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AN EXPLORATION OF PATHOLOGICAL GAMBLING AMONG DIVERSE
POPULATIONS

by

AYANA N. PERKINS

Under the Direction of Dr. Ciara Smalls

ABSTRACT

This study used an ecological perspective to identify pathological gambling (PG) risk and protective factors, nonclinical resources, and prevention strategies based on the perceptions of Georgia stakeholders. With an ecological perspective, human behavior is perceived as an outcome of the interaction between the individual and various factors in their social environment. The ecological perspective is especially suitable for examining the higher PG prevalence among ethnic minority groups since these populations have been documented as encountering greater exposure to PG social and environmental risk factors (Smedley & Syme, 2000). To assess prevention needs, data were obtained from a 2008 DBHDD needs assessment where diverse perspectives were collected through semi structured focus groups and interviews. A qualitative approach was used to address the study aims. Grounded theory was used to guide the data analysis. Findings indicated that community perceptions of risk and protective factors, nonclinical resources, and prevention strategies were present at multiple levels of analyses. Furthermore, data trends also indicated that charitable gambling and other social norms should be considered in prevention.

INDEX WORDS: Pathological gambling, Addiction, Community, Prevention, Ecological perspective, Behavioral health, Stigma, Qualitative Analyses, Focus group, Interview

AN EXPLORATION OF PATHOLOGICAL GAMBLING AMONG DIVERSE
POPULATIONS

by

AYANA N. PERKINS

A Dissertation Submitted in Partial Fulfillment of the Requirements for the Degree of

Doctor of Philosophy

in the College of Arts and Sciences

Georgia State University

2012

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2012

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POPULATIONS

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May 2012

ACKNOWLEDGEMENTS

I am thankful for the faith, and love from the Most High, my Ancestors, my family, and friends. This support motivated me to complete this task. I am grateful to have these spiritual and social resources always available to me.

I also feel honored and extremely lucky to have worked with such a great committee team. My committee worked well together. Your dedication to my project speaks volumes about your character and your commitment to the program.

I especially want to thank my Chair, Ciara Smalls for her support during this process. Dr. Smalls is a dedicated researcher with a commitment to excellence. I was very pleased to have the opportunity to work with her. Dr. Smalls was especially gifted in maintaining my vision for theoretical framework and analysis, while providing astute advice on clarifying key arguments.

Similar sentiments are felt towards my four Committee Members, James Emshoff, Gabe Kuperminc, Kelly Lewis, and Akihiko Masuda. Each of these members offered very helpful feedback in the design of this research project. I have worked with my research advisor, Dr. Emshoff for over 4 years, and his feedback is always supportive, timely, and clear. Likewise, Dr. Kuperminc has always served as a compassionate academic advisor and has offered extensive support in the dissertation process. Dr. Lewis has provided meticulous reviews of my work as well as encouraging words to assist me in this dissertation process. Dr. Masuda was very helpful with guidance in refining the data analytic process to reflect more defined parameters and greater transparency.

This process has been liberating and helpful in refining my research focus. I am looking forward to using these lessons learned in upcoming projects.

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Chapter 1. Introduction

The purpose of this study is to determine which perceptions of biological, social, and psychological factors are more associated with pathological gambling behavior and prevention across diverse populations. Pathological gambling (PG) literature in the United States and abroad has consistently reported that low-income populations and ethnic minorities are at greatest risk for developing gambling problems (Clarke et al., 2006; Momper, 2010; Volberg & Wray, 2007; Welte, Barnes, Wieczorek, Tidwell, & Parker, 2001). Further, economic studies indicate that proper protection against PG and other consequences of legalized gambling have not been established in the United States (Grinols, 2004). Despite considerable data that indicate economic, racial, and ethnic disparities exist in PG prevalence, few intervention studies have investigated if needs vary across communities. In-depth community perspectives on PG are scant because there is greater use of quantitative research methods in the field of gambling and PG (McMillen, 2007; Stebbins, 2007). Exploring different perceptions of pathological gambling and its influential factors can provide valuable information on the appropriateness of current PG prevention efforts for diverse populations. Commercial legalized gambling has existed intermittently since colonial America (Clotfelter & Cook, 2009; Grinols, 2004; Dion, Phillip-Labb, Giffard, Collin-Vezina, & De La Sablonni-Labbe, 2010; Nelson, 2009). Despite historical documentation of the negative consequences of gambling, disordered gambling has not been studied as extensively as other behavioral health disorders such as substance dependency (Thompson, 2001). PG was not officially recognized as a clinical disorder until 1980 (Thompson, 2001). This original diagnostic description was primarily based on the criteria for substance dependency (Thompson, 2001). Diagnostic criteria were later refined to become more specific to the PG experience. Greater refinement is needed for PG intervention since factors

such as settings and social norms are minimally addressed in PG intervention strategies (Raylu & Oei, 2004). Additional research in these documented areas could explain the higher PG risk experienced by many vulnerable populations.

The current study was inspired by findings from a 2006 PG prevalence study in Georgia (Emshoff, Anthony, Lippy, & Valentine, 2007a). The findings indicated four characteristics related to higher risk for PG: being male, ethnic minority status, low access to resources, and education (Emshoff et al., 2007a). Based on the 2006 study's findings, the Georgia Department of Behavioral Health and Developmental Disabilities (DBHDD) sponsored a 2008 needs assessment to further examine the awareness, prevalence, and intervention needs of diverse Georgia stakeholders (Perkins, Emshoff, Mooss, & Zorland, 2009). In the first analysis of the 2008 needs assessment, findings indicated that most participants had low awareness and low utilization of local clinical treatment resources for PG. These findings indicated a need to study community support for an alternative to clinical treatment: prevention.

This study used an ecological perspective to identify: a) risk and protective factors for PG prevention, b) nonclinical resources, and c) PG prevention strategies. Data were obtained from the 2008 needs assessment. Diverse perspectives were collected through semi structured focus groups and interviews. Gathering open ended responses from community members was prioritized in order to learn more contextual details about known ecological factors and identify new factors influencing PG prevention needs. A qualitative approach was used to address the study aims. Grounded theory guided the data analysis.

The first two chapters of this document provide an overview of the study. Chapter One is organized into three major sections: Introduction, literature review, and significance of study. Chapter One is designed to introduce the reader to the context and significance of this topic.

Chapter Two's methodology section describes the data source and the methods used to collect and analyze these data. Chapter Three reports the findings of the data collection. Chapter Four discusses support of hypotheses and the implications of the findings. To increase clarity in document, definitions of major terms are provided below.

Definition of Terms

Definitions of commonly used terms are provided for the ease of the reader. The following terms are defined: a) culture, b) ecological perspective, c) ethnic minorities, d) gambling, e) high-poverty area, f) intervention, g) pathological gambling, h) prevention, i) problem gambling, j) pro-social, k) protective factor, l) risk factor, and m) risk perception.

Culture. Culture is defined as behavior norms and beliefs valued within groups and settings. This definition of culture extends the general meaning beyond race and ethnicity and acknowledges that culture can originate from other sources such as neighborhood and organizational settings (Trickett, 2009; Warner, 2003). Some researchers have noted the emergence of subcultures in neighborhoods that promote gambling behavior (Shaw & McKay, 1969; Warner, 2003). Researchers have associated the social norms of greater tolerance within Catholic Church with a higher frequency of gambling seen among followers of this spiritual tradition (Lam, 2006; Walker, 1992). Within each of these settings, it is assumed that the adoption of associated cultural values of these settings could contribute to PG risk.

Ecological perspective. This theoretical approach is designed for prevention intervention. Kelly intended its use for multiple stages of intervention: assessment, development, and implementation. This perspective is also known as the ecological analogy or ecological metaphor (Kelly, 1966; Trickett, 2009). The ecological perspective has not

specifically been applied to gambling in the extant literature, however it is intended to broaden understanding of wellness than just the absence of disease.

Ethnic minorities. This paper uses the term ethnic minorities to refer to the following racial/ethnic populations: African Americans, Asian Americans, Hispanic/Latino Americans, and Native Americans and Pacific Islanders. The categorization of these populations under this term is frequently used by public health organizations such as the Substance Abuse and Mental Health Services Administration and the Centers for Disease Control and Prevention to refer to these very same populations (Centers for Disease Control and Prevention [CDC], 2010; Substance Abuse and Mental Health Services Administration [SAMHSA], 2005; Yancey et al., 2004). These same groups are also identified as ethnic minorities based on five characteristics defined by sociologist Richard Schaefer (1998):

1. “Unequal treatment and have less power over their lives than members of a dominant group,
2. physical and cultural characteristics that distinguish them such as skin color or language,
3. membership involuntary,
4. exhibit a strong sense of group solidarity, and
5. high rates of intermarriage.”

Ethnic minority status has been associated with higher risk of PG and other types of behavioral health disorders (U.S. Department of Health and Human Services [DHHS], 1999).

Gambling. Gambling is defined as “pertaining to risking money or something of value on the outcome of a chance event such as a card or dice game” (Clark, 1987). Other terms for

gambling include wagering or betting (Clark, 1987). This paper refers to legalized gambling unless otherwise specified.

High-poverty area. High poverty area describes a United States census tract with poverty rates at 20% or greater (Roberts et al. 2006).

Intervention. Intervention is defined as an external strategy used to improve health outcomes (Institute of Medicine [IOM], 1994). The Institute of Medicine intervention spectrum has three stages of health intervention which include in order of severity: Prevention, treatment, and maintenance (IOM, 1994). The current study examines the first stage of intervention: prevention.

Pathological gambling. Pathological gambling (PG) is described as a “persistent and recurrent maladaptive gambling behavior that disrupts personal, family, or vocational pursuits” (American Psychiatric Association, 1994). PG is categorized as an impulse control disorder under the Diagnostic and Statistical Manual of Mental Disorders (DSM IV-TR), (American Psychiatric Association, 2000). Clients must exhibit five or more of the 10 DSM-IV criteria associated with pathological gambling in order to be diagnosed as living with this disorder. Some of these symptoms include obsessive thoughts, deception, gambling related crime, and financial loss from gambling.

Prevention. A qualifying characteristic of a successful prevention campaign is the reduction of risks and increase in use of protective factors (DHHS 1999). This paper uses a multilevel definition of prevention that refers to a health promotion strategy delivered at three different levels: Universal, selective, and indicated. Universal prevention is directed at all audiences without specific consideration of individual risk. Selective prevention is directed at

populations deemed to be at higher PG risk. Indicated prevention is directed at stopping the progression of a disorder for those individuals who are experiencing early stages of PG.

Problem gambling. The term, problem gambling, refers to the sub-clinical experience of gambling problems (Blanco, Hasin, Petry, Stinson & Grant, 2006). Disordered and compulsive gambling are often used synonyms for nonclinical diagnosed PG (Hodgins & Holub, 2007; Shaffer, Hall, & Bilt, 1997). Prevalence studies generally capture frequencies of both problem and PG. Research studies that study both problem gambling and PG distinguish problem gambling as the broad range of disordered behavior that does not qualify as a clinical diagnosis of PG (Petry, 2005).

Pro-social. Pro-social refers to behavioral characteristics or beliefs associated with beneficial outcomes (Twenge, Baumeister, DeWall, Ciarocco, & Bartels, 2007).

Protective factor. Protective factors include those variables that buffer the influence of PG risk or minimize expression of PG (Jessor, Van Den Bos, Vanderyn, Costa, & Turban, 1995; Stacy, Newcomb, & Bentler, 1992).

Risk factor. Risks are factors that predispose or influence the development of PG such as genetic propensity for impulsiveness or being born into a lower socioeconomic status.

Risk perception. Risk perception refers to the personal evaluation of harm in decision making (Sjoberg, Moen, & Rundmo, 2004).

Literature Review

Clinical treatment for PG is underutilized among adult pathological gamblers (Edberg, Corey, & Chaleunrath, 2004; Petry & Tawfik, 2001; Petry, 2005; Weinstock, Armentano & Petry, 2005). Some researchers speculate that this low use of clinical treatment is due to lack of awareness of PG among general public and clinical providers (Heriff, 2009; Center for Substance Abuse Treatment, 2004). Further, this low awareness has compelled some gambling researchers to refer to PG as a hidden illness (Abbott, 1999; Phillips, 2005; Verbeke & Dittrick-Nathan, 2008). In addition, low perception of health risk can influence awareness of disease prevalence and treatment seeking (Karan, 2008).

Although low awareness of PG may explain some level of risk, research has not sufficiently investigated which factors are contributing to the higher risk experienced by ethnic minority populations (McMillen, 1996a, b). Gambling studies have predominantly focused on intrinsic motivations for pathology such as impulsiveness or anxiety while de-prioritizing the impact of environmental influence (Gilliland & Ross, 2005; Smedley & Syme, 2000). Ethnic minorities encounter unique stressors that are the outcomes of racism, poverty, and cultural bias that influence susceptibility and prevalence of disordered behavior (DHHS, 1999; Smedley & Syme, 2000). Racism and poverty are also associated with poor mental health (Albee, 1996). Ethnic minorities are also more likely to reside in neighborhoods with high exposure to determinants of PG such as poverty or access to alcohol, tobacco, or other drug (Smedley & Syme, 2000). Research is needed on which setting risk and protective factors influence susceptibility to this disorder for certain population groups. Collecting qualitative data from diverse populations could assist in identifying how susceptibility is increased for high risk populations.

The disease model in PG research has contributed to a predominant focus on treatment rather than prevention (Castellani, 2000; McMillen, 2007). A small proportion of those living with PG seek treatment, therefore much of the research is based on a minority of those living with PG (Milosevic & Ledgerwood, 2010). Additionally, the most established theoretical models in PG research such as behaviorism, typically examine PG as singular choice rather than an amalgamation of influences from different factors (Griffiths & Delfabbro, 2001).

Finally, greater attention is required on an integrative framework that address related factors that can be modified through policy or education (Borrell & Boulet, 2007; Williams, Simpson, & West, 2007). This overemphasis on the more singular focused disease model in gambling research inadvertently implies that other determinants are negligible and that treatment is the most viable solution. Added to this challenge, treatment is an insufficient intervention for many ethnic minorities who do not use mainstream behavioral health resources (Petry, 2005; Raylu & Oei, 2004). In addition to the low utilization of clinical resource, most states' infrastructure is not sufficient to address PG needs (Center for Substance Abuse Treatment, 2004). These barriers to PG treatment indicate that there should be more study in PG prevention. An investment in PG prevention should also be considered since many state governments expand gambling ventures to bolster revenue (Grinols, 2004).

Prevalence of PG among Ethnic Minorities

Significant racial and ethnic disparities in PG prevalence has been attributed to lower socioeconomic status, earlier exposure to gambling, a more severe experience with later onset, and substance abuse (Alegría et al., 2009; Barnes, Welte, Hoffman, Tidwell, 2010; Momper, 2010; Volberg & Abbott, 1997, Welte, Barnes, Wiczorek & Tidwell, 2004; Whitton, & Weatherly, 2009). Attributing risk to these aforementioned factors has some merit but full

understanding of risks is limited since most research has been quantitative in nature. Without offering research participants' opportunity to at least provide context of risk or protection, PG intervention research may fail to identify how risk is elevated in vulnerable communities. Additionally, most PG adult prevention research excludes the social factors that have been associated with PG for ethnic minorities such as level of acculturation or immigration status, length of stay or neighborhood characteristics (Barry, Stefanovics, Desai, & Potenza, 2011; McDonald & Steel, 1997; Marshall, Elliott, & Schell, 2009; Petry, Armentano, Kuoch, Norinth, & Smith, 2003; Raylu & Oei, 2002; 2004).

PG treatment studies often report that most individuals living with PG rarely seek clinical treatment for this behavioral disorder (Cunningham-Williams et al., 2005; Kessler et al., 2008; Petry, 2005, Slutske, 2006). Suurvali, Cordingley, Hodgins, & Cunningham (2010) collected data on the barriers to PG treatment seeking. Suurvali and colleagues (2010) reported the common reasons for declining treatment included (a) shame, (b) an interest to self manage PG, (c) absence of treatment information, (d) not valuing available treatment, or (e) not having the time or money to invest in treatment. Ethnic minorities, a high risk population for PG, are also less likely to seek treatment for PG, a behavioral choice that has broader implications for those with normal PG risks (McDonald & Steel, 1997; Minas, Silove, & Kunst, 1993; Productivity Commission Report, 1999; Raylu & Oei, 2002). Ethnic minorities are more likely to receive inadequate treatment or diagnosis as a function of lower access to resources or their minority status (Agency for Healthcare Research and Quality, 2010). Empirical studies have indicated that income alone can predict quality of health care with lower income groups receiving behavioral health care that is inferior to middle and upper income populations (Agency for Healthcare Research and Quality, 2010; Kuno & Rothbard, 2005). Research in mental health settings has

also documented that ethnic minorities are more likely to receive a more severe diagnosis than majority populations, a finding which could explain why clinical resources are not used (Hays, McLeod, & Prosek, 2009; Gunshue, 2004; Rosenthal, 2004; Jenkins-Halls & Sacco, 1991; Li-Repac, 1980). Ethnic minorities and other marginalized populations are often at higher risk for co-occurring chronic health conditions which further explain how low utilization of clinical resources is problematic (Smedly & Syme, 2000). Since the PG risk of ethnic minorities appears to be the outcome of risk from normal exposure to gambling as well as risk based on aforementioned marginalizing factors, a comprehensive prevention framework has been adopted for this study.

Ecological Prevention Framework

PG is well recognized as a complex disorder that emerges from the interaction of multiple factors such as genetics, personality, settings, culture, and access (Blaszczynski & Nower, 2002; 2007; Griffiths & Delfabbro, 2001). Although the use of an ecological perspective has not been reported in PG research, James Kelly, a leader in community psychology, recognized early in his career the importance of examining how human behavior is shaped by multiple ecological determinants (1966). Kelly conceptualized an ecological perspective to guide the development of community interventions that would lead to improved individual and community functioning. This framework defines behavior as an outcome of person-environment interaction rather than an outcome of a single variable, making it especially suitable for PG, a disorder with multiple influences. Additionally, the ecological perspective encourages researchers to learn about the community's adaptive response, preexisting resources, histories, and the interdependent nature of community residents and their settings. To learn the intricacies of a social problem requires gathering data from affected community members in order to discover new aspects of social

issue, such as learning about PG prevention needs from community members who live in a state where gambling is legalized. Kelly emphasized the need to gather alternative data in order to facilitate new directions of inquiries and discover new variables, as seen in the following quote:

“The focus for ecological concepts is not to verify them but also to stimulate thinking as well as discover new facts about the ways in which different persons and social settings are not connected” (Kelly, 2006, p. 254).

Kelly work was later advanced by his former graduate student, Edison Trickett (1998) who expanded the ecological perspective on community intervention to include multiple levels in human ecology and culture. Multilevel interventions are generally described as more effective than individual level interventions since their comprehensive design illuminates the multiples risk and protective factors for a defined illness as well as leading to the enhancement of different aspects of community systems to support individual behavior change (Durlak, 1998; Ellis, 1998; Trickett, 2009). Moreover, a PG prevention framework centered on key ecological levels in the social setting that could address the complexity of PG needs for ethnic minority populations.

Nonclinical resources. One of the complexities of addressing PG prevalence among ethnic minorities is the low utilization of clinical resources. Thus, it becomes important to assess which alternative resources are valued when assessing the needs for PG prevention initiatives for diverse populations. Discovering the resiliencies of a community is also more empowered approach for community research (Harvey, & Tummala-Narra, 2007). This empowered approach balances the current overemphasis on community deficits (e.g., poverty) and encourages the scientific community to become active partners with community stakeholders (Prelow, Weaver & Swenson, 2006). Due to the general reluctance of ethnic minority communities to seek assistance from clinical resources, prevention needs are even more

important. Since nontraditional help seeking is relatively unexplored in previous PG research, learning from community members about where resources are sought and why these alternatives are chosen, could expand our understanding of diversity of need in PG. Furthermore, the identification of nonclinical resources could also assist with the design, dissemination, and implementation of prevention messages at each level of the community.

Absence of Integrated Approach.

Gambling researchers, Robert Williams and Robert Simpson (2008) recommended the integration of singular prevention strategies in their article on the best practices of PG prevention (2008). According to these authors, previous prevention studies have generally included singular approaches, either educational or policy prevention strategies (Williams & Simpson, 2008). However, these strategies are enhanced when combined since each strategy has its own limitations (Williams & Simpson, 2008). One example referenced in Williams and Simpson (2008) article described how gambling outlets promote responsible gambling while still placing automatic teller machines in close proximity to gambling devices.

Policy prevention strategies were more likely to include modification of an ecological setting to reduce risk. These prevention strategies include removal or banning more harmful gambling activities, creating or managing enforcement of policies or laws that limited access to gambling services (Carr, Buchkoski, Kofoed, & Morgan, 1996; Williams et al., 2007). The limitation of this prevention approach is that policy efforts are often not consistently enforced.

Educational prevention strategies for PG include social marketing and PG training workshops and curriculum models. Social marketing is the more widely recognized PG prevention strategy and can be used for each level of the population (Williams et al., 2007). Social marketing utilizes traditional marketing approaches to improve health behavior (Harvey,

1999; Hastings, 2007). PG training and curriculum model offers a longer duration of exposure to health information, and has included content on signs and symptoms, cognition errors, probabilities of winning, and coping skills (Williams, Connolly, Wood, & Currie, 2003; Williams, Connolly, Wood, Currie, & Davis, 2004). Audiences for the curriculum and training models has included youth, colleges students, and employees at gambling venues (Hing & Breen, 2008; Williams et al., 2003; Williams et al., 2004). This style of prevention is typically used for smaller audiences as compared to the larger reach of social marketing. The limitations of education prevention include short term retention of information and mixed findings on behavior change after receiving intervention.

A final note is that most gambling prevention funding is often less than 1% of gambling revenue for most states (NAASPL, 2011). In Georgia, 200,000 dollars is allotted for prevention and treatment, while the advertising budget exceeded 20 million in 2009 (Georgia Lottery Corporation, 2009). Although it is expected that funding limits the scope of many prevention services, greater awareness on interdependent nature of individual and setting level risks could lead to more financial support of integrated PG prevention strategies.

Ecological Levels

Trickett and other researchers have championed expanding the focus of behavior to levels beyond the individual since intervening factors in behavioral development and expression has been linked to multiple levels of the human ecology (Bronfenbrenner, 1979; Durlak, 1998; Trickett, 2009). However, the practiced knowledge of this interdependence has not been adequately implemented in PG prevention (Williams et al., 2007). Trickett often refers to the heterogeneity of communities and even stated that “There is no consensual blueprint for how to get to know communities (Trickett, 2009, p.261).” For this study, community is defined as a

“residential area with limited geographic boundaries such as a neighborhood” (Nation, Wandersman, & Perkins, 2003). The four ecological levels within the community were chosen based on risks and protective factors identified in the literature and an ecological health promotion model conceptualized by McLeroy and colleagues (McLeroy, Bibeau, Steckler, & Glanz, 1988). The four levels include intrapersonal, interpersonal, organizational, and neighborhood and are graphically depicted in Figure 3. Each ecological level still possesses the characteristic reciprocal causation that is typically associated with multilevel ecological systems models (Bronfenbrenner, 1979; McLeroy et al., 1988; Trickett, 2009). This model lists strata specific variables such as social groups and family which are only found on the interpersonal level. There are also variables that can be found across levels such as nonclinical resources. A description of each level and related research on risk and protective factors, nonclinical resources and prevention strategies found within these levels is found in the text below.

Intrapersonal level risk and protective factors. Historically, prevention science has more often concentrated more on risks than protective factors; a trend that is also seen in PG prevention (Durlak & Wells; 1997; Durlak, 1998; Williams et al., 2007). Risk and protective factors include the biological, social, and psychological characteristics indirectly or directly related to PG. Each introduction of additional risk or protective factor exponentially increases vulnerability or protection against PG for an individual (Durlak, 1997; 1998).

Across numerous gambling studies, individual risks noted for PG include substance dependence, social isolation, poor coping skills, low awareness of probabilities, and antisocial behavior (Alegria et al., 2009). A national survey conducted among 10,765 college students found specific characteristics associated with protection against PG which included valuing the importance of art or religion, and having a parent with a bachelor’s degree (LaBrie, Shaffer,

LaPlante & Wechsler, 2003). Intrapersonal risk factors documented in this national study included ethnicity, gender, and a history of substance abuse. Other types of intrapersonal risk factors were found in a telephone survey of 1142 adult residents in Missouri and Illinois (Cunningham-Williams et al., 2005). Cunningham-Williams and colleagues (2005) identified novelty-seeking and unemployment as two significant risk behaviors for PG. Monthly church attendance was identified as the only significant protective factor that emerged (Cunningham-Williams et al., 2005).

Intrapersonal level nonclinical resources. A person's belief systems and identity have been linked to positive mental health. Some Asian Americans endorse the use of willpower for improving behavioral health rather than use a psychotherapeutic approach used in most Western countries (Kim, 2005). African Americans have been associated with the use of a spiritual belief system as inner protective resource against disordered behavior (Mattis & Jagers, 2001; Mullings & Wali, 2000). The findings of ethnic identity researchers like Jean Phinney and Thomas Parham indicates that self-ascribed racial identity is associated with the use of positive coping skills and a positive self-concept (Orozco, 2007; Phinney, 2003; White & Parham, 1990). This work suggests that avoidant behavior like problem gambling, may be reduced among individuals who utilize this internal resource. Since gambling has been described as avoidant behavior that is often used to "escape" from unsettling emotions (Blanco et al., 2006; Crisp et al., 2000; Crisp et al., 2004), a positive racial identity or willpower are two individual level resources that could reduce the desire to use gambling as an escape.

Intrapersonal level prevention strategies. Intrapersonal level prevention is directed at maintaining wellness or preventing risk at the individual level. Most prevention strategies are directed at the individual level (Durlak & Wells, 1998; Williams et al., 2007). Among PG

prevention approaches directed at the individual level, educational strategies are used most often (Williams et al., 2007). For most adult prevention campaigns in the United States, the consumer is warned to play responsibly and to avoid problem gambling (NAASPL, 2011; Williams et al., 2007). Examples of individual strategies include social marketing campaigns, providing messages on products, and offering a hotline for those exhibiting signs and symptoms of problem gambling.

Although policy at the individual level is not well documented, self-exclusion is one example of policy prevention strategy at the individual level (Grinols, 2004; O'Neil et al., 2003; Williams et al., 2007; Williams & Simpson, 2008). Individuals that want to protect themselves from developing PG are able to ban themselves from gambling outlets. This ban is more often used at casinos (Bes, 2002; Nowatski & Williams, 2002; O'Neil et al., 2003; Steinberg & Velardo, 2002). Evaluation research has shown limited effectiveness of self-exclusion program due to poor monitoring and enforcement (Ladouceur, Jacques, Girous, Ferland, & LeBlond, 2000; O'Neil et al., 2003)

Interpersonal risk and protective factors. The interpersonal level refers to the networks where the individual is embedded such as the family, peers, or other social groups. Even short-term social networks on the interpersonal level, such as seasonal little leagues, still manage to create social norms influencing the behavior of group members (Fine, 1979). Thus temporary interpersonal networks should also be considered in prevention.

Families are an influential interpersonal network. Adults with problem gambling report early exposure to gambling through family members (Abbott, 1999; Eisen et al., 1998). Families with children under the age of 18 often visit popular destination casino resorts in Las Vegas, Nevada and Atlantic City, New Jersey (Hoffman, 2009). It is common place for adult gamblers

to purchase lottery products as gifts for their under aged relatives (Derevensky, Gupta, Haroon, Dickson, & Deguire, 2003). Generally, these early forays into gambling behavior are considered harmless; yet, recent data indicate that early family exposure to gambling increases risk for problem and pathological gambling with some support seen with increased frequency of gambling problems among adults who have a father or sibling with PG (Derevensky et al., 2003).

What is not well understood is how families protect against PG (Raylu & Oei, 2004). Substance abuse research has indicated that supportive families can assist with protection against substance abuse (Ashery, Robertson, & Kumpfer, 1998; Hawkins, Catalano & Miller, 1992; Kumpfer, 1987; Kumpfer, Baxley, & Drug Control Group, 1997). Families that endorse collectivism, a belief that prioritizes the whole over the individual, are more documented among Asian, African American, Eastern European, and Latino populations (Balaji et al., 2007; Walters & Rogers, 2010). This belief can introduce risk or protection depending on what types of health behaviors are encouraged or normalized (Raylu & Oei, 2004). Researcher have documented that there are gambling preferences associated with race or ethnicity (Clarke et al., 2006; Raylu & Oei, 2004). For example, gambling preferences may translate into risk or protection depending on whether or not a person's culture is accepting of a particular type of gambling (Walker, 1992). This pattern of influence is not typically measured in PG research.

Although many research studies have been able to establish a significant link between the PG behavior of child and parent, non-familial influences are generally related to general interest in gambling and not problem gambling (Hoffman, 2009). This research finding is counter to findings from other non-PG health studies which suggest that health behavior and disease can be predicted by your social network even leading some scientists to suggest that health habits are contagious (Smith & Christakis, 2008). This assertion was recently supported by secondary

analysis of 32 years of data from the Framington Heart Study, where researchers were able to document that weight gain was increased from person to person through their social network, with significantly higher risk found for same sex friends and siblings (Christakis & Fowler, 2007). This same study also found that positive health behavior such as smoking cessation appeared to be facilitated by behaviors of other within social networks (Christakis & Fowler, 2007).

The influence of the non-sanguine interpersonal network is not well understood but PG research on peer social norms suggest risk perception is shaped by descriptive norms. Descriptive norms refer to those norms based on perceptions of peer behavior (Larimer & Neighbors, 2003). Similarly, Larimer and Neighbors (2003) found that descriptive norms were influential in increasing gambling frequency among college students. Sheeran and colleagues (1999) also found descriptive social norms as significantly related to lottery behavior for community participants.

Interpersonal nonclinical resources. The exploration of small groups as an interpersonal resource is a worthy endeavor. Although nonclinical resources has not been well studied in PG, community development research has found that small groups of adults who organize around community gardens are more likely to experience signs of positive psychological health such as reduced social isolation, lower stress levels, and lower rates of crime, all factors that have been found to protect against pathological gambling (Armstrong, 2000; Okvat & Zautra, 2011). These related findings suggest that existing small groups that may not be directed related to gambling could still be used as a resource to intervene in the development or recovery from PG.

Interpersonal prevention strategies. Similar to the intrapersonal level, the prevention efforts more often involve education. Youth gambling prevention campaigns are often directed at youth and their parents so both groups can simultaneously be aware of the risks and offering extra support (Volberg, Hedberg, & Moore, 2008). Further, the interpersonal level has been used for co-occurring PG health disorders such as HIV and substance abuse that utilize small group to disseminate prevention messages (Dembo & Walters, 2003; Erickson & Butters, 2005; Kirby & Keon, 2004).

Organizational risk and protective factors. The inclusion of organizational settings in behavioral prevention reflects the understanding that health is partially determined by organizational resources and policies (McLeroy et al., 1988; Trickett, 2009). Individuals (intrapersonal) and their social networks (interpersonal) can affect health behavior and are influenced by policies and norms established in different community organizations. Worksites and other organizations are ideal for prevention since community members spend a considerable amount of time in these environments.

Experiences within community organizations are related to PG risk factors such as churches and gambling venues (Arizona Criminal Justice Commission, 2006; Carpenter, 2009; Hing & Breen, 2008). Higher risk of PG is found within religious denominations that are accepting of gambling or use gambling for fundraising purposes (Carpenter, 2009). Furthermore, casino employees have been documented as having higher risk from exposure to gambling activities in their workplace (Wu & Wong, 2008). Hing and Breen (2008) interviewed employees at different gambling businesses to identify variables that could predict PG. Risk factors reported by employees in Hing and Breen's 2008 study included overexposure to alcohol, gambling activities, and a culture of frequent gambling. Many of these described organizational

risks could be managed, which could lead to more positive health outcomes for diverse communities.

Protective factors are associated with these same organizations: churches, and gambling venues (DeHaven, Hunter, Wilder, Walton & Berry, 2004; Hing & Breen, 2008). Reduced risk for PG was associated with infrequent attendance of religious services in a survey administered to residents in Missouri and Illinois (Cunningham-Williams et al., 2005). Employees in Hing and Breen's study (2008) on gambling venues were more likely to be protected from PG if they had an accurate understanding of odds, lost interest in gambling due to high exposure to this gambling, and heightened awareness of losses associated with gambling. These summarized findings are supportive of discovering how community organizations could protect against or elevate risk of PG among ethnic minorities.

Organizational nonclinical resources. PG prevention messages may be better received from trusted organizations (Patterson & McKiernan, 2010). Funders of prevention programs often require community based organizations when implementing a health intervention since local organizations can lend influence and support (Nation et al., 2003; Substance Abuse and Mental Health Services Administration [SAMHSA], 2011). Collaboration with churches and other faith based organizations is often desired for health interventions since there is often greater trust and familiarity with these organizations due to their long history in providing social support in local communities (DeHaven et al., 2004; Hofstetter et al., 2010; Jo, Bastani, Yang & Maxwell, 2010). Therefore, engaging a valued organization could enhance PG prevention.

Organizational prevention strategies. There are many prevention initiatives that involve the organizational level. In the United States, gambling venues often support dissemination of prevention messages on gambling products and advertisements, and the

enforcement of state and local policy for underage gambling (Williams et al., 2007). However, the more comprehensive prevention initiatives at this level are outside of the United States. In Quebec, Canada, setting characteristics that increase risk such as dark lighting or chrome fixtures were adjusted to reduce incidence of problem gambling (NAASPL, 2011). In the Netherlands, customers with excessive gambling patterns are identified through computer monitoring, and offered an opportunity to limit their visits (Bes, 2002). In Manitoba and Quebec, Canada and Queensland, Australia, employees are offered training on signs and symptoms in order to identify customers or fellow coworkers who may be at risk (Hing & Breen, 2001; Smitheringale, 2001). In Melbourne, Australia, onsite counseling is available for casino customers (Williams et al., 2007). Although research is limited on this topic, findings indicate that organizational initiatives can be impactful if enforcement is consistent or customers are comfortable seeking resources in these environments (Williams et al., 2007).

Neighborhood risk and protective factors. The neighborhood level of the PG ecological model includes neighborhood characteristics and local policies. In this study, neighborhood characteristics refer to physical conditions and features of a lived environment. Local policy refers to community and neighborhood ordinances and procedures that affect conditions that increase risk for gambling and general access to gambling.

Neighborhood characteristics have been associated with PG risk in the United States and abroad (Welte et al., 2004; Pearce, Mason, Hiscock, & Day, 2007). A gambling study in New Zealand found that neighborhood characteristics contributed to greater odds of gambling and PG than individual factors (Pearce et al., 2007). Specifically, the odds of PG increased when a resident lived near an electric gaming machine or near a sports betting venue (Pearce et al., 2007). Other studies revealed that disparities exist in gambling prevalence between affluent and

high poverty areas (Gilliland & Ross, 2005; Ministry of Health, 2006; Welte et al., 2004).

Despite a small body of research, neighborhood studies have broadened how we understand PG, but are still limited in scope and are dependent upon quantitative methods and mapping systems that draw on preexisting data from public records (Pearce et al., 2007; Welte et al., 2004).

Additionally, other studies that explored neighborhood related variables to PG or determinants of PG (e.g., substance abuse) indicate a need for capturing community level variables. These variables include access to resources, exposure to gambling, and physical conditions of neighborhoods (Pearce et al., 2007; Welte et al., 2001).

Binde identified the economic setting of a lived environment as a contributing factor to gambling behavior in her cross cultural review of gambling behavior (Binde, 2005). Binde's findings indicated that economic disparities were a common precondition to supporting a gambling culture (Binde, 2005). Political scientist Brian Richard discovered a similar finding in his study on economic conditions associated with the legalizations of casinos (Richard, 2010). Lower incomes levels and high rates of unemployment were strong predictors of both gambling legalization and PG in many countries. Legislative bodies in Brazil, India, and other countries with high percentages of resource-deprived settings, have reportedly decided to not legalize gambling in order to prevent PG problems among their citizens with lower access to resources (Richard, 2010).

Some studies have found greater exposure to gambling enterprise in high poverty areas (Wallisch, 1993; Weiss, 1988; Welte et al., 2004). Wallisch (1993) and Welte et al., (2004) found higher rates of PG in urban areas, which is consistent with other gambling research that found links between a locale's social complexity, size, and gambling (Binde, 2005; Pryor, 1977). There is some evidence that neighborhood conditions can increase risk for PG. Studying

adult community residents, Welte and his colleagues (2004) investigated PG risk and neighborhood conditions. In their national study, these team of researchers found that individuals that lived in the most disadvantaged areas had over ten times the PG risk of someone who lived the most affluent areas (Welte et al., 2004). Other studies in New Zealand and Canada found similar PG disparities between affluent and high poverty areas (Gilliland & Ross, 2005; Ministry of Health, 2006).

These same protections for resource-deprived communities do not exist in the United States. First, gambling is perceived as harmless entertainment. Therefore, individuals who develop problems are among the few who have a genetic predisposition for addiction or impulsiveness. Some researchers do acknowledge that increased exposure does pose some risk, but further argue that exposure is not simply based on access and the spikes seen in PG incidence gradually decrease (Abbott, 2007; Shaffer, LaBrie, & LaPlante, 2004). Max Abbott further explains that adaptation to gambling risk can occur over a number of years with spikes in PG subsiding once exposed populations learned to adapt to this risk. According to Abbott (2007), the process of adaptation is also facilitated by the type of gambling laws established and gambling health policies. Despite decades of exposure in many states and countries where gambling has been introduced, disproportionate rates of PG continues to be documented as related to social characteristics such as neighborhood conditions or ethnic minority status (Gilliland & Ross, 2005; Ministry of Health, 2006; Pearce et al., 2007; Welte et al., 2004). The “adaptation hypothesis” also does not fully explain how a state like Georgia with only 3 chapters of GA increases to 15 chapters post legalization of the state lottery (Grinols, 2004). Yet, these 15 chapters remain over a decade after the state lottery was introduced, suggesting a need for this

resource even when the population should have adapted to their initial exposure (Gamblers' Anonymous, 2011).

Local policy. Community leaders of local neighborhoods can also moderate risk by creating policies that either elevate or buffer risk. The Public Gaming Research Institute, the research arm of the North American Association of State and Provincial Lotteries (NAASPL, 2011) asserted the high poverty areas are not disproportionately targeted by legalized gambling enterprises (Burke, 1999). NAASPL attributes this higher concentration of gambling outlets to the zoning differences between high income and low-income neighborhoods. The institute suggests that high-income neighborhoods are more likely to limit the number of stores that sell lottery services and products such as gas stations, supermarkets, and convenience stores; a local policy that also has a protective function (Burke, 1999). Locales that banned electronic gaming machines (EGM) were found to have large reductions in PG prevalence and lower utilization of PG support services such as Gamblers' Anonymous (GA) and PG helplines (Doiron & Mazer, 2001). These research studies highlight the interdependence of organizational and neighborhood risk and provides support for the use of policy interventions that minimize controllable risks.

Neighborhood nonclinical resources. It is expected that just as disadvantaged neighborhoods have been linked to risk for pathological gambling, advantaged neighborhoods with more harmonious living conditions would be identified as a residential nonclinical resource for PG. Neighborhoods that are more socially cohesive are more involved in leadership and creating policies that protecting their residential areas (Nation et al., 2003; Okvat & Zautra, 2011). The potential benefits of neighborhood level resources to PG prevention should also be investigated since other studies have found that there are psychological benefits to these resources (Nation et al., 2003).

Neighborhood prevention strategies. Although published studies on neighborhood prevention are limited, African and Asian countries often place gambling venues only in tourist areas (Richards, 2010). This approach is intended to protect local residents while only exposing visitors to the risks of gambling (Grinols, 2004; McMillen, 1996b, Richards, 2010; Williams et al., 2007). To limit harm extending to local population, this prevention approach requires strict enforcement (Grinols, 2004; McMillen, 1996b).

Significance of the Study

The current study is both practically and methodologically significant because it addresses unmet needs, and collects and analyzes data in a manner that invites new ideas.

Practical Significance

Eliminating conflicting interests. There is not a designated federal agency that specifically studies pathological gambling which may explain why federal funding is limited for this disorder. Interestingly, the gambling industry invests substantial funding in gambling research (Grinols, 2004; Kindt, 2003). Since this industry has vested interest in a more harmless perception of gambling, there is a need for more independent research (Kindt, 2003). Additionally, the utilization of “shadow research”, where the gambling industry finds alternative findings to studies that document harm of legalized gambling also highlight the need for more independent research (Grinols, 2006; Kindt, 2003).

Methodological significance. The diverse needs of communities are difficult to understand without the use of qualitative research methods. Survey prevalence studies are a popular strategy to collect information on community needs in gambling studies (Clarke et al., 2006; Volberg & Wray, 2007; Welte et al., 2001). Survey prevalence studies allow for

recruitment of greater population size. However, qualitative data collected from focus group research would provide the breadth and level of detail for developing a comprehensive perspective of community needs (Stebbins, 2007). Furthermore, engaging community members to discuss their solutions for their problems is an empowering act that is often absent in gambling prevention research. Finally, exploring community perceptions could highlight needs that may not have been discussed in the literature, as well as provide support for the utility of the ecological model for PG prevention.

Research Questions

The current study examines which aspects of the proposed PG ecological prevention model emerges in diverse community conversations about disordered gambling. The data from focus groups and interviews of Atlanta community residents (a history of PG not required) will be analyzed to find which community perceptions are supportive of the major components of the described theoretical model (Figure 3). The primary aims of this study are to assess perceptions of prevention needs in addition to exploring which components of the theoretical model are associated with PG prevention. The primary research questions and hypotheses are:

1. Are perceptions of risk consistent with the ecological model?
 - a. Hypothesis 1a: The perceptions of risk factors will be consistent with the ecological model.
 - b. Hypothesis 1b: The perceptions of protective factors will be consistent with the ecological model.
2. Are perceptions of nonclinical resources consistent with the ecological model?
 - a. Hypothesis 2: The perceptions of nonclinical resources will be consistent with the ecological model.

3. Are perceptions of prevention strategies consistent with ecological model?
 - a. Hypothesis 3: The perceptions of prevention strategies will be consistent with ecological model.

Chapter 2. Methodology

Data were drawn from qualitative needs assessment coordinated from 2008 to 2009 in order to assess barriers and facilitators to PG treatment seeking. The current researcher developed the original study for the Georgia Department of Behavioral Health and Developmental Disabilities. This purpose of the original study was to discover level of awareness of PG as a disorder and whether or not intervention resources were appropriate for the needs of diverse populations (Perkins et al., 2009). In addition to low awareness of PG, findings indicated that there was low utilization of clinical treatment resources and stigma associated with PG (Perkins et al., 2009). Based on these findings, it was important to assess alternatives to treatment especially as populations at higher risk for PG are also more likely to be more vulnerable to other mental and physical conditions (DHHS, 1999). These data were reexamined in the current study with a greater emphasis on *perceptions* of risk and protective factors, nonclinical resources, and prevention strategies. Capturing the perceptions of community participants is recommended for health disparities intervention (Smedley & Syme, 2000). Furthermore, community perceptions could provide insight on how social factors contribute to PG expression, a recognized gap in the literature (Raylu & Oei, 2004; Smedley, & Syme, 2000)

Participants

Participants primarily included English-speaking residents ages 18 and older. Data were collected from 15 focus groups and 6 interviews (See Table 2). Non-English speaking residents

were invited when a translator was available onsite, which only occurred for focus groups held at the Clinic for Education, Treatment and Prevention of Addiction (CETPA). In total, five racial/ethnic groups were included: African Americans, European Americans, Asian Americans, Hispanic Americans, and multiracial identified.

One hundred and twenty-nine community residents completed full interviews or focus groups. The majority of participants indicated that they lived in the Atlanta metropolitan area or in nearby cities located in Georgia. Data on age were not formally collected but field notes indicated that participants ranged between the ages of 18 and 55 years old but the majority appeared to be in their late twenties. Individuals were affiliated with the following racial or ethnic groups such as Hispanic/Latino (33%), African American (33%), European American (24%), Asian (8%), and multi-racial (6%). The multi-racial category was comprised of a) one individual who was of African and European descent, b) two individuals who were African American and Native American descent, c) two individuals with Asian and European heritage, and d) one individual of Asian and Hispanic heritage. Gender distribution was fairly even for African Americans, European Americans, and multiracial populations but due to reliance of referrals and preexisting groups, gender distribution was not as balanced for Asian Americans and Hispanic Americans (see Figure 1).

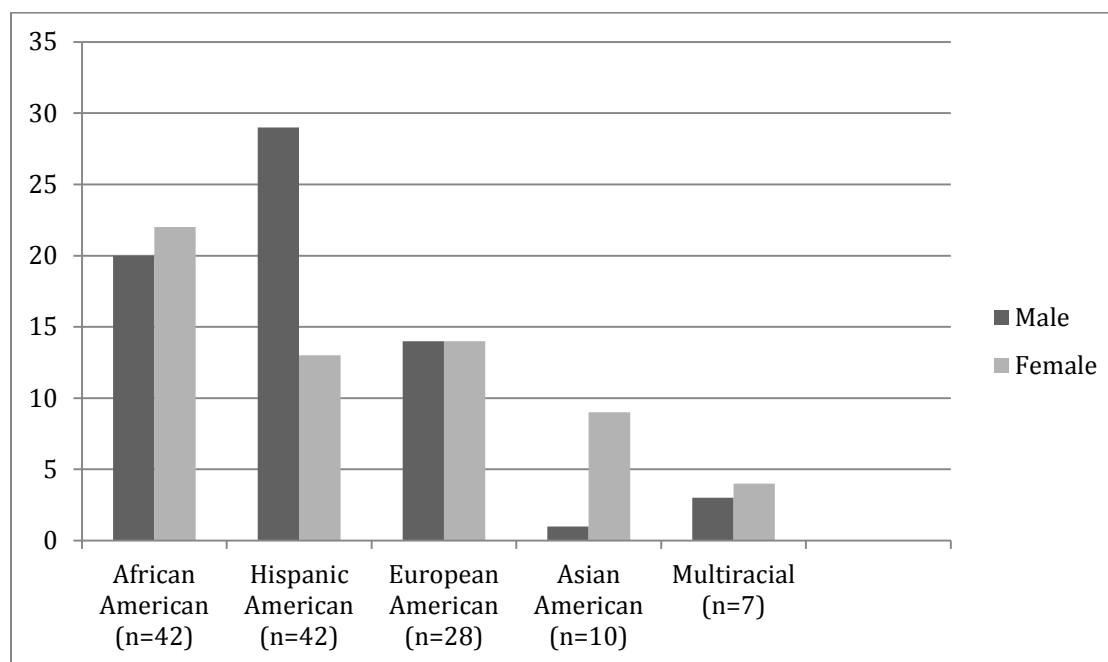


Figure 1. Frequencies and Gender, Racial, and Ethnic Demographics of Study Participants

These populations were chosen based on United States Census racial/ethnicity categories and represent the five prevalent racial/ethnic groups in Atlanta, Georgia (United States Census Bureau, 2010). Native Americans, a high risk population for PG, were not included in the sample due to the small percentage (3%) of this population located in Georgia (United States Census Bureau, 2010). Participants had to meet the following inclusion criteria: a) ages 18 and older, and b) fluency in English. Exclusion criteria included a) community members who are under the age of 18, and b) not fluent in English, and c) not having autonomy. Language exceptions were made for participants who had access to a translator.

Procedures

Recruitment. Six partner organizations assisted with recruiting a culturally diverse sample. These six organizations included African Djeli, Center for Pan Asian Community Services, CETPA, and Grant Park Neighborhood Association, Martha Brown United Church and Tai Pei Cultural Arts Center. Partner organizations were asked to contact their membership, post flyers, host focus groups, and even provide a translator when needed.

Recruiting through our partner organizations did not initially yield high rates of participation. The research team began one-on-one recruitment at the Tea Walk¹ and in the Little Five Posts neighborhood area. The Principal Investigator also used Craigslist and other social media to increase participation rates. This method was successful in recruiting African Americans (n=42) and European Americans (n=28) but very few Asian Americans and Hispanic Americans. Asian Americans (n=10) were primarily recruited through a marketing recruiter and other community contacts. Most Hispanic Americans were recruited through preexisting groups at CETPA (n=42). There was only one Hispanic American recruited through general public outreach such as flyers or online classifieds. CETPA assisted with translation and recruitment. Preexisting groups, such as support groups at CETPA, were a great resource to utilize for focus groups since these populations have a history of sharing information. Support groups are also beneficial to discussing stigmatizing topics such as pathological gambling since discussing sensitive information is common (Bloor, Frankland, Thomas, and Robson, 2001).

¹ The Tea Walk is an annual outdoor event in Atlanta, Georgia, coordinated by the Center for Pan Asian Community Services to raise awareness of the social issues that directly affect Asian Americans (Center for Pan Asian Community Services, 2009).

Interviews. Several Asian American community leaders stated that this topic was too sensitive in nature to discuss in an open forum. Interviews were added to increase representation of Asian Americans. Interviews were conducted at Georgia State and over the phone. When face-to-face, the respondent signed the document and was provided a copy of the consent document. The informed consent was sent by electronic email prior to phone interview. No signed consent was required for telephone interviews. Instead, participants were asked for verbal consent which was audiotaped. An overview of the study was provided after consent was granted. Each interviewee was asked whether or not they had any questions before the interview began. The average duration of each interview was 45 minutes. After the interview, respondents were invited to be added to our mailing list to learn results of study.

Focus groups. Focus groups were held in meeting rooms at the following locations: West End Library, Center for Pan Asian Community Services, Martha Brown United Methodist Church, and CETPA. One focus group was held in the morning at the Midtown Nail Salon to accommodate an Atlanta business owner who agreed to have her staff participate in the focus group. Two focus groups were held at noon at the West End Public Library. The remainder of the focus groups was held after 6pm in the evening.

At the beginning of each focus group, the informed consent was read. Signatures were obtained for each participant. An “icebreaker” exercise was used to increase group cohesion and facilitate conversation among group members. Participants were asked to guess the favorite color or type of pet of other attendees during the icebreaker exercise. After the icebreaker exercise, focus group rules were read and participants were asked whether or not they had any questions. Upon completion of the rules section, the recording began. The average duration of each focus group was 110 minutes. Once the focus group ended and recording stopped,

participants were provided with information on PG treatment. Brochures on PG prevention and treatment were provided to all participants. Participants were asked to leave their name and email address if they were interested in learning the results of this study.

Measure. A semi structured focus group and interview guide was used to collect data. A copy of the instrument can be found in the Appendix. This guide was used to organize data, however qualitative inquiry does encourage the introduction of probes to enhance understanding of a topic or unearth additional findings (Charmaz, 2006; Glaser & Strauss, 1967; Henwood & Pidgeon, 2003). Questions were organized around broad themes such as perception of prevalence, attitudes towards gamblers, community treatment patterns, and community prevention. Emerging questions from participants or related topics were allowed in the discussion; an occurrence that grounded theory anticipates and encourages (Charmaz, 2006; Glaser & Strauss, 1967; Henwood & Pidgeon, 2003).

Data Preparation

The researcher and research assistants transcribed tapes. A second review of transcripts was performed to ensure that words were not omitted. Although a translator was present in four Spanish speaking focus groups, the four audio recordings were translated using professional translators to ensure accurate translation of the focus group did not inadvertently fail to report information that was shared.

Description of analytic strategy. *Constructive grounded theory* methods were used to generate theory from the collected data. Constructive grounded theory is different from objectivist grounded theory which assumes that research can be value free (Charmaz, 2006). Kathy Charmaz, a champion of constructivist grounded theory states that “a constructivist approach places priority on the phenomena of study and sees both data and analysis as created

from shared experiences and relationships with participants and other sources of data” (Charmaz, 2001; p.677). In general, grounded theory provides a systematic and rigorous strategy to data collection and analysis. This theory emphasizes the importance of learning from the data rather than applying theory to define data (Charmaz, 2006; Henwood & Pidgeon, 2003).

Credibility is sought in exploratory investigations rather than reliability or validity (Stebbins, 2007). This study establishes credibility through the use of the reiterative stage process created by Glaser and Strauss (1967) and later detailed by Charmaz (Charmaz, 1990, 1995, 2000, 2001; Charmaz & Olesen, 2003; Charmaz & Mitchell, 1996). Credibility is further enhanced by the use of different techniques in qualitative data analysis software and including four interpretative stances during theoretical coding. Clearly defined thematic categories are produced at the end of the analytic process to enhance transparency of findings. Data analytic strategies are outlined to further illustrate how this study’s findings were identified and to increase transparency of the analytic process (Miles & Huberman, 1994)

Many qualitative researchers would agree that the researcher is the primary instrument (Glaser & Strauss, 1967; Miles & Huberman, 1994; Gibbs, 2002; Denzin & Lincoln, 2005; Charmaz, 2006, Bazeley, 2007). However, using documented and proven qualitative analytic techniques in computer-assisted qualitative data analysis software (CAQDAS) like NVivo, tests the conclusions of researchers and facilitates the emergence of theoretical concepts. This logic is further supported in a statement made by qualitative expert, Pat Bazeley (2007, p.2): “The use of a computer is not intended to supplant time-honored ways of learning from data, but to increase the effectiveness and efficiency of such learning (p.2).”

It is common for many qualitative researchers to pre-code data before loading data into NVivo with the software being used only to organize data and generate frequency counts. NVivo

software has numerous techniques that assist the researcher in efficiently and rigorously analyzing the data and from arriving at premature conclusions (QSR International, 2010). The current researcher performed all of the coding in NVivo. Some researchers assert that NVivo and other qualitative software can assist with overcoming some of the limitations of the researcher, by offering strategies to audit the coding process or to assess if there are preferences for certain data sources (Bergin, 2011, Robson, 2002).

Coded text were categorized under *nodes* in CAQDAS, free standing single units or part of a coding “tree”, a hierarchical structure used to organize thematic concepts. In addition to categorizing the data under nodes, the current study used specific data analytic techniques within NVivo to increase credibility of findings. These techniques included *word count* and *classical content analysis* (Bergin, 2011, Leech & Onwuegbuzie, 2011, QSR International, 2010). These techniques were not required but these strategies increased the saliency of data patterns and complimented the stages of grounded theory (Miles & Huberman, 1994).

Stages of Grounded Theory. Grounded theory provides a rigorous data analytic process that encourages a comprehensive examination of the data. Figure 2 depicts six steps of grounded theory. Some additional layers were added to increase analytic rigor such as including axial coding and interpretative stances to prevent hasty conclusions or fully exploring a phenomenon. There is flexibility with grounded theory with the researcher choosing steps based on research needs (Charmaz, 2006). This figure illustrates how the topic of nonclinical resources was explored using the rigorous multistage process.

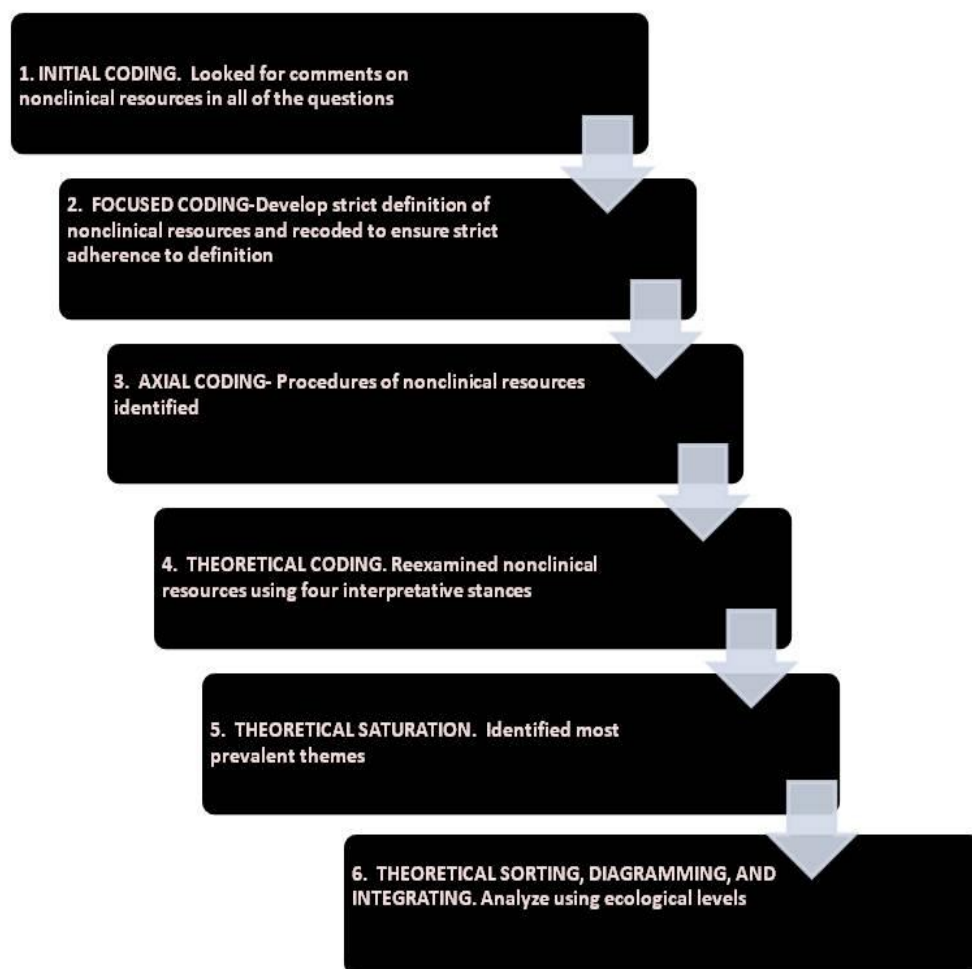


Figure 2. An Example of Six Stages of Grounded Theory for Nonclinical Resources

Initial coding. Turner (1981) recommends the review of each transcript with the following direction, “What categories, concepts, or labels do I need to account for, or what is importance to me in this paragraph?” (p.232). General themes related to risk and protective factors, nonclinical resources, and prevention strategies were initially explored. Since it is common for respondents to introduce topics in unrelated questions, all content of the 15 focus groups and 6 interviews were coded to determine if there was any relevance to the three major

research codes. Word count was frequently used in this stage to confirm hunches and clarify the prevalence of a thematic concept. Although *word count* is arguably an introduction of quantitative like assumptions, it was helpful in exploring thematic categories, confirming conclusions, or enhancing transparency of findings (Miles & Huberman, 1994). In the initial coding stage, there were 23 major thematic categories, commonly referred to as parent nodes in CAQDAS software. Subcategories totaled up to 102 codes, also known as child nodes. The current researcher used this stage to become familiar with the data and to determine how much of the data supported the inquiry.

Focused coding. Focused coding was marked by questions such as, “How adequate are these codes” (Pidgeon, Turner, & Blockley, 1987). Data analysis at this stage has been compared to a maze (Pidgeon, Turner, & Blockley, 1987). The decision to keep a particular code was based on the content’s relevance to the three research questions and similar findings in the literature. For example, many participants specified gambling activities in their description of PG behavior, however, most participants did not suggest that were different levels of risk among gambling services. However, previous research studies have indicated that certain gambling activities are more harmful (Williams et al., 2007). The current researcher re-examined data to determine which gambling activities were more popular or posed greater harm. The more selective search and coding strategies of this stage created more distinct thematic categories. After this stage, major categories decreased from 23 to 11.

Axial coding. “When, where, why, who, how, and with what consequences” are the questions that Strauss and Corbin (p.125, 1998) recommended for axial coding. Process oriented questions that were important to this investigation included: a) what types of acts creates risk or protection against gambling, b) what procedures were used when seeking nonclinical resources,

and c) how communities should prevent against PG. The early formation of a theoretical outline was conceptualized based on categories identified during the first two stages (Charmaz, 2006). Although this stage was not required, the inclusion of this stage assisted with overcoming the ambiguity that occurs in qualitative analysis (Charmaz, 2006). *Classical content analysis* was used to confirm placement of codes in this stage and in the following stages. This technique produced a table of how many sources were associated with this code and the number of times a code was mentioned across all sources. The researcher used this technique to eliminate redundancies across codes and to determine the level of placement in the coding framework. After this stage, five categories remained: ecological, nonclinical, prevention, protective, and risk.

Theoretical coding. The current researcher searched for the meaningful processes and actions that emerged from earlier stages in order to test logic of discovered concepts. Data were interpreted based on four interpretative positions: researcher's position, participants' meanings, ecological theory, and existing literature (Henwood & Pidgeon, 2003). Using all four approaches to interpretation assisted with data organization and clarifying concepts. The application of these interpretative layers was helpful in correcting incomplete or poorly organized thematic categories. To further explain each of the four interpretative stances, the exploration of nonclinical resources at this stage is used as an example:

1. *Researcher's position:* As a former substance abuse counselor, the researcher was aware that stigma was attached to seeking clinical treatment for behavioral health. Therefore, themes related to stigma were explored during this stage to assess if all instances related to stigma were associated with seeking alternative treatment resources.

2. *Participants' meaning.* Participants' comments were reexamined to achieve a full understanding of how nonclinical resources were represented in these data. Therefore all dimensions of this topic were explored such as conflicting opinions, ethnic response patterns, or links to other topics. This stance shifts the focus from what is predominantly the perception to capture what is the total perception in this study.
3. *Ecological theory.* Under Kelly's ecological perspective, behavior is influenced by the social milieu such as physical environments or social norms, which may affect the use of nonclinical resources. It was important to discover which setting factors were included in the discussions of nonclinical resources.
4. *Literature review.* Performing literature review is another way to discover new ways to analyze the data, such as identifying how nonclinical resources have previously been explored in PG or research on disorders comorbid to PG.

Theoretical saturation. Theoretical sufficiency was assessed at this stage (Dey, 1993). Glaser (2001) describes theoretical saturation as “the conceptualization of comparisons of these incidents which yields different properties of the pattern, until no property of the pattern emerge.” (p191). Although the same five categories remained, it was important to determine if every subcategory with risk and protective factors, nonclinical resources, prevention strategies, and ecological levels was theoretically supportive of the major node. In addition to checking for credibility, subcategories were reorganized to enhance clarity of need. For example, prevention

subcategories were reorganized under universal, selected, and indicated to more clearly determine how the community addressed prevention at different levels of risk.

Theoretical sorting, diagramming, and integrating. The two major questions at this stage were: a) how best were concepts arranged, and b) did weak relationships exist between major theoretical concepts. This last stage prepared the researcher for describing the written results and discussion (Charmaz, 2006). The researcher used matrices, and hierarchical nodal maps to describe and define the grounded theory (QSR International, 2010). Codes were sorted by ethnicity and race, types of prevention strategies, and ecological levels. Organizing thematic codes by ecological levels strengthened the relationship across categories and provided an adequate structure for all of the major thematic categories.

Summary

The perspectives of 129 community stakeholders were collected through 15 focus groups and 6 interviews in the Atlanta metropolitan area. Using constructive grounded theory, the saliency of risk and protective factors, nonclinical resources, prevention strategies, and ecological levels were examined. These findings are presented in Chapter Three.

Chapter 3. Results

Overview

Grounded theory is designed to uncover new dimensions of a social issue (Charmaz, 2006). Identifying emerging findings is critical to qualitative study for it is often these emergent findings that support theory development or provide much needed insight on difficult problems (Charmaz, 2006). Emergent findings related to the ecological model were expected especially as this model had not been applied to PG and there was much to learn about the expression of this

disorder from community perspectives. There were also *unexpected* findings revealed by grounded theory that provided directions for future research. Both of these types of findings are discussed in this section. The use of clearly defined categories in the coding results was beneficial in refining themes and determining whether a cluster of ideas were actually linked by an underlying concept. Thematic categories are organized by research questions in three sections. Demographic information on sources of quotes is limited to gender in order to protect the privacy of participants (Miles & Huberman, 1994).

The results section provides descriptive summaries on each of the research questions. The results section begins with a description of risk and protective factors. These factors are the building blocks of prevention strategies and serve as guidance markers for ensuring that interventions have a measurable impact (Durlak, 1998). Nonclinical resources are next explored to determine which help seeking resources would be used for PG. A report on the types of prevention strategies mentioned is included after nonclinical resources. After each research question is answered, the predominant ecological levels are described. Lastly, a final section on unexpected findings is presented.

Each thematic category is italicized and defined. Subcategories are italicized and underlined. After the emerged themes are described from the most prevalent to the least prevalent in both major categories and subcategories, the ecological levels that surfaced for each research question are discussed. Prevalence is defined by the number of sources (focus groups and interviews) associated with an emerged theme and number of times it was referenced in discussions. Table 1 provides details on names of major categories, percentage of coverage within focus group or interviews on particular topics, number of subcategories, and ecological

levels. Other matrices are used throughout this section to delineate major and unique findings for each research question.

Table 1.

Major Thematic Categories

Code	Coverage in Focus Group or Interview	No. of Sub categories	Dominant Ecological Levels
Research Questions			
Risk and Protective Factors	35	17	Intrapersonal, Organizational, and Interpersonal
Nonclinical resources	19	7	Organizational and Interpersonal
Prevention Strategies	17	4	Neighborhood and Interpersonal

Research Question 1A. Perceived risk factors for PG consistent with ecological model.

Two questions captured risk factors in the focus group and interview guide. In the first question, participants were asked which situations contributed to disordered gambling. This question was designed to collect information on risk. Risk factors were also identified within another question on prevention strategies in the focus group and interview guide; participants were asked what types of prevention strategies they would recommend for PG.

Participants were able to identify risk factors at each of the four levels. Risk factors included access to gambling, health risks, risk of gambling for money, lack of education, and social influence. A listing of risk factors, number of sources, number of references, and meaningful quotes for risk factors is provided in Table 3.

Risk of access to gambling. Several respondents indicated that *access to gambling* was a major risk for PG. While a minority of participants argued that access to any form of gambling is dangerous, the majority of stakeholders indicated that gambling risk is more related to overexposure to gambling services and products. This major subcategory included types of gambling services and products and general access to gambling. Types of gambling were *lottery*, *electronic gambling machines*, *scratch tickets* and *illegal gambling*. Overall, the *lottery* was the most popular gambling activity mentioned with some participants alluding to a culture of studying numbers. Participants referred to this subculture of gambling. One male participant admitted to receiving a daily call from a family member to share his details of dreams to inform lottery choices. These dream images can be researched in lottery books that can translate these images into numbers (Lombardo, 2002).

All participants either used the term lottery or named more specific games such as *Cash 3*, *Cash 4*, or *Powerball*. *Cash 3* and *Cash 4* are daily lottery games where participants play three digit number combinations for cash prizes. *Cash 3* and *Cash 5* have drawings in the morning and in the evening. Customers can wage as little as 50 cents with odds as low as 1 in 133 (Georgia Lottery Corporation, 2011). There were references to a *Cash 5* but this game does not exist in Georgia lottery so participants may have been referring to *Fantasy 5*. Participants indicated that daily lottery games, such as *Cash 3*, were more commonly supported by impoverished customers based on what he observed in his family's store.

"I have generally found people who have played the scratch tickets or the Cash 3 or Cash 5 are generally going to be poor. People who play the big big lottery thing, they kind of run across the whole spectrum of economic groups.....I think it's designed for a different market. I think the Cash 3's are for, the people who are just hard core,

everyday, they got to put their dollar in, and get that kick. Kind of like a slot machine in Vegas.”

However games such as Powerball were popular enough to encourage a diversity of socioeconomic populations to purchase these products. Descriptions of Powerball purchasing included “lines wrapped around the stores” and “taking out second mortgages” to buy tickets. Respondents frequently stated that their non gambling friends and family members took a risk with this activity. Similar to Cash 3, electronic gaming machines were frequently mentioned and referenced in description of disordered gambling. These games were most often referred to as “machines” or “slot machines.” Another participant noticed the difference in her performance on the machines versus the time she spent on lottery:

“What’s the base, what’s the strategy? I’m not understanding. I would sit there and put over 1000 dollars in the machine. With the lotto I would spend no more than 100 dollars”

Female Participant

Participants observed that when entering local businesses they would notice customers playing for hours without interruption:

“I live in Decatur and I see people sit at the machine for hours and hours.”

Male Participant

“I live downtown but I used to live in Bouldercrest and there are a couple of convenience stores where people sit down and they just sit there all day. You go there and get one thing and you come back for another thing and they are still chilling [remain in store]. After a while you know my name....They are like a prop [inanimate object].”

Male Participant.

Several participants remarked that scratch tickets were another popular gambling activity that was associated with symptoms of PG such as increased spending, increased frequency of participation, and compulsiveness. Scratch tickets are an instant lottery product that can be purchased for as little as one dollar. The prizes and odds are smaller (1 in 5) than the average type prize, ranging from winning another scratch ticket to 14, 0000 dollars. Customers typically use a coin or another type of hard object to remove metallic colored latex covering to display the winning prize. Buying scratch tickets daily was described as a high risk activity in the following quote:

“I assume that there are people out there that are addicted to gambling, just by watching people come in to the convenience stores and spend hundreds of dollars on scratch offs...the regulars”

Female Participant

One male participant observed co-workers

“Also, I have heard that, my roommate works in restaurant, and his co-workers go and spends 20 or 30 buckets to play scratch offs. It’s like after every shift.”

A female participant inferred the popularity of scratch tickets by describing the discarded tickets littering her neighborhoods:

“I was taking a walk down the street [and] there was dumpster by the gas station store and they were all over the ground spilling all out onto the street. It wasn’t a pile of restaurant trash or refuge, but just a pile of scratch offs “

Female Participant

Although not as frequently mentioned as lottery styled games, illegal gambling was also paired with gambling that lacked control, such as playing dice or games at local Vegas styled gambling houses. Illegal gambling was not separately queried but this topic was introduced in discussion by participants. Gamblers often start with legal gambling and progressed to illegal gambling as they desired better odds or greater access. Poker was the most frequently mentioned non regulated gambling activities. Many activities have become so mainstream that many people did not appear to be aware that these activities were illegal in Georgia such as playing Poker for money, sports betting, and Internet gambling. Participants commented that online games such as poker that can be played for non-cash prizes but as they advance in skill, these advanced poker players begin seeking cash prizes. Two participants stated that they did not think Poker was gambling. One person even stated that he knew of students who dropped out of college to pursue playing Poker as a full time job, as seen in the following quote:

“But I know a lot of students who do online poker the point where they skipped out of school. They are making a lot of money. They dropped out of school and don’t really know what they will be doing for the next 5 to 10 years.”

Sport gambling followed poker in prevalence. Sports of interest typically include football, basketball, and soccer. Dice was mentioned as another popular gambling activity but

descriptions were minimal with more verbal and non verbal (head nods) assent than intimate stories, however, dice frequently came up in responses denoting awareness of PG like behavior. The description of *illegal gambling houses* varied. People commonly referred to them as “card houses” or “underground.” A female participant described the emotional ordeal of retrieving a friend’s mother from such a place:

“I do know that the pathological side of it, going to Campbellton Road or either in Decatur. There are several stores that have machines behind closed doors that you literally knocking, you got to have a password and they got to have they have to know you, they have little machines and its cash and not points,..I have gone with a friend of mine several times to get her mama out of there.”

Female participant

Health risks. The theme of *health risks* encapsulates reports of behavioral and medical risks associated with gambling. Subcategories of *health risks* include *gambling is addictive*, *emotional vulnerable*, *risky personality*, and *substance use*,

Gambling is addictive, the largest subcategory under *health risk*, includes those responses that any exposure to gambling would lead to PG to describing how it is unhealthy by labeling it addictive. Participants used words such as “habit,” “high,” or “rush” or referred to substance abuse as comparisons to PG behavior. Participants often stated PG was inevitable since the “excitement would take over” or the process of gambling or a win would encourage playing. As one male stakeholder stated, “They are just ordinary neighbors, they just happened into it, it’s just a line between being addicted or not.” Thus the inherent danger for people who responded supporting this category is that all gambling has addictive like qualities

The *emotional vulnerable* was a personality type that was frequently associated with PG risk. Words to describe individuals with this type of health risk included absence of a key element for contentment, experiencing emotional suffering tied to an onset of illness, or encountering trauma such as abuse or a significant loss. One male participant described how the trauma of illness can create emotional vulnerability as seen in the following quote:

“...somebody was diagnosed with a kidney disorder and they gave him 8 months or year and a half to live. He didn’t really care, he wound up living like 5 or 6 more years but he had a any day now mentality over him so he literally let it ride all the time [gambling terminology for taking great risks with money]”

One participant stated, “It’s totally really about the vulnerability. It could be a part of the life cycle, I was thinking maybe change in your life, like divorce or something like that, so that vulnerability.” Participants reported that feelings of emotional lack contributed to risk since gambling was used as replacement for these unsettling feelings of emptiness. Words used to describe this emptiness include “void,” “empty,” or “bored.” Gambling was referred to as a hobby or an escape. Participants reported that community members with this particular type of risk of vulnerability lacked direction, an argument made in the statement below:

“A thrill seeking individual who is looking to fulfill some type of emptiness in their life, or there is an ideal of need that gambling can fulfill...”

This category of risk is primarily based on using gambling as either a replacement for an emotional lack.

Gambling risk was also seen as an escape from emotions originating from trauma such as child abuse or a significant loss. Emotional vulnerabilities did not have to be recent. Stakeholders described how a lifetime of lack or an earlier experience of abuse or deprivation could contribute

to a proclivity for PG. Additionally, sudden huge losses were responsible for shifting a gradual progress from normal to PG behavior, as described by one male participant: “It’s usually casual. But if you lose your car or job, it makes it more big.” One female stated that her roommate’s break up with a romantic partner preempted her increased spending with Internet gambling.

Risk takers, a subcategory of *health risk*, describes a personality type that was associated with PG. Individuals exhibiting this personality type were described as a) “addicted to a thrill,” b) were unable to live their life in balance, or c) due to their personality regularly engaged in multiple high risk activities, and gambling was one of those activities. Some participants mentioned risk takers struggled with addiction or a type of emotional vulnerability. A male participant suggested a thrill seeker was an “individual who was looking to fulfill some type of emptiness in their life.” A male participant shared a similar story when describing a friend, a risk taker, who suffered from “lack of guidance” and “no one giving him direction. “

Substance use was another subcategory of risk under *health risk*. A few of the respondents complained of the smoke that accompanied gambling in local businesses. A female participant recalled her own experience in the community, “But in this one gas station, oh my gosh, it’s like smoke city, that’s normally a sign when you see a lot smoke.” A male and a female participant indicated that their own fathers struggled with disordered behavior in drinking and gambling. Another male participant reported that a father of a family friend simultaneously struggled with gambling and drinking. Explanations for this reported association with gambling and drinking were diverse. A female participant stated that alcohol created an atmosphere that led to “out of control” behavior which subsequently influenced other high risk behavior. In one focus group, attendees reported customers buying lottery tickets while intoxicated. In the same

focus group, a fellow attendee stated substance dependence may encourage the participation in gambling in order to pay for alcohol, tobacco, and other drugs.

Risk of using gambling to obtain money. Across all interviews and focus groups, gambling was more frequently described as a method to obtain money than its intended purpose of entertainment. Two major reasons for *using gambling to obtain money* surfaced in the analyses and included a) *greed* and b) a *financial setback*. One focus group participant remarked:

“ Yeah I think it is not play because [one] can play in the house can play cards with no money or something but I see a lot of people come to make the Bingo because they say last week I come to do Bingo and try again but its same. But I see a lot of people to make money.”

Male Participant

For some participants, this desire for wealth was about *greed* that either originated from coveting riches displayed on television or a lifestyle that many participants attributed to the general marketing of the lottery as one male participant remarked in the following quote:

“People thinking they got to live a certain way when they got everything. My grandma and them didn’t have nothing and they lived their life good. Now everybody want something that they can’t have, so it makes you want to stretch, like, on the TV, and the gas stations, where ordinary people but advertising keep putting in your face, mega millions is going to be 100 million dollars, like who needs a hundred million dollars?”

Male Participant

Not surprisingly, those participants who described greed as part of the financial motivation were much more critical of gambling and those who exhibited symptoms of PG.

Risk was not always related to *greed*. Another financial risk was tied to experiencing a financial setback. Other participants were more empathetic for those involved in riskier gambling to overcome a financial “hurdle” and referred to their behavior as an attempt to access resources, using such terms such as “hope” or “come up” in their commentary to explain how these riches were unavailable to many communities outside of gambling. The majority of comments were often tied to statements that indicated that gambling was used to escape poverty, which is aptly captured in the following quote:

“I think as long as people feel poor and desperate, by and large the people who have a problem [are impoverished] so as long you have people that feeling that it’s their one last hope, you are going to have a gambling problem. It’s an economic issue.”

Male Participant

Other descriptions were related to absence of formal education in addition to being poor. In another focus group, a male participant warned that questioning the legitimacy of this financial strategy would be encountered with hostility. One female participant stated that her father’s interpretation of gambling as a job, limited the impact of intervention:

“Like with my father that wouldn’t work for him cause he think that he is working..In his mind it’s all about making money..so I don’t know what to do with people like him”

This risk appears to be centered on the intrapersonal level since participants described internal motivations such as greed or feeling like there was no other option. However, there were also examples of neighborhood level factors such as poverty or unemployment in these conversations which explains how the influence of living high poverty areas may increase risk for PG.

Risk of marketing. Several participants believed that the gambling system in Georgia was designed to take advantage of the less fortunate by describing it as “a system that plays on people’s needs.” Other respondents did not ascribe to the predatory nature of the gambling system but did state that gambling advertisements were misleading and unduly influential:

Other participants were much more critical of the marketing ads as found in the following text:

“I feel like it starts off as I am trying my luck. I am going to see what is the outcome. With these, with the ads becoming more and more intense. Where they have a scratch off where it promotes you being a millionaire. I feel like it now goes to be hope... I can be this one day. Where it starts from trying my luck. I think it brainwashes people [into thinking] that it can actually be me by looking at this ad. ...The ad actually fuels it to keep people.”

Male Participant

One focus group attendee described the marketing as “good” and responsible for large amounts of lottery spending. Commercials were the most popular advertisements mentioned. Other references included marketing in stores and billboards.

Risk of lack of information. *Lack of information* was common. Many participants indicated that risks were elevated since there was not adequate information on signs and symptoms of pathological gambling, on personal finance, probability of winning, and substantial losses experienced by gamblers, to make informed decisions. *General awareness of the risks* was the largest subcategory area under lack of information and included remarks that risk was associated with being low educated, not receiving education on gambling a risk, and low awareness of risks and consequences. Details were not provided as to how being low educated was a risk just that this aspect of socioeconomic status (SES) was a risk. However, participants

did emphasize the need for *more* education on gambling, in particular risks and consequences. Participants frequently remarked that this low awareness of risk was leaving community members unprepared and vulnerable as described in the following quote:

“You can for instance, you can run across a ten lane highway if you want but if you are not using any sensibility about it when there’s a bridge. There’s a good chance that it can mess you up. If you are going to be gambling you are going to need to be aware of the risks and consequences.”

Male participant

Lack of financial knowledge was an important subcategory. Participants listed the need for information on how to budget household income, manage credit, invest stocks, and general financial education as subject areas that would encourage responsible gambling. One male participant indicated that knowledge of personal finance would lead to modifying riskier gambling behavior in the following quote:

People are not taking into account what damage that they can do [from excessive gambling spending]. Maybe like she is saying if you really knew what the payback would be, you would not be gambling

A few participants believed that if more people knew of the financial losses of “real people,” then it would influence their risk taking in gambling.

Risk of social influence. Human are social beings and gambling is a social behavior. Social influence was limited to three thematic subcategories: a) learning of the wins of other people, b) network influence, and c) communal gambling. Learning of other people’s wins was the predominant social influence for PG risk. The win of influential others encouraged people to begin or increase their gambling frequency. Learning of the wins of others included strangers on

television so it was not always the influence of personal acquaintances, as indicated by one female participant:

She really look at the news and the TV. She found out that somebody get win. They have the top number one winner for that million. She imagining that she will be [like that] one day.

Hearing a reported win from a personal friend or a stranger was able to transform the elusive jackpot into a possible achievement. The influence of learned win may vary depending on how familiar the source or how deeply this person's story motivated the gambler. One female participant described how through learning of another person's win led to increased gambling for a year, in which she did not win any money.

Risk from network influence such as peers or family were noted as potential variables of influence. One male attendee asserted that hanging with delinquent youth may have put a family friend at risk for PG. Another male participant stated that every week his friend invites him to gamble on horse races. A female participant alluded to a parental influence in her excessive gambling by referring to herself as "a chip off the old block," when describing her gambling. Although she later made the distinction, that her father gambled more heavily than she did, she made frequent references to her own frequent gambling, a predictor of PG.

Communal gambling practices were also detected as a risk. Several of the men in one focus group expressed that they experienced pressure to participate in a collective lottery purchase at their jobs. Although other references to collective gambling playing were mentioned in other focus groups, there appeared to be a heightened level of stress associated with feeling obligated to support a collective pool for lottery in this one all male focus group.

Summary of risk factors. Risks for gambling were mentioned in all of the focus groups and interviews (See Table 3). The two most commonly discussed factors were access to gambling and health risks. Other risks were associated with lack of resources and social influences. An emergent finding included gambling for money. The risk of gambling for money has not been sufficiently explored in depth in the PG literature. The relevance of this emerging risk factor is described later in the Discussion section.

Ecological summary for risk factors. Risks were found in each of the ecological levels of the PG Ecological Framework Model. The intrapersonal level was the most prominent ecological level. Four of the major themes were risks based on internal vulnerabilities or motivation, which includes health, using gambling for money, and lack of information. The organizational level was the second most prominent ecological level since access to gambling services were primarily through local businesses.

Research Question 1B. Perceived protective factors for PG consistent with ecological model.

There were less protective factors discussed than risk factors. Protective factors were seldom mentioned in other topics and did not naturally emerge with equal frequency as risk factors. Unlike risk factors, a question on protective factors was not included in the original focus group and interview guide. More protective factors were introduced when participants were asked about prevention and included both factors that buffered PG emergence or minimized its expression. Participants also provided fewer details when describing protective factors. The predominant protective factors were *self-control, family, employment resources, sense of community, and being poor*. Table 4 provides an overview of major themes and related quotes.

Protection of self-control. *Self-control* was the most prominent theme for protective factors that emerged. Self-control was described as the protective barrier between regular gambling and disordered gambling. Several participants reported that when community members with self-control, they could avoid PG. Examples given for using self-control as a protective factor included (a) not exceeding your means, or b) being guided by knowledge. Most references for self-control were tied to financial means, with one male participant stating that it was specifically the financial element of gambling that caused the suffering of his girlfriend and distinguished it from other forms of addiction. Another female participant compared her behavior against a family member who had loss control of his gambling; learning from his example enabled her to control her gambling spending habits. Excess was mainly demarcated by the inability to pay for basic expenses such as rent, groceries, or any other required expense that could impact the quality of life, as found in the following quote:

“I gamble and it’s not like. I know I had to pay my rent. I wouldn’t put my rent out there. You got to be smart with it. It’s like everything; you got to be smart about it.”

The protective nature of *self knowledge*, another subcategory under self-control and it was primarily organized around awareness of individual vulnerabilities. Awareness of individual weaknesses was a protective factor that participants used to explain why they avoided riskier PG behavior. The labeling of themselves as addictive, bad at gambling, or unlucky was given as examples as to why participants were able to avoid the pitfalls of gambling. One male participant described his bad luck at gambling as the major reason as to how he individually avoided gambling. In the following statement, he implies that his low average of wins in dice games encouraged him to seldom gamble:

For over 30 years, I have played board games, strategy games, and my dice are notoriously bad. For the last four months, I have played this fantasy football game with a friend of mine. And I [have] been running a constant streak of way below average dice rolls. Six out of dice should be 3.5 averages and kind of figured out that I was running 1.5 or 1.2 on aggregate dice roles. That keeps me from a lot of gambling.”

Another participant stated that he was always aware of his addictive personality so this awareness influenced his gambling behavior.

“That notion of me just one second having nothing and the next second have 50-100,000 more that’s very enticing to me, since I’m a person who has student loans and credit card debt. I always think \$2 jumbo bucks with 50 grand. I would pay that off right there. Just like with all addictions I like to think I’m not judgmental of people that are gambling because I could see myself doing that in a heartbeat. I don’t dance a fine line but I have to keep myself in check because I have an addictive personality, you know getting into gambling you get a rush out of it.”

Additionally, self-control was attributed to keeping gambling fun and a form of entertainment.

Protection of family. Just as the end of an unhappy relationship was a risk factor (see risk of emotional vulnerable), stable loving relationship with family was listed as protective factor. Subcategories included *familial wisdom* and *familial expectations*. Many participants described the influence of family wisdom. Participants described the importance of imparted knowledge from family members. A male focus group member continuously described the advice of his grandmother who warned of the danger of trying to obtain money that was not earned through hard work. Another female participant recalled a famous story in her native country where a mother moved her children away to avoid a negative influence, resulting in her

children become better decision makers. These stories reflect how familial wisdom could prevent disordered gambling.

Stakeholders inferred that when families made their expectations explicit; problems could be avoided or minimized. Some stakeholders indicated that families were responsible for providing information before the behavior was disordered. One female participant stated that most of her family endorsed a zero tolerance approach, and implied that this type of behavior was not tolerated:

“My family came from the islands so for them they believe they sacrificed a lot to have us here so for them they believe they raised us a certain type of way. So they either give you one chance or no chance but you disowned. “

Family was a common protective factor for all respondents.

Protection of access to employment resources. Being employed offered many protective benefits against gambling. These benefits include access to health insurance, worksite interventions, and employee organizations. Participants indicated that the health insurance offered through the job could be used as a resource for PG. One female participant stated “if you are a professional and you have health benefits, you could call a 1-800 number.” Other participants described the resource of worksite intervention programs that offer primary and secondary prevention services that will offer the employee a “clean slate if they attend meetings.” In addition to worksite programs, one participant indicated that a union, an employee organization, was the primary resource for her father:

“People seem to be associated with their jobs and their unions. My father needed help of any kind he went to union. He was an electric worker and that was a very tight group.”

Health insurance was also mentioned outside of the context of the job. Having access to this “health benefit” was still valuable without being employed. In fact, one participant indicated that having neither was a precarious state: “A lot of people without jobs or insurance you’re kind of S.O.L [sic].”

Protection of sense of community. *Sense of community* was another protective factor that naturally emerged in the conversations. McMillan and Chavis (1986) define sense of community as “Sense of community is a feeling that members have of belonging, a feeling that members matter to one another and to the group, and a shared faith that members’ needs will be met through their commitment to be together.” Participants defined community as either *relational* or *geographical*.

Relational communities were defined as a membership based on shared characteristics or need. Three types of relational communities were identified based on membership in union, racial group, or immigrant status. In the previous section, the union was noted as employment resources but the person also described a sense of community in the statement, “he was an electric worker and that was a very tight group”. One female participant noted that African and Asian communities provided more support. A male participant commented that immigrant communities were less likely to be involved in a behavior that could be perceived as shameful.

Geographical communities were defined based on neighborhoods such as East Atlanta. Several participants inferred that the low frequency of gambling in their affiliated neighborhood indicated that PG was either not an issue for their community or as an individual. One male participant indicated that since he did not own property in his current neighborhood where gambling was prevalent; he more closely identified with the neighborhood where he was raised. A female participant described her community as an old neighborhood and explained that there

was a level of cohesiveness that would allow community members to intervene on a topic as sensitive as PG. In all these examples, a sense of community was identified as a potential intervening factor.

Protection of being resource deprived. Having a low income or suffering a loss that would deplete resources were described as risk factors for PG as it implies that these circumstances would influence more riskier gambling. Yet, surprisingly, it was also offered that resource deprived populations could not afford such risks. One female participant suggested that the poor would not take such risks. Yet, this same participant described a resource deprived work friend that exhibited symptoms of disorder gambling. Two other group members in another focus group shared similar remarks by implying that gambling was more a risk for the rich. The similarities between these respondents were only that English was not their primary language.

Protective factor summary. Protective factors were far less emphasized than risk factors, with a fewer number of sources and references (See Table 5). Self-control and family were the two largest protective factors, with participants providing detail information on how these protective factors would minimize risk for PG. Sense of community and being resource deprived are not mentioned in the PG prevention research literature but emerged as protective factors in this study.

Ecological levels for protective factors. Protective factors were distributed across all ecological levels. The most common themes were related to the intrapersonal level (self-control) and interpersonal level (family).

Research Question 2. Perceived nonclinical resources for PG consistent with ecological model.

In the full study, participants were asked where community members seek assistance for unhealthy or pathological gambling treatment. Few community members were aware of members seeking psychiatric or psychological treatment for PG. There was also a decided preference in the use of nonclinical resources for PG among most of the respondents. These thematic categories, in order of prevalence, are a) *religious resource*, b) *family*, c) *social network*, d) *Internet*, e) *community organization*, and f) *holistic health*. Examples of these major themes are presented in Table 5.

Religious resource. *Religious resource* was the largest thematic category for nonclinical resources. The subcategories include *church*, or *God*. Church was the most prevalent subcategory for religious intervention. Church was mentioned in the majority of the interviews and focus groups. Church was described as the place that most people would go in their respective communities. The resources described in church include the pastor, a prayer list, or opportunity to swear before God.

“I think if they truly truly want help they will have to get into that step where they are ready to accept the help...all that is not going to help unless their mind right frame of mind. They going to have to do a lot of inner in themselves. They have to make the first step..ok I need some help..Boot camp or whatever they have..In my community I would go to church and tell them about the situation.”

Male Participant

Using the church for this type of intervention did not always appear to be contingent upon belonging to a particular religion which is consistent with the human service role that many

churches offer to their surrounding community. One female participant suggested that it was her experience that people would go to the family doctor or the church when presented with a behavioral health issue. In the following quote, she indicates that most people first choice is not behavioral health specialist but instead preexisting resources such as a family doctor or their church:

“They do ask the doctor even though it’s not a mental health doctor. So I know that happens a lot and then I would say, it kind of depends on what access a person has if they have a doctor – then doctor, and if they are part of the church community then church then a pastor but I don’t have anybody personally so.”

Female Participant

A small minority expressed some dissent with the use of the church. This dissent may be related to the stigma associated with gambling and the religious judgment that “gambling was not of God,” a statement made by participants. A few participants acknowledged that the church would be the primary resource in the community but they did not believe it was necessarily the best resource:

“We want to church everything. Not to say that there’s anything wrong with the Lord. I love the Lord. It’s just that nobody wants to deal with mental health issues it’s just have faith. You can have a clear addiction and they will tell you to just keep the Lord first and everything will just work out. No real intervention. No programs, no step by step, just put it in the Lords hands.”

Male Participant

“Church will be the one but everybody doing it. Lord please help me get this number, people are praying to win....”

Female Participant

We know about it but we don't talk about it. The whole building will know he got a gambling problem but won't say nothing about it.

Male Participant

God was a small subcategory of *religious* nonclinical resource. A few participants stated that their religious resource was God. Seeking God was a resource identified for overcoming PG. One female participant stated that a person would either chose therapy or their God. Two male participants stated that a connection with God could assist or even prevent PG so in this sense God was both a nonclinical resource and a protective factor as seen in the following quote:

"If you put God first then everything else is in order...we have to get back to the basics and not see gambling but God is glorified. That's who deserves all the glory."

Male Participant

Family. *Family* was the second major thematic category for nonclinical resources. Family was often perceived as the sole resource or to be used in conjunction with resources as seen in the following quotes:

"Family comes first. Family, church, community center."

Female Participant

Using family as a resource was tied to limited financial resources, stigma/shame, and its assignment as a low priority. In the following statement, a male participant indicates that the primary reasons for using family as a behavioral resource were to save money and to avoid shame:

Male Participant: Professional help is pulling all your family together. We are not going to pay no money when we can get together.

Facilitator: Is it just about money?

Male Participant: A lot of times its pride. Like you are not going to mess up the family name.

Family was also seen as a symbolic resource to inspire individuals as they received treatment. Many people believed that having a family could either assist with avoiding rock bottom or would allow a faster recovery:

People who have responsibility for people other than themselves then that would be the catalyst. Your spouse is hurting and somebody else is affected by your behavior then it's not just about you so that rock bottom goes out the window.

Female Participant

Social network. *Social network* nonclinical resource primarily included friends. Other variations of the social network included the combination of friends and family, loved ones, a co worker, or a mentor. Being able to approach someone in a social network was dependent on the level of closeness. These resources were often mentioned as support to avoid the more severe symptoms of PG, as illustrated in the following statement:

"I have become convinced that close knit family, friends, even employers can help before rock bottom. It doesn't mean that you won't miss a bill payment. Just because you miss a bill you won't hit rock bottom. Again it's my perspective, it's not just one bill you miss, it's a number of bills you miss."

The members of the *social network* distract those affected by PG with fun alternative activities such as shopping or massage. One female participant indicated that she would attempt to speak to her friends in a manner like a physician if they experienced PG. Another participant recommended the use of a friend or parents as resources but added the caveat that ultimately the

recovery of PG was up to that individual.

Internet. Following *family*, the *Internet* was a frequently mentioned nonclinical resource. A male participant indicated that assistance could be sought in a chat room or online forum that would offer anonymity that could not be guaranteed in support group. Collaborating with online gaming sites was another option to ensure that community members gained access to services. One female participant found material for a coworker's wife dealing with PG.

'In my community I had a situation where a guy came to me because he said his wife had a problem I went online and printed off some stuff so she can read it...he wanted to help her in some kind of way and she wasn't willing to go speak with anyone...'

It is interesting in this last example that this respondent used the Internet on behalf of someone else which counters the assumption on the availability or the utility of the Internet. Another participant stated that *Internet* is her alternative resource since she does not have access to other resources:

"I don't really have a church community, and I don't have a doctor, but I do have the Internet, and so I would I think it would depend on the person."

Female Participant

Some participants stated that they didn't know where to go for PG assistance but the Internet would be the first step. In describing the benefits of using the Internet, a male participant stated that a stranger contacted him for resources using Facebook and that anyone could find the help they needed.

Community organizations. *Community organizations* were mentioned as a resource for PG by a few of the respondents. One female participant stated that in her ethnic community they would either go to the church or the community center. Another participant also indicated

that individuals in his ethnic community would prefer to use the community center for PG. Two other respondents mentioned two well known multiservice agencies in Atlanta, Georgia: The Open Door Community and the Latin American Association. Neither of these organizations offers behavioral health services but they do provide social support services such as food, clothing, and housing assistance.

Holistic health. The smallest category was *holistic health*. This category of response refers to alternative health strategies that could be sought when experiencing PG. These strategies included hypnosis, yoga, and meditation. Details were not provided on the success of these strategies for PG or other behavioral health interventions.

Summary of nonclinical resources. A question was not posed specifically for nonclinical resources, yet these resources naturally emerged in the focus groups and interviews. Religious and family resources were the two most frequently mentioned nonclinical resources.

Ecological levels of nonclinical resources. Each ecological level was represented. The predominant ecological levels were organizational and interpersonal levels. The organizational level was represented by churches and other community based organizations. The interpersonal level was represented by family and the more generic social network.

Research Question 3. Perceived prevention strategies for PG consistent with ecological model.

These data were related to specific strategies, prevention targets, and stages of prevention. Categories that emerged in order of prevalence were a) education, b) support from a family member or friend, c) policy, and d) outlet for expression. Thematic categories and related quotes are ordered by prevalence in Table 6.

Education. The need for education was a popular topic. Conversations were centered around three subcategories: a) content, b) delivery, and c) target population. The greatest amount of details for education was content. Participants indicated that content should address probabilities, managing finances, or the risks of PG, as noted in the following quotes:

“If we are talking about preventative...have like a campaign if you will among the community just relaying it is not cool or ok...take me for example...not knowing a compulsive gambler..cause for me I didn’t think about it being a problem. I mean really a problem like a drug addiction”

Male participant

“People have to realize that it’s a game of luck. There are certain mathematical principles but in the end it’s a matter of luck winning. I don’t know if poker falls under gambling”

Male Participant

“Education on the signs. If you see someone you know getting really excited about gambling, or maybe you notice it in yourself.”

Female participant

It was believed that receipt of this information would decrease the risk of PG. Participants also described how to enhance the quality of the message. They stated that the message should be “catchy” and use songs. There was also references to using the same technique as seen in the *Truth Campaign*, a popular anti-tobacco social marketing campaign that famously used shocking images and real life stories to inspire change in behavior (American Legacy Foundation, 2011), as referenced below:

“Instead of the cigarette commercials have the Truth commercials, they would advertise more on how to help with gambling, if you a problem, call this number, or go to place or joined this community support group”

Female Participant

Celebrities and images of children were offered as visual content that could emotionally capture the attention of the viewing audience. Many participants believed that these messages should describe the real stories of the people struggling with this disorder. It was described earlier in the risk factor section that the absence of these real stories that participants argued as why pro gambling marketing was so influential.

Media was the most popular delivery method. Within the category of media, respondents endorsed television commercials as the best method to deliver educational messages. Radio advertisements were also mentioned but few respondents specifically mentioned print media. Participants also believed that the public should be informed by placing the messages as close to the gambling service or product as possible. They believed that the messages needed to be visible and should be seen on flyers or posters, the back of receipts, or even placed in video pop up messages on electronic gaming machines.

“Targeting people most affected. Hourly announcements at the casino. When you buy lottery ticket or if you are at the lottery machine, between playing, there is a 15 minute piece where the player is asked if this is fun. If you are at lottery ticket, the people who sell must ask if they have bought lottery ticket today ... about spending about their check. A mandatory [statement about out of control]”

Male participant

“Showing the odds of winning in the store. Make it more visible. I know it’s on the back of the card]”

Male participant

Other places for delivery of prevention message were in the public, school, or within a family setting. Outside of the gambling venue, billboards, bus stops, trash cans, and public signs were identified as locations to display messages. Presenting information in the school system was also highly recommended since many believed that youth were vulnerable and could be protected from later developing PG if they were instructed earlier in their lives. However, not all education efforts were only for children and youth audiences. A few participants indicated that educational courses be available for adults. One female participant suggested that education be required for all gambling adults, similar to the level of knowledge required for a driver’s license.

“I thinking gambling should just be like getting your driver’s license you have to take a test to get your gambling license. You have to take a test and every time you go to gamble you have to show your license and they scan it and um whoever is the [issuing agency] of the drivers license they know how much you are gambling and it beeps when it gets to your maximum...you are out of control and you have to check in with them when it beeps again”

The family setting was another place where early prevention messages were mentioned. Two respondents described scenarios where a mother would offer warnings about the consequences before gambling started or the disorder emerged.

Most of the education involved universal prevention approaches that would encourage responsibility for everyone. High risk groups were youth and gamblers. Pop up messages are a selected prevention approach since this marketing would target a population that was at higher risk for PG, video lottery terminal customers. Another unique finding was a selected intervention

approach for people with personalities associated with PG, such as individuals with addictive personalities, as seen in the following quote:

“My mother, even though, she worked in health care profession, she recognized that she had an addictive personality. Maybe education on your personality type. You know how they have the love signs, like Leo and cancer or perhaps novel personality quizzes.”

Support from family member or a friend. Many members recommended that a loved one intervene on behalf of someone who is beginning to experience PG. This type of prevention strategy is an indicated approach. Types of support included a) making an individual aware of their problem, b) managing finances and other personal responsibilities while the PG individual recovers, c) involving the person in other activities, d) relocating the sufferer, and f) or assisting the affected person with receiving PG treatment. Quality of support varied. Some stakeholders described it as very loving and unconditional. While other participants suggested that this strategy would be confrontational as stated below:

“Full frontal force confrontation. That’s basically, calling it what it is and we getting that person up off the side of street and the curb and they address the issues at hand. And however, I believe my family would be supportive but there would be help. Help would be sought.”

Male Participant

Some participants explained that non professional intervention was related to the degree of importance assigned to gambling:

“Like if my brother was struggling with gambling. I would probably go talk to him. Like if my brother was addicted to heroin, I would probably get him some professional help.”

Male Participant

Related to the belief that risk in gambling is the activity, is the prevention recommendation that an alternative activity should be considered. Responses varied from a new direction in their lives to more specific activities such as shopping or getting a massage. One male participant remarked:

“For my family you connect them with one person in the family they are really [close], you don’t insist, you just push them in a different direction. In the end, it’s still a addiction, it’s got to be replaced with something.”

Gambling policy. Many participants believed that gambling should be regulated by either banning all of it or limiting access to some aspects. A minority of participants wanted to ban it completely in Georgia. The majority of respondents indicated that gambling should be more regulated so that the public’s vulnerability could be reduced. Most participants believed that PG could be prevented if there were more controls. Range of responses for limiting access included decreasing frequency of participation, limiting the number of products sold, establishing limits on the number of tickets sold or the amount of money spent, or creating a ceiling for the number of gambling products sold in a neighborhood or business, as seen in the following quote:

There should be limits set. Let say if I bought \$50 lottery tickets in the morning. I am not sure, some kind of way, there are limits, but still have other people have a way to buy the tickets.

Respondents frequently mentioned that businesses should have more responsibility by having to monitor when PG symptoms were emerging or even having to use the same methods to control selling products with pseudoephedrine to limit access to the illicit drug, methamphetamine.

Although illegal gambling was minimally mentioned, one participant who did mention illegal gambling in this context indicated that it was impossible to prevent PG with this type of gambling since their customer base were more likely living with PG. PG affected community members often gravitate to illegal gambling because of the increased access to gambling or the better odds of winning.

Outlet for expression. Several participants indicated that they believed that risk of PG could be minimized if there were outlets for expression. Universal strategies included serving a common good or creating settings where citizens would have a “voice” to express themselves. One man commented that “Give people an outlet to express themselves, to show their individual lives were worth something. They may be stuck or may be afraid to try something.” In addition, gambling was associated with boredom so the avoidance of boredom was the true prevention target. Other participants remarked that gambling behavior could be supplanted with other types of activities after PG symptoms began to emerge such as a hobby, or an interest in investing. Another participant warned that replacement activity should not closely resemble gambling.

“Well I think that it is a danger to replace it with something too similar to it with them going straight back to it. A lot of online gambling have sites where you don’t win any money..And it’s a similar site that is advertised ..You just have to be careful for some people if it is too close to gambling then it could be very very easy for them to fall back”

Summary of prevention strategies. Education and support from family or friends were the most frequently mentioned prevention strategies. Outlet for expression was an emerging finding. Each of the three stages of prevention was included in the discussions. However, stakeholders were more likely to recommend universal prevention strategies than selected or indicated.

Ecological levels for prevention strategies. *Prevention* was mentioned at all of the ecological levels. The most prominent ecological level for *prevention* was the neighborhood level and broader. For example, commercials and other mass media strategies were identified as the best vehicle for delivery of these messages. The interpersonal level was the next most predominant ecological level; the suggested prevention efforts were to be led by family and friends.

Unexpected Findings

Two major unexpected findings were risk of charitable gambling and differences in trends in ethnic response patterns of study participants. Both of these unexpected findings were linked to several ecological levels but also signify how planning for PG prevention requires an acceptance of the multiplicity of perceptions for one single factor.

Risk of charitable gambling. *Charitable gambling* referred to discussions where participants described how perception of gambling loss was redefined as charitable donation. This topic is relatively unexplored in the literature. A few participants criticized the confusion of associating charitable donations with gambling. Some participants indicated that people gambled under the guise that their activity is actually to benefit a charitable organization like a church. Further, participants stated that this issue is complicated by religious leaders and denominations that condemn gambling but either urge parishioners to donate their winnings or use gambling as a way to raise money. An example of a conflicting message from a religious organization is found in the following quote:

“Gambling is wrong but it’s okay to play bingo for the church. I have seen it for the Italian church with a bunch of nuns running a roulette wheel, you win a bottle of wine. Gambling is wrong. But anyway.”

Female Participant

Religious institutions were not the only organizations included in these discussions. The Hope Scholarship is a beneficiary of the Georgia Lottery. It was discovered that gambling losses from lottery playing were considered donations to the Hope Scholarship rather than an actual loss. Opinions were divided on this risk perception. Some individuals expressed concern for those experiencing the negative consequences of gambling while the lost money funded the scholarship. Other participants suggested that it was the Hope scholarship that made gambling not an entirely negative venture, as seen in the following quote:

Maybe I try the lottery, I put up \$100 a dollar. I lost about \$100. it's okay. They put about 10 percent or 7 percent for the charity then I am happy about that.

Female Participant

Ethnic response patterns. Diversity in perceptions was found across all factors. In particular, variation in response patterns specific to race and ethnicity was an unexpected finding. There were differences for three categories: a) risk of access to gambling, b) family as a protective factor and vehicle for prevention, and c) church as a nonclinical resource.

Gambling Access. As discussed earlier, access to gambling is a risk factor. Gambling preferences may contribute to risk of local access to gambling (Raylu & Oei, 2004). African American respondents more often used the term “studying numbers” or using “number books” to describe strategies of community members heavily invested in lottery gambling. Disordered sports gambling was only reported by Asian Americans and European Americans. One participant indicated that he only saw PG like behavior with sports gambling, stating “I have seen more PG with sports gambling because it’s more money. People buying two hundred

lottery tickets, put that on a game.” Some participants believed that betting on the World Cup was linked to annual suicides and loss of business ownership in Asian communities:

“Every time world soccer, it’s a big time for gambling. They will kill themselves. They lose a lot of money. I know a lot of people who owe on their gambling. Like blackjack. They have to sell their business. They owe everybody.”

Female participant

Thus, perceptions revealed that predeterminants of PG (frequent lottery behavior) and outcomes of PG (suicides) were organized around several ecological levels. Another aspect of ethnic response differences was found in the reports of availability of electronic gaming machines in cafes, bars, restaurants, and Laundromats. These reports were only made by Asian and Hispanic American respondents. In these reports, many machines appear to be unregulated as some attendees reported that police removed these machines from restaurants and bars. One participant describes the interest in these activities in the following passage:

“They are crazy. They go to the machine to put the money, likes slot on it, like gambling. Day nighttime, just all the time.... You put your money, like casino with numbers, like three apples, that’s what they are crazy about it. Every coffee shop, they put games in there.”

Female Participant

For protective factors, family was the subcategory where racial and ethnic differences were more pronounced with more frequent endorsement of families by Asians and African Americans was discovered. These same trends were also related to family for nonclinical resources and prevention strategies. Asian Americans were more likely to report family as the sole resource. African Americans were also more likely to mention family second to Church, but also mentioned family in addition to nonclinical and therapeutic resources. European American

participants were more often to report using family to facilitate the use of a clinical resource. Hispanic Americans did not mention family as often as the other ethnic groups.

Within statements on prevention, family was more commonly endorsed by Asian Americans. Asian American participants indicated that early messages about gambling and even intervention should first be introduced in a family setting. African American and Asian American respondents were more likely to describe specific family interventions. Examples of interventions include assuming fiscal responsibility or creating activities to distract a family member from gambling, or even moving away. Family was an important resource among European Americans but more as conduit in getting that person into treatment. Hispanic Americans were more likely to mention the use of clinical resources than other ethnic groups in this study.

Finally, the church was another category where racial and ethnic differences were found. The church was a popular nonclinical resource for European Americans and African Americans. Asian Americans were least likely to mention the use of the church.

Summary of unexpected findings. There were two major unexpected findings: charitable gambling and ethnic response differences. Charitable gambling was identified as a risk that people may not be aware of. Ethnic response differences were found for gambling access, preference for family, and the utilization of the church as a resource.

Ecological levels for unexpected findings. The predominant ecological level for charitable gambling was organizational with institutions being associated with both blame and praise for their role. The predominant ecological level for ethnic response trends was the interpersonal level based on the frequent referrals to family.

Chapter 4. Discussion

The purpose of the study was to examine perceptions of diverse community stakeholders to identify which risk and protective factors, nonclinical resources, and prevention strategies surfaced in discussions. Since community perceptions were used to broaden current understanding of PG prevention needs, it was expected that some findings would be different from the literature. Emergent findings directly tied to the PG Ecological Framework (See Figure 3) and unexpected findings were detected. The major study's findings suggest that access to gambling, self-control, family, and education were the most prominent factors identified and should be studied more in depth in order to reduce social costs of PG. All of the levels of the ecological framework were represented in the findings indicating the need for a multilevel and integrated approach to PG prevention.

Research Question 1A. Perceived risk factors for PG consistent with ecological model.

It was expected that the risk factors would be consistent with the ecological model. This hypothesis was supported with identification of risk factors that were associated with multiple ecological levels. Additionally, the current study's findings revealed that there were considerably more risks factors than protective factors introduced in the discussions. The current researcher speculated that the higher number of risk factors identified was related to an additional question in the interview and focus group guide that solicited data on which situations led to PG (See Appendix A), which may have automatically directed the respondents to PG risks rather than protective factors.

Community stakeholders' awareness of the context of PG risk suggest an astuteness that is supported by the likes of James Kelly and other community psychologists who emphasize the importance of capturing data outside of a laboratory environment, and collaborating with those

most affected by a condition (Kelly, 2006; Trickett, 2002). The use of qualitative data advanced previous knowledge by providing context and even introducing new variable relationships. In this section, two themes are explored : a) risk access to gambling, and b) health risk.

Access to gambling was identified as the most common risk factor based on discussions indicating that any exposure to gambling is a risk and the general accessibility of popular gambling activities. These findings are consistent with other studies that linked PG risk to general proximity to any gambling and increased exposure to more harmful gambling (Grinols, 2004; Nelson, 2009; Pearce et al., 2007; Welte et al., 2004). Authors, Raylu and Oei, cite the importance of determining if there are preferences for certain types of gambling since these gambling patterns could indicate a higher risk for certain populations (Raylu & Oei, 2004). Membership in a population group with a historical preference for particular type of gambling could also influence members to engage in a particular activity or gambling behavior in general (Raylu & Oei, 2004). Despite evidence that PG risk is associated with general gambling exposure and access to more harmful forms of gambling, these types of findings are often challenged by some researchers as inconclusive since not all exposure to gambling leads to PG and there is the expectation that populations would eventually adapt to the risk caused by exposure (Abbott, 2007; Shaffer et al., 2004). This study's ability to gather explicit statements on PG risks from community members, offers greater credence to exploring risk of access in prevention efforts, especially as community stakeholders indicated that there needed to be equal protection for the entire public, and not only children. Thus, community perceptions suggest that current adult prevention efforts would need to be expanded to include non gambling public and low risk gamblers. This finding is especially important because some ethnic communities, such as Native Americans and African Americans, have bimodal participation rates where there is a

large population of non gamblers and problem gamblers (Abbott, 2004; Volberg, 2003). In light of the bimodal participation rates, PG prevention for some ethnic minority communities would be better targeted towards non gamblers in populations with these trends because previous research indicates that moderate gambling may be difficult to maintain in these groups.

Health risk was the second most common risk factor mentioned in focus groups and interviews. This category included people with emotional vulnerabilities, a history of substance use, possessing addictive or thrill seeking personalities, or diagnosis of chronic disease, as more likely to develop PG. The occurrence of comorbidity with other behavioral health or medical conditions is a cross disciplinary concern since ethnic minorities and other vulnerable populations experience disproportionate risk for chronic and infectious diseases (Agency for Healthcare Research and Quality, 2010), a finding which precludes the importance of examining how to minimize the risks of co-morbidity. Additionally, the \$54 billion in annual costs attributed to pathological gambling (Grinols, 2004) may be even higher when considering long term costs for groups that are disproportionate in prevalence for this comorbidity. These types of health risks have been cited as major contributors to PG in treatment research (Blaszczynski & Nower, 2002; Petry, 2005; Weinstock et al., 2006; Sacco, Cunningham-Williams, Ostmann, & Spitznagel, 2008). The higher frequency of health risks mentioned in these data indicates that these risks may need to be prioritized in prevention. Offering PG screens and early intervention to those living with behavioral health disorders that are frequently comorbid with PG, such as affective disorders and substance dependence, may assist in reducing risk.

Research Question 1B. Perceived protective factors for PG consistent with ecological model.

It was expected that perceptions of protective factors would be consistent with the ecological model. This hypothesis was supported with protective factors associated with multiple ecological levels. Moderation and family were the two largest themes under protective factors. Along with self-control and family, the implications of three emerging factors are discussed: a) sense of community, b) employment resources, and c) being poor.

Participants' examples of gambling with self-control only involved an ability to gamble without spending money for basic living expenses. Since many respondents also suggested that it was the addition of precipitating factors such as loss of health or a job that caused the shift from responsible gambling to problem gambling. Using self-control has been endorsed by the North American Association of State and Provincial Lotteries (NAASPL) in its campaign on responsible gambling, but this message of responsible gambling does not always accompany details on how to use restraint (NAASPL, 2011). Therefore, gambling prevention messages that recommend only *the use of self-control* such as "to gamble responsibly," may not be adequate for individuals who live in settings where they have low access to resources and riskier gambling practices could be perceived as responsible based on survival needs.

After self-control, families were mentioned as common protective factor. Study participants frequently remarked that the intervention of family members or family expectations could protect against PG. An emergent finding in this study was difference in response patterns by race. Asian Americans and African Americans were more likely to refer to the use of family as a protective factor. Findings from stress research on diverse communities suggest that ethnic minority communities rely more on family than clinical resources (Bean, Bush, McHenry, &

Wilson, 2003; Dressler, 1985; Taylor, Chatters, Hardison & Riley, 2001; Yeh, Inman, Kim, & Okubo, 2006). Hispanic Americans and African Americans are documented in the literature for the utilization of extended family networks in help seeking behavior (Ayon, Marsiglia, & Bermudez-Parsai, 2010; Bagley & Carroll, 1998). The protective effects of African American families was supported in research on anxiety, depression, and academic achievement that found families served as a primary resource for overcoming psychological stressors (Bean et al., 2003; Dressler, 1985; Taylor et al., 2001). Certain mental health topics, such as PG, are considered too shameful to discuss outside of Asian American families, a finding discovered during these recruitment efforts. Community descriptions of familial influence along with similar findings from behavioral health literature, suggest that there needs to be greater inclusion of the familial network when designing intervention to protect against PG (Bean et al., 2003; Dressler, 1985; Taylor et al., 2001; Yeh et al., 2006).

Equally important for this study was the discovery of a new protective factor, namely *sense of community*. McMillan and Chavis (1986), authors of the influential work on sense of community explained that this concept can validate an individual through group membership with benefits such as emotional safety, sense of belonging and identification, and personal investment. Examples of a sense of community in the study included geographic and relational communities. Study references to geographic communities included descriptions of the degree of familiarity among residents needed to intervene on behalf of community members. Relational communities defined by racial or ethnic identity were used to explain risk, help seeking behavior and gambling preferences. Researchers Ocean and Smith (1983) have suggested that casino gambling activities and settings offer validation and lead to the social benefits of “group affiliation, emotional and moral support, self esteem, social status, and salient identity.”

Individuals raised with collectivist traditions that are against gambling could have lower risk (Raylu & Oei, 2004). Lottery play, a popular activity in this study, may also offer similar validation by allowing members of a reference group to bond around this activity (Adams, 2001; Ariyabuddhiphongs, 2010). Based on community perceptions, the preexistence of a strong sense of community may prevent the need for a gambling activity to serve as the organizing factor for a relational or geographic community. One participant noted that by finding a positive reference group, addictive behavior such as PG and substance abuse could be avoided. The appearance of this theme among focus group and interview discussions suggest that prevention strategies that acknowledge the tendency for groups to define normative behavior could lead to lowered risk.

Another emerging factor was *being poor*. This finding was inconsistent with the majority of literature that indicates having a low SES is a risk factor (Volberg & Wray, 2007; Welte et al., 2004). Rachel Volberg found in her research that non gamblers disclosed limited resources as a reason for abstinence from gambling (Volberg, 2003). Thus, for some individuals, the awareness that they have limited means prevents them from gambling at all which contributes to lower risk of PG. However, among those who gamble, limited means may not offer protection but instead a motivation to gamble more. These findings indicate that there needs to be different prevention messages for the non gambling public and those who currently gamble.

Finally, the third emerging factor, access to employment resources, indicates that worksites could offer greater protection than a steady income. Reports from study participants indicate employee assistance programs, union membership, and health insurance add extra layer of protection against PG. The introduction of this factor offers another potential variable that could be used for PG prevention. Individuals employed at businesses that offer these resources may be more inoculated against PG or may at least avoid the more severe forms of the disorder if

prevention resources are used. Federal agencies now fund health departments to collaborate with local employers in implementing disease prevention initiatives (CDC, 2011; 2010). Research is not available on worksite wellness program that specifically target PG prevention. However, study participants' examples of how to use this resource for PG has added another facet on worksite PG prevention which had previously only been limited to gambling venue (Hing & Breen, 2008). Finally, there is literature that has shown that health promotion models targeting tobacco dependence, a comorbid condition of PG, is beneficial to the participants (Warner, Smith, Smith & Fries, 1996).

Research Question 2. Perceived nonclinical resources for PG consistent with ecological model.

It was expected that nonclinical resources would be consistent with the ecological model. The second hypothesis was supported by the data since perceptions were organized around most ecological levels. Community members mentioned only nonclinical resources associated with the intrapersonal, interpersonal, and organizational levels. Nonclinical resources were not identified at the neighborhood level. Church and family were the predominant themes. Since these concepts have not been studied as nonclinical resources in PG prevention, implications for all of the themes are presented.

In this study, the church was the predominant nonclinical resource identified among community perceptions. Community members more frequently discussed the church as a *religious resource* that offered many services to address PG such as counseling, mentoring, support groups, and spiritual intervention. The church is well known for offering spiritual therapeutic strategies (Blank, Mahmood, Fox, & Guterbock, 2002; Johnston, Bufford, & Smith,

1982). Despite being well known as a resource for counseling, the church is more frequently referred to as a protective resource rather than an alternative to clinical treatment in PG

PG surveillance research has identified variations of religiosity as protective against PG including variables such as church attendance or valuing religion (Cunningham et al., 2005; LaBrie et al., 2003). In this study, the church was the predominant nonclinical resource with community members explaining that this *religious resource* offered many services to address PG such as counseling, mentoring, support groups, and spiritual intervention. For a minority of our respondents, the church was only an intermediary and the real resource was the direct contact with a higher power. There were also some reports that there were mixed messages within the church regarding gambling. These data were consistent in previous research that indicated many people use the church to overcome behavioral health problems. However, our study has added understanding on why other aspects of this nonclinical resource should be considered such as the mixed messages from religious doctrine or a preference for direct contact with a Higher Power. The inclusion of religious resources in prevention strategies has not been adequately explored in PG research despite a documented affinity for its use in other behavioral health conditions such as substance dependency (Chavez, 2008).

Family was the second most common nonclinical resource mentioned by participants. Participants indicated families would often initiate the first steps in initiating recovery for the affected PG family member. In Petry and Weiss (2009) study on PG treatment outcomes, families and friends were beneficial with assisting in recovery. The natural recovery paradigm is especially important for understanding family as a nonclinical resource because it has been assumed that many PG sufferers independently recover. The limited research on natural recovery has indicated that this healing process is not achieved independently but this process is

instead facilitated by familial support (Slutske, 2006). The frequency of participants mentioning family as an alternative to clinical resources in this study could also signal an opportunity for prevention efforts to use these very same resources especially as they are familiar.

After church and family, respondents mentioned that they would use the Internet to obtain information on recovery. The perception of the Internet as a valid resource is common to many health disorders (Peeke, 2011; Powell & Clark, 2004; 2006). Furthermore, this study was able to add the contextual limitation of Internet resources. One participant indicated that she researched on behalf of another community member which raises the question how health is compromised by lack of computer literacy. Without the use of qualitative methods, this limitation may not have been detected. This research elucidates the importance of even well intentioned efforts such as placing health communication on the Internet. However, these data emphasize the diversity in need by clarifying that everyone's access to Internet is not equal. Moreover, populations that do not regularly use the Internet could be at a loss if majority of resources are only available on the Web.

After Internet, study participants mentioned two community based organizations as nonclinical resources. Despite these organizations lacking mental health services, including these organizations implies these neighborhood resources are valued. This type of collaboration is heralded as an effective strategy for behavioral health research (Nation et al., 2003; Trickett, 2009). However for PG prevention and treatment, this integration of professional and community based resources is rarely documented. Again, the value engaging of community participants is highlighted by the mentioning of community based organizations, a resource rarely mentioned in PG prevention studies. These types of missteps have been corrected in AIDS research where researchers regularly engage affected populations and regularly pursue accessible resource to

galvanize the community around prevention (Trickett, 2005). These lessons have not been transferred to PG even with general awareness of the stigma associated with clinical therapeutic resources.

Lastly, complementary and alternative medicine for reducing gambling problems was introduced as a nonclinical resource. These resources have not been mentioned in PG prevalence studies, despite the use of large samples (Welte et al., 2001; 2004). In this study, participants listed yoga, meditation, and massage as nonclinical resources to use when experiencing problems with PG. Research in substance dependence cites the effectiveness of alternative therapies like acupuncture to complement well established therapeutic methods (Culliton & Kiresuk, 1996). Research is not available on the use of complementary and alternative medicine within PG research. A holistic approach to health is valued by ethnic minorities where behavioral health is also linked to spiritual health and physical health (Ida, 2007; Pukui, Haertig, & Lee, 1972; Hays, 2001). Findings from stress and resilience research studies have been instrumental in linking the importance of integrating all aspects of wellness for psychology and medicine (Cowen & Work, 1988). Participants' comments on holistic medicine have introduced new variables to consider for PG prevention especially as there are documented preferences in ethnic minority communities and burgeoning interest in the general public for these alternative strategies to clinical resources (Ida, 2007; Pukui et al.; Hays, 2001).

Research Question 3. Perceived prevention strategies for PG was consistent with the ecological model.

It was expected that the prevention strategies would be consistent with the ecological model. Findings indicate the hypothesis was fully supported with prevention strategies associated with multiple ecological levels. Education and family interventions were the most

frequently mentioned prevention strategies. Support from social network, outlet for expression, and support groups were emerging factors and are also discussed.

Educational strategies were organized around content, delivery, and intended populations. Recommended content included probabilities, financial management, and PG risk. Variation of this content is covered in youth education programs, however, these elements are seldom included in adult prevention campaigns that predominantly center on self-control or playing responsibly (NAASPL, 2011). These findings suggest that the standard prevention content offered to adult audiences may not be sufficient. Using the mass media to educate was the most popular prevention strategy recommended by study participants. What was unique to this study is that participants specified that they wanted media images that were more cutting-edge and honest about the consequences of gambling, or included celebrities or songs. These perceptions suggest that prevention content may not be engaging enough to change behavior in their communities. Finally, respondents indicated that PG education to be directed at the general public, and vulnerable populations such as youth and individuals with addictive personalities. Overall, themes from community perceptions indicate that current prevention initiatives would need to be broadened to include many of the recommendations made by participants.

Family and friend support, an emerging factor was described mainly as an indicated prevention strategy since participants stated that members of their social network would make diagnosis and intervene based on their assessment of the problem. Family members were more often mentioned than nonrelatives.

After family and friend support, providing an outlet for expression was another emerging prevention strategy. Participants commented that the appearance of PG was symptomatic of an absence of an *outlet of expression*. Support for the use of this prevention strategy was found in a

study on college students and PG behavior. College students who had an interest in art were less likely to be at risk for PG (LaBrie et al., 2003). Although there was not data to explain whether an interest in art is also related to engaging in artistic expression, this national college study does offer some indirect support for the importance of outlet of expression. Other participants in current study believed that this disorder emerged because community members were missing something in their life, with responses ranging from a higher purpose to a hobby. There also appears to be the assumption that community members should either address the root cause of the deficiency or choose a less riskier activity than gambling for a hobby.

Addressing PG across Ecological Levels

Intervention projects that include multiple levels generally result in greater impact, receptivity, and sustainable outcomes (Durlak, 1998; Kelly, 2006; Trickett, 2005). Incorporating an ecological perspective encouraged the exploration of levels of beyond the individual for PG prevention. The analyses of qualitative data revealed that four ecological levels were suitable for the study's main foci. However, emergent themes foreshadowed a need to include a broader societal level in future research on this topic. Certain themes were more closely associated with specific ecological levels. A description of support for the four ecological levels in the PG ecological framework are discussed below.

Intrapersonal level. Among our community stakeholders, the intrapersonal level was primarily associated with risk and protective factors. All of the factors mentioned in our study have also been discussed in the literature: health risks, risk of lack of information, risk of using gambling for money, and protection of gambling using self-control. Although participants mentioned factors based on characteristics of the individual, the bidirectional influence of ecological levels is more clearly seen on the intrapersonal level. Several participants described

risk taking personality (health risk) or self-control as influential PG factors. In the *Handbook of Self-Regulation* (Boekaerts, Pintrich, & Zeidner, 2005), willpower and other self-regulated traits that are thought to be primarily influenced by genetic factors are also modified by signals from an individual's environment. Boekaerts and colleagues (2005) suggest the development of traits like risk taking or willpower is supported by the information delivered by social networks or the environment. Lack of information and using gambling to obtain money also reflect individual level risks that are affected by other levels. Participants often remarked that risk of PG was due to absence of information. This individual vulnerability could be minimized by obtaining this information from a person's interpersonal network, prevention ads at a local business, or mass media campaigns. The influence of other levels is seen with the risk of using gambling to obtain money. Participants mentioned that the media and lack of resources as causal factors for engaging in this risk. Overall, findings support the inclusion of intrapersonal level for diverse communities but also provide evidence for the defining these levels as interdependent rather than separate systems.

Interpersonal level. The interpersonal level was the most prominent level among all of the ecological levels due to the more frequent references of family across all thematic categories, and frequent references to social support. This finding challenges the predominant focus on the individual in PG research. The organization of data around the interpersonal level highlights the need to include this level in PG prevention efforts. To date, the interpersonal level is more frequently used for youth prevention with intervention leveled at strengthening the family or involving friends and parents to encourage pro social behavior (Weissberg, Kumpfer, & Seligman, 2003).

There are also cultural elements to consider. American and other western psychosocial developmental model view independence from family as a sign of adulthood (Bellah, Madsden, Sullivan, Swidler, & Tipton, 1991). However, this perception of adulthood is at odds with collectivist cultures that defines emotional stability based on higher degree of attachment and involvement. Belief in collectivism could also introduce risk or protection depending on what is defined as normal for that interpersonal network (Raylu & Oei, 2004). Signs of collectivism were found in responses where study participants defined what was acceptable for their family and specified how their family would react to correct PG behavior that deemed unhealthy.

The failure to include this level could leave interpersonal risk and protective factors unidentified and over prioritizing factors that are not solely causing PG expression, such as SES. Community members were able to specify which aspects of intrapersonal level created risk or protective influence. The utilization of interpersonal network has proven successful in accountability campaigns used to reduce the negative consequences of excessive drinking where adult audiences are encouraged to support members in their network with responsible drinking, with slogan, such as “friends don’t let friends drive drunk” (Ad Council, 2011). This same type of social accountability could be included with better understanding of risks, protective factors, and resources associated with this level.

Organizational level. Similar to social networks, organizations were associated with risk and protection (Arizona Criminal Justice Commission, 2006; McLeroy et al., 1998; Trickett, 2005). Churches and businesses were the most prominent organizations in this study. Cunningham and colleagues (2005) found that church attendance served as a protective factor for participants in this research study. Participants in the current study described church as a resource to use for PG. Church and other faith based organizations are frequently used to

support the recovery of substance dependency. Some churches, even house Narcotics Anonymous and GA meetings (GA, 2011). However, some respondents also shared that the church may not always be equipped to address every emerging health issue. There was also criticism against the church for ignoring the issue or encouraging parishioners to donate a portion of their winnings while condemning the act. Although there was strong support for religious resources, support was not unanimous. These differences in opinions suggest that the use of community based resources may vary.

Several participants indicated that they believed that businesses did have a moral responsibility and suggested businesses assist their customers in avoiding PG. Although the NAASPL report indicates that their prevention messages are on many products and advertisement, the nature of respondents' comments suggests that there was a low awareness of this prevention information. These prevention strategies include displaying health communication messages in the store and on gambling products and limiting sales of gambling products. According to Steven Wartick and Philip Cochran (1985), "businesses exist at the pleasure of society: its behavior and methods of operations must fall within the guidelines set by society. Like government, business has a social contract----an implied set of rights and obligations." These authors imply that there is a certain amount of responsibility that businesses should uphold for their consumers. In fact, several community members appeared to have inferred the social responsibility of business by recommending the inclusion of more prevention messages in stores that sell gambling services and products.

Other organizations that were important were worksites. A few participants mentioned worksite wellness programs; however there was no mention of intervention for employees at the gambling venues in Georgia. In other countries, casinos offer training to their employees to

protect their workforce and customer base from PG (Williams et al., 2007). Although participants did not advocate for education of the employees of gambling outlets, themes from community responses suggested that prevention could occur in any workplace if certain employment resources preexisted such as a counseling hotline, union membership, and insurance.

The ecological perspective is supportive of the use of community defined local resources like churches and convenience stores in intervention since preferences for certain institutions are often grounded in culture and context. Emergent findings indicated that certain organizations have greater influence on PG behavior. Learning which organizations could affect risk or protection is beneficial to future planning for collaboration and sustainability (Nation et al., 2003; Trickett, 2002).

Neighborhood level. Participants described neighborhood influence on PG as limited to controlling access and encountering desperate situations. Controlling access to gambling was a prevention strategy mentioned by many of the participants to curb PG incidence. The physical or economic status of local neighborhoods was not explicitly mentioned as related to PG. However SES and low education were mentioned as related to risk, two individual characteristics that are also related to setting characteristics. Quite simply, resource deprived populations more likely live in high poverty areas (Bureau of the Census, 1995). High poverty areas engender desperate situations such as low employment, crime, and substance use, all of which are predictors of PG. Affluent neighborhoods have lower rates of gambling than high poverty areas (Gilliland & Ross, 2005; Ministry of Health, 2006; Welte et al., 2004). It is interesting that few studies collect information on motivation behind gambling. Yet, in this study, community perceptions of

gambling as an entertainment function was overshadowed by frequent references of using gambling to make money.

A geographic community identity was also noted as an influential factor where a female participant reported that her community was close and supportive of its inhabitants. A strong sense of community could influence residents to be more vocal about the level of gambling access they desire in their neighborhoods. These findings provide new perceptions of neighborhood characteristics as protective force against PG which has not been found in the literature. Additionally, community perceptions offer an early understanding on what resources are perceived as meaningful, which could be useful for future prevention planning.

Level beyond neighborhood. Support for all ecological levels were provided in study results. The influence of mass media and broader relational communities (i.e., ethnic or racial identification) lent support for including a fifth layer to the PG ecological prevention framework. Commercials and other broader cultural influences (e.g., Internet) can create risk or protection depending on the information. Finally, adding this fifth layer to the proposed PG ecological model is consistent with the depiction of a level of a broader societal influence that has the same bidirectional influence of lower levels (Bronfenbrenner, 1979).

Unexpected Findings for PG Prevention Needs.

Allowing the data to inform the research is major part of qualitative data analysis. Unexpected findings challenge established truths and provide direction for future research. Charitable gambling and ethnic response patterns were two unexpected findings in this research.

Charitable gambling. The risk of charitable gambling is not well represented in the literature but did emerge as a topic of interest in this study. Charitable gambling was described as an area of concern by participants. Essentially in these interviews and focus groups, gambling

loss was compared to a donation if gambling was tied to charitable interests, such as a religious institution or a scholarship. Some of the participants alluded to how influence of charitable gambling could cause someone to ignore the signs of risky behaviors. Justifying riskier behavior under the guise of charity for educational scholarship or a religious organization is its' own unique risk if individuals are compromising their ability to pay for their basic necessities. In a small qualitative study, Pelozo and Hassay (2007) examined motivation of seven adults who regularly supported charitable super lotteries in Canada. Their findings were similar to some of the findings in the current study with community stakeholders indicating that their losses were considered a donation and the participants gambled more for a charitable cause (Pelozo & Hassay, 2007). Nonprofit organizations and government agencies often pair gambling revenue with a charitable cause (American Gaming Association, 2010; Grinols, 2004; Pelozo & Hassay, 2007). Nonprofit agencies often use charitable gambling to overcome the reduced governmental funding of yesteryear (Pelozo & Hassay, 2007). Most states have a charitable gaming division or agency that offers licenses to nonprofit organizations to fundraise through gambling. In Michigan, the 2010 net revenue was close to 74 million for charitable gambling (Bowen & Peterson, 2011). One gambling industry report refers to this type of gambling as the least regulated (American Gaming Association, 2010). Moreover, the explicit disapproval and mixed messages regarding charitable gambling has highlighted a risk that has been relatively under explored in PG literature.

Ethnic response patterns. Indirect evidence of cultural differences was implied in the ethnic response patterns for gambling access, protective influences, and nonclinical resources. Preferences for certain types of gambling and the historical origins of preferences have been relatively under explored (Raylu & Oei, 2004). Raylu, Oei, and others have suggested that social

norms that validate a particular gambling activities may contribute to risk (2004; Walker, 1992). In this research, certain groups were only associated with PG behavior specific to a particular game, such as sports gambling. With differences across race and ethnicity for access (gambling preference and exposure) reported among participants, these perceptions indicate that prevention needs may need to be tailored based on social norms.

Ethnic response patterns were also associated with protection and seeking nonclinical resources, as seen with family and church. The value of familial resources is also shaped by social expectation. Membership in groups that endorse collectivism, generally view illness as a responsibility to be addressed by the whole unit. Collectivism is operationalized in family kinship systems where members are expected to support their embedded networks (Weine & Siddiqui, 2009). Populations of Eastern Europeans, African, Asian, and individuals with Hispanic/Latino heritage are documented for embracing a collectivist culture (Weine & Siddiqui, 2009). In this study, an emerging finding was African American and Asian Americans were more detailed about how their families would lead a recovery effort before using clinical treatment. Hispanic/Latino Americans are also listed in the literature for their dependence on the familial system, a concept sometimes referred to as *familismo* by some Hispanic researchers (Ayon et al., 2010). However, the majority of Hispanic/Latino American participants did not mention family as often; this response pattern may be related to being recruited from a behavioral health provider. The difference in ethnic responses offers more support for variation in intervention needs.

Racial and ethnic differences were also detected as an unexpected finding for the use of religious resources. African American and European American respondents were more likely to refer to these resources in PG help seeking. These differences in response across racial and

ethnic groups suggest that there is variation in preferences for alternatives to clinical treatment. In the literature, African Americans and Hispanic Americans are especially noted for use of religious resources (Dodani & Fields, 2010; Ishikawa, Cardemil, & Falmagne, 2010). Although culture was not directly assessed in this study, many of the ethnic response patterns such as utilization of religious resources and a greater reliance on family has been associated with a collectivist culture celebrated by many ethnic communities (Al-Krenawi & Graham, 2000; Kelly & Papadopoulos, 2009; Yoo & Skovholt, 2001). Study participants did not acknowledge any underpinning of cultural traditions, however, the value of religious resources conveyed in focus groups and interviews and the distinct variation in responses indicates that these trends would be worth exploring in the future.

Strengths of the Study

The major strengths of this study stem from the selection of research design, theoretical framework, and support found.

Qualitative research design. A qualitative study was needed to overcome the gaps in PG research on why ethnic minority communities were at higher risk. The ecological perspective as defined by Kelly (1966; 2006) and expanded by Trickett (2005; 2009), was used to provide organization and direction in developing an intervention framework that was most appropriate for addressing PG among diverse communities. Although the findings offered only a preliminary understanding for the perception of needs among diverse populations, future directions in PG prevention were identified. Ethnic minority communities are often cited for health disparities they experience in preventable illnesses (DHHS, 2001). The promise of health disparities research is that it acknowledges that certain groups are more at risk and that these illnesses have a unique influence on them. The limitation of health disparities research is that knowing that

certain vulnerabilities exist for specific populations does not necessarily lead to the study of the causes or investigation of how to prevent disproportionate incidence. A qualitative methodology with a community sample was chosen in this study to introduce new insight and greater detail on community perceptions of risk. The findings of this study introduced emerging concepts and unexpected themes that could have only been detected using qualitative research strategies and community participants.

Ecological perspective. PG prevention models that are currently implemented in most states and countries have not assisted in reducing the higher risk of ethnic minority communities. Many prevention programs do not engage the community when defining needs, include an organizing framework, or explore population specific risk and protective factors. The ecological perspective was chosen because this theoretical perspective is supportive of community intervention and highlights the interdependence of individuals and settings. The ecological perspective compliments qualitative research by prioritizing the voice of the target population. This framework encourages the use of multiple strategies in PG prevention; a multimodal approach has already been identified as effective within PG treatment (Emshoff et al., 2007b; Moore & Marotta, 2004).

Limitations of the Study

There were several limitations to this study. These limitations included the use of secondary data, low representation of Asian Americans, absence of universal definition of culture, and generalizability of findings.

There were several limitations associated with secondary data analyses of qualitative data. First, it was prohibited to return to participants to collect more data since these participants only agreed to the parameters of the original study. Therefore, participants could not be

contacted for additional clarity on their responses and demographic information was limited to race, ethnicity, and gender, limiting research to only an exploratory focus. The exploratory nature of the study prevented broad conclusions or assumptions of causality. Thus, these data are better suited to highlight areas of needs and identifying variables for confirmatory investigations.

Low participation of Asian Americans was another limitation of the study. The percentage of Asian Americans was consistent with percentage found for the state of Georgia. However, the size of this population was not comparable with other participating racial and ethnic groups. Therefore, this low participation limits generalizability to other Asian populations. This challenge could be overcome in the future by engaging Asian researchers or Asian community stakeholders to assist with recruitment process and facilitation of groups, to ensure that there was greater representation of this population.

Differences in ethnic response categories suggested the need for continued study on cultural influence on help seeking and prevention strategies. Although variations in response patterns appeared to be reflective of cultural traditions, the absence of universal definition of culture prevented an assignment of meaning to the use of the word, “culture,” especially as many Americans are multicultural in their expression and would be difficult to determine what culture meant for that particular person.

The emergent grounded theory is specific to only these data. The purpose of this research was to explore participants’ perceptions regarding risk and protective factors, nonclinical resources, and prevention strategies. It cannot be assumed that these perceptions would also apply to the general population, thus the generalizability is limited. However, this research does fulfill its intent of discovering new aspects of a social issue, a goal of many qualitative

investigations (Henwood & Pidgeon, 2003).

In summary, the limitations of this study indicate the need for additional study in this area. These findings are preliminary but provide direction on critical areas to target in PG intervention. Finally, the study supports the importance of including community perspectives when designing community PG interventions.

Conclusion

Support for each of the hypotheses was found among the study findings as well as support for related literature. Findings were also consistent with PG surveillance studies indicating that ethnic minority communities may be more susceptible to PG due to residing in areas with greater density of gambling services and products, and higher rates of poverty, which could alter their risk perception. The use of a qualitative approach and an ecological perspective are both conducive to identifying layers of PG influences, resources, and prevention strategies. Based on these data, the viability of a PG prevention approach for diverse communities was explored.

This study provides new data to consider in development of prevention strategies to minimize risk for ethnic minority communities. Additionally, findings indicated that a fifth level should be considered to guide research on how state policies, mainstream culture, and even larger relational communities can contribute to PG risk. Many of the recommended solutions in this study have been deemed efficacious in the literature but are rarely implemented in the practice (Cloutier, Ladouceur, & Sevigny, 2006). Next, an integration of prevention strategies may be the most appropriate implementation approach since both ecological prevention research and PG prevention research indicate the need for prevention at multiple levels. The difference in ethnic response strategies and charitable gambling were unexpected findings which suggest the

diversity of need found within these data. Future research should also examine emerging concepts, and new perspectives found for risk and protective factors, nonclinical resources, and prevention strategies. The continued exploration of these findings could broaden the scope of how to address health disparities in high risk communities. Furthermore, these research findings could also inform other behavioral prevention initiatives where ethnic minorities are at higher risk.

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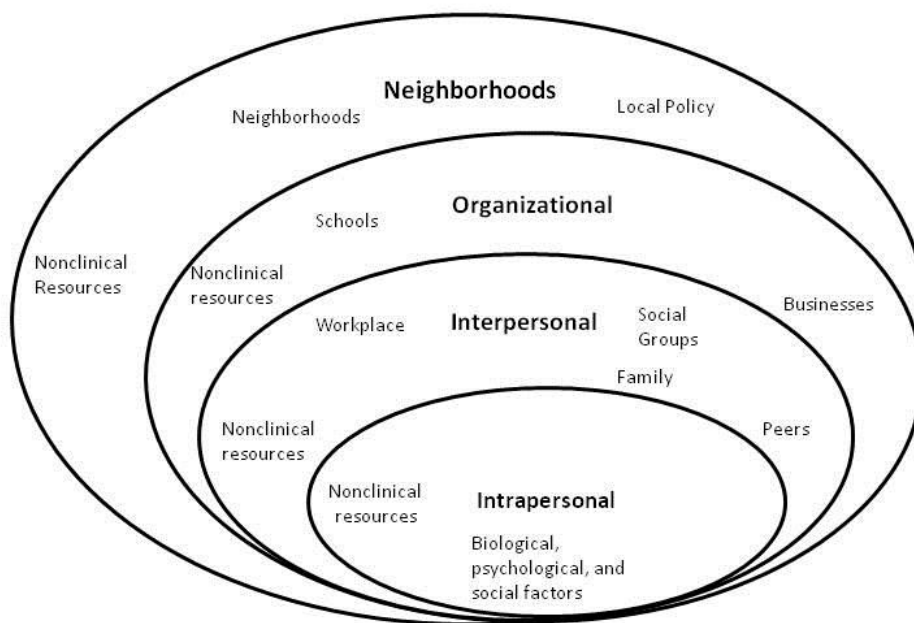


Figure 3. PG. Ecological Prevention Framework. Figure 3 illustrates the proposed model, a PG Ecological Prevention Framework. This figure depicts a hierarchical structuring of ecological levels, with each higher level subsuming the preceding one. Adapted from “An Ecological Approach to Understanding Black-White Disparities in Perinatal Mortality,” by A.P. Alio, A.R. Richman, H.B. Clayton, D.F. Jeffers, D.J. Wathington, and H.M Salihu, 2009, *Maternal and Child Health Journal*, 4, 557-566. Alio et al. (2009) study was also influenced by the work of McLeroy and colleagues (McLeroy et al., 1988).

Table 2.

Cross site Comparison of Focus Groups and Interviews

Location	Focus Group	Interview
CETPA	4	0
CPAC	0	1
Georgia State	0	2
Grant Park	1	0
Martha Brown United	5	0
Midtown Nails	1	0
Telephone	0	3
West End Library	4	0
Total	15	6

Table 3.

Risk Factors

Code	Number of sources	No. of References	Meaningful quotes
Access to gambling	9	80	As far as BP, they are not paying for gas, they are paying for lottery.
Health	19	72	Someone that has a mental illness they have a chemical imbalance they will do a lot of things other people wouldn't normally do.
Using gambling for money	16	43	There are probably plenty of people who try gambling to make up for lost wages or for money that didn't get paid.
Marketing	15	36	Where it starts from trying my luck. I think it brainwashes people [into thinking] that it can actually be me by looking at this ad.
Lack of Information	13	30	The state has the responsibility to educate children earlier in the process since it does go back to scholarships
Charitable Giving	9	16	Here the lottery tax funds the hope scholarship..I guess in moderations isn't bad but if like if people are abusing it almost or getting abusing by it then other people are profiting of it
Social Influence	9	11	\$5000! From that day I say Oh my God how do you play this? and then I start playing and the more I play I say I'm waiting to win \$5000 just like she did

Table 4.

Protective Factors

Code	Number of Sources	No. of References	Meaningful quotes
Self-control	7	28	It's pretty much the same as everyone else as long as you don't go beyond your means or the excess, then it's no problem
Family	7	13	Financial, mental and psychological problems. I think it depends on your relationship with your family members.
Sense of community	4	6	The Chinese community is much more than the nuclear family than American. Friends and family have a very strong influence.
Jobs	3	5	If you are a professional and you have health benefits, you could call an 1-800 numbers
Resource deprived	2	3	Working in Georgia, you make about \$500 a week, you would not dream of wasting \$100 on a risk
Insurance only	2	3	I think that they access their insurance benefit

Table 5.

Nonclinical Resources

Code	Number of sources	No. of References	Meaningful quotes
Religious	14	24	In my community I would go to church and tell them about the situation
Family	9	16	He is a man totally changed from what he was before. His whole family has stood by him and he has transformed over time.
Social network	7	12	I feel a certain amount of closeness to somebody and I see a problem I think you should say something, usually we'll say something about it or try to be helpful in some way.
Internet	7	12	Probably yeah or they would go to the Internet, yep they would Google it people in my community yep.
Community organization	7	8	A community center. I used to work at one of them. That where people would come. This is the place to help people with certain needs.
Holistic health	1	2	Some people get hypnotized

Table 6.

Prevention Strategies

Code	Number of sources	No. of References	Meaningful quotes
Education	16	59	One of those machines, where it pops up “have you been sitting there for 9 hours?”
Support from family or friend	15	34	[I am] more likely to approach a family member. For co-worker or friend, I will ask them in a discretionary way.
Policy	14	26	Regulation is important but personal liberty is important. This is not Nazi Germany you can't just have personal liberty, there needs to be some regulation. Maybe limiting the number of lottery tickets like they do Sudafed.
Outlet for expression	6	6	I try to give the young people play more activities. Keep them busy.
Support groups	1	2	I have this actually. Free community support group. I am going to leave this here with you. It's for people that just getting out of jail.

Appendix

Focus Group and Intervention Schedule

Introduction

- The purpose of this study is to learn more about awareness of and treatment seeking for pathological gambling within the community you most strongly identify.
- Everything that you say here will be kept confidential, and your names, and any other identifying information will not be used in any report coming from this discussion.
- We have a limited amount of time, so I might have to interrupt to make sure we end on time. We will try to return to these items if there is extra time at the end.
- Gambling activities are those activities where money is used to bet on an unpredictable future outcome, e.g., playing the lottery, slot machine, betting money on sport games, etc.
- Here is the definition for pathological gambling [*Compulsive (pathological) gambling* is defined as a disorder characterized by a continuous increase in worsening of symptoms, the regular loss of control over gambling; a preoccupation with gambling and with obtaining money with which to gamble; irrational thinking; and a continuation of the behavior despite negative consequences].

Opening question

1. Could each of you describe your awareness of out of control gambling in the state of Georgia?

2. Please describe the frequency of out of control gambling in the community you reside.

Introductory question

3. Please describe your feelings towards people who gamble.
4. What types of gambling activities are most popular within your community?
5. Please describe the symptoms that would qualify as unhealthy gambling behavior.
 - a. Probe: How would this issue be addressed within your community?
How would the family be involved?
6. Would you please describe your understanding of how frequently unhealthy or pathological gambling occurs within your community?
7. What situations contribute to someone engaging in unhealthy gambling?
8. What are the characteristics of someone who would engage in problem gambling?

Key questions

9. What experience would motivate someone in your community to seek assistance for unhealthy or pathological gambling? (Please determine if there are any differences between the community you reside and the one you serve)
10. Do you know anyone who has sought treatment for pathological gambling?
11. What factors prevent community members to seek assistance for unhealthy or pathological gambling? (Please determine if there are any differences between the community you reside and the one you serve)
12. Where do members go to receive assistance for unhealthy or pathological gambling treatment? Where do members to receive assistance for other mental health issues?

13. How often do members go to receive assistance for pathological gambling treatment?
14. Do you know of anyone in the community you live who has sought pathological gambling treatment?
15. What are the best ways to prevent unhealthy or pathological gambling in the community you live?
16. What are best ways to gain the attention of community members who need treatment for unhealthy gambling but who have not received help?

Ending question

17. What other ways should the Georgia Department of Human Resources consider when addressing gambling?

Debriefing

We appreciate your participation. No part of our discussion that includes names or other identifying information will be used in any reports, displays, or other publicly accessible media coming from this study. Before we end, I want to open the floor for any questions that you have for me or you may have about this study.