

Contextual Typologies:  
Gambling Practices among University Students

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## ABSTRACT

### Contextual Typologies: Gambling Practices among University Students

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In recent decades, research on gambling has largely focused on the description of gambling behaviours and problems, and on the psychological determinants of excessive behaviours (Aasved, 2003b). It is our contention that these conceptual orientations have ignored the role of the proximal social context as a significant determinant of gambling patterns and problems. In response to this limitation, we suggest conceptualizing gambling behaviours as social practices that are expressed and empirically observed in proximal contexts through a triad of dimensions including the type of activity, the relationship to gambling partners and the location. Given the scarcity of research on the social context of gambling, however, this contextual study of gambling is exploratory in nature. It aims primarily at identifying groups of gambling practices among university students and examining the association between the identified groups and related problems. These problems namely include gambling problems, alcohol and illicit drug use and psychological distress. The sample (N=861) was drawn from the University Student Gambling Habit Survey 2008 (ENHJEU), conducted among a representative sample of undergraduate students in three universities and three affiliated schools in Montreal, Canada. A multiple correspondence analysis was performed to generate groups of gambling patterns based on the combination of three characteristics of the gambling context including the activity, the gambling locations and the partners. The analysis revealed three groupings of activities and eight distinct groups of contexts. Three groups were found to be associated with problem gambling while none of the other risk-behaviours had any association. The discussion brings about the role of contexts in shaping gambling as collective social practices and the association between specific constellations of contextual factors and gambling problems. It concludes with a broader reflection on new approaches to comprehend gambling in the context of modernity.

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## Introduction

Gambling is a culturally-embedded activity holding a wide-variety of meanings and functions through history and societies. As such, it has been a topic of interest in various disciplines. This is especially true in recent years, where research on gambling has increased drastically following substantive changes in gambling regulations in western countries. With an increasing number of countries legalizing gambling, public health concerns about the potential impact of availability on gambling participation and problems were echoed with the expansion of research endeavours (Shaffer & Stanton, 2006).

In the last few decades, research has predominantly focused on two conceptual orientations. In population studies and public health ideologies, it was primarily geared towards the assessment of gambling participation rates and prevalence of problems, targeting gambling pathology as a priority for action (Aasved, 2003b). Alternatively, at the individual level, analyses have mostly explored psychological determinants of excessive behaviours such as cognitive distortions and erroneous beliefs about chance.

It is our contention in this thesis that gambling behaviours do not occur in social vacuum, but rather in a surrounding socio-cultural context that significantly contributes to the understanding of gambling patterns and problems. The proximal context where gambling activities occur is hypothesized to be an object of inquiry that is important to explore from a sociological standpoint and a level of analysis on its own, which is likely to affect gambling behaviours above and beyond individual characteristics.

Thus, in this thesis, gambling is defined as a social phenomenon and a social activity which on one end of the continuum is playful and on the other end can be harmful, entailing severe negative consequences for the gambler and his/her social environment. By taking a sociological approach beyond the pathology of gambling, this thesis focuses on the role of the social context in gambling behaviours and problems. The models build on the assumption that individual actions are embedded in a social context that plays a determining role in the patterns of gambling behaviours. Thus, the contribution of this thesis is twofold: 1) theorizing gambling on a continuum as a social activity rather than a dualistic reality, dichotomized as normal or pathological, and 2) exploring the social context of gambling as a significant determinant of gambling patterns and problems. Ultimately, this thesis builds on multidimensional models that account for the gambler, the gambling activity, and the gambling context setting as well as their interactions to investigate the patterns of gambling behaviours and gambling problems.

This thesis will be structured in the following manner. The first chapter will present a historical perspective of significant changes in the gambling landscape in Canada with a description of gambling trends in the general population and among university students, the latter of which compose the sample group for this study. In the second chapter, we briefly provide operational definitions of gambling and pathological gambling and we substantially review the underpinning sociological theories that emphasize the role of proximal contexts and face-to-face encounters in understanding human behaviours and actions, namely for gambling. We build on the theory of lifestyle to sustain the hypothesis that the social practices of gambling are the manifestation of a collective lifestyle, 'routinized' actions that are actualized in specific gambling contexts. The theory of lifestyle provides the theoretical foundation for

understanding the mechanisms underlying social practices. These social practices are captured empirically in this thesis through the analysis of the proximal context of gambling and, more specifically, through a combination of three dimensions: space (gambling location), interpersonal dynamics (gambling partners), and the nature of the activity (gambling activity). The third chapter presents the methodology of the ENHJEU survey and describes the sample of the study, the measurements and the analytical procedure, namely multiple correspondence analysis. The fourth chapter presents the descriptive results of the ENHJEU survey and our study followed by a presentation of the results that were generated through multiple correspondence analysis. The final chapter of the thesis includes a discussion of the results, the limitations of the study, and conclusions regarding the potential implications of the thesis and promising venues for future research.

## Chapter 1. Historical Perspective and Gambling Trends

Through the ages, gambling, as a cultural activity, has been interpreted through multiple orientations, namely towards the sacred, to providence, as expression of superstition or irrationality in prehistoric times (Gabriel, 2003, pp. 335-336), or as forms of unproductive expenditure and play in Ancient Rome and the Middle Ages (Cosgrave, 2006; Gabriel, 2003, pp. 335-336). Contemporarily, Durkheim asserted that gambling should be regarded in terms of its collective representation throughout its history (Durkheim, 1982 [1895]). In late capitalist societies, it should be understood as an institutionalizing of orientations and a setting to acknowledge chance, uncertainty and ontological insecurities (Beck, 1992; Giddens, 1991). Gambling has its own history in Canadian society, translating means and ways of control that society imposed on the activity.

Ever since all forms of gambling were banned in 1982, the history of gambling in Canada has been intimately linked to the Canadian criminal code. Its legalization began with small exemptions to allow gambling on behalf of charities and agricultural fairs and events, which eventually led to a Criminal Code amendment in 1969 that granted provincial and federal governments the use of lotteries to fund worthwhile activities such as the Montreal 1976 Olympics (Stevens, 2006). With the monopoly governments had on Canadian gambling, substantial revenues were generated by these lotteries from less than \$100 million in 1970 to \$1.3 billion by 1985 (Basham & White, 2002). From that point forward, the federal government began reducing its involvement in gaming regulation and completely stopped partaking in any lottery schemes. This left space for provincial governments to negotiate provisions that led to more gambling options such as province-run lotteries (Stevens, 2006).

With the success of lotteries, provincial governments became interested in diversifying their gambling venues (Stevens, 2006). Another juncture was reached in 1985, when the criminal code was once again amended to permit provincial governments to administer computer and video gambling devices such as video lottery terminals and slot machines (Korn & Shaffer, 1999; Stevens, 2006). With the consolidation of provincial control on gambling in Canada, it underwent an unprecedented expansion in both accessibility and availability (Marshall & Wynne, 2003), which is expected to continue in the future (Messerlian, Derevensky, & Gupta, 2005).

Within this expansion, the state-run institutions have also been diversifying gambling activities and their milieus to appeal to the greater part of the population and retain individuals already gambling (Korn & Shaffer, 1999). For instance, since its foundation, Loto-Quebec (the province's state-run institution) has been offering public lotteries ranging from draw games to instant lotteries whilst continually designing new kinds. They also manage four casinos that incorporate gambling activities such as gaming tables, slot machines, and keno, as well as restaurant services and shows. In addition, they have developed a vast video lottery network consisting of 12,000 terminals distributed throughout 2,000 establishments including two gaming halls and a bingo network. This is aside from the fact that they have recently made their debut in online gambling, which offers various activities such as online poker—the new craze (Loto-Québec, 2011b).

In sum, the gambling landscape underwent significant changes in terms of the type of activities gambling encompasses, the locations in which they are made available and the forms of settings where they are practiced. This diversity in the realities of gambling renders the general

notion of gambling meaningless and calls for targeted analyses of various gambling realities separately to account for the diversity and the specificity of gambling experiences.

### Prevalence of Gambling and Pathological Gambling

In a culture where gambling has been legalized and made more accessible with promotional media materials depicting a glamorous side of the behaviour, gambling has become a common, socially acceptable form of recreational activity that many people seem to embrace (Dyall, Tse, & Kingi, 2009; Korn, Gibbins, & Azmier, 2003). In 2002, the prevalence rates of gambling participation in Canada were 76% and 79% in Quebec (Cox, Yu, Afifi, & Ladouceur, 2005). The latest survey conducted in 2009 revealed that 86% of Quebec residents have gambled at least once in their lifetime and 70.5% have gambled in the past year (Kairouz, Nadeau, & Paradis, 2011).

The growth of the gambling industry has been paralleled by a growth in pathological gambling rates where a steady rise was observed from 1977 to 1993 (Shaffer, Hall, & Vander Bilt, 1997). Population surveys in Canada and the USA, however, suggest that the prevalence of pathological gambling remains rather marginal, with pathological gambling rates ranging between 0.5% and 1.1% (Shaffer, Hall, & Vander Bilt, 1999; Statistics Canada, 2002). Those rates are significantly lower compared to those of other health-risk behaviours, such as tobacco (15%), alcohol (10%), and drug use (5%) (Sussman, Lisha, & Griffiths, 2011, p. 38). Moreover, population trends suggest that those rates tend to remain unchanged over the last ten years or so, particularly in Quebec (Kairouz et al., 2011). Still, one must bear in mind that the negative consequences related to problem gambling affect not only the individual, but also his or her

family and community. Several studies found that pathological gambling involved serious financial problems, bankruptcies, loss of jobs, loss of productivity and health problems for the gambler (Ladouceur, Boisvert, Pépin, Loranger, & Sylvain, 1994). Pathological gamblers are also more likely to experience comorbidity with mental health disorders, such as dependence on alcohol and illicit drugs. Suicide was also among the many potential adverse effects a problem gambler might face (Ladouceur et al., 1994; Marshall & Wynne, 2003). Furthermore, several studies have shown that specific populations can be more at risk for experiencing pathological gambling (Aasved, 2003b). For instance, gambling seems to be inherently more risky among university students (Shaffer, LaBrie, LaPlante, Nelson, & Stanton, 2004), the target population of this thesis.

### University Students and Gambling

Although recent studies have revealed that students' participation in gambling activities is lower compared to that of the general population (Kairouz, 2005; Kairouz & Nadeau, 2010; LaBrie, Shaffer, LaPlante, & Wechsler, 2003), the prevalence of moderate-risk gamblers (2.7%) and pathological gamblers (1.0%) is higher in this group compared to rates observed in the general population (1.5% of moderate-risk and 0.5% of pathological gamblers) (Adlaf M., Demers, & Gliksman, 2005; Canada, 2004), making gambling an emerging concern on campuses (McComb & Hanson, 2009).

This vulnerability of students in regards to gambling should be examined as an integral component of a special developmental stage that is favourable to risk-taking behaviours in general, including excessive drinking and frequent substance abuse (Lesieur et al., 1991). As

such, behavioural patterns found in younger populations revealed that certain lifestyles associated with risk, such as binge drinking, risky sexual conduct, and drug use, are more prevalent in this age group than in older groups (Chassin, Pitts, & Prost, 2002; Tucker, Ellickson, Orlando, Martino, & Klein, 2005).

For some researchers, the vulnerability to risk is a transitional phenomenon insofar as college years are associated with higher frequency of risk-taking behaviours. The conjecture is supported in developmental psychology. Psychologist Jeffrey Arnett observed that university students or individuals between eighteen and twenty-five years of age have a distinctive connection to risk. He coined the term “emerging adults” to describe them as he envisaged their impending shift into adulthood while still remaining on the border of adolescence (Arnett, 2000, 2005). He suggested five characteristics that distinguish these emerging adults: 1) identity explorations where emerging adults want to have a wide range of experiences and, at the same time, alleviate the burden of constructing a stable identity through risk behaviours; 2) instability as, during identity exploration, emerging adults make frequent changes in their lives; 3) self-focused, as emerging adults are freer to make decisions independently without requiring permission or opinions from others, such as previously imposed parental controls; 4) feeling in-between where emerging adults gradually begin to accept responsibilities for their actions and make independent decisions and become financially independent; 5) possibilities where emerging adults perceive that they can make significant changes in their lives and have high hopes that everything will work out well for them in the long run (Arnett, 2005). It is through these perceptions and realities that emerging adults are more prone to risk-taking.



Additionally, other studies have also established three correlates of university students' gambling: first, gender differences emerge both in the ways and frequency with which they gamble (Shaffer & Hall, 1996; Winters, Stinchfield, Botzet, & Anderson, 2002). As such, it has been widely observed that among university students, men are more likely than women to gamble frequently and to experience gambling-related problems. They also seem to prefer games of skill, such as sport betting and pool (Adebayo, 1998; Slutske, Jackson, & Sher, 2003; Winters et al., 2002); whereas women seem to favour more passive activities, such as bingo and lottery tickets (Burger, Dahlgren, & MacDonald, 2006). Second, problem gambling occurs in concurrence with other potentially addictive behaviours (Jessor, 1993). As such, university students who are considered pathological gamblers report higher rates of excessive alcohol use and alcohol dependence, as well as increased likelihood to use illegal substances, compared to social gamblers and non-gamblers (Arseneault, Ladouceur, & Vitaro, 2001). Third, problem gambling is linked with poor mental health (Kairouz & Nadeau, 2010; Weinstock J, Whelan JP, & A., 2008). In this respect, psychological distress was significantly more prevalent among at-risk and pathological gamblers, which revealed a greater likelihood of developing psychiatric disorders and poor levels of general well-being compared to social gamblers (Petry & Weinstock, 2007; Weinstock J et al., 2008).

To summarize, although the prevalence of gambling is lower than in the general population, gambling remains a popular activity among university students in search of new experiences. As such, the incidence of problem gambling is much higher among them and is correlated with other factors such as gender, other risk behaviours and poor mental health.

## Chapter 2: Conceptual Approaches and Theoretical Background of the Study

Although the practice of gambling is ancient, there still exists a lack of consensus on what exactly gambling is and what function it maintains in society. On one hand, society portrays gambling as a social phenomenon regarded as a recreational behaviour and a consumer's choice. On the other hand, it is portrayed as health-related risk behaviour where the consequences could be severe. The objective of this section is to present different approaches that have been used to understand gambling. These approaches have emphasized specific contextual aspects of gambling that lead to our conceptual model of gambling as a social practice. Thus, this section will begin by defining gambling and problem gambling and will then offer a description of different approaches in the study of contexts and gambling contexts. It will conclude with a proposal of a conceptual model for this thesis.

### 2.1. Definitions

One of the problems concerning gambling studies has been the terminology used in many corpuses of research where gambling and problem gambling remain ill-defined. Consequently, any operational definition must take into account this dichotomy by distinguishing between social and problem gamblers and their respective points of inception.

#### 2.1.1. Definitions of gambling

According to Ladouceur, gambling is determined by three criteria: 1) the individual must wager money or something of value, 2) once placed, the bet cannot be retracted, 3) the basis of the game relies on chance (Ladouceur, 2004). While his definition seems indefinite, it allows for a greater scope of gambling behaviours that are present in contemporary society. For example,

Devereux's definition, like others, assumes that money, property or other items of value is a requirement in gambling (Devereux, 1979); Internet gambling without money would therefore be excluded as a form of gambling. For Ladouceur, this activity would still be considered gambling given that the individual would have invested time, which can be something of value. Additionally, Ladouceur's last criterion, namely that the outcomes are beyond one's control and contingent on chance, is a key component in fully understanding problem gambling, as some might argue that a number of activities, such as poker, can depend on the skills of the player (Croson, Fishman, & Pope, 2008; Fiedler & Rock, 2009). He recognizes that gamblers in general are likely to hold erroneous beliefs that one's own luck or skills can change the outcome of the game to their advantage (Bonfoldi & Ladouceur, 2001; Ladouceur, 2004), beliefs that are particularly harmful for pathological gamblers as they sustain persistence in gambling and a false confidence to recover previous losses (Ladouceur, 2004).

### 2.1.2. Definition of Problem and Pathological Gambling

Similarly to the definition of gambling, the implications of the terms pathological gambling and problem gambling vary significantly depending on the context of the research (Aasved, 2003a). Even the term 'pathological gambler' conveys a different connotation depending on its use in clinical or epidemiological contexts, pointing to the need for a greater precision in the definition of these terms.

In the clinical context, it is the term *pathological gambling* that is used, which refers to a persistent and recurring gambling behaviour signified by a preoccupation with gambling and obtaining money to do so, loss of control over one's time and money expenditure on gambling,

and inability to stop gambling even in the face of large losses. It was classified as an impulse control disorder by the American Psychiatric Association in 1980. Being a psychiatric *diagnosis*, it is used to confirm the presence of a gambling pathology according to the ten diagnostic criteria of the Diagnostic Statistical Manual –IVR, which are answered by yes/no responses. The total score is obtained by summing-up the ten criteria as a total score. A cut-point of five or more indicates a diagnosis of pathological gambling (American Psychiatric Association, 2000; Stinchfield, Govoni, & Frisch, 2005).

In epidemiological surveys, it is predominantly the term *problem gambling* that is used to designate “those who have experienced adverse consequences from their gambling, and may have lost control of their behaviour. Involvement in gambling can be at any level, but is likely to be heavy (Ferris & Wynne, 2001, p. 30).” In earlier definitions, problem gambling was a more inclusive term that applied to all patterns of gambling behaviour which may compromise, disrupt or damage family, personal and/or vocational pursuits. When looking at the literature, problem gambling also includes, but is not limited to, terms such as compulsive or pathological gambling when *screening* measures are used (Lesieur & Rosenthal, 1991). Although there exist several different screening measures such as the South Oaks Gambling Screen (SOGS), the Canadian Problem Gambling Index (CPGI), and National Opinion Research Center DSM-IV (NODS) that all have their own categorisation, their objectives remain the same: 1) to determine the risk level of the behaviour, and 2) to identify gamblers that are at-risk for developing a gambling problem, and those that are *probable* pathological gamblers in the population. As such, these measures are considered more liberal compared to the DSM-IV diagnostic instrument as they serve the main goal of screening potential risks in the population

instead of confirming a pathological gambling diagnosis. For instance, if we consider the Canadian Problem Gambling Index (CPGI) which is the measure that has been used in this thesis, gamblers are categorized into four groups where the two highest on the severity continuum include 'moderate risk gamblers' and 'problem gamblers,' which are usually grouped because of the small number of observations in those groups, and to ensure robust estimations of the prevalence in the population (Kairouz et al., 2011).

As the present thesis adopts a populational approach that refers to problem gambling as gambling behaviour that has a negative impact on the gambler, we have used the CPGI *screening instrument* to measure problem gambling. This measure was specifically selected because of its relative emphasis on social and environmental factors related to problem gambling and its ability to divide gamblers into four groups (non-problem gamblers, low risk gamblers, moderate risk gamblers and problem gamblers) that would better capture the reality in the general population. Furthermore, the instrument comprised good psychometric qualities of validity and reliability when capturing the concept of problematic gambling in epidemiological studies, cementing its choice as instrument for this thesis (Ferris & Wynne, 2001).

## 2.2. Conceptual Approaches in the Study of Gambling

As gambling has been studied through various disciplines, the phenomenon has been explained in a multitude of ways, each emphasizing different aspects and functions of gambling. The two approaches presented in this thesis were selected specifically because of their theories emphasizing the influence of contextual factors in gambling behaviours supporting the

assumption that proximal contexts are essential in understanding the phenomenon of gambling. Thus, starting with the psychological approach, we portray the play theory, which is then followed by the sociological approach, and its three accompanying interactional theories, which focus on small-group interaction and gambling venues.

### 2.2.1. Psychological Approach: Gambling as a Pure Play Position

Like many psychological theories, play theory is an approach that puts emphasis on individual actors. It was pioneered by Huizinga (1955) who saw play as an activity which was neither serious nor part of ordinary life, but possessed the ability to fully engage its participants. Although his focus was on the concept of play, gambling was considered a form of play which was neither profitable nor associated with any material interest (Aasved, 2003b). Through a set of freely established rules, the activity was performed voluntarily and ended with some material or symbolic reward. Huizinga felt that the function of play was to serve as a relief for tension and to inspire states of euphoria that were otherwise unattainable (Huizinga, 1955).

It was from Huizinga's starting point that Roger Caillois expanded on the concept of play and its application to gambling. He defined play as an activity that was 1) a *free*, unforced, 2) *separate*, temporally and spatially defined, 3) *uncertain* in relation to its result, 4) *unproductive*, 5) *rule-governed*, and 6) '*make-believe*' – that is, "accompanied by a special awareness of a second reality, or of a free unreality, as against real life" (Caillois, 1961, p. 10). Although he agreed that play produced no material value, he asserted that play leads to an exchange of value (Aasved, 2003b).

Caillois categorized play based on the subjective experience of the participants and its dominant role: competition (agôn), chance (alea), simulation (mimicry), and vertigo (ilinx) (Herman, 1976). The category agôn, as characterized by Caillois, corresponds to agonistic games of competitive struggle which involves skill and strategies. The second category, alea, relates to aleatory games which involve chance, uncertainty, and luck. The third category, mimicry, involves role-playing situations in which participants make believe and assume character traits of others. The last category, ilinx, involves the chase of mood altering experiences which can result from or in a sensation of dizziness, euphoria, or panic (Aasved, 2003b; Herman, 1976). Through these categorizations, Caillois' description of play could also be applied to many forms of gambling. For instance, poker could be classified in the category agôn, as it entails a competition between players and their skills, whereas gambling on video lottery terminals represents the alea category, as it involves pure luck (Herman, 1976).

### 2.2.2. Sociological Approach: Gambling as a Situated Action

Although numerous sociological theories discussed gambling, interactional theorists were specifically chosen because they defined gambling as an activity that offered an agency for role-playing where personality and behavioural characteristics could be conveyed. In that sense, the gambling environments could be regarded as stages where gamblers could assume a desired identity, fulfill their fantasy, or play a particular role. For them, gambling provided social opportunities and benefits that would have been normally unavailable and their personal needs unsatisfied (Aasved, 2003b). Three authors in particular emphasized the importance of the social contexts of gambling: Goffman, Rosecrance, and Abt.

Erving Goffman was one of the main theorists on small-group interaction who researched 'actions' in passing interactional situations. For him, the notion of "gambling" could be used as a metaphor to explain many other kinds of social interactions in Western capitalist societies where fixed rules and roles were imposed and individuals expected to adhere to them. As many before him, he believed that Western society left little place for choice in the lives of individuals, except when they were engaged in voluntary risk-taking behaviours such as gambling. In contrast to others, he regarded these behaviours as one of Western society's highest values as it enables observers to judge an individual's true character during high stress conditions (Goffman, 1959, 1967, 1969).

For Rosecrance (1986), gambling went further than role-playing as gambling venues were considered to be distinct social worlds where gamblers developed social networks centered around the gambling activities and the gambling partners. For him, the reward of gambling was social and the reason that gamblers continued to play despite their losses was that quitting would mean abandoning their social relationships with their counterparts (Rosecrance, J., 1986). Thus, he stated that "the sustaining mechanisms of regular gambling are not rooted in individual pathology or economic rationality but instead can be located in the social networks that have developed among the participants" (Rosecrance, J., 1986, p. 358).

Abt and her colleagues were in opposition of the notion of gambling as being socially deviant, functionally pathological, or contributing only to negative individuals needs. They felt that this 'pathologizing' approach largely ignores the social system-maintaining dynamics of gambling which enable the action to continue through the socialization of players into the properties of



the gambling situation (Abt, Smith, & McGurrin, 1985, p. 64).” For them, gambling was fundamentally a social and cultural phenomenon and needed to be analysed in sociological and cultural terms rather than in terms of the personality of players. Similarly to play theorists, they believed that gamblers did not play for the money but for fun, as gambling provided entertainment, excitement, safe risk, escape, and an alternative social reality. They consented that cash was important in gambling, but remains only the medium through which individuals played the activity (Abt et al., 1985). They also believed that gambling provided positive social needs in society by providing an escape from stress and anxiety produced by everyday life through the profound involvement of participants. As interactional theorists, they regarded gambling venues as social systems generating self-sustaining mechanisms that enable gamblers to assume new identities through interactions and socialization via complicated networks of formal and informal rules. For instance, they regarded casino and race track gambling as generating distinct social worlds with their own symbolic meaning systems with their specific roles and identities. As such, gambling simultaneously provided an escape from the real world as well as a type of world building activity (Abt et al., 1985, p. 65).

### 2.2.3. The Importance of Context

As contended at the beginning of this section, all theories of context presented previously put emphasis on the impact that specific contextual factors have on gambling behaviours. Alternatively, Caillois’s theory highlighted within that context the importance of the activity itself, whereas Goffman and Rosecrance placed emphasis on the relational dimensions among gambling partners and the symbolic value of gambling venues as time-out from life stressors, which was also recalled in Abt and her colleagues’ work.

As a result of these theories, this study defines gambling as a social phenomenon where gambling behaviours are understood in relation to their physical and social settings. In that sense, the importance of proximal contexts is fundamental as gambling behaviours are formed at the frontiers of the activity, the physical setting, and the relation of individuals to the social setting. Thus, as Goffman asserted, social interactions and verbal/non-verbal behaviours could not be understood when they were removed from the milieu in which they occur (Goffman, 1981).

Moreover, this stance towards the contexts is not new as several studies in the field of risk behaviour have already shown the significance of the role played by contexts. For example, studies pertaining to the determinants of alcohol consumption among university students showed that half of the variations in alcohol consumption were explained by physical and social environmental factors, such as the location of consumption and number of individuals partaking in the activity (Demers et al., 2002; Kairouz & Adlaf, 2003). Similarly, Kairouz & Greenfield (2007) argue that contextual factors are essential to the comprehension of health and risk behaviours, such as alcohol consumption and gambling, as they allow the representation of reality on two (individual and contextual) levels insofar as the interaction between them generates the risk behaviour.

### 2.3. Conceptual Model and Theoretical Background

As illustrated in the previous section, the diverse approaches presented gave prominence to three specific aspects of proximal contexts, namely the gambling activity, the location, and the social relations between gamblers. Consequently, this thesis proposes an ecological model

positioning the gambler in relation to these proximal contexts where collective social practices are observed and manifested. This section will explore the context as a space where collective social practices, which are expressions of lifestyles, manifest themselves.

### 2.3.1. Social Practices and the Proximal Contexts

Abt and her colleagues considered that “by studying social gambling situations, we learn something about the general rules of encounters and the social circumstances of reality that govern face-to-face interaction in all social situations (Abt et al., 1985, p. 64).” In that regard, any context can be understood as being part of a social situation which regroups multiple elements contained in a larger social system. In this context, we can consider the individual as an agent who operates as the carrier of the multiple different practices, and expresses “routinized ways of understanding, knowing how and desiring” (Reckwitz, 2002, p. 250). Therefore, it must be understood that these ‘routinized ways’ are not characteristics of the individual but elements of the practice that the individual participates in, allowing an intrinsic understanding of the practice itself. Thus, “a practice is social, as it is a ‘type’ of behaving and understanding that appears at different locales and at different points in time and is carried out by different body/minds” (Reckwitz, 2002, p. 250).

Through this particular understanding of social practices, we can regard the gambling experience from the practice theory standpoint. Accordingly, practice theory defines ‘practices’ as a “routinized type of behaviour which consist of several elements, interconnected to one others: forms of bodily activities, forms of mental activities, ‘things’ and their use, a background knowledge in the form of understanding, know-how, states of emotion and motivational

knowledge” (Reckwitz, 2002, p. 249). Thus, practices form an entity whose existence cannot be reduced to a single element but depends on the synergy that all these elements generate together. Consequently, we consider the act of gambling as social practices that are fully expressed through the contextual experiences of the gambler. Gambling practices manifest themselves differently depending on the contexts where they are enacted. They are expressed and reinforced in contexts. Thus, through an ecological analysis of gambling practices, we are able to explore gambling behaviours as embedded within their social context and examine them in relation to the proximal context (i.e. activity, location and partners). More broadly, social practices are considered to be an expression of lifestyle and lifestyles could be understood as generating social practices which emerge and are reinforced from the context which can be facilitating or constraining the expression of specific practices (Frohlich, Corin, & Potvin, 2001). The following section will explore, within the broader lifestyle framework, the mechanisms underlying the expression of social practices.

### 2.3.2. Theory of Lifestyles

According to Frohlich (2001), the concept of social practice is intricately linked to the concept of lifestyle. Weber (1949) established the groundwork of the concept with the intention to represent specific modes of consumption and behaviours of status groups, which would ascertain their stratification. Weber observed that lifestyles were based not so much on what the person produced, but on what he consumed. Consequently, the difference between status groups rested in their relationship to the means of consumption (Cockerham, Abel, & Laschen, 1993). In Weber’s paradigm, lifestyle includes two fundamental mechanisms—life choices and life chances—and it is through their interplay that social practices are produced.

For Weber (1949), life choices referred to self-direction of one's behaviours. It was directly related to a process of agency where individuals selectively remember and re-enact past cognitive or behavioural patterns, while imagining and evaluating potential future outcomes, and thus choose a specific course of action. All these actions take place in a context which contains both enabling and constraining factors that the individual interprets and acts in relation to (Weber, 1949).

Life chances, on the other hand, were anchored in structural conditions, which signified that chance was socially determined and social structures were an arrangement of chances (Cockerham, 2005). As such, the concept of structure could essentially be understood as schemas, such as societal rules or appropriate ways of action, and/or resources, such as innate (e.g. physical strength) or manufactured means (Sewell, 1992). Both Giddens (1984) and Sewell (1992) believed that structure(s) possess(es) a duality that constrained or increased an individual's power to act or influence action and, at the same time, is reproduced through social action. Thus, the structural conditions surrounding the individual provide an assortment of options and resources essential for the achievement of his aspirations. They also restrict what is open to him or her as a member of society.

The most important contribution to the conceptualization of lifestyle in Weber's paradigm was the interplay between life choices and life chances. In essence, lifestyles both originate from and maintain structure by upholding particular conventions or social practices, which, in turn, are reinforced into structural elements. These structural elements subsequently influence the individual's decision on a course of action, as expressed in social practices, whilst the individual

takes into account the factors that would help or constrain him. Therefore, an individual selects the goals, needs, and desires that have the best probability of being realized and chooses a lifestyle that takes into account his own assessment of reality such as class circumstances and their resources. In this context, choices and chances not only are connected dialectically, but are analytically distinct (Cockerham, 2005).

Even though this thesis does not directly reflect on the concept of lifestyle, it explores gambling practices as a production of lifestyle, which is expressed within the gambling context. Thus, through the study of the gambling context characteristics, we aim at gaining some understanding of the gambling practices among university students and their associations with gambling problems and other risk behaviours.

## Chapter 3: Research Objectives & Methodology

### 3.1. Research Objectives

It is our contention that contexts are necessary factors to understand gambling practices as social practices manifesting themselves through proximal contexts. Thus, we propose to identify typical gambling practices among students through the generation of profiles of contextual gambling patterns. These contextual factors are understood as the type of gambling activity, the location where gambling occurs, and the presence of particular partners. The identification of those gambling groups would also allow examining the association between some of the practices and risk behaviours such as gambling problems, hazardous drinking, and substance use. Thus, the study has two specific objectives:

1. Identify gambling practices among university students through the analysis of gambling patterns emerging from three contextual factors, namely the gambling activity, the location, and the social relations between gamblers (partners).
2. Determine if specific social practices are associated with particular risk behaviours, namely problem gambling, hazardous drinking, substance use, and psychological distress.

### 3.2. Sample Selection & Procedure

This thesis used data from the Enquête sur les habitudes de jeu des étudiants universitaires [ENHJEU], a survey gathering information on gambling habits and associated problems. The study used a stratified sampling design and targeted full-time undergraduates enrolled in one of the four universities and their affiliated schools on the island of Montreal. Given that one

university declined participation, the study sample was selected in the remaining three universities and the three affiliated schools.

Using lists provided by the registrar's office, a random sample (N=6,000) was selected to participate in the study. The sample size was calculated to ensure statistical power with a margin of error of less than 5%. The sample size was distributed equally across French- and English-speaking universities, and proportionally to the size of the student body within a single university and its affiliated schools.

All participants were mailed a package that included a cover letter with information regarding the project's goal, a consent form, and a paper questionnaire. They were given the option to answer the questionnaire on paper or on the web. Employing both completion methods was elected to increase participation rates in a population that is Internet savvy. Data collection occurred over an eight-week period between October 2008 and January 2009, and included seven reminder contacts, by both letter and email, to increase participation. Respondents were assured that participation was voluntary and that answers were to remain confidential. The final sample of the ENHJEU survey consisted of 2,139 undergraduate students for a response rate of 41%, which was deemed comparable to other large national university surveys (Adlaf M. et al., 2005).

### 3.3. Description of the Thesis Sample

Only students who reported betting or spending money on one or more of seven gambling activities in the past twelve months (bingo, poker, video lottery terminals, games of skill, card and board games, table games, and sport betting) were kept in the analysis (N=861). Lotteries



and horse and dog racing were discarded from the analysis. For horse and dog racing, the very low prevalence of participation and the consequent low number of gamblers in this category (N=15) rendered the analysis unreliable. This situation could be explained by the closing of hippodromes in Quebec in 2009 and the general decline of the popularity of this gambling activity (Chevalier & Papineau, 2007). Unlike the other gambling activities considered in this thesis, betting on lotteries is a more routinized activity that does not involve a social context of playing. Purchasing a lottery ticket does not involve a time dimension nor a prolonged social setting. Given the focus of this thesis on the role of social settings in gambling patterns, lotteries were deemed inadequate to address the core research question. Moreover, given that Multiple Correspondence Analysis [MCA] focuses on similarities and differences between gambling activities and settings, adding a highly prevalent activity such as lottery betting could add a factor, given the size of the sample, which is likely to pull the variance, leaving out less prevalent activities and contexts and blurring the overall association between activities and settings.

The final sample comprised of 47% males and 53% females and the average age was 22.2 years (SD=3.4). The sample included students in all four years of study (36.6%; 28.6%; 22.7%; 12.1%). In terms of area of study, the highest proportion of the sample was in arts and humanities (23.8%), business and commerce (21.9%), engineering (11.8%), education (11.4%), social science (10.4%), health science (8%), science and technology (5.8%), and law (2.2%). The majority of the sample resided in non-university housing (94.9%) and mostly with parents (52.3%), followed by co-habitation with friends (16.3%), and spouses/partners (14.2%). Most of the sample was born in Canada (82.8%), compared to 17.2% who were born outside Canada.

In comparison to the overall sample of the ENHJEU study, differences in gender and place of birth were observed. The reduced sample included a higher proportion of men (47.3% vs. 37.4% in the general sample) and students who were born in Canada (82.8% vs. 75.4% in the general sample). A small difference in age was observed with the reduced sample being slightly younger (mean of 22.2 vs. 22.6 in the general sample) (see Appendix B). The two samples did not differ on living arrangements, area of study, and year of study.

### 3.4. Measures

The ENHJEU survey covered three major themes: gambling patterns and problems, alcohol and drug use, and psychological distress. The frequency distributions of these measures are presented in the next chapter.

#### Gambling Patterns

Participation in gambling activities: Nine gambling activities were initially surveyed but seven were kept for the thesis: bingo, video lottery terminals (VLTs)/ coin slot machines, table poker, table games, betting on sports/ sport events, card games / board games, and games of skills.

Gambling locations: For each gambling activity, respondents reported the frequency of gambling in various locations in the past twelve months (“During the past 12 months, how often did you bet or spend money on BINGO in the following locations’), using a five-point scale (‘every day’, ‘2 to 6 times a week’, ‘1 to 4 times a month’, ‘less than once a month’, ‘never’, ‘don’t know’). All locations were recoded into binary variables with ‘every day’, ‘2 to 6 times a week’, ‘1 to 4 times a month’, and ‘less than once a month’ recoded as 1 and ‘never’ and ‘don’t know’ recoded as 0. Only locations with 10 observations and more ( $N \geq 10$ ) were used in the

analysis as, conceptually, gambling locations used by few individuals are nondescript and, statistically, analyses performed with limited individuals gives flawed results (Canada, 2006). Furthermore, the activity 'gambling on sports' did not have any location as, conceptually, individuals did not gamble in specific locations.

*Gambling partners:* For each gambling activity, respondents had to select the partner with whom they generally gambled ("During the past 12 months, with whom did you generally bet or spend money on BINGO?") from a list of four options ('alone', 'friends', 'family members', 'co-workers', 'other'). The last three categories were combined given the small number of observations.

*Severity of gambling problems:* The Problem Gambling Severity Index [PGSI] which is the part of the Canadian Problem Gambling Index [CPGI] was used to measure problem gambling. The psychometric characteristics of the PGSI have been shown to be satisfactory (Ferris & Wynne, 2001). The nine questions were answered on a four-point Likert scale ('never'; 'sometimes'; 'most of the time'; 'almost always') for a total score ranging from 0 to 27. Participants were categorized into one of four groups as non-problem gamblers (score = 0); as low-risk gamblers (score = 1 or 2); as moderate-risk gamblers (score = 3 to 7); and as problem gamblers (score  $\geq$  8). Non-problem gamblers and low-risk gamblers were combined into one variable 'non-problem/low-risk gamblers' for the analysis, as both groups are likely to not have experienced any adverse consequences from gambling (Ferris & Wynne, 2001).

## Drug Use

*Cannabis use*: we derived a measure of past-year cannabis use based on the frequency of use in the past twelve months ('How often have you used marijuana or hashish during the past 12 months?')(‘almost every day’, ‘4 to 5 times a week’, ‘2 to 3 times a week’, ‘once a week’, ‘2 to 3 times a month’, ‘once a month’, ‘less than once a month’, ‘never’).

*Illicit drug use*: A total of fifteen questions assessed illicit drug consumption other than cannabis ('When was the last time, if ever, that you used the following drugs?'), on a four-point scale,(‘never in my life’, ‘in my life but not in past 12 months’, ‘in past 12 month but not in past 30 days’, ‘in past 30 days’). Based on the drug use items, we derived a measure of use of any illicit drugs in the past twelve months.

## Hazardous Drinking and Dependence to Alcohol

We used the World Health Organization Alcohol Use Disorders Identification Test (AUDIT) screener (Babor, Ramon de la Fuente, Saunders, & Grant, 1992) to assess drinking problems. The cut-off score of 8+ identified hazardous and harmful drinking, and the cut-off score of 11+ was used to assess possible alcohol dependence (Babor et al., 1992).

## Psychological Distress

We used the General Health Questionnaire [GHQ-12] (Goldberg, 1978; Goldberg, Oldehinkel, & Ormel, 1998) to examine components of psychological distress such as ability to cope with stress, depression, and self-confidence. The measure emphasizes changes during the past few weeks in symptom conditions (e.g., “more than usual”, “much more than usual”), and has been

extensively used and validated (Goldberg et al., 1998). Students reporting four or more of the symptoms were considered to present an “elevated level of psychological distress”.

### 3.5. Analytical Procedure

#### Description of Analysis: Multiple Correspondence Analysis

This thesis employed Multiple Correspondence Analysis technique [MCA], an extension of correspondence analysis (Benzécri, 1973). Using a graphical method of representation, this exploratory multivariate technique aims at providing a *simultaneous* representation of individuals or categories of the variables in an Euclidean space to examine possible associations between them (Lebart, Morineau, & Piron, 2000). This allows us to detect and group homogeneous individuals depending on their answers to variables which consequently can be used in the construction of groups (Allaire & Meloche, 2010). For this thesis, the categories of variables were used in the graphical representation.

Multiple correspondence analysis was chosen specifically because 1) all variables are categorical, 2) it allows the exploration of similarities between students through the variables, namely, the gambling activities, the gambling locations, and gambling partners, 3) it explores the associations between these variables' categories, 4) it enables the observation of the associations between these categories of the variables *simultaneously* contrary to other exploratory multivariate techniques such as principal component analysis, and 5) it enables the enhancement of the depiction of the grouping through the addition of independent variables (called supplementary variables) in the graphical representation, namely, the severity of

gambling problems, hazardous drinking and alcohol dependence, drug use, and psychological distress.

### Steps of the Analysis

Contrary to other multivariate statistical techniques, multiple correspondence analysis is very intuitive and includes few proper statistical tests. It is mainly an exploratory analysis providing graphical representation of dimensions to find theoretical interpretations (i.e., meaning) for the extracted dimensions. There are four steps in the evaluation and interpretation of MCA results.

1) Like factor analysis, MCA creates several dimensions and one has to select the dimensions that should be kept; 2) for the dimensions that are retained, one should identify the categories of the variables that contribute the most to the construction of the dimensions and the quality of their representation; 3) once the most contributive categories of the variables are determined, we can observe them in the graphical representation of MCA and interpret the association between variables' categories (groups); 4) the last step is to observe the arrangement of the categories of the supplementary variables in the graph and interpret them in relation to the identified groups.

### Selection of Dimensions

To decide on the number of dimensions (axis) that should be retained, a Scree plot is produced. In the Scree plot, we look for the 'elbow' or the decrease in the percentage of explained variance reflected in the slope of the line. The slope flattens when the dimensions start reflecting random, error-type dimensions. Ideally, the solution should explain the most variation with the least number of dimensions (parsimony principle) targeting only meaningful

dimensions. In this thesis, the number of retained dimensions was based on the interpretation of the Scree plot, specifically those that were included in a steep slope.

The percentage reported in the Scree plot is the inertia where its total can be divided into multiple dimensions where each explains a proportion of the total variation (Allaire & Meloche, 2010). Total inertia adds up to 100% and encompasses the quality of the display and the associated error or loss as stated by Greenacre (2007, pp. 43-44). The reported percentage can be interpreted exactly as the 'percentage of explained variance' (Greenacre, 2007). It should also be noted that MCA severely underestimates the percentage of inertia explained and, as such, the Greenacre's corrections formula was applied to correct some of the undervaluation (Abdi & Valentin, 2007).

### Contribution and Quality of Variables

The contribution of the variables is meant to guide researchers in the interpretation of the dimensions, while the quality of the variables reveals how well the category of the variables is represented (or explained) in one dimension.

Once the number of dimensions (axis) in the solution is determined, we need to examine the contribution of each category of the variables to the dimension. This is analogous to item factor loadings and the purpose is to identify the categories that mostly contributed to the construction of each dimension. The sum of the contributions of categories equals 1 on all identified dimensions, with higher loadings on the primary dimension and lower loadings on secondary dimensions. Only categories offering the highest percentage of participation are kept to explain the dimension (Allaire & Meloche, 2010; Greenacre, 2007). Although there is no

statistical test or cut-off points to decide which categories are the best contributors to a dimension, it is common to find two to four categories with a high percentage of participation in each dimension. In some cases, the choice of variables could be more tedious if the percentage of participation is equally distributed across all variables (Lebart et al., 2000).

While the contribution provides a description of the most important variables within each dimension, squared correlations (Squared Cosines) are used to judge the quality of representation of a variable on the dimension. It is also labelled “relative contribution” of a variable to its position in the graph. The closer a Squared Cosine is to 1, the closer the observed projection is to its actual position in space (Allaire & Meloche, 2010; Greenacre, 2007; Lebart et al., 2000). Although no statistical test exists to determine if a variable should be excluded for its quality, a variable’s category retaining a low Squared Cosine should be interpreted with caution and we are usually interested by the categories holding the highest value (Lebart et al., 2000).

### Graphical Representation

The graphical representation of MCA can be compared to a scatter plot where the categories are positioned by calculating the distance from the center axes using the percentage of explained variance of the dimension. As such, the distance represented in the display should not be interpreted as a Euclidian distance. Furthermore, even though it is possible to represent individuals in the graph, only the categories are shown to alleviate the representation.

Data is interpreted in relation to the main axes in the display which represent dimensions. If more than two dimensions are kept, additional graphical representations are usually produced to represent the missed dimensions. The variables that are less contributive will fall close to the



center of the axes, whereas elements that contribute substantially to defining a dimension will lie further away. As a rule, only the variables that made a significant contribution to the dimensions are represented. Furthermore, variables that have similarities will lie close together, and dissimilar ones will lie apart. Based on the graphical display, dimensions (axes) can be labelled in terms of the concept they capture.

### Supplementary Variables

It is possible in MCA to add supplementary variables in the graphical representation. Even though they do not contribute to the MCA solution, these variables can be used to examine the expected association between these supplementary modalities and the identified groups. Those variables are interpreted in the graphical representation in the same manner as the variables involved in the building of the solution, whereas the quality of their explanation can be judged by their squared cosines. This option of the MCA was used in the thesis to examine gender and the concomitance of alcohol consumption, substances use, and gambling problems in relation to the profiles.

### Statistical Analytical Procedure

Given the exploratory nature of the study and the lack of empirical knowledge on associations between gambling activities, locations and partners, we have adopted a step approach in the analysis of the variables. This approach was favoured because a single analysis including participation, locations and partners' variables would have been overwhelming and almost impossible to interpret given the high number of variables involved. As such, the first MCA examined the associations between the seven gambling activities only and based on the result,

the groups of gambling activities were subsequently analysed with their own MCA to examine their association with the settings, namely the locations and the partners (Lebart et al., 2000, p. 93). Furthermore, for these subsequent MCA solutions, supplementary variables were added to explain the association between the activity-location-partners triad and associated problems.

SAS System for Windows v.9 (Institute, 2002) was used to produce the multiple correspondence analysis and STATA 10 statistical software (StataCorp, 2007) was used to produce all other analyses.

## Chapter 4: Results

### 4.1. Descriptive Results

#### Prevalence of Gambling Activities, Patterns and Problems among University Students

The results presented here contain all individuals of the general sample to portray a comprehensive illustration of the prevalence of gambling and problems among university students. Overall, more than half of all university students (60.5%) engaged in at least one gambling activity during the past year, with *lottery tickets* (39.3%) being the most preferred activity followed by *table poker* (19.5%), occurring mainly in private residence (94%) and, to a lesser extent, on Internet (14.6%) and casino (11.5%), and *video lottery terminals* (VLTs)(17.6%), occurring mainly in casinos (81.1%) and in bars (35.4%) (Kairouz & Nadeau, 2010). Conversely, the least preferred gambling activities were *horse and dog racing* (0.7%), *card and board games* (3.1%), occurring mainly in private residences (89.3%), and *bingo* (3.9%), occurring mainly in bingo halls (76.2%) (Kairouz & Nadeau, 2010). Gambling on all activities was mostly done with partners; friends being the most reported partners for all activities including poker (86.7%), card/board games (71.7%), VLTs (68.5%), and bingo (56.8%), followed to a lesser extent by other partners such as family members and co-workers (Kairouz & Nadeau, 2010).

Regarding problem gambling, the CPGI demonstrated that 88.6% of the student population were identified as non-problem gamblers with 41.1% being non gamblers and 47.5% non-problem gamblers. Almost 7.8% of the student population were at low risk for gambling problems, and 2.8% were categorized as gamblers with moderate risk for problems, and 0.9% as problem gamblers. Concerning alcohol usage, 22.7% of university students reported a

harmful drinking (score of 8+ on the AUDIT) and 11% reported a score indicating possible dependence to alcohol (score of 11+ on the AUDIT). For drug use, 33.9% reported using cannabis and 12.3% reported using other drugs in the past year. Finally, the findings revealed that 24.5% of students experienced some form of psychological distress over the past few weeks (Kairouz & Nadeau, 2010).

### Gambling Patterns of the Thesis Sample

For our sample, the two most popular gambling activities were poker games (42.9%) and video lottery terminals/coin slot machines with (42.6%), while the least reported activities were bingo (10%) and card and board games (8%). Most activities occurred in one or two primary locations - either in private or public settings or in both. For instance, betting on table poker occurred predominantly in a private residence (92.9%) and, to a lesser extent, on the Internet (20.7%) and in casinos (15.2%), whereas betting on VLTs/slot machines mostly occurred in casinos (80.3%) and in bars (35.9%). Bets on games of skill were mostly reported in bars (85.9%) and, to a lesser extent, in a private residence (19.1%) and on campus (10.5%) whereas table games were mostly reported in casinos (82.1%) and, to a lesser extent, in private residence (14.1%). Bets on card and board games were mostly reported in a private residence (89.3%) whereas bingo was mostly reported in bingo halls (75%).

All gambling activities were mostly done with partners. Friends were the most reported partners followed, to a lesser extent, by other partners such as family members. Sports' betting, however, was significantly done alone more often than with family members or co-workers.

**Table 1. Prevalence of gambling activities in various locations**

<b>Activities</b>	<b>N</b>	<b>%</b>	<b>CI</b>
<b>Poker</b>	<b>368</b>	<b>42.9</b>	<b>39.6-46.3</b>
Internet	74	20.7	16.5-25.0
Private residences	341	92.9	90.3-95.6
Casinos	54	15.2	11.4-18.9
Campus	29	8.1	5.3-11.0
Work	19	5.3	3.0-7.7
Bars	40	11.2	7.9-14.5
<b>VLT / Slot machines</b>	<b>367</b>	<b>42.6</b>	<b>39.3-46</b>
Internet	11	3.1	1.3-4.9
Casinos	289	80.3	76.1-84.4
Bars	128	35.9	30.9-40.9
<b>Games of skill</b>	<b>195</b>	<b>22.8</b>	<b>20-25.7</b>
Private residences	35	19.1	13.4-24.9
Campus	19	10.5	6.0-15.0
Bars	165	85.9	81.0-90.9
<b>Table games</b>	<b>123</b>	<b>14.3</b>	<b>12.1-16.9</b>
Private residences	17	14.1	7.8-20.3
Casinos	101	82.1	75.2-89.0
<b>Bingo</b>	<b>90</b>	<b>10.5</b>	<b>8.5-12.7</b>
Private residences	15	17.7	9.4-25.9
Bingo halls	66	75.0	65.8-84.2
<b>Card board games</b>	<b>69</b>	<b>8.0</b>	<b>6.3-10.1</b>
Private residences	59	86.8	78.5-95.0

\* The questions pertaining to the locations in the ENHJEU questionnaires were not mutually exclusive.

**Table 2. Prevalence of gambling activities and partners (N=861)**

<b>Activities</b>	<b>N</b>	<b>%</b>	<b>CI</b>
<b>Poker</b>	<b>368</b>	<b>42.9</b>	<b>39.6-46.3</b>
Alone	16	4.4	2.3-6.4
Friend(s)	320	87.0	83.5-90.4
Other(s)	32	8.7	5.8-11.6
<b>VLT / Slot machines</b>	<b>367</b>	<b>42.6</b>	<b>39.3-46</b>
Alone	25	6.9	4.3-9.5
Friend(s)	247	68.0	63.2-72.9
Other(s)	91	25.1	20.6-29.5
<b>Games of skill</b>	<b>195</b>	<b>22.8</b>	<b>20-25.7</b>
Alone	s	s	s
Friend(s)	183	93.9	90.4-97.2
Other(s)	10	5.1	2-8.3
<b>Table games</b>	<b>123</b>	<b>14.3</b>	<b>12.1-16.9</b>
Alone	7	5.7	1.5-9.8
Friend(s)	100	81.3	74.3-88.3
Other(s)	16	13.0	7.0-19.0
<b>Sports</b>	<b>115</b>	<b>13.4</b>	<b>12.1-16.9</b>
Alone	26	22.6	14.8-30.4
Friend(s)	74	64.4	55.5-73.2
Other(s)	15	13.0	7-19.3
<b>Bingo</b>	<b>90</b>	<b>10.5</b>	<b>8.5-12.7</b>
Alone	6	6.7	1.4-11.9
Friend(s)	50	55.6	45.1-66.0
Other(s)	34	37.8	27.6-48.0
<b>Card board games</b>	<b>69</b>	<b>8.0</b>	<b>6.3-10.1</b>
Alone	0	0	0
Friend(s)	48	71.6	60.6-82.7
Other(s)	19	27.9	17-38.9

## Gambling Problems and Other Problems of the Sample

Overall, 92% of selected gamblers were identified as either non-problem gamblers or low-risk gamblers, whereas 5.7% of students were considered at moderate risk for problems, and 2.3% as problem gamblers. Moreover, 31% of the sample reported a harmful drinking pattern, and 15.7% reported a score indicating possible dependence to alcohol. Additionally, 43.9% of the students in the sample have used cannabis in the past year, and 17.4 have used other illicit drugs. Finally, 27% of the students reported an elevated level of psychological distress.

**Table 3. Gambling problems and other problems**

<b>Gambling problems</b>	<b>N</b>	<b>%</b>	<b>CI</b>
No problem gamblers & Low risk gamblers	754	92.0	90.1-93.8
Moderate risk gamblers	47	5.7	4.1-7.3
Problem gamblers	19	2.3	1.3-3.3
<b>Hazardous drinking and dependence to alcohol</b>			
Audit 8+	261	31.3	28.2-34.6
Audit 11+	131	15.7	13.3-18.4
<b>Drug use</b>			
Cannabis use	364	43.9	40.5-47.3
Other drugs use	144	17.4	14.8-19.9
<b>Psychological distress</b>			
At risk of mental health problems	219	26.5	23.5-29.6

## 4.2. Multiple Correspondence Analysis with Gambling Activities

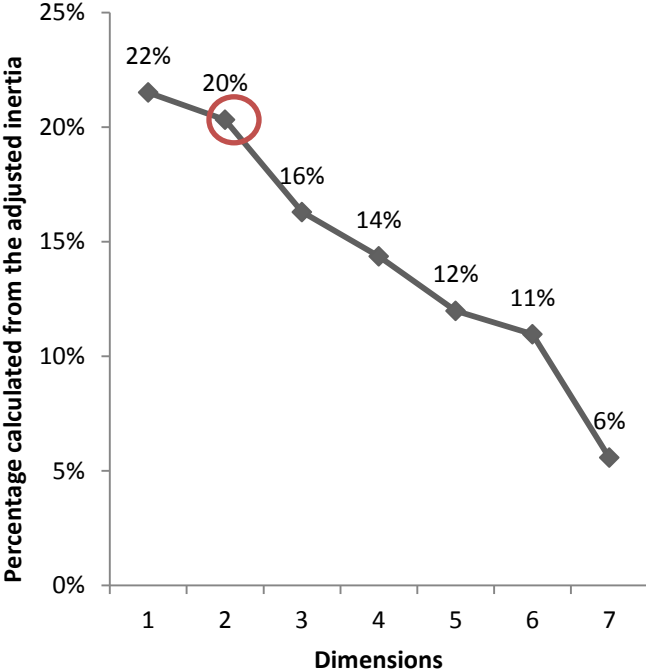
As justified in the statistical procedure, this analysis only comprised seven activities, namely poker, VLTs, sports, table games, games of skill, bingo, and card and board games, in order to find the grouping of activities for the subsequent MCAs. The inspection of the Scree plot (Figure 1) revealed a two-dimensional solution, accounting for 42% of the data heterogeneity.

Along the first axis (adjusted eigenvalue of 22%), “gambling on poker” (19% of the total variance, Squared Cosine of 0.45), “gambling on sports” (15% of the total variance, Squared Cosine of 0.23) were opposed to “not gambling on poker” (15% of the total variance, Squared Cosine of 0.45), “gambling on games of skill” (14% of the total variance, Squared Cosine of 0.25), and “gambling on bingo” (13% of the total variance, Squared Cosine of 0.19). This first axis represented “skills related activities” as the skills required for these gambling activities are diametrically opposed. Furthermore, even though its contribution was smaller in the first axis, “gambling on card and board games” was considered part of the grouping of games of skill and bingo for the subsequent MCA as they lay near each other in the same quadrant.

The second axis (adjusted eigenvalue of 20%) was constructed from “gambling on VLTs” (34% of the total variance, Squared Cosine of 0.76) as opposed to “not gambling on VLTs” (25% of the total variance, Squared Cosine of 0.76). As such, this axis represented the practice of “Video Lottery Terminals gambling”.



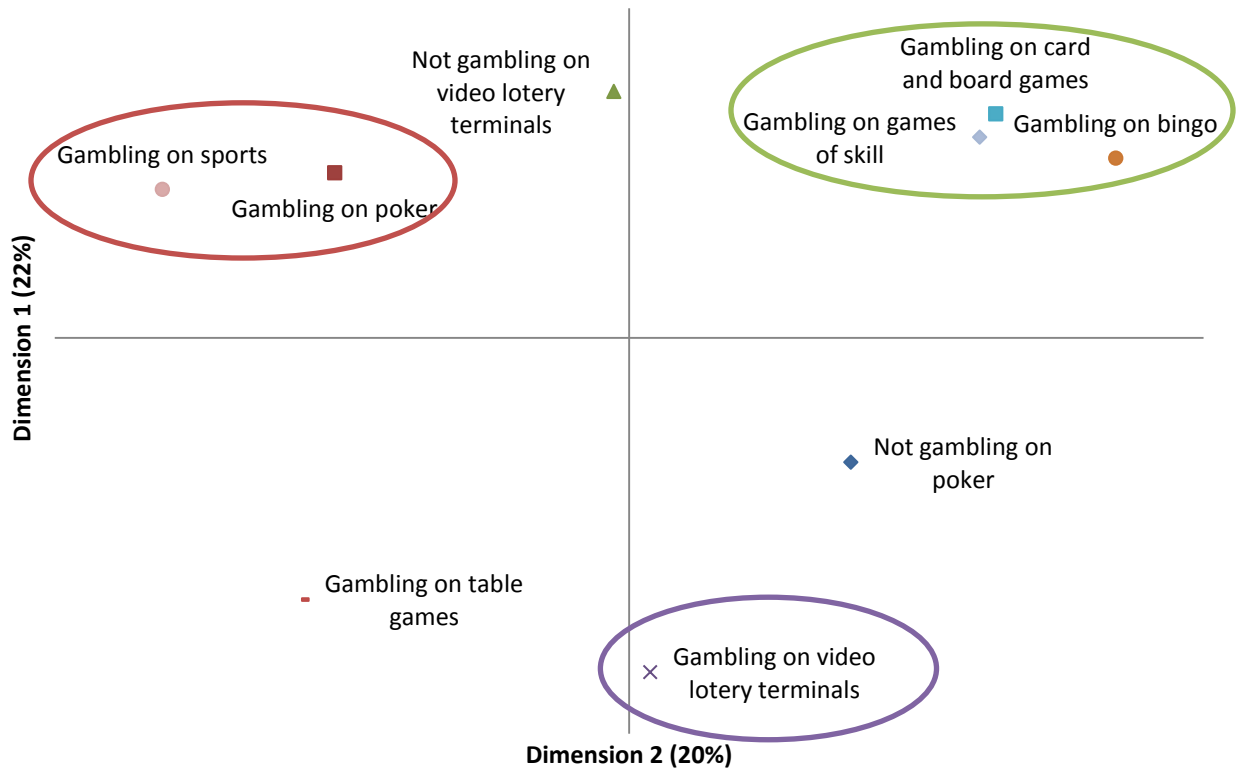
Figure 1. Scree plot for the dimensions produced by seven variables of participation in gambling



**Table 4. Contribution of each variable for the first two dimensions produced by the gambling activities**

Activities	Contribution		Square cosines	
	Dimension		Dimension	
	1	2	1	2
Not gambling on poker	15%	6%	0.45	0.19
Gambling on poker	19%	8%	0.45	0.19
Not gambling on video lottery terminals	0%	25%	0.00	0.76
Gambling on video lottery terminals	0%	34%	0.00	0.76
Not gambling on bingo	2%	0%	0.19	0.03
Gambling on bingo	13%	2%	0.19	0.03
Not gambling on table games	1%	1%	0.12	0.11
Gambling on table games	8%	7%	0.12	0.11
Not gambling on sports	2%	0%	0.23	0.03
Gambling on sports	15%	2%	0.23	0.03
Not gambling on card & board games	0%	0%	0.08	0.04
Gambling on card and board games	6%	3%	0.08	0.04
Not gambling on games of skill	4%	2%	0.25	0.11
Gambling on games of skill	14%	7%	0.25	0.11

Figure 2. Representation of gambling activities on dimension 1 and dimension 2



#### 4.3. Multiple Correspondence Analysis with Poker and Sports Betting

As established with the first MCA, this second analysis concerns the first grouping, which consists of gambling on poker and gambling on sport along with their locations and partners. For poker, the locations were Internet, private residences, campus, work, and casinos, while betting on sports had no locations. For the partners, both poker and betting on sports were done alone, with friends and with others. The inspection of the Scree plot (Figure 3) revealed a three-dimensional solution, accounting for 59% of the data heterogeneity.

The first axis (adjusted eigenvalue of 33%) was constructed from “gambling on poker” (14% of the total variance, Squared Cosine of 0.85), “gambling on poker in private residences” (13% of

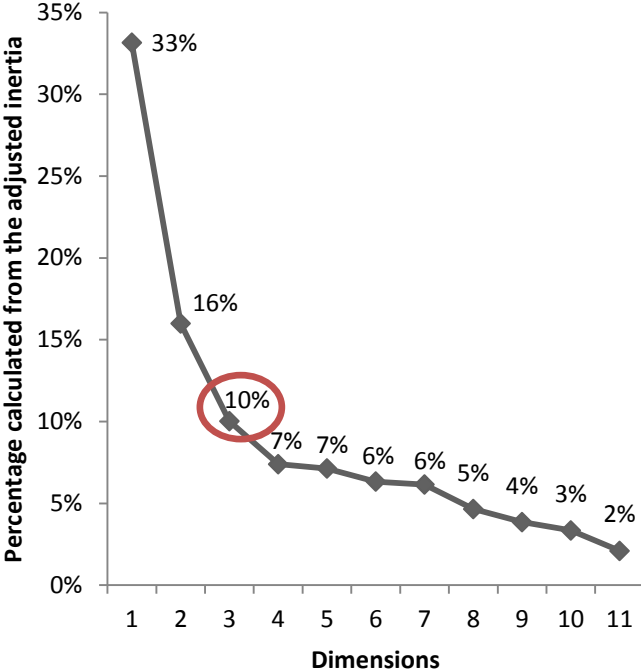
the total variance, Squared Cosine of 0.76), “gambling on poker with friends” (12% of the total variance, Squared Cosine of 0.65). This first axis represented “social poker gambling”.

The second axis (adjusted eigenvalue of 16%) was constructed from “gambling on sports” (37% of the total variance, Squared Cosine of 0.85) and “gambling on sports with friends” (23% of the total variance, Squared Cosine of 0.5). The second axis represented “social sports gambling”.

The third axis (adjusted eigenvalue of 10%) was constructed from “gambling on poker alone” (25% of the total variance, Squared Cosine of 0.36), “gambling on poker on the Internet” (16% of the total variance, Squared Cosine of 0.25), and “gambling on poker in bars” (15% of the total variance, Squared Cosine of 0.23). The third axis represented “solitary poker gambling”.

We can observe the opposition between the three groups, inferring that individuals will have a preference for gambling on one of the three activities and not participate in gambling on others. Moreover, the inspection of the graphical location of the supplementary variables’ categories on the figure revealed an association with gender on the first axis. This suggests that a preference exists among men towards poker, while women seem less likely to gamble on poker. It should, nonetheless, be interpreted with caution because of the Square Cosine of 0.15. Problem gamblers also illustrated an association with the third axis, “solitary poker gambling,” but should be interpreted very cautiously as well because of the Squared Cosine of 0.059. No other associations were observed between the set of gambling groups and the three examined problems, namely drinking patterns, substance use, and psychological distress (see appendix C).

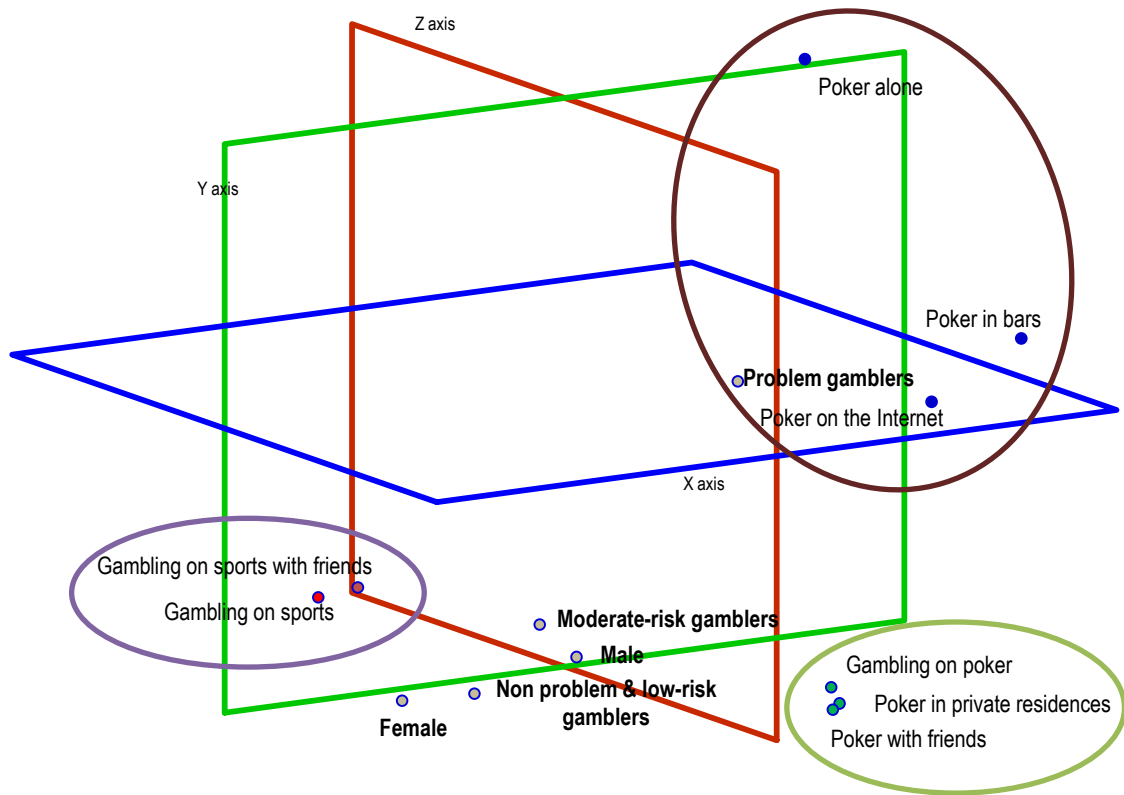
Figure 3. Scree plot for the dimensions produced by poker and sport, their locations and partners



**Table 5. Contribution of each variable for the first three dimensions produced by poker, betting on sports, their locations and partners**

Activities, locations and partners	Contribution			Square cosines		
	Dimensions			Dimensions		
	1	2	3	1	2	3
Not gambling on poker	10%	1%	2%	0.85	0.07	0.05
Gambling on poker	14%	2%	2%	0.85	0.07	0.05
No poker on the Internet	1%	0%	2%	0.31	0.01	0.25
Poker on the Internet	8%	1%	16%	0.31	0.01	0.25
No poker in private residences	8%	1%	3%	0.76	0.08	0.10
Poker in private residences	13%	2%	4%	0.76	0.08	0.10
No poker on campus	0%	0%	0%	0.11	0.01	0.01
Poker on campus	3%	0%	1%	0.11	0.01	0.01
No poker at work	0%	0%	0%	0.07	0.00	0.05
Poker at work	2%	0%	4%	0.07	0.00	0.05
No poker in casinos	0%	0%	0%	0.24	0.02	0.11
Poker in casinos	6%	1%	7%	0.24	0.02	0.11
No poker in bars	0%	0%	1%	0.21	0.00	0.23
Poker in bars	6%	0%	15%	0.21	0.00	0.23
Poker alone	2%	1%	25%	0.06	0.02	0.36
Poker with friends	12%	2%	5%	0.65	0.07	0.11
No poker with partners	10%	1%	2%	0.85	0.07	0.05
Poker with others	1%	1%	2%	0.03	0.02	0.03
No gambling on sports	0%	6%	1%	0.09	0.85	0.06
Gambling on sports	2%	37%	4%	0.09	0.85	0.06
Gambling on sports alone	0%	8%	2%	0.01	0.17	0.03
Gambling on sports with friends	2%	23%	2%	0.07	0.50	0.03
Not gambling on sports with partners	0%	6%	1%	0.09	0.85	0.06
Gambling on sports with others	0%	5%	0%	0.00	0.11	0.00

Figure 4. Representation of poker, betting on sports, their locations and partners on dimension 1, dimension 2, and dimension 3 with supplementary variables gender and type of gambler



**Table 6. Squared cosines of supplementary variables for poker and betting on sport**

Supplementary variables	Square cosines		
	Dimensions		
	1	2	3
No hazardous and harmful drinking	0.044	0.000	0.002
Hazardous and harmful drinking	0.049	0.000	0.000
No dependence to alcohol	0.039	0.001	0.000
Possible dependence to alcohol	0.041	0.000	0.001
Not smoking cannabis in the last 12 months	0.033	0.000	0.000
Smoking cannabis in the last 12 months	0.031	0.000	0.001
Not taking drugs in the last 12 months	0.009	0.000	0.001
Taking drugs in the last 12 months	0.008	0.000	0.000
Female	0.154	0.018	0.000
Male	0.154	0.018	0.000
Not in psychological distress	0.000	0.001	0.004
In psychological distress	0.000	0.001	0.001
No problem & low-risk gamblers	0.018	0.005	0.054
Moderate-risk gamblers	0.004	0.000	0.007
Problem gamblers	0.053	0.025	0.059

#### 4.4. Multiple Correspondence Analysis with Bingo, Card and Board Games and Games of Skill

As established with the first MCA, this third analysis concerns the second grouping, which consists of gambling on bingo, card and board games and game of skills along with their locations and partners. For bingo, the locations were private residences and bingo halls, while card and board games had private residences only, and games of skill had private residences, campuses, and bars. For the partners, bingo, card and board games, and games of skill were



done alone, with friends and with others. The inspection of the Scree plot (Figure 5) revealed a three-dimensional solution, accounting for 62% of the data heterogeneity.

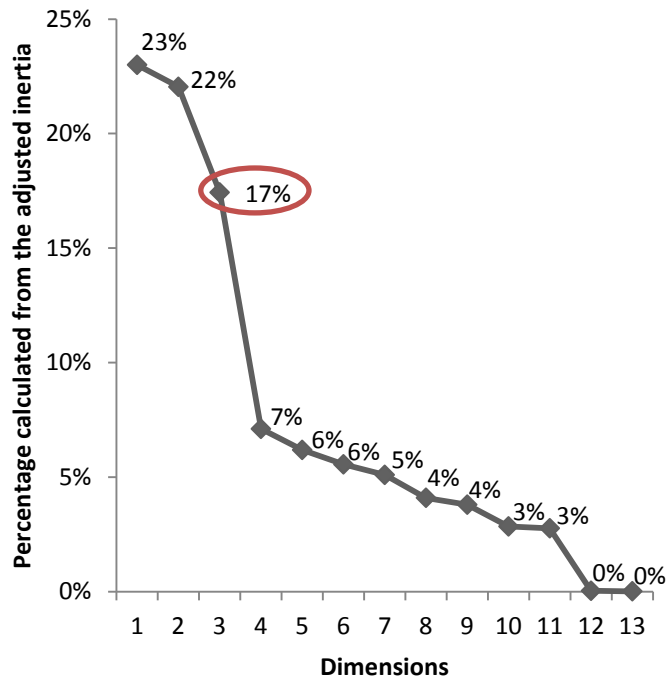
The first axis (adjusted eigenvalue of 23%) was constructed from “gambling on bingo” (16% of the total variance, Squared Cosine of 0.57), “gambling on bingo in bingo halls” (14% of the total variance, Squared Cosine of 0.48), “gambling on card and board games” (14% of the total variance, Squared Cosine of 0.49), and “gambling on card and board games in private residences” (13% of the total variance, Squared Cosine of 0.45). The axis represented “gambling related to chance”.

The second axis (adjusted eigenvalue of 22%) was constructed from “gambling on games of skill” (23% of the total variance, Squared Cosine of 0.94), “gambling on games of skill in bars” (21% of the total variance, Squared Cosine of 0.87), and “gambling on games of skill with friends” (22% of the total variance, Squared Cosine of 0.81). The second axis represented “social gambling related to physical skill”.

The third axis (adjusted eigenvalue of 17%) was constructed from “gambling on card and board games” (17% of the total variance, Squared Cosine of 0.49), “gambling on card and board games in private residences” (17% of the total variance, Squared Cosine of 0.48), “gambling on card and board games with friends” (13% of the total variance, Squared Cosine of 0.35), which was opposed to “gambling on bingo” (13% of the total variance, Squared Cosine of 0.37), and “gambling on bingo in bingo halls” (11% of the total variance, Squared Cosine of 0.3). The third axis represented “setting of gambling related to chance” as the dichotomy between private/public settings can be observed.

We can observe the opposition between the three groups, inferring that individuals will have a preference for gambling on one of the three activities and not participate in gambling on others. Moreover, the inspection of the graphical location of supplementary variables' categories on the graph revealed no associations between the set of gambling groups and gender, gambling problems, and the three examined problems, namely drinking patterns, substance use, and psychological distress (see appendix C).

**Figure 5. Scree plot for the dimensions produced by the gambling activities bingo, card and board games and games of skill, their locations and partners**

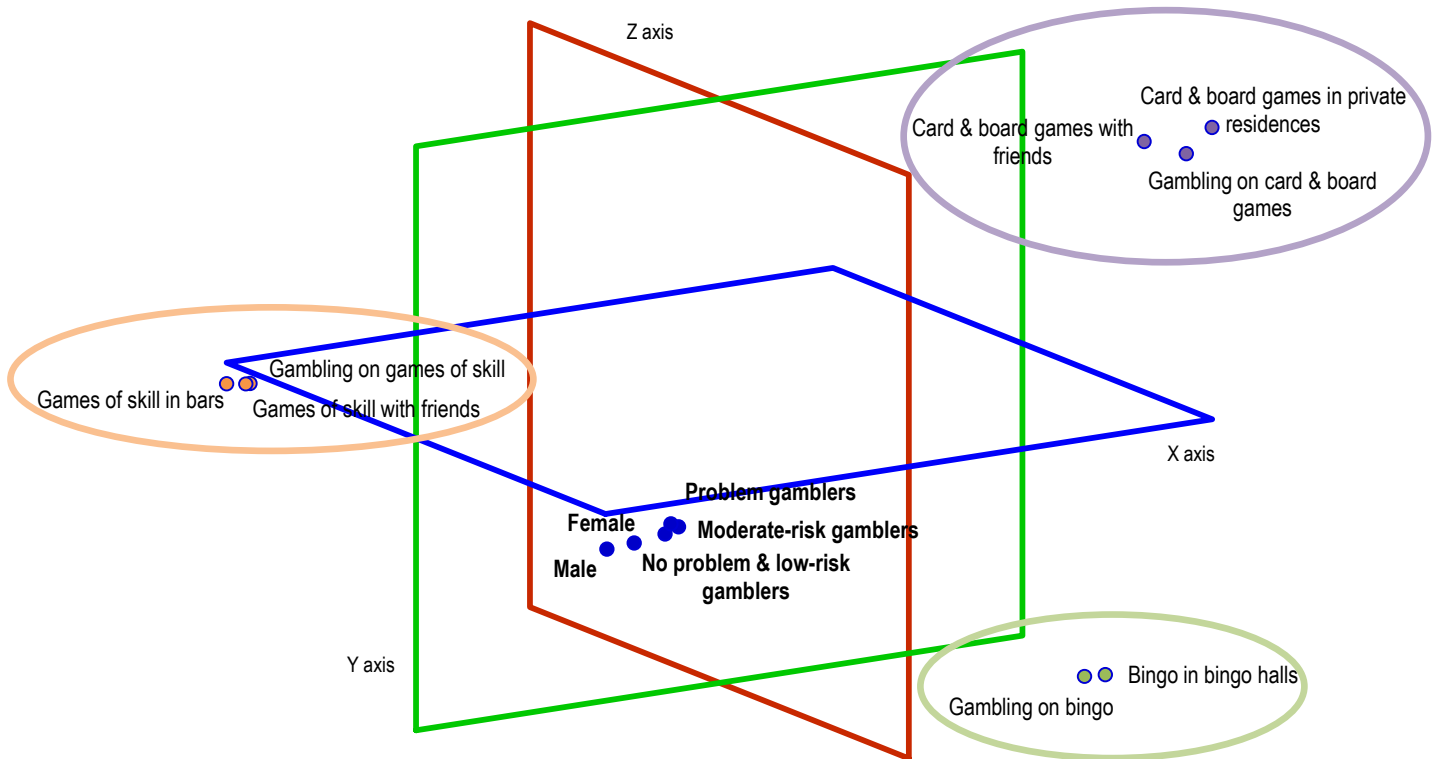


**Table 7. Contribution of each variable for the first three dimensions produced by bingo, card and board games, games of skill, their locations and partners**

Activities, locations and partners	Contribution			Squared cosines		
	dimension			dimension		
	1	2	3	1	2	3
Not gambling on bingo	2%	0%	1%	0.57	0.01	0.37
Gambling on bingo	16%	0%	13%	0.57	0.01	0.37
No bingo in private residences	0%	0%	0%	0.15	0.00	0.08
Bingo in private residences	5%	0%	3%	0.15	0.00	0.08
No bingo in bingo halls	1%	0%	1%	0.48	0.01	0.30
Bingo in bingo halls	14%	0%	11%	0.48	0.01	0.30
Bingo alone	0%	0%	1%	0.00	0.00	0.01
Bingo with friends	8%	0%	7%	0.29	0.02	0.19
No bingo with partners	2%	0%	1%	0.57	0.01	0.37
Bingo with others	7%	0%	6%	0.26	0.00	0.15
Not gambling on card & board games	1%	0%	1%	0.49	0.00	0.49
Gambling on card & board games	14%	0%	17%	0.49	0.00	0.49
No card & board games in private residences	1%	0%	1%	0.45	0.00	0.48
Card & board games in private residences	13%	0%	17%	0.45	0.00	0.48
Card & board games with friends	9%	0%	13%	0.30	0.00	0.35
No card & board games with partners	1%	0%	1%	0.49	0.00	0.49
Card & board games with others	5%	0%	5%	0.17	0.00	0.12
Not gambling on games of skill	0%	6%	0%	0.01	0.94	0.01
Gambling on games of skill	0%	23%	0%	0.01	0.94	0.01
No games of skill in private residences	0%	0%	0%	0.00	0.26	0.00
Games of skill in private residences	0%	8%	0%	0.00	0.26	0.00
No games of skill in bars	0%	5%	0%	0.01	0.81	0.01
games of skill in bars	0%	21%	0%	0.01	0.81	0.01
No games of skill on campus	0%	0%	0%	0.00	0.18	0.00

Games of skill on campus	0%	6%	0%	0.00	0.18	0.00
Games of skill alone	1%	0%	0%	0.03	0.02	0.00
Games of skill with friends	0%	22%	0%	0.01	0.87	0.01
No games of skill with partners	0%	6%	0%	0.01	0.94	0.01
Games of skill with others	0%	1%	0%	0.00	0.03	0.00

Figure 6. Representation of bingo, card and board games, games of skill, their locations and partners on dimension 1, dimension 2 and dimension 3 with supplementary variables gender and type of gambler



**Table 8. Squared cosines of supplementary variables for bingo, card and board games, and games of skill**

Supplementary variables	Squared cosines		
	Dimensions		
	1	2	3
No hazardous and harmful drinking	0.001	0.006	0.000
Hazardous and harmful drinking	0.001	0.003	0.000
No dependence to alcohol	0.000	0.002	0.000
Possible dependence to alcohol	0.000	0.001	0.001
Not smoking cannabis in the last 12 months	0.004	0.000	0.001
Smoking cannabis in the last 12 months	0.003	0.000	0.002
Not taking drugs in the last 12 months	0.000	0.003	0.000
Taking drugs in the last 12 months	0.000	0.006	0.001
Female	0.031	0.003	0.000
Male	0.031	0.003	0.000
Not in psychological distress	0.000	0.011	0.000
In psychological distress	0.000	0.013	0.000
No problem & low-risk gamblers	0.001	0.000	0.001
Moderate-risk gamblers	0.002	0.000	0.000
Problem gamblers	0.002	0.000	0.000

#### 4.5. Multiple Correspondence Analysis with Video Lottery Terminals

As established with the first MCA, this fourth analysis concerns the third grouping, which consists of gambling on VLTs along with its locations and partners. The locations were Internet, casinos and bars. The partners were alone, with friends, and with others. Although a one-dimensional solution could be adequate through the inspection of the Scree plot (Figure 7), a two-dimensional solution was kept because of the conceptual particularities of VLT gambling

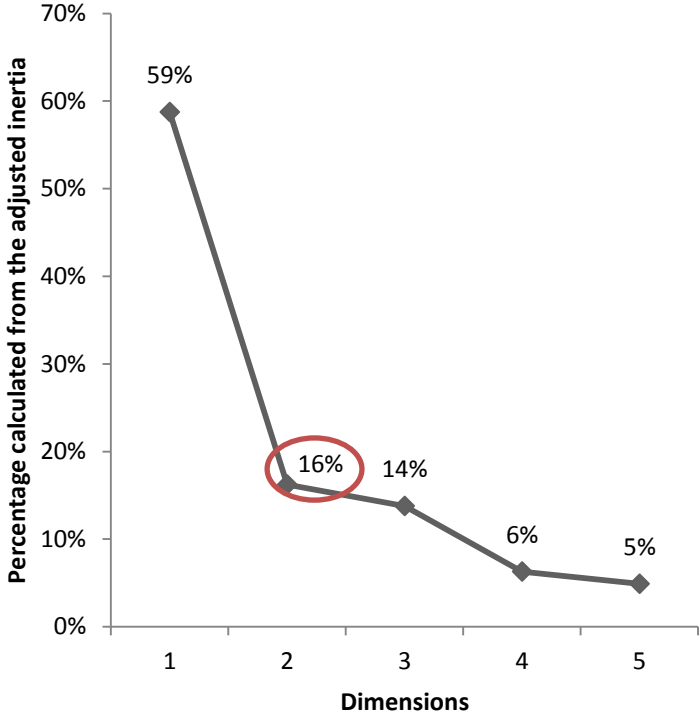
and solitary play, which appeared in the second dimension. As such, two dimensions accounted for 75% of the data heterogeneity.

The first axis (adjusted eigenvalue of 59%) was constructed from “gambling on VLTs” (19% of the total variance, Squared Cosine of 0.97), “gambling on VLTs in casinos” (16% of the total variance, Squared Cosine of 0.74), and “gambling on VLTs with friends” (13% of the total variance, Squared Cosine of 0.54), which were opposed to “not gambling on VLTs” (13% of the total variance, Squared Cosine of 0.97). As such, this axis represented the practice of “social VLTs gambling”.

The second axis (adjusted eigenvalue of 16%) was constructed from “gambling on VLTs alone” (38% of the total variance, Squared Cosine of 0.5) and “gambling on VLTs on the Internet” (24% of the total variance, Squared Cosine of 0.31). The second axis represented “solitary VLTs gambling”.

We can observe the opposition between the two groups, inferring that individuals who participate in social VLT gambling do not participate in solitary VLTs. Moreover, the inspection of the graphical location of supplementary variables’ categories on the figure revealed a tentative association between problem gamblers with both social and solitary VLT gambling, although it should be interpreted very cautiously because of the squared cosine of 0.002 and 0.000. There were no other associations between the set of gambling groups and gender and the three examined problems, namely drinking patterns, substance use, and psychological distress (see appendix C).

Figure 7. Scree plot for the dimensions produced by VLTs, their locations and partners

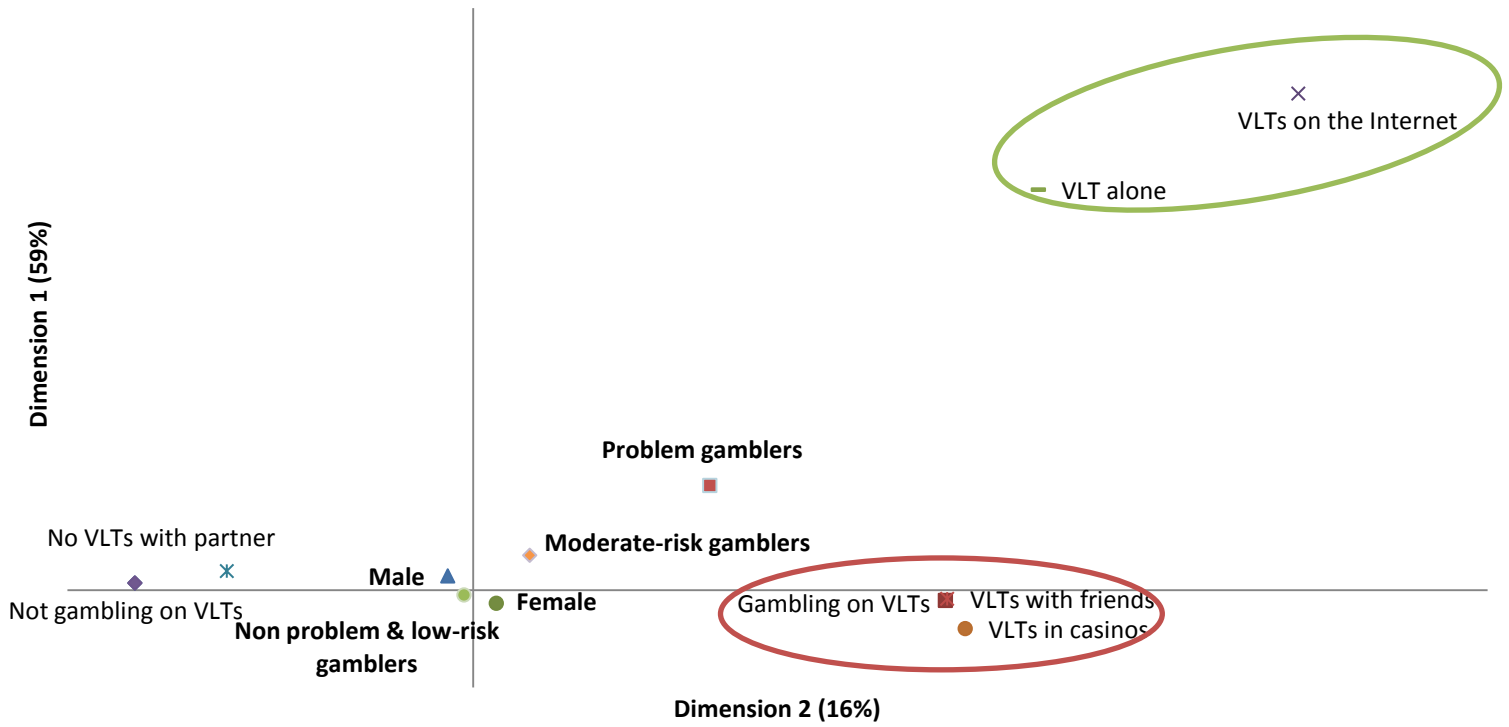




**Table 9. Contribution of each variable for the first two dimensions produced by VLTs, its locations and partners**

Activity, locations, partners	Contribution		Squared cosines	
	Dimensions		Dimensions	
	1	2	1	2
Not gambling on VLTs	13%	0%	0.97	0.01
Gambling on VLTs	19%	0%	0.97	0.01
No VLTs on the Internet	0%	0%	0.05	0.31
VLTs on the Internet	2%	24%	0.05	0.31
No VLTs in casinos	8%	2%	0.74	0.08
VLTs in casinos	16%	4%	0.74	0.08
No VLTs in bars	1%	2%	0.30	0.21
VLTs in bars	9%	14%	0.30	0.21
VLTs alone	2%	38%	0.06	0.50
VLTs with friends	13%	0%	0.54	0.00
No VLTs with partners	13%	0%	0.97	0.01
VLT with others	4%	14%	0.14	0.19

Figure 8. Representation of VLTs, its locations and partners on dimension 1 and dimension 2 with supplementary variables gender and type of gambler



**Table 10. Squared cosines of supplementary variables for VLTs**

Supplementary variables	Squared cosines	
	Dimensions	
	1	2
No hazardous and harmful drinking	0.001	0.006
Hazardous and harmful drinking	0.001	0.003
No dependence to alcohol	0.000	0.002
Possible dependence to alcohol	0.000	0.001
Not smoking cannabis in the last 12 months	0.004	0.000
Smoking cannabis in the last 12 months	0.003	0.000
Not taking drugs in the last 12 months	0.000	0.003
Taking drugs in the last 12 months	0.000	0.006
Female	0.031	0.003
Male	0.031	0.003
Not in psychological distress	0.000	0.011
In psychological distress	0.000	0.013
No problem & low-risk gamblers	0.001	0.000
Moderate-risk gamblers	0.002	0.000
Problem gamblers	0.002	0.000

## Chapter 5: Discussion

This thesis revealed three major findings. First, the multiple correspondence analysis showed that gambling activities are not independent but rather grouped together in three meaningful subsets: 1) poker and sports gambling, 2) games of skill, bingo, and card and board games, and 3) video lottery terminal/slot machines. Second, including information on gambling locations and partners led to additional meaningful sub-categories within each subset of activities. For instance, for poker and sports betting, the three meaningful groups included 1) poker betting in private residences with friends, 2) poker betting alone on the Internet or in bars, 3) sports betting with friends. For games of skill, bingo, and card and board games, the three groups included 1) gambling on bingo in bingo halls, 2) gambling on card and board games in private residences with friends, and 3) gambling on games of skill in bars with friends. Finally, the analysis entailing video lottery terminals also generated two groups including 1) gambling on video lottery terminals at the casino with friends, and 2) gambling on video lottery alone on the Internet. Third, among the eight revealed groups, 'gambling on poker alone on the Internet or in bars' was associated with problem gambling while two others - 'gambling on video lottery terminals at the casino with friends' and 'gambling on video lottery alone on the Internet' - were tentatively associated with problem gambling. All other supplementary factors had no association with any of the groups. In light of those findings, we will discuss in the following sections the nature of the various gambling activities, the role of the physical and social context in the creation of the groups and their relationships found through MCA, and the association of those groups with associated problems.

## 5.1. Specificity of the Activity

The first multiple correspondence analysis model revealed that gambling activities are not independent, but cluster together. One potential interpretation of the emergence of several subgroups of activities is Caillois' conception of the role of the subjective experience of participants, or the particular gambling experience that activities provide to the gambler (Herman, 1976). In this respect, activities sharing common characteristics will be played by individuals seeking out the same subjective experience. Thus, we can interpret the first grouping of poker and sports betting to correspond to the *agôn* categorisation, which occurred in a competitive struggle that involves skills and strategies. The second grouping, which contained gambling on games of skill, card and board games, and bingo, although harder to classify, can correspond to mimicry where social interactions are the primary motive for the activity. As for the last grouping, gambling on video lottery terminals, it might correspond to the *alea* categorisation as it involves pure chance and luck.

Several studies have already demonstrated that gambling activities are not equivalent and have suggested dividing them by types as a method of categorization (Aasved, 2003a; Chantal & Vallerand, 1996; Kroeber, 1992). Similar to our own inference, some studies differentiated between activities that required skills from those involving luck (Myrseth, Brunborg, & Eidem, 2010; Zhou et al., 2011). For instance, poker is almost always perceived by gamblers as an activity mostly built on skills, as is the case with sports betting as well. Alternatively, video lottery terminals are predominantly perceived as an activity that involves luck (Ladouceur & Sévigny, 2005; Myrseth et al., 2010). Those studies, however, were mostly driven by the aim of employing the classification of gambling activities to examine psychological risk factors such as

the illusion of control that an activity brings about, and the impact of those factors on gambling problems. For instance, some studies explored the influence of the overestimation of abilities in gambling activities (in which abilities or knowledge are partially required) on excessive gambling behaviours and problems (Mitrovic & Brown, 2009). In this context, profiling activities was primarily done to examine their higher potential for ‘addictiveness’ and related problems (Engwall, 2004). In population studies, the prevalence of problem gambling by activities (Commission, 2010; Wardle et al., 2010; Wiebe, Mun, & Kauffman, 2006) was a guiding principle for public health recommendations for prevention and legislative regulations, such as the implementation of licence quotas for VLT machines in Quebec. In this thesis, we purposively conducted an exploratory analysis aimed at providing a description of typologies based primarily on gambling participation among university students. Beyond the pathological rationale for grouping activities, we aimed at providing an empirical description of how different types of activities overlap and differ in this particular population.

Among the other reasons why activities may group together, some authors suggested the importance of motivations as a psychological determinant (Back, Lee, & Stinchfield, 2011; Chantal & Vallerand, 1996; Clarke, 2004; Mitrovic & Brown, 2009). For example, Chantal et al. (1996, p. 407) concluded that “self-determined motivations (intrinsic motivation and identified regulation) would be more prominent for the skill game because it is conducive to optimal challenges, fun, and self-involvement. Conversely, the non self-determined forms of motivation (especially external regulation) should be more important for the game of luck because the luck dimension precludes true involvement of the self and orients the individual towards material gains”. Overall, this type of research has been centered primarily on the gambler (Back et al.,

2011), and on individual choices, ignoring, to a large extent, the potential influence of the social and physical context.

## 5.2. Emergence of Particular Gambling Practices

Our findings revealed that proximal contexts are an integral part of gambling practices. As indicated by Frohlich and al. (2001), these practices represent “routinized” types of behaviours that are determined by the type of configuration between the variables defining the proximal context (Reckwitz, 2002). Supporting our argument, the descriptive analyses revealed that poker (42.9%) and VLT/slot machines (42.6%) are the most popular activities among university students who gamble. Although most activities could be practiced in multiple locations, most are played in one primary location such as the games of skill in bars (85.9%), and two or three secondary ones, with games of skill in private residences (19.1%) and on campus (10.5%). Moreover, university students predominantly gamble with partners—mainly friends. These results point to a pattern of associations between gambling activities, locations, and gambling partners, which was further illustrated with the results of the various models of multiple correspondence analyses. Thus, although the number of contexts, such as the gambling activities and the available and accessible locations for gambling, has multiplied in recent years, the number of emerging groups remains relatively small compared to the number of possible permutations. One of the possible explanations for this occurrence can be found in the lifestyle model which rationalizes that, although a lifestyle generates social practices that emerge and are reinforced by the context, it simultaneously facilitates or constrains the appearance of specific practices (Frohlich et al., 2001). This means that the combination of partner, activity and locations are only favourable to specific practices and, in this instance, constrained the

number of possible gambling practices that university students engaged in. Thus, if we consider poker gambling, which has the highest number of possible locations of play, only two particular groups emerged and are typified in three locations (private residences, bars, and the Internet), which are further constrained by the choice of partners (friends or alone). As a consequence, it is impractical to think that poker at a private residence can be done without partners, whereas poker on the Internet promotes solitary play because of the asocial nature the Internet confers to gambling activities (Griffiths, 2003).

Further evidence of the influence of the proximal contexts can be uncovered in the division between the groups. Similarly to the choice of type of gambling activities, separation between the emergent practices in the graphical representations suggests that university students prefer some practices compared to others. This could be seen as directly related to a process of agency and as choices are made in the selection of gambling activities, their locations, and the social partnership when gambling (Cockerham, 2005). As a collective choice, university students tend to prefer engaging in gambling practices that focus on social interactions compared to solitary gambling, given that five out of the eight groups include the presence of gambling partners. However, in accordance with the lifestyle model, we should underline that the choices are bounded to available gambling options or “chances” (in reference to the lifestyle model). For university students, “gambling chances” are not equivalent and could be determined by geographic accessibility (proximity of locations), monetary access (cost of gambling), or the social accessibility (places where partners are more likely to be available)(Stevens & Young, 2010). For instance, gambling at a casino could be more onerous to achieve in terms of proximity (Loto-Québec, 2011a), cost, and willingness of students to



participate than gambling in a private residence where the social setting is more appealing. Moreover, the symbolic meaning of gambling in a casino can be more contrasting with the students' culture than a get-together in a private location where gambling represents mainly a pastime.

### 5.3. Association between Gambling Practices and Risk Behaviours

One of the objectives of this thesis was to examine whether the identified groups had an association with specific risk behaviours, namely problem gambling, hazardous drinking, dependence to alcohol, cannabis and other drug use, and psychological distress. Overall, only problem gambling had association with three specific groups. Of the three groups, only 'solitary poker gambling', characterized by gambling on poker alone on the Internet or in bars, was associated both graphically and qualitatively with problem gambling, even though the last aspect is to interpret with caution. The last two groups – 'social VLT gambling' and 'solitary VLT gambling' -, characterized by gambling on video lottery terminals at the casino with friends and gambling on video lottery alone on the Internet, seem to be associated with problem gambling but only graphically as the quality of their representation was nil. We can infer that these weak associations could be due to the small number of problem gamblers in our sample and the type of statistical approach we used. Nevertheless, the correlations exist, although they should be interpreted with caution.

Although we cannot fully corroborate the associations implied through our results, other studies have found similar correlations which allow us to substantiate our findings. Thus, if we consider the weak association found between VLT gambling and problem gambling, several

researchers have shown that VLT gamblers are at a greater risk of developing gambling problems compared to other gamblers (Chevalier et al., 2004; Kairouz et al., 2011). In addition, similar to our own correlation between solitary gambling and problem gamblers, few studies mention that individuals who experience problems are more likely to be playing alone as a solitary activity, whereas individuals who gamble in social settings are less likely to overspend (Griffiths, 1990; Griffiths, 1995). The identified groups corroborate this contention as most contain a strong association with partners, which points towards gambling practices where the primary orientation of gambling is for social reasons. Gambling with partners can therefore be seen as a protective factor where they act as a social control mechanism for the individual. This can be compared to results found in alcohol studies where “drinking settings carry their own sets of rules and norms regarding drinking in terms of normal-deviant drinking. They are reinforced through social interaction, and thereby normatively regulate alcohol intake” (Kairouz, Gliksman, Demers, & Adlaf, 2002, pp. 606-607). Thus, we can hypothesize that, contrary to alcohol, gambling in social situations acts as a source of informal control where implicit norms of moderation are at play. Moreover, as solitary gambling appears for both poker and VLT gambling, we can suggest that it enhances the risk of developing gambling problems for VLT gamblers and facilitates its existence for poker gamblers only when the activity is practiced alone. Finally, the location “Internet” also appears to correlate with problem gamblers for both poker and VLT gambling, which is corroborated by several studies since the Internet, as a medium, contains several features that make the practice of gambling more risk-oriented. For instance, it provides higher event frequency, 24-hour accessibility, associability and escape; all of which were revealed to be linked to higher levels of pathologies

(Griffiths, 2003). This is especially true for university students where the rates of online problem gambling are significantly higher than those found in the general population (Ladd & Petry, 2002; Wood, Griffiths, & Parke, 2007). Although the factors associated with problem gambling were presented separately to corroborate our inferred findings, we must remember that the analysis demonstrated that it is the synergy between activity, location and partners (or lack of such) which produces an at-risk gambling practice and the three factors cannot be dissociated from each other.

We must also keep in mind that we do not suggest a causal relationship between the practice and problem gambling, but only an association between the two and, even though no other risk-behaviours were associated with the groups found, it does not imply that problem gambling does co-occur with other risk behaviours. Several studies have already shown the co-occurrence of risk-behaviours and their prevalence, especially in university student populations (Adlaf M. et al., 2005; Martens et al., 2009).

#### 5.4. Risk Society

Exploring gambling practices through the proximal contexts provides a social understanding of the phenomenon beyond individual-based explanations. However, in accordance with Durkheim's (1982 [1895]) assertion, gambling as an institution must be interpreted in light of the social, collective, and cultural contexts.

Gambling, as an institution, exists within a particular social structure that has been geared towards chance and risk in North America. Sociological models of risk in societies provide an interesting basis for understanding the paradigm of gambling in modern society. As a social

practice, gambling is part of this new risk society brought by modernity. For gambling, risks are featured in an institutionalised risk environment that provides a setting where the individual can decide to risk scarce resource (Giddens, 1991, p. 124). In this respect, modernity is a double-edged phenomenon insofar as on one hand, the modern social institutions generated more opportunities for individuals to enjoy secure and rewarding way of life and, on the other hand, it brings structural threats focused around two themes, security versus danger and trust versus risk (Giddens,1991). All these transformations were possible in a society that emancipated itself from the past and is turned towards an uncertain future where Giddens' notion of colonisation of the future is central to the understanding of the modern world. The concept of colonisation of the future revolves around the control of time and, more precisely, around the flexibility of the social world and the capacity of humans to shape their physical world. While the future remains unknowable, it becomes a 'new terrain' where an infinite number of situations are possible, "a territory of counter-factual possibility" (Giddens, 2006, p. 31). In this context, the future lends itself "to colonial invasion through counterfactual thought and risk calculation"(Giddens, 2006, p. 31). Even if nothing is certain, the calculation of risk has permeated modern society where all activities and habits are victims to the assessment of risk. "The intrusion of abstract systems into day-to-day life, coupled with the dynamic nature of knowledge, means that awareness of risk seeps into the actions of almost everyone (Giddens, 2006, p. 32).

Modern societies opened up new settings of risk, such as gambling venues and opportunities. These institutionally structured risk environments affected virtually everyone whether they participate actively within them or not. As an institutionalised system of risk, gambling is

constituted through risk rather than risk being incidental to it. It actively uses risk to create the 'future' and then colonises it. It is through these institutionalised risk environments that individual and collective risks are connected together (Giddens, 2006).

### Institutionalisation of Risk

Although the line between voluntary risk and imposed risk can often be blurred, the deliberate embrace of certain types of risks is an essential part of the risk climate. For instance, the thrill of driving fast and dangerously can be understood in terms of dimensions of 'cultivated risk' that can be performed for their own sake (Giddens, 1991, pp. 124-125). Giddens believed that these cultivated risks originate in part from characteristics of life planning and lifestyles. Gambling can be considered one of these cultivated risks entrenched in risk society as a social practice within a lifestyle. While some particular practices might be assessed separately for their consequences, it is doubtful that a person will *always* consider each one individually. Specific practices will usually be integrated in a cluster of lifestyle habits (Giddens, 1991). Through the individuals' colonisation of the future, they will have a collection of risk assessments which depend on their knowledge and openness. Nowadays, thinking in terms of risk has become relatively inevitable and refusing to think in those terms is a risk by itself. Amid the climate of risk that prevails in high modernity, "living on 'automatic pilot'" has become more difficult and fewer and fewer pre-established lifestyles are protected from changes (Giddens, 1991, p. 126).

Although modernity must be understood on an institutional level, the transformations introduced by modern institutions interweave in a direct way with individual life and therefore with the self. In a modernity that is non-foundational, the individual has to decide among a

complex diversity of choices with little of the societal markers that were current in traditional societies to help in their selection (Giddens, 1991, p.80). The consequence of this new reality has been the creation of a risk society where the individual has no choice but to choose. “A lifestyle can be defined as a more or less integrated set of practices which individual embraces, not only because its practices fulfill utilitarian needs, but because they give material form to a particular narrative of self-identity (Giddens, 1991, p. 81)”. Whereas the term lifestyle was less applicable in traditional cultures because it implied plurality of possible options and is ‘adopted’ rather than ‘handed down’, lifestyles can be seen as ‘routinised’ practices (Giddens, 1991, p. 81). These routines are incorporated into multiple everyday habits such as dressing, eating, or mode of acting. It is through these social practices that lifestyles are accomplished. Moreover, because of the risk society, these habits are subject to changes because of the mobility of self-identity. All the choices that an individual makes are decisions not only about how to act but also reflect who to be (Giddens, 1991). Giddens (1991, p. 81) states that “the more post-traditional the setting in which the individual moves, the more lifestyle concerns the very core of self-identity, its making and remaking”.

## Chapter 6: Conclusion

This study of gambling as social practice, expressed and empirically observed in proximal contexts, represents one of the first in its kind. Thus, the findings should be regarded as an exploratory effort to emphasize the importance of contexts when studying gambling behaviours, especially the liaison between gambling activities, locations, and partners. Consequently, this thesis remains exploratory in nature. The chosen statistical technique, multiple correspondence analysis, was used mainly because of its capacity to provide a descriptive solution that heavily relies on empirical knowledge. This bottom-up approach is primarily meant to investigate emerging topics where data are available and theoretical knowledge remains relatively scarce. Thus, it should be kept in mind that given the exploratory and descriptive nature of the analysis, a great deal of power is left for interpretation. Consequently, further research is warranted to explore more deeply the notion of social contexts and the mechanisms by which they are likely to influence behaviours and problems.

### Limitations

The main goal of the ENHJEU project, from which the data of this thesis were derived, was to provide an exhaustive depiction of gambling reality among university students. Given that the level of participation of students in some of the gambling activities was very low, we were constrained to exclude those activities from the analysis in order to respect some of the statistical assumptions. This exclusion was done merely on the basis of prevalence regardless of the potential symbolic, experiential, and social importance of the activities. Similarly, lottery was also removed from the analysis for statistical and conceptual reasons even though it was the most prevalent gambling activity among university students who gamble. Despite its

relevance, the analysis imposed some limitations on the possibility to conduct simultaneous analyses on the total number of activities. This reality should be acknowledged and efforts to remedy this situation in future studies should include incorporating qualitative analyses based on the data that were generated through the focus groups and the in-depth individual interviews that were conducted with a sub-sample of the study. It is through a triangulation of quantitative large-scale data and more analytical content of the interviews that some interesting conclusions may emerge.

Another limitation of this study comes from the measure that was used to capture the partner variable. As the query asked to identify the most important partner for each specific activity, and since we know that gambling partners could be different depending on the social context, we kept the choice of partners constant across locations for the same activity. It would be interesting to examine this hypothesis through the description of gambling contexts that was provided by interviews and in focus groups.

Finally, one should keep in mind that the sample of the study was limited exclusively to urban areas. Many contextual differences can exist along the rural urban continuum in terms of the availability of gambling as well as its function. Certain locations, such as casinos, are only available in urban regions, or their access is limited due to distance in rural areas. Moreover, the social dynamics on campuses in rural areas might be more conducive to informal forms of get-togethers where gambling could occur among friends. Finally, the ease of access to gambling on the Internet beyond all geographic boundaries raises questions about potential



differences in its functions and level of use in urban and rural areas. Consequently, the groups found in this thesis depict an urban reality that needs to be reassessed for rural realities.

### Impacts and Direction for Future Research

By demonstrating the importance of the proximal contexts in gambling patterns, this thesis aimed to examine student gambling from a sociological perspective beyond an analysis of gambling pathology and its psychological determinants. The findings revealed that a larger perspective is warranted pointing to the importance of the gambling context. For prevention, context should be considered as an integral determinant of gambling behaviours and an important component in the safe/risk gambling continuum. As such, future studies and interventions concerning gambling should also revisit the traditional model of health epidemiology (Cassel, 1976) that takes into account not only the host and the agent, the gambler and the activity, but also the environment in which they occur.

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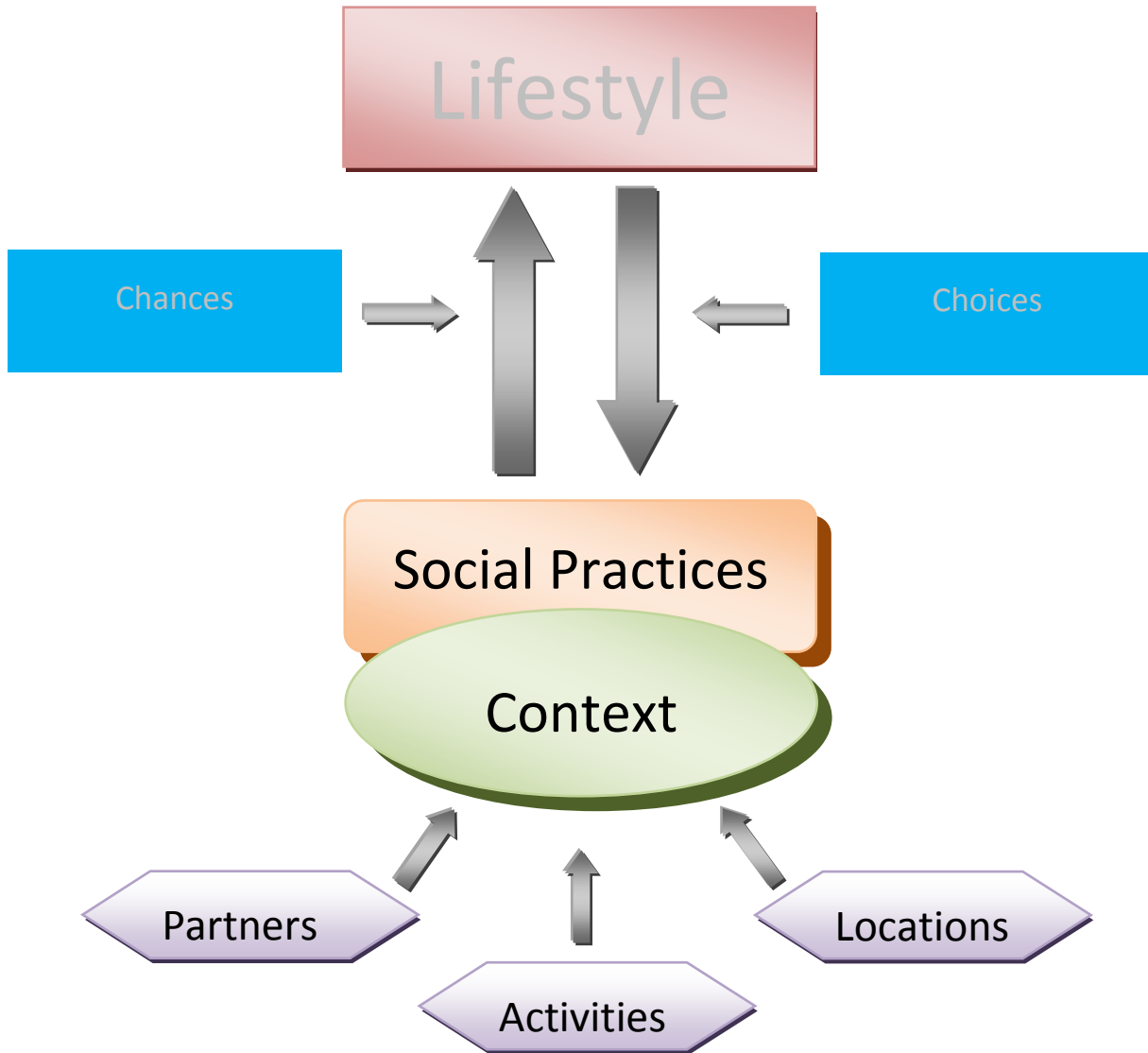
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## **Appendix A: Social Practices in the Lifestyle Model**



## **Appendix B: Comparison of Demographics Variables between the Thesis Sample and the ENHJEU Sample**

	ENHJEU sample			Thesis sample		
	%	Confidence interval (95%)		%	Confidence interval (95%)	
		<i>Lower</i>	<i>Upper</i>		<i>Lower</i>	<i>Upper</i>
<b>Gender</b>						
Male	37.4	35.3	39.5	47.0	43.7	50.4
Female	62.6	60.5	64.7	53.0	49.6	56.3
<b>Residence</b>						
University residence	3.8	2.98	4.65	3.7	2.37	4.65
Other university residence	1.2	0.71	1.64	1.5	0.64	2.29
Non-university residence	62.1	59.98	64.19	64.0	60.6	67.28
Other	32.9	30.89	34.96	30.9	27.72	34.06
<b>Living arrangements</b>						
With spouse / partners	16.8	15.22	18.46	14.2	11.76	16.54
With parents	48.2	46.05	50.38	52.3	48.9	55.74
With other family members	7.5	6.42	8.71	7.3	5.53	9.1
With friends / acquaintances	15.8	14.23	17.39	16.3	13.81	18.88
<b>Place of birth</b>						
In Canada	75.4	73.53	77.25	82.8	80.21	85.37
Outside Canada	24.6	22.75	26.47	17.2	14.63	19.79
<b>Year of study</b>						
1 year undergraduate	36.6	34.52	38.68	36.6	33.31	39.9
2 year undergraduate	26.9	24.98	28.81	28.6	25.52	31.7
3 year undergraduate	24.5	22.61	26.32	22.7	19.8	25.53
4 year undergraduate	12.0	10.63	13.45	12.1	9.89	14.35
<b>Domain of study</b>						
Arts / Humanities	23.8	21.99	25.68	21.6	18.78	24.42
Sciences / Technology	5.8	4.78	6.8	5.3	3.8	6.88
Engineering	11.8	10.42	13.22	13.0	10.69	15.29
Social Sciences	10.4	9.09	11.73	11.4	9.23	13.58
Buisness / Commerce	21.9	20.15	23.73	24.4	21.45	27.33
Medecine	2.4	1.77	3.1	3.4	2.16	4.64
Other Health Sciences	5.6	4.6	6.59	4.5	3.07	5.91
Law	2.2	1.56	2.82	2.7	1.57	3.77
Education	11.4	10.01	12.76	10.6	8.46	12.66
Other	4.6	3.71	5.53	3.2	1.96	4.35
	Mean	Confidence interval		Mean	Confidence interval	
		<i>Lower</i>	<i>Upper</i>		<i>Lower</i>	<i>Upper</i>
<b>Age</b>	22.62	22.43	22.81	22.19	21.96	22.42

## **Appendix C: Supplementary Multiple Correspondence Analysis Graphs**

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Figure 1. Representation of poker, betting on sports, their locations and partners on dimension 1, 2 and 3 with supplementary variables audit+8 and audit+11

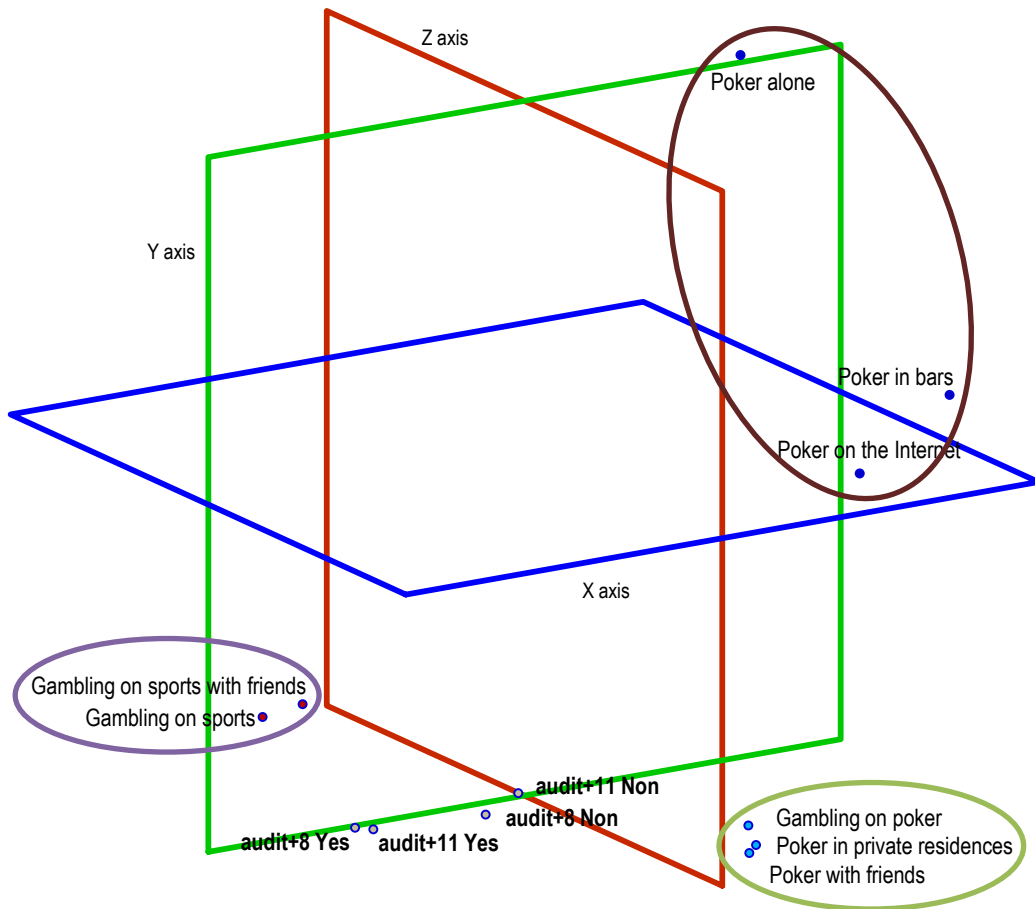


Figure 2. Representation of poker, betting on sports, their locations and partners on dimension 1, 2 and 3 with supplementary variables cannabis and drugs

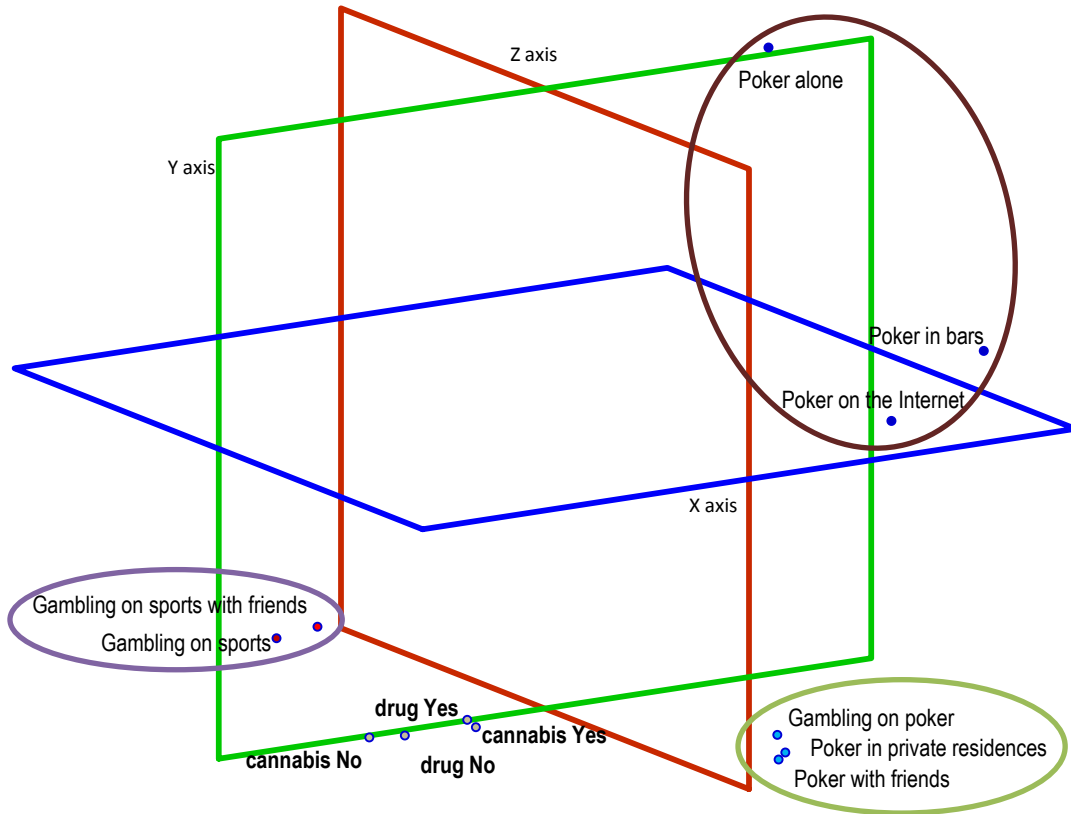




Figure 3. Representation of poker, betting on sports, their locations and partners on dimension 1, 2 and 3 with supplementary variable GHQ

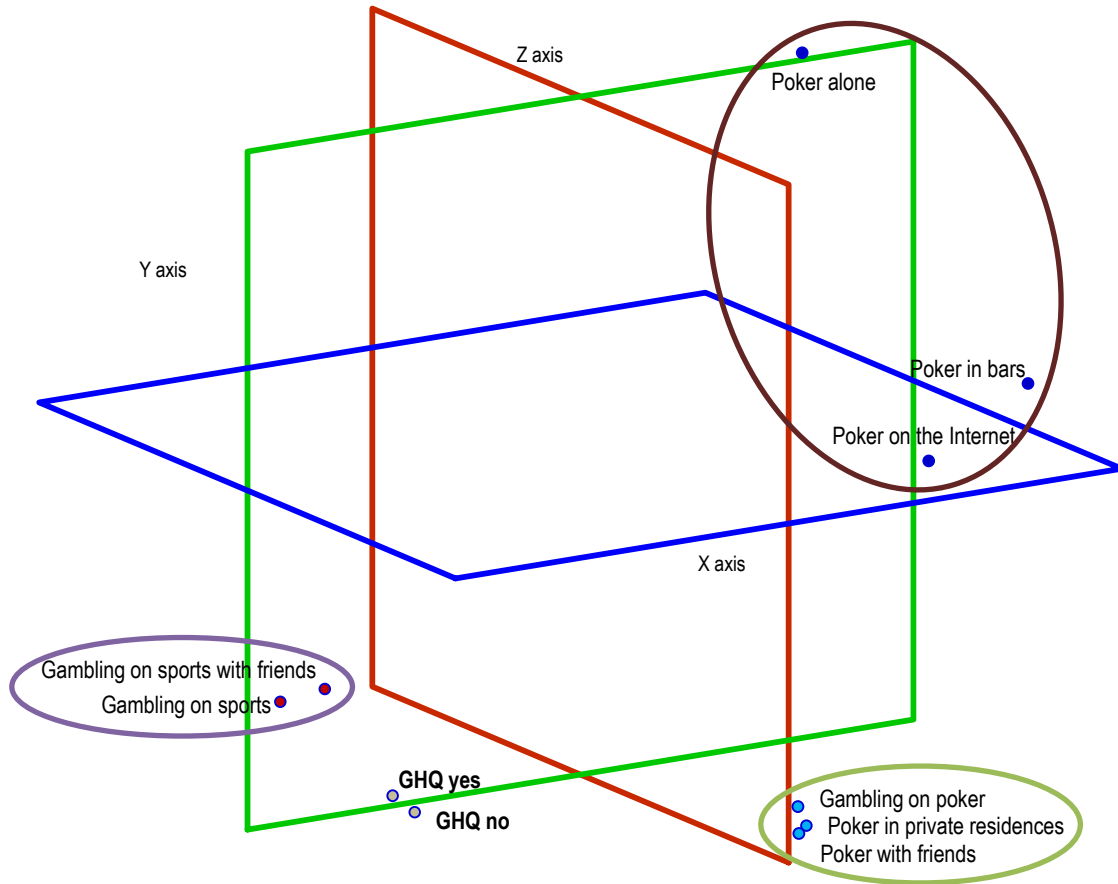


Figure 4. Representation of bingo, card and board games, games of skill, their locations and partners on dimension 1, 2 and 3 with supplementary variables audit+8 and audit+11

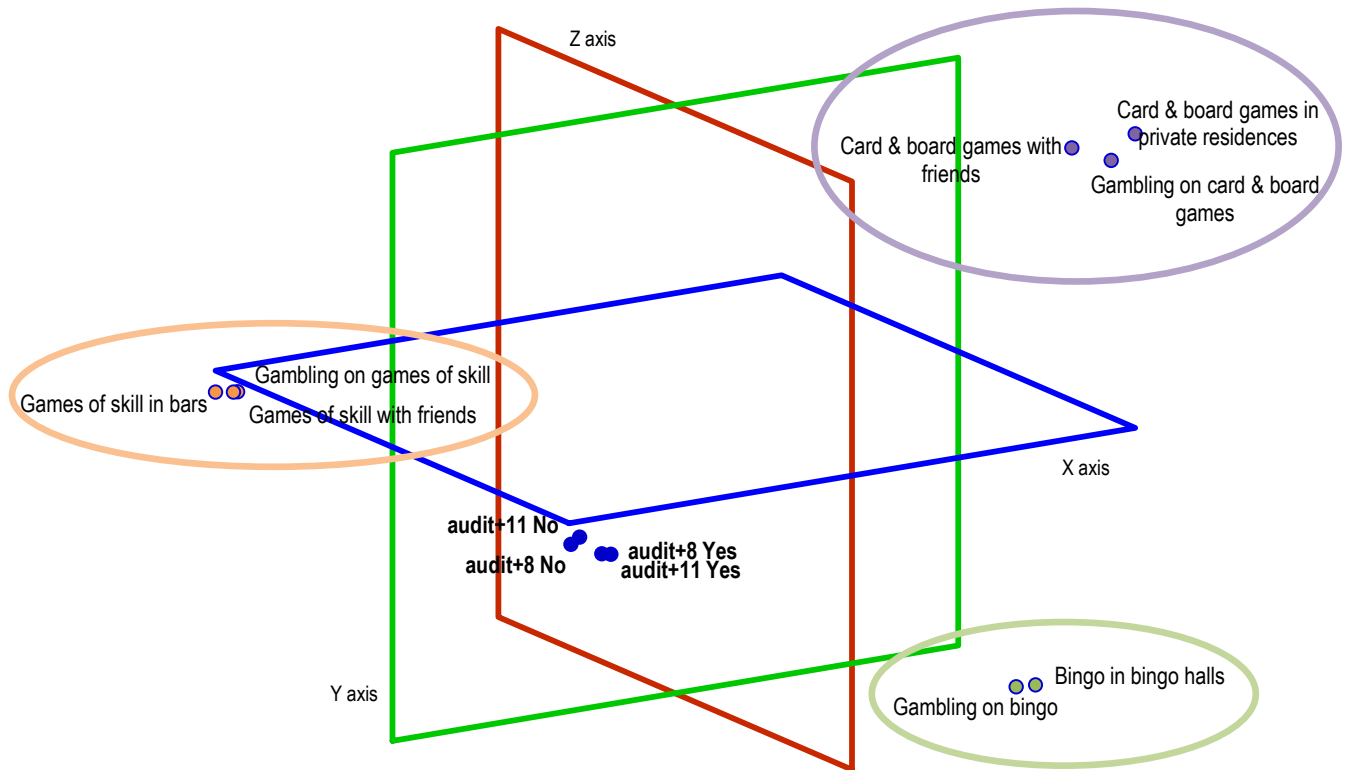


Figure 5. Representation of bingo, card and board games, games of skill, their locations and partners on dimension 1, 2 and 3 with supplementary variables cannabis and drugs

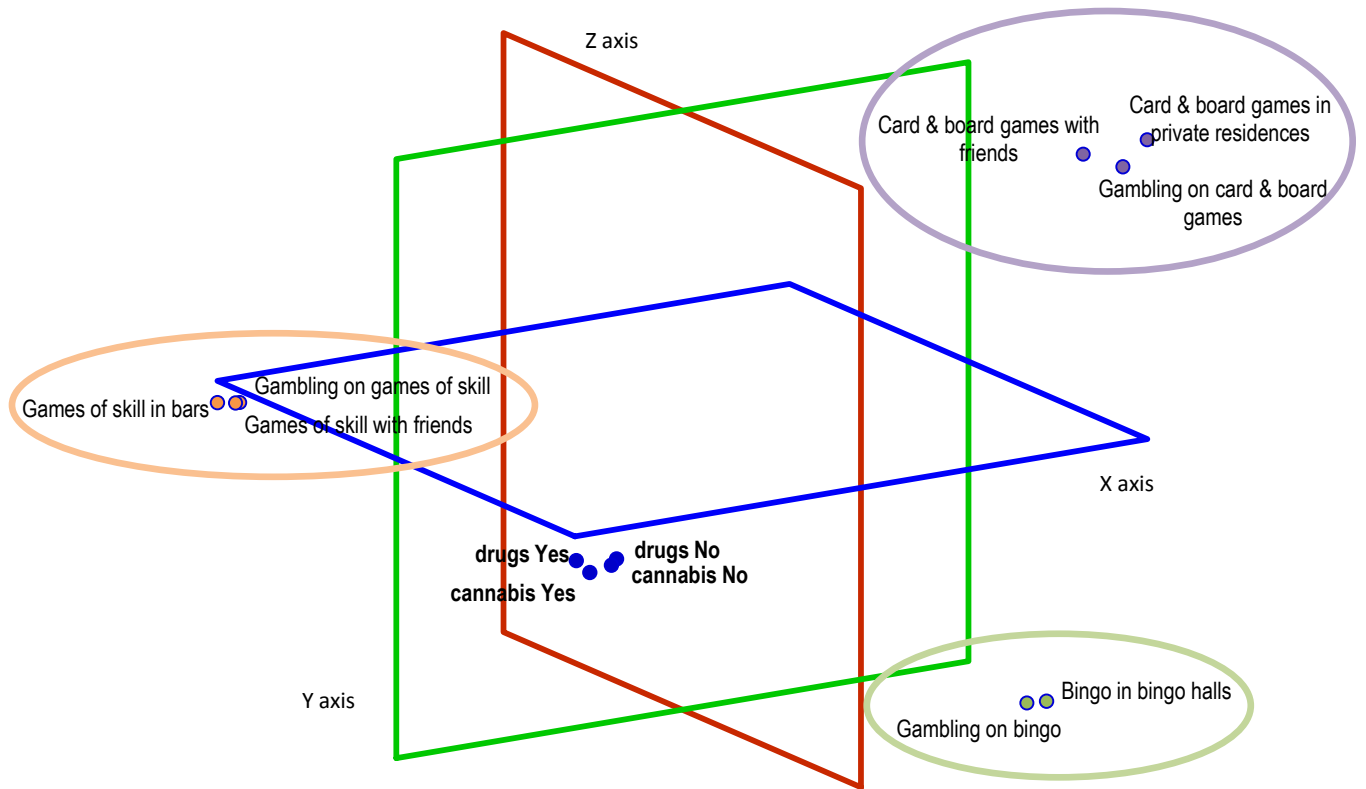


Figure 6. Representation of bingo, card and board games, games of skill, their locations and partners on dimension 1,2 and 3 with supplementary variable GHQ

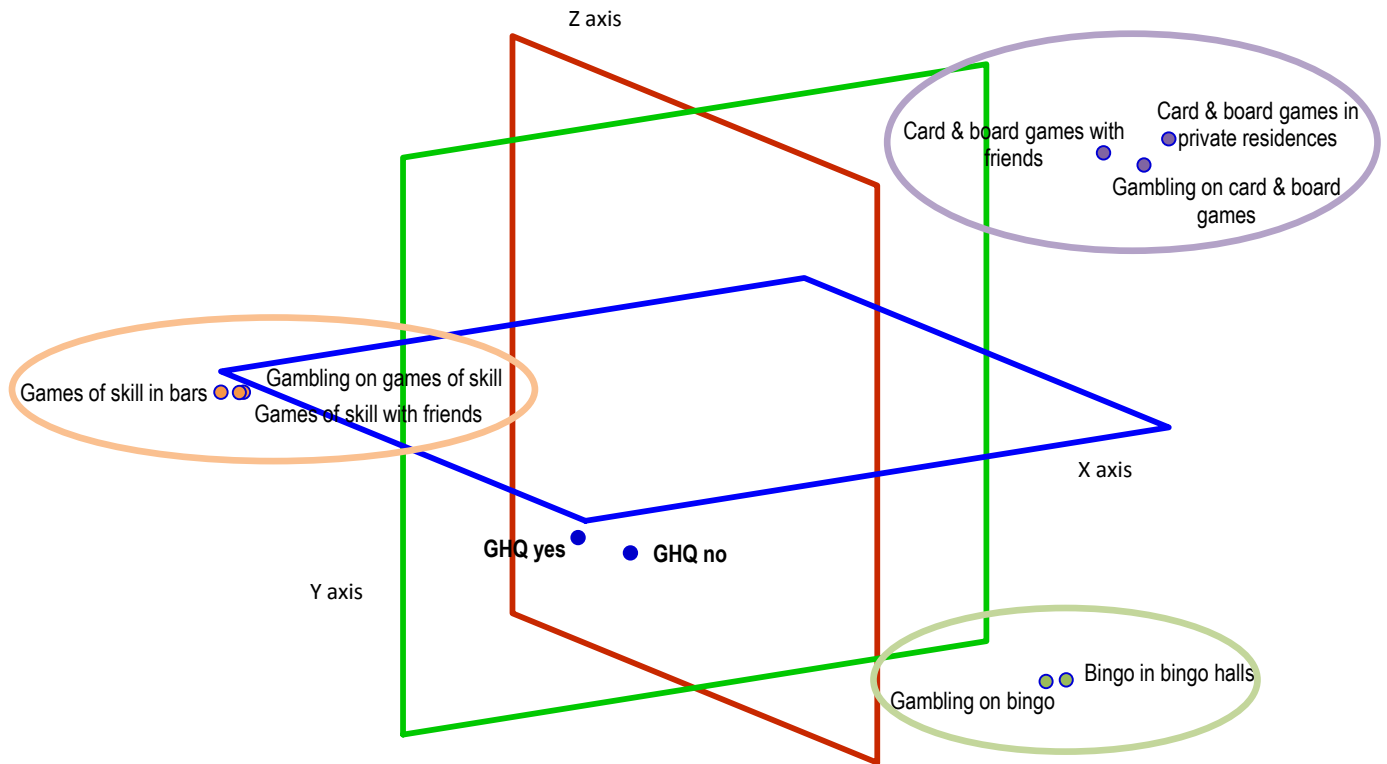


Figure 7. Representation of VLTs, its locations and partners on dimension 1 and dimension 2 with supplementary variables audit+8 and audit+11

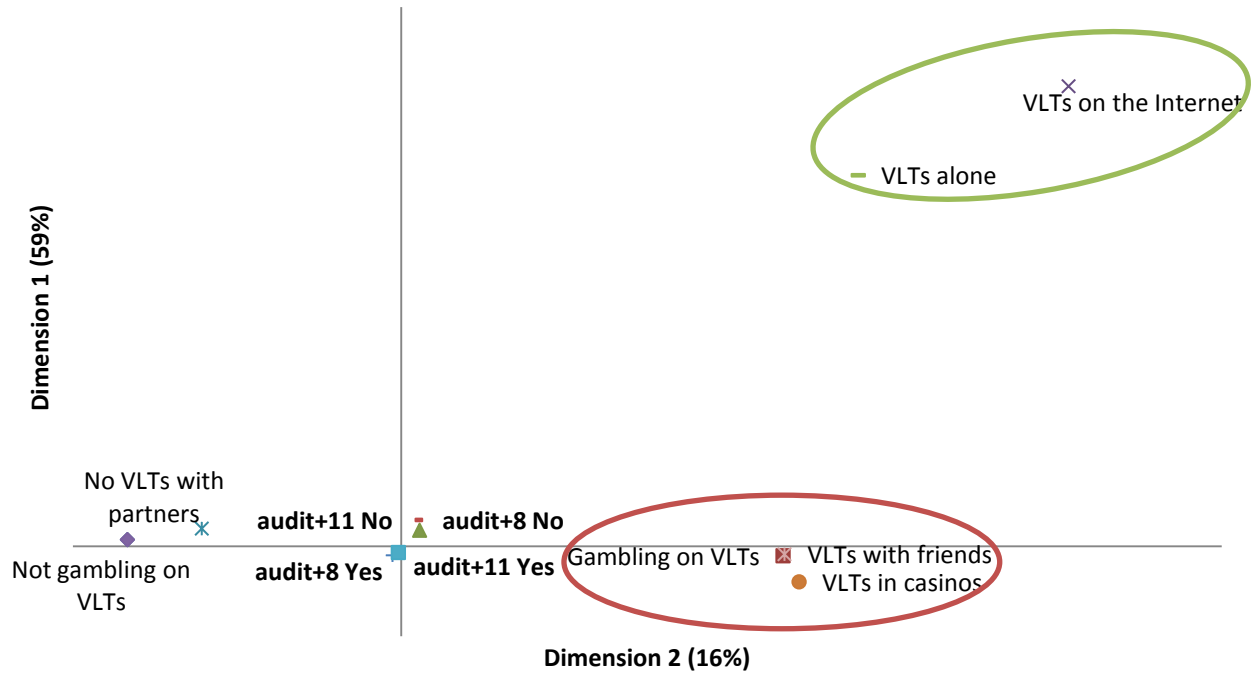


Figure 8. Representation of VLTs, its locations and partners on dimension 1 and dimension 2 with supplementary variables cannabis and drugs

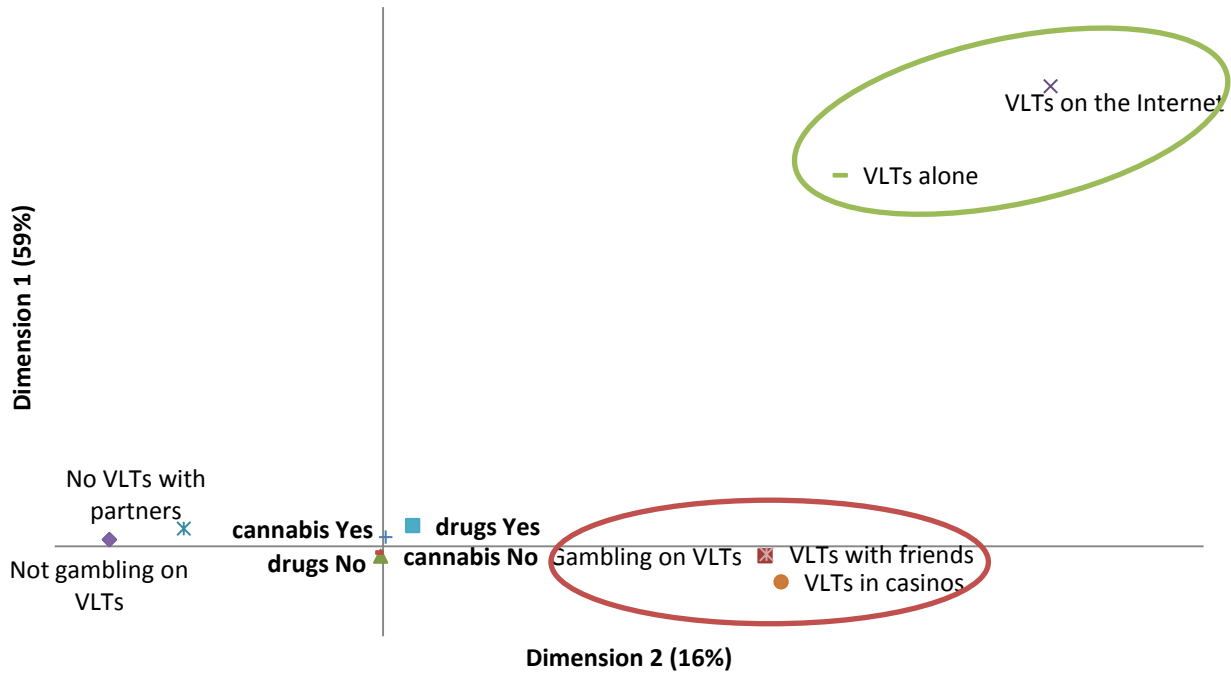
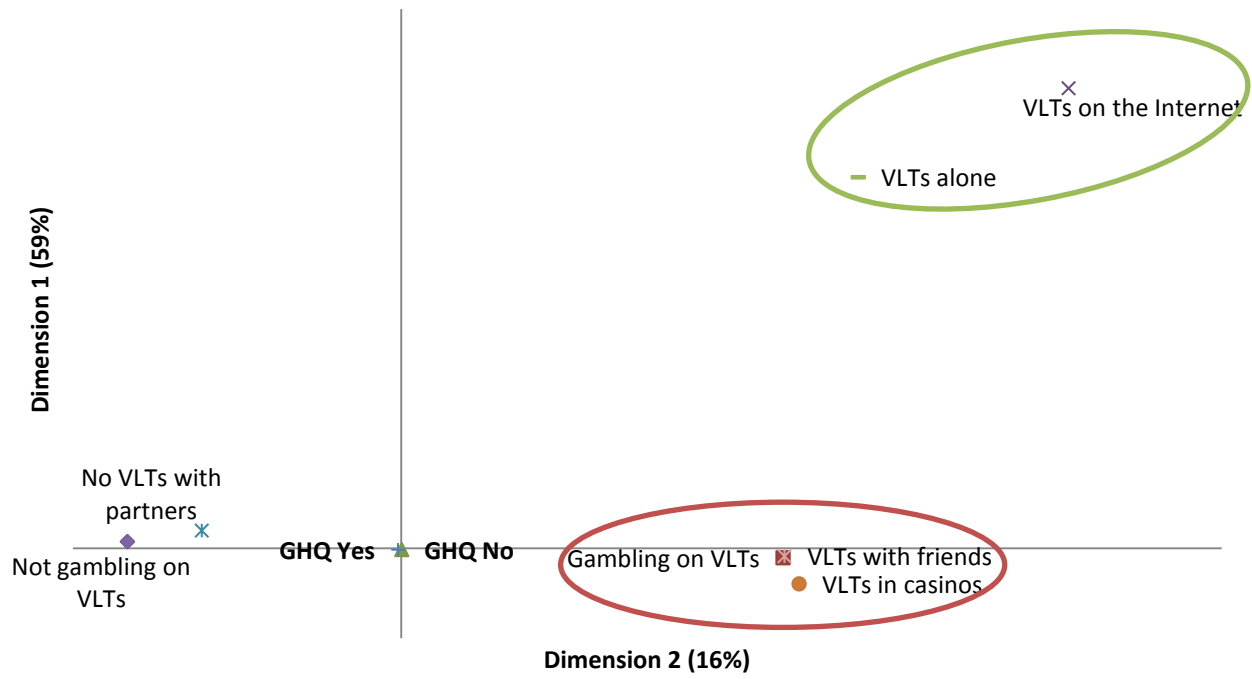
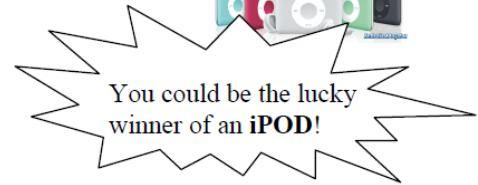


Figure 9. Representation of VLTs, its locations and partners on dimension 1 and dimension 2 with supplementary variable GHQ



**Appendix C: University Student Habit Gambling Survey 2008  
(ENHJEU) Instrument**





You could be the lucky winner of an iPod!

\* Winners will have to answer a mathematical question.

# University Student Gambling Habit Survey 2008

You can answer this survey online in English or French at:

<http://enhjeu.questionnaires.ca>

Or complete this questionnaire and return it in the postage paid return envelope

For all other questions or comments, please contact us at:

(514) 848-2424 # 5398

Voice mail is available 24 hours a day



We care about the environment. We have sent the survey in one language depending on the university you attend. Thank you for your understanding.



This survey is printed on recycled paper





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## CONSENT FORM

**Please complete the following section:**

- I understand that my participation in this study is voluntary
- I understand that my participation in this study is CONFIDENTIAL
- I understand that data from this study will be released only in the form of summaries in which individual answers will not be identifiable

**I HAVE READ THE ABOVE CAREFULLY AND UNDERSTAND THIS AGREEMENT. I GIVE MY CONSENT FREELY AND VOLUNTARILY AGREE TO PARTICIPATE IN THIS STUDY.**

NAME (please print) \_\_\_\_\_

SIGNATURE \_\_\_\_\_

If at any time you have questions about your rights as a research participant, please contact Adela Reid, Research Ethics and Compliance Officer, Concordia University, at (514) 848-2424 x 7481 or by email at [areid@alcor.concordia.ca](mailto:areid@alcor.concordia.ca).

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**PLEASE READ INSTRUCTIONS CAREFULLY**

- **Please complete the questionnaire and return it AS SOON AS POSSIBLE.**
- **Your answers will remain anonymous.**
- **Please sign your name on the consent form only.**
- **DO NOT write your name on the questionnaire.**
- **Your participation is voluntary.**
- **You do not need to answer any question that makes you feel uncomfortable.**

**Thank you for your participation.**



**GAMBLING ACTIVITIES**



People have different definitions of gambling activities. They may spend money or gamble with family and friends on a variety of games, such as lottery tickets, bingo or card games.

To get a better understanding of gambling habits, we have listed various gambling activities on which you may have spent money. Certain questions may not apply to you, but all participants must be asked the same questions.

**LOTTERY TICKETS**

1. **During the past 12 months**, have you bet or spent money on LOTTERY TICKETS such as Super 7, “scratch” tickets, Banco, random draws, Keno, etc. EXCLUDING Mise-O-Jeu lottery?

Yes  No  → *Skip to question 7*

2. **During the past 12 months**, how often did you bet or spend money on the following LOTTERY TICKETS:

	Every day	2 to 6 times a week	1 to 4 times a month	Less than once a month	Never	Don't know
a. Lottery tickets such as 6/49, Super 7 .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Instant win or “scratch” tickets such as Lucky 7, Crossword, etc.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Daily lotteries (Banco, Extra, la Quotidienne, Encore).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Random draw tickets or fund raising draws.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Keno.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

3. **During the past 12 months**, with whom did you generally bet or spend money on LOTTERY TICKETS?

- Alone .....
- Friend(s).....
- Family member(s) .....
- Co-workers.....
- Other.....

4. **In the past 12 months**, how much debt have you accumulated due to betting on LOTTERY TICKETS?(amount in \$)

↳  \$

5. **During the past 12 months**, how much money on average did you spend **per month** on the following LOTTERY TICKETS? Do not include your winnings. (amount in \$)

a. Lottery tickets such as 6/49, Super 7 .....	<input type="text"/>	\$
b. Instant win or “scratch” tickets such as 7 lucky, Crossword, etc. ....	<input type="text"/>	\$
c. Daily Lotteries such as Banco, Extra, la Quotidienne, Encore .....	<input type="text"/>	\$
d. Random draw tickets or fund raising draws .....	<input type="text"/>	\$
e. Keno .....	<input type="text"/>	\$

6. **During the past 12 months**, would you say that betting or spending money on LOTTERY TICKETS has caused problems in your:

	Does not apply	Never	Sometimes	Most of the time	Almost always
a. Relationship with family members (mother, children, partner, etc.) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Relationship with friend(s) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Studies .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Finances.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Work.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**HORSE OR DOG RACING**

7. **During the past 12 months**, have you bet or spent money on HORSE OR DOG RACING at hippodromes or outside hippodromes?

Yes  No  → *Skip to question 13*

8. **During the past 12 months**, how often did you bet or spend money on HORSE OR DOG RACING in the following locations or situations :

	Every day	2 to 6 times a week	1 to 4 times a month	Less than once a month	Never	Don't know
a. Internet.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Hippodrome.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Hippo Club .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Casino .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Bookie .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Other.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

9. **During the past 12 months**, with whom did you generally bet or spend money on HORSE OR DOG RACING ?

- Alone.....
- Friend(s).....
- Family member(s).....
- Co-workers.....
- Other.....

10. **In the past 12 months**, how much debt have you accumulated due to betting on HORSE OR DOG RACING? (amount in \$)

11. **During the past 12 months**, how much money on average did you spend **per month** on HORSE OR DOG RACING? Do not include your winnings. (amount in \$)

12. **During the past 12 months**, would you say that betting or spending money on HORSE OR DOG RACING has caused problems in your:

	Does not apply	Never	Sometimes	Most of the time	Almost always
a. Relationship with family members (mother, children, partner, etc.) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Relationship with friend(s) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Studies.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Finances.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Work.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**BINGO**

13. **During the past 12 months**, have you bet or spent money on BINGO?

- Yes  No  **Skip to question 19**

14. **During the past 12 months**, how often did you bet or spend money on BINGO in the following locations:

	Every day	2 to 6 times a week	1 to 4 times a month	Less than once a month	Never	Don't know
a. Internet.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Private residence .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. On campus .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Work.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Bingo Halls/Rooms.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Church basement .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Other.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

15. **During the past 12 months**, with whom did you generally bet or spend money on BINGO?

- Alone.....
- Friend(s).....
- Family member(s).....
- Co-workers.....
- Other.....

16. **In the past 12 months**, how much debt have you accumulated due to betting on BINGO? (amount in \$)

17. **During the past 12 months**, how much money on average did you spend **per month** on BINGO? Do not include your winnings. (amount in \$)

18. **During the past 12 months**, would you say that betting or spending money on BINGO has caused problems in your:

	Does not apply	Never	Sometimes	Most of the time	Almost always
a. Relationship with family members (mother, children, partner, etc.) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Relationship with friend(s) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Studies .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Finances.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Work.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**VIDEO LOTTERY TERMINALS (VLTs)/ COIN SLOT MACHINES**

19. **During the past 12 months**, have you bet or spent money on VIDEO LOTTERY TERMINALS (VLTs) or COIN SLOT MACHINES?

Yes       No       **→ Skip to question 25**

20. **During the past 12 months**, how often did you bet or spend money on VLTs or COIN SLOT MACHINES in the following locations :

	Every day	2 to 6 times a week	1 to 4 times a month	Less than once a month	Never	Don't know
a. Internet.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Casino .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Ludoplex.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Bar/Pub/Tavern/Resto-bar.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Other .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

21. **During the past 12 months**, with whom did you generally bet or spend money on VLTs or COIN SLOT MACHINES?      22. **In the past 12 months**, how much debt have you accumulated due to betting on VLTs or COIN SLOT MACHINES? (amount in \$)

- Alone.....
- Friend(s).....
- Family member(s).....
- Co-workers.....
- Other.....

23. **During the past 12 months**, how much money on average did you spend **per month** on VLTs or COIN SLOT MACHINES? Do not include your winnings. (amount in \$)

24. **During the past 12 months**, would you say that betting or spending money on VLTs or COIN SLOT MACHINES has caused problems in your:

	Does not apply	Never	Sometimes	Most of the time	Almost always
a. Relationship with family members (mother, children, partner, etc.) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Relationship with friend(s) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Studies .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Finances.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Work.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**TABLE POKER**

25. **During the past 12 months**, have you bet or spent money on the following types of TABLE POKER? (“X” ONE RESPONSE)

- Cash Game poker .....
- Tournament poker .....
- Cash-Game and tournament poker ...
- No.....  → *Skip to question 31*

26. **During the past 12 months**, how often did you bet or spend money on TABLE POKER in the following locations :

	Every day	2 to 6 times a week	1 to 4 times a month	Less than once a month	Never	Don't know
a. Internet.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Private residence.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. On campus.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Work.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Casino.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Bar/Pub/Tavern/Resto-bar .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Other.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

27. **During the past 12 months**, with whom did you generally bet or spend money on TABLE POKER?

- Alone.....
- Friend(s).....
- Family member(s).....
- Co-workers.....
- Other.....

28. **In the past 12 months**, how much debt have you accumulated due to betting on TABLE POKER? (amount in \$)

↳  \$

29. **During the past 12 months**, how much money on average did you spend **per month** on TABLE POKER? Do not include your winnings. (amount in \$)

↳  \$

30. **During the past 12 months**, would you say that betting or spending money on TABLE POKER has caused problems in your:

	Does not apply	Never	Sometimes	Most of the time	Almost always
a. Relationship with family members (mother, children, partner, etc.) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Relationship with friend(s) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Studies .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Finances.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Work.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**TABLE GAMES**

31. **During the past 12 months**, have you bet or spent money on TABLE GAMES such as Blackjack and Roulette, EXCLUDING Poker?

- Yes  No  → *Skip to question 38*

32. **During the past 12 months**, how often did you bet or spend money on the following TABLE GAMES EXCLUDING Poker:

	Every day	2 to 6 times a week	1 to 4 times a month	Less than once a month	Never	Don't know
a. Roulette.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Black Jack.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Other.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



33. **During the past 12 months**, how often did you bet or spend money on TABLE GAMES in the following locations :

	Every day	2 to 6 times a week	1 to 4 times a month	Less than once a month	Never	Don't know
a. Internet.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Private residence.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. On campus.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Work.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Casino.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Bar/Pub/Tavern/Resto-bar .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Other.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

34. **During the past 12 months**, with whom did you generally bet or spend money on TABLE GAMES?

- Alone.....
- Friend(s).....
- Family member(s).....
- Co-workers.....
- Other.....

35. **In the past 12 months**, how much debt have you accumulated due to betting on TABLE GAMES? (amount in \$)

\$

36. **During the past 12 months**, how much money on average did you spend **per month** on TABLE GAMES? Do not include your winnings. (amount in \$)

\$

37. **During the past 12 months**, would you say that betting or spending money on TABLE GAMES has caused problems in your:

	Does not apply	Never	Sometimes	Most of the time	Almost always
a. Relationship with family members (mother, children, partner, etc.) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Relationship with friend(s) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Studies .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Finances.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Work.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

### BETTING ON SPORTS OR SPORTING EVENTS

38. **During the past 12 months**, have you bet or spent money on SPORTS such as sports lotteries (ex. Sport Select, Pro-Line, Mise-O-jeu, Total), sports pool or sporting events?

- Yes  No  → *Skip to question 44*

39. **During the past 12 months**, how often did you bet or spend money on the following SPORTS or SPORTING EVENTS:

	Every day	2 to 6 times a week	1 to 4 times a month	Less than once a month	Never	Don't know
a. Sports lotteries (ex: Mise-O-Jeu) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Pool(s) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Sports betting events (other than sports lotteries and pools) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. With a bookie.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

40. **During the past 12 months**, with whom did you generally bet or spend money on SPORTS or SPORTING EVENTS?

- Alone.....
- Friend(s).....
- Family member(s).....
- Co-workers.....
- Other.....

41. **In the past 12 months**, how much debt have you accumulated due to betting on SPORTS OR SPORTING EVENTS? (amount in \$)

\$

42. **During the past 12 months**, how much money on average did you spend **per month** on the following SPORTS or SPORTING EVENTS? Do not include your winnings. (amount in \$)

- a. Sport lotteries (ex: Mise-O-Jeu).....
- b. Pools .....
- c. Sports betting events (other than sports lotteries and pools).....
- d. With a bookie.....

	\$
	\$
	\$
	\$

43. **During the past 12 months**, would you say that spending money on SPORTS OR SPORTING EVENTS has caused problems in your:

	Does not apply	Never	Sometimes	Most of the time	Almost always
a. Relationship with family members (mother, children, partner, etc.) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Relationship with friend(s) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Studies .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Finances.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Work.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CARD GAMES / BOARD GAMES**

44. **During the past 12 months**, have you bet or spent money playing CARD GAMES / BOARD GAMES, EXCLUDING Poker and Blackjack?

Yes  No  → *Skip to question 50*

45. **During the past 12 months**, how often did you bet or spend money playing CARD GAMES / BOARD GAMES, EXCLUDING Poker and Blackjack in the following locations:

	Every day	2 to 6 times a week	1 to 4 times a week	Less than once a month	Never	Don't know
a. Internet.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Private residence.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. On campus.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Work.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Bar/Pub/Tavern/Resto-bar .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Other.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

46. **During the past 12 months**, with whom did you generally bet or spend money playing CARD GAMES / BOARD GAMES?

- Alone.....
- Friend(s).....
- Family member(s).....
- Co-workers.....
- Other.....

47. **In the past 12 months**, how much debt have you accumulated due to betting on CARD GAMES / BOARD GAMES? (amount in \$)

↳  \$

48. **During the past 12 months**, how much money on average did you spend **per month** playing CARD GAMES / BOARD GAMES? Do not include your winnings. (amount in \$)

↳  \$

49. **During the past 12 months**, would you say that betting or spending money playing CARD GAMES / BOARD GAMES has caused problems in your:

	Does not apply	Never	Sometimes	Most of the time	Almost always
a. Relationship with family members (mother, children, partner, etc.) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Relationship with friend(s) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Studies .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Finances.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Work.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## GAMES OF SKILLS

50. **During the past 12 months**, have you bet or spent money on GAMES OF SKILLS such as Pool, Darts, Bowling, etc.?

Yes  No  → *Skip to question 56*

51. **During the past 12 months**, how often did you bet or spend money on GAMES OF SKILLS such as Pool, Darts, Bowling, etc. in the following locations:

	Every day	2 to 6 times a week	1 to 4 times a week	Less than once a month	Never	Don't know
a. Internet.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Private residence.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. On campus.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Work.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Bar/Pub/Tavern/Resto-bar.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Other.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

52. **During the past 12 months**, with whom did you generally bet or spend money on GAMES OF SKILLS? 53. **In the past 12 months**, how much debt have you accumulated due to betting on GAMES OF SKILLS? (amount in \$)

- Alone.....
- Friend(s).....
- Family member(s).....
- Co-workers.....
- Other.....

→

54. **During the past 12 months**, how much money on average did you spend **per month** on GAMES OF SKILLS? Do not include your winnings. (amount in \$)

→

55. **During the past 12 months**, would you say that your betting or spending money on GAMES OF SKILLS has caused problems in your:

	Does not apply	Never	Sometimes	Most of the time	Almost always
a. Relationship with family members (mother, children, partner, etc.).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Relationship with friend(s).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Studies.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Finances.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Work.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

## SPECULATIVE INVESTMENTS

56. **During the past 12 months**, how often have you bet or spent money on SPECULATIVE INVESTMENTS such as stocks, options, or commodities?

- Every day.....
- 2 to 6 times a week.....
- 1 to 4 times a month.....
- Less than once a month.....
- Never.....  → *Skip to question 61*
- Don't know.....


57. **During the past 12 months**, with whom did you generally bet or spend money on SPECULATIVE INVESTMENTS?

- Alone.....
- Friend(s).....
- Family member(s).....
- Co-workers.....
- Other.....

58. **In the past 12 months**, how much debt have you accumulated due to SPECULATIVE INVESTMENTS? (amount in \$)

59. **During the past 12 months**, how much money on average did you spend **per month** on SPECULATIVE INVESTMENTS? Do not include your winnings. (amount in \$)


60. **During the past 12 months**, would you say that betting or spending money on SPECULATIVE INVESTMENTS has caused problems in your:

	Does not apply	Never	Sometimes	Most of the time	Almost always
a. Relationship with family members (mother, children, partner, etc.) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Relationship with friend(s) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Studies .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Finances.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Work.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

61. a) How old were you the first time you spent **more than \$10** on games of chance ? (**IF YOU HAVE NEVER SPENT MORE THAN \$10, WRITE 0 IN THE BOX**)

\_\_\_\_\_ years old the first time I spent **more than \$10** on games of chance.

b) On average, how much money do you dispose per week for your personal expenses? (Please include money from all sources, whether employment, allowances, bursary, etc.)

If, during the past 12 months, **you have bet or spent money on AT LEAST ONE of the ten gambling activities** listed above **involving games of chance** or gambling. → ***Go to question 62***

If, during the past 12 months, **you have NOT bet or spent money on ANY of the ten gambling activities** listed above. → ***Go to question 65***

62. **During the past 30 DAYS**, how often did you bet or spend money on each of the following gambling activities:

	Every day	2 to 6 times a week	1 to 4 times a month	Less than once a month	Never	Don't know
a. Lottery tickets.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Horse or dog races .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Bingo.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Video Lottery Terminals (VLTs)/ coin slot machines .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Table Poker .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Table games .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Betting on sports/ sport events .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Card games / board games.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Games of skills.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Speculative investments .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

63. The following questions concern the social nature of occasions involving gambling and games of chance.

If during the LAST 12 MONTHS, you have bet or spent money:

- ONCE → Please complete MOST RECENT OCCASION ONLY
- TWICE → Please complete MOST RECENT OCCASION AND 2<sup>ND</sup> MOST RECENT OCCASION;
- THREE TIMES OR MORE → Please complete MOST RECENT OCCASION AND 2<sup>ND</sup> MOST RECENT OCCASION AND 3<sup>RD</sup> OCCASION LA PLUS RÉCENT

If it helps you to remember, you may write down the date or other information under each occasion.	Most Recent Occasion	2 <sup>nd</sup> Most Recent Occasion	3 <sup>rd</sup> Most Recent Occasion
<b>a. On this occasion, on what gambling activity did you bet or spend money? (PLEASE "X" ONE RESPONSE)</b>			
i. Lottery ticket.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. Horse or dog racing .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii. Bingo.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv. Video lottery Terminals (VLTs)/ coin slot machines .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
v. Table Poker.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
vi. Table games .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
vii. Betting on sports/ sport events .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
viii. Card games / board games.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ix. Games of skills .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
x. Speculative investments .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>b1. On this occasion, in which of the following locations or situations did you mainly bet or spend money? ("X" ONE RESPONSE)</b>			
i. Private residence.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. On campus .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii. Ludoplex.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv. Hippodrome .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
v. Hippo club .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
vi. With bookie .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
vii. Bingo hall/room.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
viii. Church basement.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ix. Casino .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
x. Bar/Pub/Tavern/Resto-bar .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
xi. Work .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
xii. Other .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>b2. In this location, did the gambling occur on Internet?</b>			
Yes .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Does not apply .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>c. Did this occasion take place during the... (PLEASE "X" ONE RESPONSE)</b>			
Week.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Weekend (includes Friday).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
<b>d. On this occasion, how many hours did you spend gambling? (PLEASE WRITE NUMBER OF HOURS AND/OR MINUTES)</b>			
i. Number of hour(s).....	_____	_____	_____
ii. Number of minute(s).....	_____	_____	_____

If it helps you to remember, you may write down the date or other information under each occasion.	Most Recent Occasion	2 <sup>nd</sup> Most Recent Occasion	3 <sup>rd</sup> Most Recent Occasion
e. On this occasion, how much money did you bet or spend? (AMOUNT IN \$)	<input type="text"/>	<input type="text"/>	<input type="text"/>
f. On this occasion, how many of the following alcoholic drinks did you have? (include coolers in the appropriate categories of beer, wine or spirits.)			
i. Number of bottles/glasses of beer .....	<input type="text"/>	<input type="text"/>	<input type="text"/>
ii. Number of glasses of wine .....	<input type="text"/>	<input type="text"/>	<input type="text"/>
iii. Number of shots of spirits .....	<input type="text"/>	<input type="text"/>	<input type="text"/>
g. On this occasion, what was <u>your main reason</u> for gambling? (PLEASE "X" ONE RESPONSE)			
i. To be sociable.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. To help me relax.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii. To pass the time/boredom .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv. To be competitive.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
v. To develop skills .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
vi. To be like others.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
vii. To try my luck.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
viii. To forget my worries.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ix. To get "high".....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
x. To win back money I lost.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
xi. To have fun .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
xii. To win money.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
xiii. Other.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. On this occasion, did you use marijuana/cannabis or hashish?			
Yes .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. On this occasion, did you use other drugs such as cocaine, crack, speed, ecstasy, hallucinogens?			
Yes .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. On this occasion, did you miss a class because you were gambling?			
Yes .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
No.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. On this occasion, excluding yourself, how many people were with you most of the time? (PLEASE "X" ONE RESPONSE)			
i. No one (Go to next occasion at ► Q 63) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. 1 person .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii. 2 to 3 people.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv. 4 to 9 people.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
v. 10 or more people.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l. What relationship did most of the people present have to you? (PLEASE "X" ONE RESPONSE)			
i. Friend(s).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
ii. Family .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iii. Acquaintances .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
iv. Other.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

64. Thinking about **the last 12 months**, (PLEASE "X" ONE RESPONSE IN EACH ROW)

	Almost always	Most of the time	Sometimes	Never
a. How often have you bet more than you could really afford to lose? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. How often have you needed to gamble with larger amounts of money to get the same feeling of excitement? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. When you gambled, how often did you go back another day to try to win back the money you lost? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. How often have you borrowed money or sold anything to get money to gamble?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. How often have you felt that you might have a problem with gambling? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. How often has gambling caused you any health problems, including stress or anxiety? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. How often have people criticized your betting or told you that you had a gambling problem, regardless of whether or not you thought it was true? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. How often has your gambling caused any financial problems for you or your household?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. How often have you felt guilty about the way you gamble or what happens when you gamble?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. Have you lied to family members or others to hide your gambling?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. Have you bet or spent more money than you wanted to on gambling?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l. Have you wanted to stop betting money or gambling, but didn't think you could?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**To get a better understanding of various gambling habits, we will ask you questions about two popular types of virtual games. Some of these questions may not apply to your situation but all participants must be asked the same questions.**

**VIDEO GAMES**

65. **During the past 12 months**, have you played or spent money on VIDEO GAMES, EXCLUDING MMOGs/MMORPGs (Massively MultiPlayer Online Games)? Buying a game OR upgrading your computer to play video games are considered as spending money.  
 Yes  No  → *Skip to question 71*

66. **During the past 12 months**, how often did you play or spend money on VIDEO GAMES in the following locations :

	Every day	2 to 6 times a week	1 to 4 times a month	Less than once a month	Never	Don't know
a. Internet.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Private residence.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Arcade.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Other.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

67. **During the past 12 months**, with whom did you generally play or spend money on VIDEO GAMES?

- Alone.....
- Friend(s).....
- Family member(s).....
- Co-workers.....
- Other.....

68. **In the past 12 months**, how much debt have you accumulated due to playing VIDEO GAMES or spending money upgrading your computer? (amount in \$):

↳  \$



69. **During the past 12 months**, how much money on average did you spend **per month**, on VIDEO GAMES and on upgrading your computer? Do not include your winnings. (amount in \$)

A)    (Video games)      B)    (Computer)

70. **During the past 12 months**, would you say that playing or spending money on VIDEO GAMES and/or upgrading your computer has caused problems in your:

	Does not apply	Never	Sometimes	Most of the time	Almost always
a. Relationship with family members (mother, children, partner, etc.) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Relationship with friend(s) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Studies .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Finances .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Work .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**MMOGs / MMORPG**

71. **During the past 12 months**, how often have you played or spent money on MMOGs (Massively Multiplayer Online Games) or MMORPG (Massively Multiplayer Online Role-Playing Games) ?

- Every day.....
- 2 to 6 times a week.....
- 1 to 4 times a month.....
- Less than once a month.....
- Never.....  → *Skip to question 77*
- Don't know.....


72. **During the past 12 months**, with whom did you generally play or spend money on MMOGs/MMORPG?

- Alone.....
- Friend(s).....
- Family member(s).....
- Co-workers.....
- Other.....

73. **In the past 12 months**, how much debt have you accumulated due to playing MMOGs/MMORPG? (amount in \$)


74. **During the past 12 months**, how much money on average did you spend **per month** on MMOGs/MMORPG? Do not include your winnings. (amount in \$)

75. a) **During the last 12 months**, have you spent money to buy **virtual money** for MMOGs/MMORPG?

- Yes  →
- No  → *Skip to question 76*

75b). **During the past 12 months**, how much money on average did you spend **per month** to buy **virtual money**? (amount in \$)

76. **During the past 12 months**, would you say that playing or spending money on MMOGs/MMORPG has caused problems in your:

	Does not apply	Never	Sometimes	Most of the time	Almost always
a. Relationship with family members (mother, children, partner, etc.) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Relationship with friend(s) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Studies .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Finances .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Work .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>



**In the next few questions, we are interested in your use of alcohol and the potential consequences of drinking that you may or may not have experienced.**

**These quantities represent one drink.**



77. Have you ever in your life consumed an alcoholic drink (more than a sip - see the definition in the previous box), for example beer, wine, spirits or coolers?

Yes  No  → *Skip to question 86*

78. How old were you when you had your first drink of alcohol excluding sips? (PLEASE WRITE AGE AT WHICH YOU FIRST DRANK ALCOHOL)

\_\_\_\_\_ years old when had first drink of alcohol.

79. **During the past 12 months**, how often, on average, did you consume alcoholic drinks? (PLEASE "X" ONE RESPONSE)

- 4 times or more a week .....
- 2 to 3 times a week .....
- 2 to 4 times a month.....
- Once a month or less.....
- Never.....  → *Skip to question 85*

80. **During the past 12 months**, on the days when you drank, how many drinks did you usually have?

Number of drinks \_\_\_\_\_

81. **During the past 12 months**, on a single occasion, how many times did you have:

Number of times

- a) 5 to 7 drinks? ..... \_\_\_\_\_
- b) 8 to 11 drinks? ..... \_\_\_\_\_
- c) 12 drinks or more? ..... \_\_\_\_\_

82. **During the PAST MONTH**, how many times did you consume alcoholic drinks? (PLEASE "X" ONE RESPONSE)

- Every day.....
- 4 to 6 times a week .....
- 2 to 3 times a week .....
- Once a week.....
- 1 to 3 times a month.....
- Less than once a month.....
- Never.....  → *Skip to question 85*

83. **During the PAST MONTH**, on the days when you drank, how many drinks did you usually have?

Number of drinks \_\_\_\_\_

84. **During the PAST MONTH**, on a single occasion, how many times did you have:

Number of times

- a) 5 to 7 drinks? ..... \_\_\_\_\_
- b) 8 to 11 drinks? ..... \_\_\_\_\_
- c) 12 drinks or more? ..... \_\_\_\_\_

85. How often have you experienced the following? (PLEASE "X" ONE RESPONSE IN EACH ROW)

	Never	Less than monthly	Monthly	Weekly	Daily or almost daily
a. How often during the past 12 months have you found that you were unable to stop drinking once you had started?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. How often during the past 12 months have you failed to do what was normally expected of you because of drinking?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. How often during the past 12 months have you needed a first drink in the morning to get yourself going after a heavy drinking session?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. How often during the past 12 months have you had a feeling of guilt or remorse after drinking? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. How often during the past 12 months have you been unable to remember what happened the night before because you had been drinking?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. How often do you have 5 or more drinks on one occasion? .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	No	Yes, but not in the past year	Yes, in the past year		
g. Have you or someone else been injured as the result of your drinking?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		
h. Has a relative, friend, or a doctor or other health worker been concerned about your drinking or suggested you cut down?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		

**The next few questions are about the use of drugs OTHER than alcohol**

86. Have you smoked at least 100 cigarettes in your life?

Yes  No  → *Skip to question 90*

87. At the present time, do you smoke cigarettes daily, occasionally or not at all? ("X" ONE RESPONSE)

Every day.....   
 Occasionally .....   
 Not at all.....

88. How long ago was it that you last smoked? ("X" ONE RESPONSE)

Less than one week ago.....   
 More than one week, but less than a month.....   
 1 to 6 months ago .....   
 7 or more months ago.....  → *Skip to question 90*

89. **In the past 30 days**, how soon after you wake up in the morning do you usually smoke your first cigarette? ("X" ONE RESPONSE)

I did not smoke in the past 30 days .....   
 Within 15 minutes .....   
 16-30 minutes .....   
 31-60 minutes .....   
 More than 60 minutes.....

90. When was the last time, if ever, that you used the following drugs? (“X” ONE RESPONSE IN EACH ROW)

	Never In My Life	In My Life But Not In Past 12 Months	In Past 12 Months But Not In Past 30 Days	Used In Past 30 Days
a. Marijuana (or hashish) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. Crack cocaine .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
c. Other forms of cocaine .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
d. Barbiturates (prescription-type sleeping pills such as Seconal, Nembutal, downs or Yellow Jackets).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
e. Ritalin, Dexedrine, or Adderall .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
f. Other amphetamines (methamphetamines, crystal meth, speed, uppers, ups).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
g. Tranquilizers (prescription-type drugs such as Valium, Librium, Xanax, Ativan, Klonopin).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
h. Heroin .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
i. Other opiate-type prescription drugs (codeine, morphine, Demerol, Percodan, Percodet, Vicodin, Darvon, Darvocet).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
j. LSD .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
k. Other psychedelics or hallucinogens such as mushrooms, mescaline or PCP .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
l. Ecstasy (MDMA) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
m. Other “party drugs” (Ketamine, Special K, GHB) .....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
n. Anabolic steroids (either injections such as Depo-testosterone Durbolin, or pills such as Anadrol, Dianabol, or Winstrol).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
o. Other performance-enhancing drugs (growth hormone, diuretics, ephedrine).....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

91. How often have you used marijuana or hashish during the past 12 months? (“X” ONE RESPONSE)

Almost every day.....	<input type="checkbox"/>
4 to 5 times a week.....	<input type="checkbox"/>
2 to 3 times a week.....	<input type="checkbox"/>
Once a week.....	<input type="checkbox"/>
2 to 3 times a month.....	<input type="checkbox"/>
Once a month.....	<input type="checkbox"/>
Less than once a month.....	<input type="checkbox"/>
Never.....	<input type="checkbox"/>

92. In your opinion, have any of your relatives had serious problems involving alcohol or drugs, or problems with gambling? (The problem must have been serious enough to indicate treatment)

	Alcohol			Drugs			Gambling		
	Yes	No	Don't know	Yes	No	Don't know	Yes	No	Don't know
Father	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Mother	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
	Alcohol			Drugs			Gambling		
Does not apply	Yes	No	Don't know	Yes	No	Don't know	Yes	No	Don't know
Brother(s) <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Sister(s) <input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**In the next few questions we would like to know how your health has been in general over the past few weeks. Think about your present and recent complaints, not those that you had in the past**

93. Over the PAST FEW WEEKS, have you... (PLEASE "X" ONE RESPONSE IN EACH ROW)

	Better than usual	Same as usual	Less than usual	Much less than usual
a ...Been able to concentrate on whatever you are doing?.....	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
b. ... Lost much sleep over worry? .....	Not at all <input type="checkbox"/>	No more than usual <input type="checkbox"/>	Rather more than usual <input type="checkbox"/>	Much more than usual <input type="checkbox"/>
c ... Felt that you are playing a useful part in things?.....	More so than usual <input type="checkbox"/>	Same as usual <input type="checkbox"/>	Less than usual <input type="checkbox"/>	Much less than usual <input type="checkbox"/>
d ... Felt capable of making decisions about things? .....	More so than usual <input type="checkbox"/>	Same as usual <input type="checkbox"/>	Less than usual <input type="checkbox"/>	Much less than usual <input type="checkbox"/>
e. ... Felt constantly under strain?.....	Not at all <input type="checkbox"/>	No more than usual <input type="checkbox"/>	Rather more than usual <input type="checkbox"/>	Much more than usual <input type="checkbox"/>
f. ... Felt you couldn't get over your difficulties?.....	Not at all <input type="checkbox"/>	No more than usual <input type="checkbox"/>	Rather more than usual <input type="checkbox"/>	Much more than usual <input type="checkbox"/>
g. ... Been able to enjoy your normal day-to-day activities? .....	More so than usual <input type="checkbox"/>	Same as usual <input type="checkbox"/>	Less than usual <input type="checkbox"/>	Much less than usual <input type="checkbox"/>
h. ... Been able to face up to your problems? .....	More so than usual <input type="checkbox"/>	Same as usual <input type="checkbox"/>	Less than usual <input type="checkbox"/>	Much less than usual <input type="checkbox"/>
i. ... Been feeling unhappy or depressed?.....	Not at all <input type="checkbox"/>	No more than usual <input type="checkbox"/>	Rather more than usual <input type="checkbox"/>	Much more than usual <input type="checkbox"/>
j. ... Been losing confidence in yourself? .....	Not at all <input type="checkbox"/>	No more than usual <input type="checkbox"/>	Rather more than usual <input type="checkbox"/>	Much more than usual <input type="checkbox"/>
k ... Been thinking of yourself as a worthless person? .....	Not at all <input type="checkbox"/>	No more than usual <input type="checkbox"/>	Rather more than usual <input type="checkbox"/>	Much more than usual <input type="checkbox"/>
l. ... Been feeling reasonably happy, all things considered?.....	More so than usual <input type="checkbox"/>	Same as usual <input type="checkbox"/>	Less than usual <input type="checkbox"/>	Much less than usual <input type="checkbox"/>
m. ... Found that the idea of taking your own life kept coming into your mind?.....	Definitely not <input type="checkbox"/>	I don't think so <input type="checkbox"/>	Has crossed my mind <input type="checkbox"/>	Definitely have <input type="checkbox"/>

94. Please answer each question by checking YES or NO. There are no right or wrong answers, and no trick questions. Work quickly and do not think too long about the exact meaning of the question.

	Yes	No
a. Do you generally do and say things without stopping to think? .....	<input type="checkbox"/>	<input type="checkbox"/>
b. Do you often get into trouble because you do things without thinking? .....	<input type="checkbox"/>	<input type="checkbox"/>
c. Are you an impulsive person?.....	<input type="checkbox"/>	<input type="checkbox"/>
d. Do you usually think carefully before doing anything? .....	<input type="checkbox"/>	<input type="checkbox"/>
e. Do you mostly speak before thinking things out?.....	<input type="checkbox"/>	<input type="checkbox"/>
f. Would you enjoy water skiing? .....	<input type="checkbox"/>	<input type="checkbox"/>
g. Would you enjoy parachute jumping? .....	<input type="checkbox"/>	<input type="checkbox"/>
h. Do you quite like taking chances? .....	<input type="checkbox"/>	<input type="checkbox"/>
i. Would you enjoy the sensation of skiing very fast down a high mountain slope?.....	<input type="checkbox"/>	<input type="checkbox"/>
j. Would you like to go scuba diving?.....	<input type="checkbox"/>	<input type="checkbox"/>

**Before we end, we have a few questions regarding your background**

95. Are you male, female or transgender?
- |                   |                          |
|-------------------|--------------------------|
| Male .....        | <input type="checkbox"/> |
| Female .....      | <input type="checkbox"/> |
| Transgender ..... | <input type="checkbox"/> |
96. How old are you?  
 \_\_\_\_\_ Current age, in years.
97. What is your current marital status? ("X" ONE RESPONSE)
- |                                     |                          |
|-------------------------------------|--------------------------|
| Married .....                       | <input type="checkbox"/> |
| De facto union (cohabitation) ..... | <input type="checkbox"/> |
| Widowed .....                       | <input type="checkbox"/> |
| Separated .....                     | <input type="checkbox"/> |
| Divorced .....                      | <input type="checkbox"/> |
| Single, never married .....         | <input type="checkbox"/> |
98. What type of residence do you currently live in? ("X" ONE RESPONSE)
- |                                |                          |
|--------------------------------|--------------------------|
| University residence .....     | <input type="checkbox"/> |
| Other university housing ..... | <input type="checkbox"/> |
| NON-university housing .....   | <input type="checkbox"/> |
| Other .....                    | <input type="checkbox"/> |
99. How many close friends do you have? ("X" ONE RESPONSE)
- |                    |                          |
|--------------------|--------------------------|
| None .....         | <input type="checkbox"/> |
| One .....          | <input type="checkbox"/> |
| Two .....          | <input type="checkbox"/> |
| Three .....        | <input type="checkbox"/> |
| Four .....         | <input type="checkbox"/> |
| Five or more ..... | <input type="checkbox"/> |
100. Excluding children, with whom are you currently living? ("X" ONE RESPONSE)
- |                                 |                          |
|---------------------------------|--------------------------|
| Alone .....                     | <input type="checkbox"/> |
| With spouse/partner .....       | <input type="checkbox"/> |
| With parents .....              | <input type="checkbox"/> |
| With other family members ....  | <input type="checkbox"/> |
| With friends/acquaintances .... | <input type="checkbox"/> |
| Other .....                     | <input type="checkbox"/> |
101. Where were you born?
- |                           |                          |                               |
|---------------------------|--------------------------|-------------------------------|
| Born in Canada .....      | <input type="checkbox"/> | → <i>Skip to question 103</i> |
| Born outside Canada ..... | <input type="checkbox"/> |                               |
102. In what year did you come to Canada? (PLEASE WRITE YEAR IN 4 DIGITS)  
 \_\_\_\_\_ Year you arrived in Canada
103. What language do you usually speak at home? ("X" ONE RESPONSE)
- |                          |                          |                                 |                          |
|--------------------------|--------------------------|---------------------------------|--------------------------|
| English only .....       | <input type="checkbox"/> | English and other only .....    | <input type="checkbox"/> |
| French only .....        | <input type="checkbox"/> | French and other only .....     | <input type="checkbox"/> |
| French and English ..... | <input type="checkbox"/> | French, English and other ..... | <input type="checkbox"/> |
|                          |                          | Other .....                     | <input type="checkbox"/> |
104. People who live in Canada have different cultural and racial backgrounds. Would you say that yours is from...? ("X" ONE RESPONSE)
- |   |                          |   |                          |
|---|--------------------------|---|--------------------------|
| Canada .....                                    | <input type="checkbox"/> | Asia (India, Nepal, Pakistan, etc.) .....             | <input type="checkbox"/> |
| United States .....                             | <input type="checkbox"/> | Australia and Pacific Islands .....                   | <input type="checkbox"/> |
| Mexico, Caribbean, or Latin America .....       | <input type="checkbox"/> | Middle East (Saudi Arabia, Oman, Turkey, etc.) .....  | <input type="checkbox"/> |
| Africa Central .....                            | <input type="checkbox"/> | Eastern Europe (Albania, Hungary, Russia, etc.) ..... | <input type="checkbox"/> |
| West Europe (France, Spain, Sweden, etc.) ..... | <input type="checkbox"/> | Don't want to answer .....                            | <input type="checkbox"/> |
| Asia (China, Japan, Laos, etc.) .....           | <input type="checkbox"/> | Do not know .....                                     | <input type="checkbox"/> |
105. What is your current year of study? ("X" ONE RESPONSE)
- |   |                          |
|---|--------------------------|
| First year undergraduate .....          | <input type="checkbox"/> |
| Second year undergraduate .....         | <input type="checkbox"/> |
| Third year undergraduate .....          | <input type="checkbox"/> |
| Fourth year or more undergraduate ..... | <input type="checkbox"/> |
| Graduate studies .....                  | <input type="checkbox"/> |

106. Overall, what was your grade average last year? ("X" ONE RESPONSE.)

A.....	<input type="checkbox"/>
B.....	<input type="checkbox"/>
C.....	<input type="checkbox"/>
D.....	<input type="checkbox"/>
F.....	<input type="checkbox"/>
Not in school last year .....	<input type="checkbox"/>

107. Which field of study best represents the area in which you are currently enrolled? ("X" ONE RESPONSE)

Arts/Humanities .....	<input type="checkbox"/>
Science/Technology .....	<input type="checkbox"/>
Engineering .....	<input type="checkbox"/>
Social Science .....	<input type="checkbox"/>
Business/Commerce .....	<input type="checkbox"/>
Medicine.....	<input type="checkbox"/>
Other Health Sciences .....	<input type="checkbox"/>
Law.....	<input type="checkbox"/>
Education.....	<input type="checkbox"/>
Other.....	<input type="checkbox"/>

108. Are you currently enrolled in university as a full-time or part-time student?

Full time .....	<input type="checkbox"/>
Part-time.....	<input type="checkbox"/>

109. What is your status concerning employment?

Full-time employee.....	<input type="checkbox"/>
Part-time employee.....	<input type="checkbox"/>
No employment .....	<input type="checkbox"/>
Other.....	<input type="checkbox"/>

110 a) Do you have a portable phone (cell) ?

Yes  No  → *Skip to next page*

	Yes	No
b1) Can you browse the WEB (www) from your cell phone?.....	<input type="checkbox"/>	<input type="checkbox"/>
b2) Can you receive your email messages on your cell phone (excluding text messages)?.....	<input type="checkbox"/>	<input type="checkbox"/>



## CONSENT FORM FOR CONTACT (FOLLOW-UP STUDY)

On behalf of the research team, I thank you for your participation in this important study. Depending on the answers you have provided, you **could be** selected for an in-depth study examining the contexts in which students gamble.

The follow-up study will take place in 2 months and will consist of a group discussion that will last approximately 2 hours. The discussion will focus on the contexts in which you gamble, such as when, how, and with whom you gamble, as well as your substance use habits. The answers will be kept strictly confidential and separate from the answers you have provided in the current survey. You will receive compensation of \$20 for your time and travelling expenses.

Would you agree to the researchers contacting you again to take part in the second study?

- Yes
- No

Thank you for agreeing to be contacted for the follow-up study. If you are selected, we will send you in the next few months a letter describing the study, and a project coordinator will contact you to schedule a group meeting.

We will need some information to be able to contact you again in a few months time.

Name \_\_\_\_\_

Telephone number \_\_\_\_\_

Address \_\_\_\_\_

\_\_\_\_\_

\_\_\_\_\_

Would you provide an email address OR the name and telephone number of another person where we might reach you in the event that you move?

- Accept

Name \_\_\_\_\_

Telephone number \_\_\_\_\_

Email \_\_\_\_\_

- Refuse



***Thank you for your valuable participation!***

***The power to question  
Is the basis of all human progress.  
Indira Gandhi***