly introducing changes to individual tax rates (Walker & Jackson, 2011). A number of schemes have been introduced capitalising on gambling revenue, usually in the form of lotteries (Bleakley & Ferrie, 2013; Giroux, 2012).

Gambling is considered to have a sinister side, associated with organised crime, leading to ruination and despair and corrupting communities (Hall, 2013; Ratcliffe, Strang, & Taylor, 2014). Links have been established between gambling and social, psychological, and physical problems (Afifi, Cox, Martens, Sareen, & Enns, 2011; Lemmens, Valkenburg, & Peter, 2011). People who are attracted to gambling generally come from lower socio-economic backgrounds and have higher vulnerabilities to health problems, further compounding the problems associated with gambling (Braverman & Shaffer, 2012). In rural settings, these issues are compounded by social and health disparities related to lack of opportunity (Crosby, Wendel, Vanderpool, & Casey, 2012) and gambling can be more destructive to the community than in urban settings (Doran & Young, 2013).

Poor health outcomes are associated with a number of common issues in most rural communities in the world. People living in rural communities experience a degree of isolation

in the form of poor transportation, fewer shops, limited healthcare facilities, and technological connectivity issues (Velaga, Beecroft, Nelson, Corsar, & Edwards, 2012). There is evidence of health disparities for people living in rural areas (Gamm, Castillo, & Pittman, 2003; Marmot, Friel, Bell, Houweling, & Taylor, 2008). In terms of specific health conditions, the picture is mixed. Mental health problems are more closely linked with inner-city living (Peen, Schoevers, Beekman, & Dekker, 2010) whereas cardio-vascular disease, risky alcohol use, and substance misuse are more common in rural areas (Miller, Coomber, Staiger, Zinkiewicz, & Toumbourou, 2010; Quarells, Liu, & Davis, 2012).

However, regardless of the relative protective and risk factors linked to rural living, when a person develops a health problem, access to adequate healthcare becomes an issue (Brundisini et al., 2013; Gulliver, Griffiths, & Christensen, 2010; Wilson et al., 2009). This is heightened where a health phenomenon, such as gambling, is less recognized by health and social care agencies (Ludwig, Kräplin, Braun, & Kraus, 2013; Wood & Wood, 2009). Being a gambler in a rural area has been shown to increase a number of risk factors, in particular the likelihood of suicide (Battersby, Tolchard, Scurrah, & Thomas, 2006; Zhang & Wang, 2011). However, little research is reported that examines increased risk of other health conditions in relation to gambling in rural areas (Clarke, 2007; Nichols, Stitt, & Giacomassi, 2004).

Gambling in rural communities is an important issue globally, given the vulnerability to health concerns for people living in rural communities and their low levels of access to appropriate healthcare. In order to advance the discussion of gambling in rural areas, this paper examines these issues and provides a picture of the prevalence and effects of gambling globally in rural settings.

### **Method**

This review has a very simple aim: to draw from the primary and grey research in order to contribute to a wider understanding of the issue of gambling in rural communities

around the world. A narrative methodology was used that incorporated systematic searches of the published literature. The following databases were searched: OvidSP, PubMed, PsycINFO, Google Scholar, and the Social Sciences Citation Index. Multiple search terms were used, including “gambling,” “gambler,” “problem gambling,” “pathological gambling,” “rural,” “peri-urban,” and “non-urban.” This search resulted in 1,130 papers. All abstracts were read and considered for inclusion in the literature review. Papers were included based on meeting at least one term from each of the gambling and rural search phrases. In addition, all papers selected presented either quantifiable data or qualitative samples. Some of the articles were published many years ago but no more recent published work was found so readers should consider the possibility that recent developments may have changed the dynamics summarized below.

## **Results**

The presentation of country data was a pragmatic one in that it represents the level and volume of literature being reported as opposed to an alphabetical or chronological order.

### **Gambling Prevalence in Rural Communities**

Gambling prevalence surveys have been carried out in almost all countries spanning all continents where legal gambling is present (Shaffer & LaPlante, 2013; Stucki & Rihs-Middel, 2007). Because of the different methodological approaches taken by the researchers, no single international prevalence rate of problem gambling can be quoted (Productivity Commission, 2010). However, the reported range of prevalence rates for problem gambling is typically between one and three percent (Becoña, 1996; Devlin & Walton, 2012; Ipsos-Reid & Gemini Research, 2008; Market Quest Research Group, 2009; Sproston, Hing, & Palankay, 2012; Volberg, Nysse-Carris, & Gerstein, 2006; Volberg & Steadman, 1989; Williams, Lee, & Back, 2013). Little distinction has been made between the prevalence rates in urban and rural areas. However, variations in rural gambling exist and in all prevalence

studies worldwide, there is a demonstrated risk from gambling in rural communities.

In Australia, the picture is mixed, with some states indicating no difference or even fewer problems associated with gambling among rural residents (Productivity Commission, 2010; Storer Abbott, & Stubbs, 2009). Several Australian states report problem gambling in rural communities. One report, based in South Australia, identified rural areas as having a greater share of both gambling expenditure and slot machines, with the average expenditure 27% higher than in non-metropolitan areas. This study noted that although participation rates are lower, residents spend a larger amounts compared to urban gamblers (O'Neil, Kosturjak, & Whetton, 2004). Further, a prevalence report also based in South Australia noted rural regions are associated with greater participation in most forms of gambling (Taylor et al., 2001). In New South Wales, a higher risk of problem gambling is associated with one rural region (Nielsen, 2007; Sproston et al., 2012). In Queensland, there are similar levels of participation in most forms of gambling, with track racing and keno having higher participation in urban area than in most rural regions (Schofield, Mummery, Wang, & Dickson, 2004).

The Northern Territory (NT), Australia has few large urban towns and so small urban towns are compared against remote communities. There is increased participation in gambling in casinos by residents of remote NT communities (Young, Stevens, & Morris, 2008). Although these remote areas have greater overall participation rates, problem gambling rates are lower than the urban areas on the Problem Gambling Severity Index (PGSI), a nine item measure that determines the extent to which respondents are experiencing gambling harm which is used as a prevalence tool (Young et al., 2005; Ferris & Wynne, 2001). The Canadian problem gambling index. Ottawa, ON: Canadian Centre on Substance Abuse.). In Tasmania, bingo and private card games are slightly higher in rural areas and Electronic Gaming Machines (EGM) or slot machine play and casino games are higher

outside the main areas. However, on the whole, urban gamblers are more frequent players (1-3 times per week), with the exception of phone betting on track racing. Regular weekly gamblers (once per week) are more likely to be from rural areas, in particular with Internet gambling on sports and track races (South Australian Centre for Economic Studies, 2008). In New Zealand, prevalence research indicates a greater risk of problem gambling is associated with rural areas. However, this is confounded by Maori or Pacific Islanders, who are more represented in rural than urban areas and are known to experience greater gambling problems (Devlin & Walton, 2012).

Similar gambling participation rates are found throughout Canada. Here there is a trend for higher participation in some rural areas, especially in the East of the country, where gambling frequency is, at times, double the national average, especially for EGM/slot machine play (Cox, Yu, Afifi, & Ladouceur, 2005). In Newfoundland, New Brunswick, and British Columbia, greater participation in most forms of gambling is described in rural areas (Cox et al., 2005). In British Columbia, overall at-risk and problem gambler rates on the CPGI are inflated in the rural regions (Ipsos-Reid & Gemini Research, 2008). In Alberta, the least populated region, there is a clear risk of problem gambling compared with the other regions of the state, especially in relation to EGM/slot machine players (Cox et al., 2005; Smith & Wynne, 2002). Further, the loss of fisheries in rural Newfoundland may have led to an increase in reliance on slot machines (Davis, 2006). Many other factors may account for this, and so the loss of this one industry cannot be considered causal.

In the United States of America (USA), the findings from state prevalence surveys suggest differences in urban/rural gambling, with isolated rural residents having a marked decrease in prevalence compared to urban and larger rural communities (Edens & Rosenheck, 2012). However, prevalence surveys in the USA have a number of problems associated with them. On the whole, most were conducted over 15-20 years ago and gambling has changed

radically since then, with the expansion of new technologies (Wood, 2009). In addition, almost all were conducted by the same researcher, and although there is consistency in method, there is insufficient depth of analysis of the rural level of participation.

California, similar to other parts of the USA, has a mixture of urban gambling and rural tribal gambling, with elevated rates of gambling in rural regions where the tribal casinos are located. The main risk of problem gambling was related to density of opportunity (i.e., the number of casinos available in a small area and so rural regions show higher rates (Volberg et al., 2006). In North Dakota, less populated regions have higher gambling prevalence. However, this was confounded by gambling opportunities across the border in Canada (Volberg, 2001). Although rural residents gamble more frequently, it is reported that this does not necessarily lead to harm (Volberg et al., 2006), perhaps because of social protective factors present in rural areas such as social support and a stronger sense of belonging, which may be the result of religious affiliation (Faigin, Pargament, & Abu-Raiya, 2014).

In Norway, there is a higher prevalence of gambling outside of the main cities, with elevated rates of problem gambling especially present in the West of the country (Bakken, Gotestam, Grawe, Wenzel, & Øren, 2009). In Sweden, lifetime problem gambling rates are higher outside of the large cities (Abbott, Romild, & Volberg, 2013). In other parts of Europe, few differences emerge between urban and rural gambling including in Spain and Germany (Becoña, 1996; Kun, Balázs, Arnold, Paksi, & Demetrovics, 2012).

The latest United Kingdom (UK) national prevalence survey divided findings not into urban/rural areas, but rather into regions. Some regions are less populated, such as the countries of Wales and Scotland; however both have large urban areas. In Scotland, the proximity to casinos is associated with greater social cost, because of the venues drawing from a local rather than tourist populations (Reith, 2006). Gambling participation is similar across all regions whether they are predominantly urban or rural. However, of note is the



lower participation in London, which is a high density urban center (Wardle et al., 2007).

Few prevalence surveys have been conducted in other parts of the world. In South Africa, fewer rural residents (53%) have ever gambled compared with urban residents (84%) and this translates into fewer regular gamblers (Dellis, Spurrett, Hofmeyr, Sharp, & Ross, 2013). A major difference between rural/urban gamblers is that rural gamblers play more “informal” forms of gambling, usually illegal (Dellis et al., 2013). However in South Africa, township gambling is a specific problem rather than the rural status of the gamblers (Collins et al., 2011). In Brazil, living in urban areas predicts higher levels of problem gambling, and having originally come from a rural region plays an important role in these rates (Tavares, Martins, Zilberman, & el-Guebaly, 2002). In Southeast Asia, gambling participation is high among rural residents and seen as an important social activity (Fong & Ozorio, 2005; Park et al., 2010; Williams et al., 2013; Wong & So, 2003).

In summary, in some countries there appears to be higher participation in gambling in rural areas. However, this does not always translate into higher risk of gambling problems, as measured by the CPGI (Brooker, Clara, & Cox, 2009). As with urban gamblers, access and opportunity are predictors of the problem in rural settings, particularly with EGMs/slot machine play and traditional track betting. Little information is available from the myriad of prevalence surveys beyond simple participation levels. Few surveys break down rural residents by demographics or gambling style and preference.

### **Rural Gambling within Sub-groups of the Population**

Certain population sub-groups are considered to be at greater risk of both gambling participation and problem gambling (Stevens & Young, 2009; Vander Bilt, Dodge, Pandav, Shaffer, & Ganguli, 2004; Welte, Barnes, Tidwell, & Hoffman, 2008). To date, little distinction has been made between such sub-groups and whether they live in rural or urban settings.

**Indigenous and ethnic groups.** Indigenous gambling has been shown to be a problem across a number of jurisdictions (Breen & Gainsbury, 2013). A small number of studies have isolated individual difference in indigenous rural communities. Overall, card games are still a popular leisure activity among indigenous people around the world, and particularly for those living in rural communities, but that popularity is on the decline because of access to regulated gambling and the death of older people who instigated the games (Jurisic, 2011).

In New South Wales, Australia, up to 20% of people in Aboriginal communities have a gambling problem, compared with the Australian national average of 2% (Breen, Hing, & Gordon, 2011; McMillen & Donnelly, 2008). In Québec and Labrador, indigenous rural residents rank gambling as the fourth most significant problem (First Nations Health Council, 2006). In Papua New Guinea, increased gambling among indigenous rural residents is seen as a demonstration of increased wealth (Raylu & Oei, 2004). Evans and Topoleski (2002) noted that four years after the introduction of casinos in rural Native American tribal areas, there was a 10% increase in bankruptcy rates and certain crimes. Further, rural Native American and Hispanic Americans have a higher risk of gambling problems (Westermeyer, Canive, Garrard, Thuras, & Thompson, 2005). In Malaysia, rural ethnic groups are over represented in gambling participation, where it is the main form of entertainment (Tan, Yen, & Nayga, 2010).

**Youth.** Overall, young people gamble less in rural areas (Volberg, Gupta, Griffiths, Olason, & Delfabbro, 2010). In rural communities, males are more inclined to gamble (Fabiansson, 2006). Although male rural youth participate more in gambling, their female counterparts are at greater risk of developing a problem (Fabiansson, 2012, p.172; Thomas, 2004). Informal forms of gambling (card games/sports betting) are more common in rural areas, with higher participation by adolescents (DiCicco-Bloom & Romer, 2012).

Exposure to gambling by parents is indicated as a potential risk factor in rural compared to urban adolescents as a result of the scarcity of social outlets in rural areas (Fabiansson, 2008). The presence of social control and social cohesion in small rural communities, where most people are known by name or by appearance, are likely to prevent underage young people from trying to buy lottery tickets from shopkeepers and newsagents, to gamble at hotels and clubs, or to use betting offices (Fabiansson, 2008). It is more likely that the gambling is undertaken together with parents, siblings or friends, thus emphasizing the social nature of gambling in rural communities (Hardoon & Derevensky, 2002). However, in both the USA and Canada, rural youth gamblers show high participation with slot machines without parental involvement (DiCicco-Bloom & Romer, 2012; Wilson & Ross, 2011). In China, rural youth see gambling as a means of getting rich quickly (Liu et al., 2013).

**Gender.** It is largely accepted that adult male gamblers are at a higher risk of developing problem gambling (Hing, Russell, Tolchard & Nower, 2014). In the Philippines, Matejowsky (2003, p. 148) stated that, “no group is more avid in these pursuits than rural males.” However, there are gender differences in preference; with female bingo players showing a greater vulnerability for risky gambling in rural areas of the USA (Cousins & Witcher, 2007). It also has been noted that the social isolation for rural women increases their vulnerability to gamble as a means of having perceived interaction with other people (Aston, Comeau, & Ross, 2002). In rural China, mahjong is so popular among female sex workers that they often refuse to participate in any other activities (Weeks et al., 2010).

**Older adults.** There is little research into the rates of problem gambling and behavior among older adults in rural areas (Bjelde, Chromy, & Pankow, 2008). In one study based in Wisconsin, USA, it was noted that although problem gambling rates are generally lower in rural towns, those who present with a problem are older (Pasternak & Fleming, 1999). In the

USA and China, older adults in rural areas stated there are few social opportunities, so card playing becomes the norm (Hope & Havir, 2002; Steinmüller, 2011).

### **Perceived Benefits of Rural Gambling to the Community**

Rural gambling conjures up many images and feelings in different parts of the world. In post-colonial countries, including the United States of America and Australia, it was seen as a means by which new communities could establish themselves (e.g., rural horse racing funded the establishment of local amenities; Gallagher, 2012; Hoye & Nicholson, 2012). Today, the importance of gambling to rural communities remains a topic for discussion. For some rural residents, gambling is simply part of a larger social process of gathering and interacting as a community at certain times of the year (Boyd, 2013; Curnow, 2012; Steinmüller, 2011). Commonly, dice and card games were the source of gambling, and community members shared the wins and losses among themselves (Bernhard, Dickens, & Shapiro, 2012; Keenan, 2012). In some rural cultures, animal sports such as cockfighting, hare coursing, and bull fighting are the source of betting (Chaiyakot & Visuthismajarn, 2012; Huggins, 2012; Klien, 2013). In Australia, rural gambling is associated with skill-based games such as cards (Stevens & Young, 2010).

Gambling opportunities can have a positive impact on areas of social deprivation through the employment of local people at gambling venues, feeding back profits from gambling into the community, and sponsoring local events (Pickernell, Keast, Brown, Yousefpour, & Miller, 2013; Richard, 2010). Commercially deprived areas can attract outside money from gambling visitors and the business they generate (Adams et al., 2004). For example in Ontario, Canada, of 24 gaming facilities, 21 have been established in small or rural communities (Norris & Tindale, 2006). In Australia, horse racing is still considered a cornerstone of life in rural towns (McManus, Albrecht, & Graham, 2012).

A national study of gambling in Australia, suggested that there are potential benefits

of gambling in rural areas (Productivity Commission, 2010, p. 13). This study identified the potential negative effects of some harm minimization approaches, common in urban areas, being used in rural communities. For example, the relocation or removal of automated teller machines (ATM) from gaming areas in hotels and pubs could be problematic if there are no banks in town. Other harm reduction approaches, including setting cash limits for gamblers and paying large wins in the form of checks were considered to be less effective in rural areas than they would be in urban settings, again because of concerns about access to banks (Productivity Commission, 2010, p. 13).

In Australia, it has been suggested that rural horse racing provides social and financial benefits to local communities (Hoye & Nicholson, 2011). However, because of poor financial viability, rural racing is in decline. Similarly, rural casinos/racinos (slot machines based in the grounds of a horse racing track) provide employment and increased wealth for rural communities even with the cost of problem gambling to some individuals (Lee, Kang, & Reisinger, 2010; Pender, Reeder, & Marré, 2012; Shannon & Mitchell, 2011). In the USA, reservation gambling is considered to have saved a number of rural tribal areas because of the influx of revenues from gaming by non-residents (Taylor, Krepps, & Wang, 2000), including health benefits such as a reduction in diabetes, hypertension, and asthma (Wolfe, Jakubowski, Haveman, Goble, & Courey, 2010). In the smaller rural towns of Alberta, Canada the presence of slot machines may mitigate against petty crime, such as shoplifting, and could therefore be seen as a positive (Humphreys & Lee, 2010).

In China, Shaw (2006) observed that elderly couples were becoming daily gamblers as a means of increasing social activity. However, although not betting large amounts, they were ignoring other aspects of their lives, including health and relationships with children. Overall, gambling offers an opportunity for better social engagement in older residents especially with greater access to online technologies. In fact, Internet gambling was listed as

one of the top ten activities listed by participants in all older age groups in rural areas (Warburton, Cowan, & Bathgate, 2013).

In summary, gambling can be seen as good for rural communities, particularly as a focus for social activity and when it brings employment and money into the region. It helps to circulate money throughout the community and can provide additional revenue, particularly if tourist dollars are spent on gambling. However, although there may be a perceived social support and other benefits from the practice of gambling by rural residents, social harms also emerge that can lead to financial and other problems (Norris & Tindale, 2006; Steinmüller, 2011; Tirachaimongkol, Jackson, & Tomnay, 2010), as discussed in the next section.

### **Perceived Negative Consequences of Rural Gambling**

The introduction of commercial and legal gambling in Australia has changed the dynamic for many rural communities. Rather than sharing gaming winnings and losses, as was the tradition, the need for greater profits by local clubs and casinos has created a negative impact whereby money is lost from the community (Park & Stokowski, 2009). The expansion of gambling often involves more slot machines, locating casinos in large rural/urban boundaries, and allowing a greater diversity of lottery and instant scratch cards to be introduced (St-Pierre, Walker, Derevensky, & Gupta, 2014). Unfortunately, these forms of gambling have a disproportionate effect on lower socio-economic groups (Petry & Blanco, 2013; Productivity Commission, 2010).

For example, a town in rural South Australia had significantly higher numbers of machines per population (20 machines/1000 residents) than urban and suburban areas (5.4 machines/1000 residents) and local residents spent twice the state average on the machines (Marshall, 1998). Further, in rural South Florida, businesses showed a significant loss in trade when they were situated more than 30 miles from a casino (Board, 2013). In Canada, the overall percentage of income spent on gambling is higher in rural areas (MacDonald,

McMullan, & Perrier, 2004). With this association between gambling density and problems, the level of gambling opportunity in rural settings is of concern (O'Neil et al., 2004; Storer et al., 2009).

A number of studies indicate that the introduction of gambling has led to serious problems for rural communities, including prostitution (Carlson, 2012; Loo, Tsai, Raylu, & Oei, 2014), organized crime (Chin & Finckenauer, 2011), greater financial hardship (Chen, Dowling, & Yap, 2012), relationship breakdowns (Nichols et al., 2004), and parental neglect (Loo, Tsai, Raylu, & Oei, 2014; Nower & Blaszczynski, 2004). Gambling has been clearly linked to homelessness (Cloke & Milbourne, 2006, p.63). In rural India, male gambling results in more pressure on partners to take control of family affairs (Nandal, 2013). Rural women who experience lower participation and prevalence of gambling need to protect the financial status of rural families (Joffe, 2007).

The existence of illegal gambling in rural areas is well documented (Desierto, Nye, & Pamintuan, 2011; McElwee, Smith, & Somerville, 2014). Both crime and rising prostitution are reported in a number of countries connected to both legal and illegal gambling activity (Cheng et al., 2013; Richard, Blaszczynski, & Nower, 2014; Xiang, 2012). There is a large illegal gambling market is reported in Viet Nam, which is further complicated by extensive money laundering by organized crime syndicates known as the "Black Society" (Le, 2013).

Crime is associated with the introduction of gambling opportunities and is linked with other negative social issues such as bankruptcies, destruction of family relationships, prostitution, divorce, and alcoholism (Back & Lee, 2012; Bryceson & Jønsson, 2010). For example, rural residents in Cyprus believed that a new casino would lead to increased crime, including domestic violence and prostitution (Alipour & Vughaingmeh, 2010). Similar concerns were expressed in Bangladesh, where it was stated that male gamblers are frequently reported to beat their partners after gambling losses (Schuler, Hashemi, Riley, &

Akhter, 1996).

In places where all gambling is illegal, such as Hawaii, one report stated rural Filipino workers were worried that their previous convictions for gambling may negatively impact on them if they were to lose their jobs and, as a result, they are prepared to work for lower wages (Anderson, 1980). There has been a rise in legal gambling on the Viet Nam and Chinese border to capitalize on the growing desire for gambling by wealthy Chinese visitors who are not legally able to gamble in their own country (Wah, 2008). Also, it is reported that many rural residents in China turn to crime in order to fund their gambling (Cheng, Smyth, & Sun, 2013). Throughout Southern Africa, women are used to collect illegal gambling losses across borders (Hübschle, 2014). There also are examples of individuals seeking positions of power in order to protect their illegal gambling concerns. This was shown in Thailand where an increase in rural female political leaders allegedly occurred because they wanted to protect their illegal gambling and prostitution activities (Nishizaki, 2011).

There are connections between other forms of crime and gambling. Sales from illegal hunting in South African game reserves are used pay for gambling (Grey-Ross, Downs, & Kirkman, 2010), as well as to pay off gambling debts (Herbig & Warchol, 2011). Similar issues are reported in other countries, including Algeria (Meddour-Sahar, Lovreglio, Meddour, Leone, & Derridj, 2013) and Latin America (Ungar, 2013). Finally illegal blood sports, such as dog/cock-fighting, still prevail in rural areas all over the world (McElwee, Smith, & Somerville, 2011) including Australia (Mogbo, Oduah, Okeke, Ufele, & Nwankwo, 2013), the USA (Davis, 2013; Johnson, 2014), many parts of Asia (Bettencourt, Tilman, Henriques, Narciso, & Carvalho, 2013; Li, 2014; Trémon, 2012), and the United Kingdom (Nurse, 2013).

In summary, problems associated with rural gambling are numerous including higher levels of crime, prostitution, financial hardship, bankruptcy, and relationship breakdown.



These problems are associated with both legal and illegal gambling. However, help for problem gamblers is often hard to find in rural communities, as described in the next section.

### **Help for Problem Gamblers**

Gambling is a public health concern, with prevalence rates of problem gambling climbing with greater accessibility of multiple forms of play including conventional land-based facilities and the burgeoning Internet market (Shaffer & Martin, 2011). There are clear links with accessibility to gambling opportunities and increased problem gambling (Productivity Commission, 2010, p.1). This is particularly problematic in rural settings where gambling is inextricably linked with other risky behaviors, such as alcohol use, and socio-demographic variables including poverty, poor housing and unemployment (Carrington, McIntosh, Hogg, & Scott, 2011). To date, no comprehensive review has been produced that identifies both the overall risk of rurality on problem gambling rates, and the variation across sectors and nations with regard to the problem.

There are limited opportunities for rural gamblers to find help and support in rural areas, in particular specialist gambling help (LaBrie et al., 2012; Ludwig et al., 2013; Weinstock et al., 2011). Regardless of the prevalence rates of the problem, once developed, the question is whether the person is able to seek help successfully. To date, research would suggest this not the case (Ludwig et al., 2013; Tse et al., 2013). In one report, rural gamblers indicated they were more aware of treatment services than their urban counterparts; however, this did not translate into help-seeking behavior (Gainsbury, Hing, & Suhonen, 2014). Treatment services are often urban-based with limited rural outreach (Tolchard & Battersby, 2001, 2013).

There is improved technological connectivity in many rural areas, mainly in developed countries (Anand, Pejovic, Belding, & Johnson, 2012; Quadri, Mehedi Hasan, Farhan, Ali, & Ahmed, 2011). Access to cellular phones is growing in all jurisdictions

(Kwong, Ngoh, Chieng, & Abbas, 2011). With this increase in remote technology, Internet and mobile treatment services have become available for a range of physical and mental health problems (Chow et al., 2013; Proudfoot et al., 2013), including gambling (Hodgins, Fick, Murray, & Cunningham, 2013). To date little has been reported on the use of these programs by rural gamblers.

Other initiatives are in place to assist problem gamblers, in particular self-initiated programs such as self-exclusion (Hing, Nuske, Tolchard, & Russell, 2014; Hing, Tolchard, Nuske, Holdsworth, & Tiyce, 2014), and industry controlled programs, including mandatory limit setting (in terms of money wagered each game; Kim, Wohl, Stewart, Sztainert, & Gainsbury, 2014), pre-commitment (the maximum amount a person is willing to gamble in one session; Ladouceur, Blaszczynski, & Lalande, 2012), and restricted gambling time (Wood, Griffiths, & Shorter, 2014). The evidence for these interventions is mixed, with no distinctions regarding their effectiveness in rural versus urban communities (Nower & Blaszczynski, 2010). However, two papers on the use of cognitive-behavior therapy, including exposure, with problem gamblers in rural setting demonstrated good outcomes but they were not randomized studies (Oakes, Gardiner, McLaughlin, & Battersby, 2012; Riley, Smith, & Oakes, 2011).

## Discussion

Rural areas share many of the same benefits and problems associated with the introduction of gambling opportunities (Basham & Luik, 2011). Certain rural gambling activities, such as horse racing, are considered to provide strong social cohesion in rural communities. In some cases, there is a boost to rural employment rates and a reduction in overall deprivation because of increased wealth from gambling revenue (McManus et al., 2012; Wolfe et al., 2010). There also is a downside when rural gambling draws solely from rural residents, with little tourist involvement. Participation in gambling is generally higher in

rural areas (Reith, 2006) but, does not tend to translate into more problem or pathological gamblers (Dellis et al., 2013; Edens & Rosenheck, 2012; Productivity Commission, 2010). Access and opportunity to gambling activities remains the strongest predictor of problems in both urban and rural areas. Protective factors in rural areas may include wider community cohesion, whereby people look out for one another, and problematic gambling being identified earlier because the person is known by venue staff (Pender et al., 2012).

Gambling by certain population sub-groups is worse in rural settings. In several countries, indigenous residents show higher prevalence rates for problem and pathological gambling compared to non-indigenous residents in the same areas (Hing, Breen, Gordon, & Russell, A., 2014; Westermeyer et al., 2005). Although informal gambling, such as card playing, continues to be popular, legalized forms of gambling are beginning to alter the dynamic so indigenous gamblers are now losing their money outside the community rather than it being recycled by community members (Winchell, Ramsey, Abrams, Clark, & Evans, 2013).

Both Rural and urban youth are at a greater risk of problem gambling than adults (Raisamo, Halme, Murto, & Lintonen, 2013). Again, there is higher participation in less formal gambling, mainly as a result of controls on youth playing at legal gambling outlets (DiCicco-Bloom & Romer, 2012). Being exposed to gambling by parents is associated with a greater risk among rural compared to urban youth (Fabiansson, 2008). As with urban gambling, males in rural areas have higher participation and prevalence rates of problem gambling compared to females (Welte et al., 2008). However, there are specific issues that raise the vulnerability of rural females, particularly their level of isolation (Fabiansson, 2006). Similar to youth gamblers, older rural residents show increased risk for problem gambling. The desire for social engagement and reducing isolation are factors that influence all older residents to participate in gambling, as it is for rural female gamblers generally

(Norris & Tindale, 2006).

Gambling has been shown to increase negative social issues in rural areas, including illegal activities and personal relationship problems (Chin & Finckenauer, 2011; Nichols et al., 2004). Rural areas are often the target of organised crime, which introduce illegal gambling events and combine it with other vices, such as prostitution (Desierto, et al., 2011; McElwee, et al., 2014). Rural gamblers themselves turn to crime, in order to gamble or to pay off gambling debts (Cheng, et al., 2013). Access to help is problematic in rural areas (Humphreys & Lee, 2010; Park & Stokowski, 2009).

Taking a classic public health approach, one needs to first raise awareness of the potential harms caused by excessive gambling and then find ways of intervening as early as possible once a problem begins to develop. Primary prevention needs to start in schools and extend to all areas of social contact (e.g., church, pub and community centers). Policy-makers need to consider the dissemination of a responsible gambling message, which could be embraced by all community members. In addition, citizens need to be encouraged to take a proactive approach when they encounter people who may be developing gambling problems.

Gambling venues could be required to maintain mandated, responsible gambling expectations and to train staff to know when and how to intervene. This may include restricting the use of automated teller machines, limiting credit to customers, and encouraging self-exclusion (LaPlante, Gray, LaBrie, Kleschinsky, & Shaffer, 2012). The accessibility, availability, and acceptability of treatment need to be in place (Oakes, et al., 2012; Riley, et al., 2011). With the increase in rural technologies, this may include online services, mobile phone applications, or traditional counseling. Those groups most at risk should be targeted, including young males, older residents, and ethnically diverse people. Alternative activities can be developed by community members to encourage less isolation and therefore reduce the need for individuals to choose gambling as an outlet.

More research is needed to understand the potential protective factors associated with rural settings within and across different countries. Identifying such protective factors would enable communities to become more active in tackling gambling related harm. The impact of government and industry policy requires careful consideration to enable better translation to rural settings.

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