

A MIXED METHODS STUDY EXPLORING BRAZILIAN AND  
UNITED KINGDOM UNIVERSITY STUDENTS' PRE-DRINKING  
BEHAVIOUR AND ALCOHOL USE DURING NIGHTS OUT

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## **ABSTRACT**

This thesis explores students' drinking behaviour in nightlife settings. In many parts of the world, much of the burden of alcohol is related to risky alcohol consumption amongst students, which often occurs during a night out, including during pre-drinking (drinking at home or other private settings before going out). In several countries, creating a safer nightlife environment has become synonymous with reducing levels of violence, injury and other health problems associated with high levels of alcohol use. This research was conducted in England, where policies and interventions to prevent nightlife-related harms have been implemented, and in Brazil, where there is no well-established prevention activity in place. A high prevalence of pre-drinking and related harms can be found across many countries, including Brazil and the UK. Hence, it is important to understand this phenomenon in more detail considering the different policy and cultural factors that might affect such behaviour, in order to inform effective policies and practices aimed at preventing and reducing pre-drinking and its associated harms across countries with diverse nightlife environments and drinking cultures. Thus, a mixed-method research study was undertaken, comprising a survey, completed by 1,151 Brazilian university students and 424 UK university students, and focus group interviews with 25 Brazilian students currently living in the UK, aimed at exploring cross-cultural differences in drinking behaviours within nightlife settings from a socio-ecological perspective. Differences in the prevalence of pre-drinking and alcohol consumption were found between Brazilian and UK respondents. The findings suggested that more UK students pre-drink, yet Brazilian students drink more than UK students when they do pre-drink. Students' attitudes and perceptions towards existing alcohol policies (e.g. drink-drive incidents; restrictions on alcohol sales and drunk and disorderly behaviour) differed between the two countries, which might have an influence on their drinking behaviour in a nightlife context. Brazilian students' views suggested that the UK's heavy drinking culture is influenced by the interaction of many factors, including the perceived British students' cultural drinking norms focused on drinking large amounts of alcohol when compared with Brazilian students and the fact that according to Brazilian participants' views British students have more positive outcome expectations towards drunkenness. Brazilian participants' views also

suggested that the acceptance of drunkenness amongst students is higher in the UK, with an emphasis on British students intentionally getting extremely drunk for entertainment. For Brazilian participants getting drunk was suggested not to be a priority for having a good night out, rather it was perceived to be a consequence for losing control of drinking. Moreover, Brazilian students' perceived effectiveness of alcohol policy also differed between the two countries, with emphasis on lax law enforcement in Brazil. Effective policies targeted towards reducing drunkenness and its risks within nightlife settings need to be put in place particularly in Brazil, where law implementation and strict enforcement are not the rule, resulting in a culture of drinking that can be harmful to university students.

**Keywords:** Alcohol; Pre-drinking; Nightlife; University students; Policy; Mixed methods.

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## LIST OF ABBREVIATIONS AND SYMBOLS

ABV	Alcohol by volume
AMBEV	Companhia de Bebidas das Américas (Americas Beverage Company)
AUDIT	Alcohol Use Disorder Identification Test
BAC	Blood Alcohol Concentration
BrAC	Breath Alcohol Concentration
BR	Brazil
BTC	Brazilian Traffic Code
CAGE questionnaire	Cut Annoyed Guilty Eye
CDRP	Crime and Disorder Reduction Partnerships
CEBRID	Centro Brasileiro de Informações sobre Drogas Psicotrópicas
CMO	Chief Medical Officers
CNN	Cable News Network
CONTRAN	Conselho Nacional de Trânsito
CSEW	Crime Survey for England and Wales
CSP	Community Safety Partnerships
EU	European Union
FAST	Fast Alcohol Screening Test
HEI	Higher Education Institutions
HESA	Higher Education Statistics Agency
HIC	High income countries
IBGE	Instituto Brasileiro de Geografia e Estatística
IAS	Institute of Alcohol Studies
LJMU	Liverpool John Moores University
LMIC	Low-middle income countries
MEC	Ministério da Educação
MMR	Mixed methods Research
MUP	Minimum Unit Pricing
NHS	National Health Service
NUS	National Union of Students
ONS	Office for National Statistics
PAHO	Pan American Health Organization
STAD	Stockholm Prevents Alcohol and Drug Problems
PSPO	Public Spaces Protection Orders
SIA	Security Industry Authority
UNIFESP	Universidade Federal de São Paulo
UK	United Kingdom
USA	United States of America
VIGITEL	Vigilância de Doenças Crônicas por Inquérito Telefônico
WHO	World Health Organization
R\$	Brazilian Reais
£	British pounds

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## CHAPTER 1: INTRODUCTION

---

### 1.1 Introduction

Drinking in private settings before going on a night out - also known as pre-drinking - is increasingly being identified as a common drinking behaviour amongst young nightlife users (Pedersen and Labrie, 2007, LaBrie and Pedersen, 2008, Read et al., 2010). Wells, Graham and Purcell (2009) and Labhart et al. (2014) suggest that young adults pre-drink to extend their drinking duration and to socialise with friends before going to noisy and crowded nightlife venues. However, studies show associations between pre-drinking and heavier alcohol use (Pedersen and Labrie, 2007, LaBrie and Pedersen, 2008, Read et al., 2010) and greater quantities of alcohol use during the night out (Borsari et al., 2007a, LaBrie and Pedersen, 2008, Clapp et al., 2009, Barry et al., 2013, Hummer et al., 2013), resulting in higher blood alcohol concentration (BAC) (Hughes et al., 2008a) and increased risk of reporting any kind of alcohol-related harms (Felson and Burchfield, 2004, Borsari et al., 2007a, Hughes et al., 2008b, LaBrie and Pedersen, 2008, LaBrie et al., 2011).

In the United Kingdom (UK) and Brazil (BR), research in nightlife settings shows that pre-drinking is a common habit among young adults and is related to alcohol-related harms (Hughes et al., 2008a, Østergaard and Andrade, 2013, Santos et al., 2015b). However, further research is needed to understand this phenomenon to inform prevention. This PhD programme has sought to address this gap by comparing attitudes and practices within nightlife settings in the UK and Brazil, in particular pre-drinking behaviour.

This chapter will provide an overview of the background to the research context, as well as how it was conducted, the researcher's position, and the aim and justification for the research. Finally, an outline of the thesis is also provided.



## 1.2 Rationale for the research

Harmful use of alcohol (or harmful drinking) is often characterized as exceeding recommended drinking levels and this drinking behaviour has been recognised as a major public health issue since drinking more quantity and regularly increases the risks for negative health problems (Chief Medical Officers, 2016, World Health Organization, 2018). However, for contemporary society alcohol and socialising have gone hand in hand, particularly amongst young adults (Sande, 2002, Lyons and Willott, 2008, Szmigin et al., 2011). Qualitative research on young adults' drinking behaviour has revealed that despite people's knowledge about the negative consequences of drinking excessively, they are still motivated to drink for pleasure, i.e. to be sociable, to meet new people, to feel good, and to enjoy the state of drunkenness (Guise and Gill, 2007, Martinic and Measham, 2008, Lyons and Willott, 2008, Fry, 2011).

In many parts of Europe, including the UK, much of the burden of alcohol on health and crime is related to harmful drinking amongst young people, which usually occurs within nightlife environments. Several studies have identified patterns of harmful drinking within nightlife amongst young adults, including the widespread phenomenon of pre-drinking, also known as pre-loading, pre-partying or pre-gaming (Pedersen and Labrie, 2007, Wells et al., 2009, DeJong et al., 2010). In the United States of America (USA) (Pedersen and Labrie, 2007, Pedersen et al., 2009, DeJong et al., 2010) and particularly in the UK (Hughes and Bellis, 2007, Wells et al., 2009, Hughes et al., 2011a, Hughes et al., 2011b), pre-drinking has come to the attention of alcohol researchers because this drinking behaviour has been strongly associated with the intention to get drunk (Pedersen and Labrie, 2007, Pedersen et al., 2009, DeJong et al., 2010), reducing anxiety and saving money on alcohol during a night out (Forsyth, 2006, Grazian, 2007, Wells et al., 2009, Read et al., 2010, Bachrach et al., 2012, LaBrie et al., 2012b). Further, in places where pre-drinking is commonly practiced, individuals are likely to use other types of drugs such as marijuana and cocaine, through factors including a reduction in individual social control and reduction in the perception of risk due to alcohol effects (Pedersen and Labrie, 2007, Zamboanga et al., 2010).

In Brazil, however, despite a strong nightlife culture, research on patterns of alcohol consumption in nightlife is still scant. Santos et al. (2015b) and Carlini et al. (2014) conducted the first epidemiological study on patterns of alcohol and other drugs in nightclubs, where efforts to introduce public policies on alcohol control have not been very successful.

### 1.3 Research approach

A mixed-method study was undertaken, comprising a quantitative online survey with 1,151 Brazilian students and 424 UK students and qualitative interviews with 25 Brazilian nationals who were currently living in the UK. This research approach aimed to explore cross-cultural differences in students' attitudes and perceptions within nightlife settings in two different countries, Brazil and UK, particularly relating to pre-drinking behaviour. Data were collected through semi-structured questionnaires and focus groups interviews, which were subsequently compared and analysed through triangulation. The research addressed issues of validity and reliability, as well as trustworthiness of qualitative research, to ensure rigor of the research undertaken.

### 1.4 Researcher reflections

As a young female international PhD student, I believe it is important to share and reflect upon my own connection to the research, including my personal interests and experiences that inspired this study. My own interests have not only shaped the topic of the thesis, but also influenced the methods chosen. I am from Brazil, a country famous for football, beautiful beaches and parties, particularly the Carnival<sup>1</sup>. Alcohol drinking has been embedded within Brazilian culture since before Portuguese colonisation, when indigenous tribes used *cauim*, an alcoholic beverage obtained by fermenting maize (Galduróz and Carlini, 2007).

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<sup>1</sup> An annual Brazilian festival held before Lent

My role and position within the research programme involved reflecting on my own student identity which began in 2004 when I was still an undergraduate student. During that time, I had a lot of fun experiencing the student lifestyle, with alcohol the dominant social offering and the main feature of most social occasions, such as house parties and nightclubbing. As a university student I had the opportunity to experience how the environment as well as peer-pressure could influence my own drinking behaviour, (particularly during pre-drinking) since alcohol was used to socialize and create enjoyment. At that time, I was unaware of any student that did not practice pre-drinking before going out to nightclubs. Seemingly it was part of university life.

After graduating my interest in the research issue and views about students' nightlife drinking behaviours changed in 2011, when I met Dr. Zila Sanchez, a prestigious alcohol researcher based at Federal University of São Paulo (UNIFESP) who agreed to be my master's supervisor. I was interested in understanding students' pre-drinking behaviour (which is still new in the Brazilian academic field) as I was aware of the pressures (and "pleasures") of being a university student, such as drinking, partying and going out which can have negative effects on students' lives. Throughout my time as a master's student, I had the opportunity to work at one of the most important centres for drug research in the country, the Brazilian Centre for Information on Psychotropic Drugs (CEBRID). During this experience, I became aware and more interested in the area of alcohol consumption within nightlife settings, especially through my own experience of data collection in nightclubs, bars and pubs, where I had closer encounters with the risky behaviours associated with alcohol consumption.

Brazilian studies on how much and how often people drink within the nightlife context are scarce compared to other areas such as America and Europe. For that reason, as well as my increasing interest in understanding the risk behaviours associated with pre-drinking amongst students, I decided to carry out a PhD. However, I wanted to gain first-hand experience within drinking cultures outside Brazil and choosing the UK to study risky behaviours was a natural choice because of its reputation as a heavy drinking nation and the substantial body of research on alcohol consumption and nightlife settings. Therefore, after finishing my masters in 2014, I

contacted Professor Karen Hughes from Liverpool John Moores University (LJMU), based at the Centre for Public Health (now Public Health Institute), to ask if she would be willing to accept me as an international PhD student. By that time, the Brazilian Government scholarship program, Science without Borders, had an open call for sponsoring full-time PhD students abroad, and luckily, in May of 2015 I was granted a four-year scholarship. In July 2015, I made the biggest change of my life and moved to the city of Liverpool to take part in postgraduate study at LJMU, with Professor Karen Hughes and Dr Zara Quigg, who are experts in nightlife behaviour, as part of my PhD supervisory team.

All these past experiences such as my decision to drink at university, having an active social nightlife (e.g., frequently attending bars, pubs and nightclubs) and doing a master in public health played a role in the way I viewed students' drinking behaviours and nightlife experiences and meant I had to reflect a lot upon my own position, which had informed the development of this research programme. Being a young female university student, someone who enjoys drinking alcohol and someone who [still] enjoys going out, who had already experienced similar situations to the participants I was researching was useful as I was able to relate to students' experiences. Therefore, during the first months in the UK, I quickly realised that if I was to study cultural differences in nightlife drinking behaviours between Brazilian and UK students, as well as perceptions and attitudes, then I could not deny the importance of wider factors such as the drinking environment, the experience of living abroad and the cultural norms and policy that can influence alcohol consumption. The complexities in students' alcohol consumption, coupled with the limited research on nightlife alcohol consumption in the Brazilian literature presented an appropriate, growing and under-researched public health issue.

Throughout the research programme, Brazilian participants living in the UK assumed that I had similar living experience (e.g., being university student, moving to a different country) and knowledge of common students' drinking culture (e.g., pre-drinking, going out to bars, pubs and nightclubs), perhaps reflecting the perceived social norms in students' drinking culture which proved valuable in connecting with

the participants. This allowed me to gain insight into Brazilian students' personal experiences of drinking during nights out. As the main researcher and analyst, I acknowledge that my previous experience as a university student could have influenced the interpretation of participants' experiences. It was necessary therefore for me to make a constant and deliberate effort to not make (un)conscious judgements about participants' experiences and impose my values onto theirs. As such, I tried to let participants lead the interview in regard to sharing their knowledge. Through a continuous development of self-scrutiny and listening and re-listening to the interview recordings, I aimed to keep this process as transparent as possible by including Brazilian participants' quotes. Since I was seeking to gain deeper knowledge and understandings into students' nightlife drinking behaviours, I relied on exploratory methods of investigation such as the survey method and semi-structured focus groups to ensure that my prior knowledge and experiences as a university student did not influence the research findings.

Overall, being an international PhD student, conducting this cross-cultural research and writing a thesis not in my foreign language has indeed developed me as a researcher in terms of developing my skills in research methods and research design. More importantly however, this research programme helped me develop skills in critical thinking of the wider aspects of alcohol research and alcohol policy within the nightlife context.

### 1.5 Aim of the research

The aim of this study was to increase the understanding of alcohol use amongst university students during a night out, including pre-drinking behaviour. Specifically, the study aimed to explore and contrast alcohol consumption amongst university students within the nightlife context through a cross cultural lens. This was specifically in relation to attitudes and practices of alcohol use and pre-drinking in Brazil and the UK, as well as the perceived impact of existing policy on drinking behaviours. The specific research questions guiding the research were:

- 1) What are the differences between the UK and Brazil in students' perspectives of the nightlife drinking culture and situations?
- 2) How do nightlife drinking patterns differ amongst UK and Brazilian students?
- 3) What is the prevalence and pattern of alcohol consumption, including pre-drinking during a night out amongst Brazilian and UK students?
- 4) What factors influence the decision of Brazilian and UK students to pre-drink?
- 5) How does pre-drinking practice differ amongst UK and Brazilian students?
- 6) What impact does pre-drinking have on Brazilian and UK students' drinking behaviour through a night out and what are the implications for policy development?
- 7) What impact do students perceive that alcohol policy measures would have on students' drinking behaviours on a night out in Brazil and UK?

## 1.6 Thesis outline

This doctoral thesis is based on work from two individual studies. Prior to describing these studies, the first part of this thesis (Chapter 2), provides a comprehensive literature review of Brazilian and UK students' alcohol consumption and a brief overview of the research on associated risks with alcohol use within both countries and research on alcohol policies across the UK and Brazil.

Chapter 3 presents the research questions and specific aims of this study. An overview of the mixed methods approach and a brief overview of the methods used in each of the studies are described. The following chapters present results from the individual studies.

Chapter 4 presents the findings from Study 1, a cross-sectional online survey conducted in two different sites, Liverpool in the UK (N= 424) and São Paulo in Brazil (N= 1,151), including limitations and overall conclusions. Chapter 5 presents the findings from Study 2, a qualitative study conducted with 25 Brazilian students currently living in the UK, including limitations and overall conclusions.

The final chapter (Chapter 6) presents the integrated findings from triangulation of the two study methods in a mixed methods synthesis and a discussion about strengths and limitations of the studies as well as the implications for future research, practice and policy.

## 2.1 Introduction

This chapter provides an overview of the literature in the field of alcohol consumption amongst students within nightlife settings, as well as the phenomenon of pre-drinking behaviour and other relevant areas of research including alcohol-related harms within nightlife settings and alcohol policy. The aim of the literature review was to review, critique, summarise and synthesise the literature in relation to Brazilian and UK university students' nightlife alcohol consumption, including pre-drinking behaviour.

The literature included were obtained using the Liverpool John Moores University's library catalogue with access to journals and electronic databases including PubMed, Science Direct, Web of Science, Scopus and Google Scholar. To ensure a broad coverage of published studies, for each of the databases, searches were carried out using the following key terms (used in various combinations): *alcohol, drinking, students, university, attitudes, norms, culture, Brazil, UK, England, drinking guidelines, perceptions, pre-drinking, pre-loading<sup>2</sup>, nightlife, nightclubs, bars, pubs, harms and policy*. In addition, the websites of key organisations such as the UK Home Office, the Brazilian Chamber of Deputies, the World Health Organization (WHO), the Brazilian Secretariat for Drug Policy, the Brazilian Institute of Geography and Statistics (IBGE) and the UK Office for National Statistics (ONS) websites were also searched for appropriate publications. The scope of the search included international papers in Portuguese and English languages, as the thesis focused on both Brazilian and UK perspectives.

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<sup>2</sup> Because the research was focused on Brazil and UK settings and literature review showed that within these specific countries the most commonly term to define drinking before going out is either pre-drinking or pre-loading, no other terms were used (e.g., pre-drinking in the American literature usually refers to the act of drinking before attending an event, such as sports match. Terms often used in the United States include pre-partying, front-loading or pre-gaming)

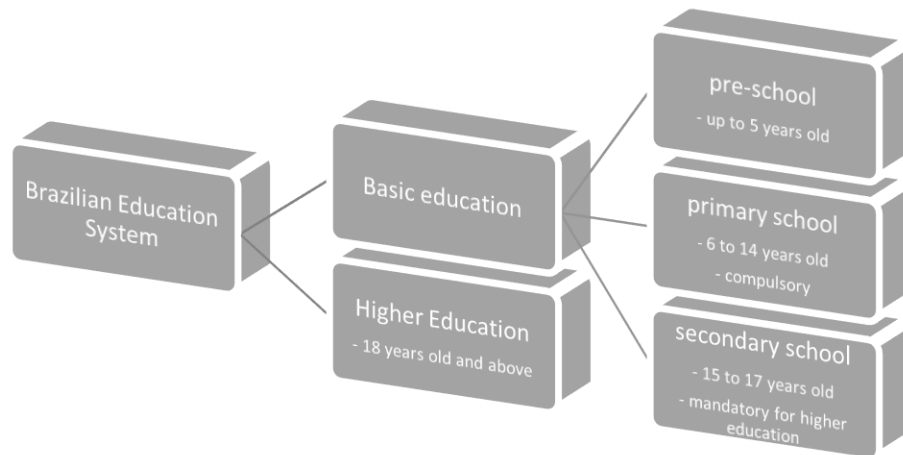


Pre-drinking is a recent drinking behaviour amongst young adults, and it is recognised as a global concern with much of the work taking place in North America, Canada, European countries and New Zealand. In Latin America, particularly in Brazil, there is a lack of studies on pre-drinking and alcohol consumption amongst university students within the nightlife context. Though contributing to wider knowledge on students' drinking behaviours, some research was not directly transferable to the research topic, for example, much of the pre-drinking research conducted in North America solely focused on students' drinking behaviour within the university lifestyle settings (e.g., residence halls, fraternity parties and sporting events). Whereas in the UK, studies deal with the association between pre-drinking and later consumption within nightlife settings. As students' alcohol use research is diverse, there was the acknowledged risk of distraction from the topic of the research for this thesis. The literature included was assessed as to whether it addressed an aspect of one of the seven research questions (see chapter 1 section 1.5) and there were no date parameters set for the literature search to ensure that all relevant research could be drawn upon. Selected articles were then categorized as to their level of relevance based on the search results, title and abstract and those ranked as "very relevant" were categorised as research conducted amongst Brazilian and UK university students within the nightlife context (nightclubs, bars and pubs). The key relevant articles were then evaluated in relation to the methodology used, particularly when searching for mixed-methods nightlife studies. Reference list were manually searched to identify any articles not already identified.

Though the literature on Brazilian students' alcohol consumption within nightlife settings and pre-drinking behaviour are limited, it is important to consider the wider and cultural role of alcohol in students' lives, due to the association with harms. Thus, this literature review will explore the wider impact of alcohol on the global burden of disease, as well as on students' lives within a nightlife context. It will also explore the specific importance of students' pre-drinking behaviour and associated risks within nightlife settings and its implications for policy and prevention programmes. Finally, the chapter will provide an overview of the conceptual and theoretical framework that underpinned the methodology used in this research.

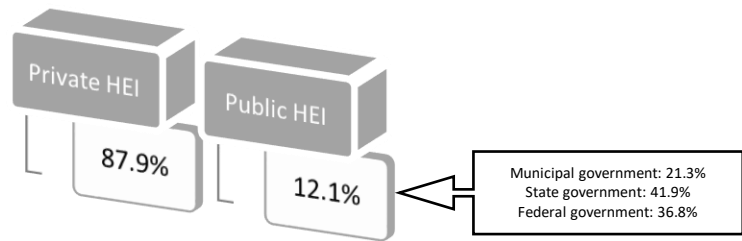
## 2.2 Population and education systems in Brazil and the UK

Brazil is the largest country in Latin America, with an estimated population of 208 million people, based on the latest census from 2017 conducted by IBGE (Brazilian Institute of Geography and Statistics, 2018). The Brazilian education system is organised in two stages: Basic Education and Higher Education and it can be either public (funded by the government with no charges) or private (**Figure 1**).



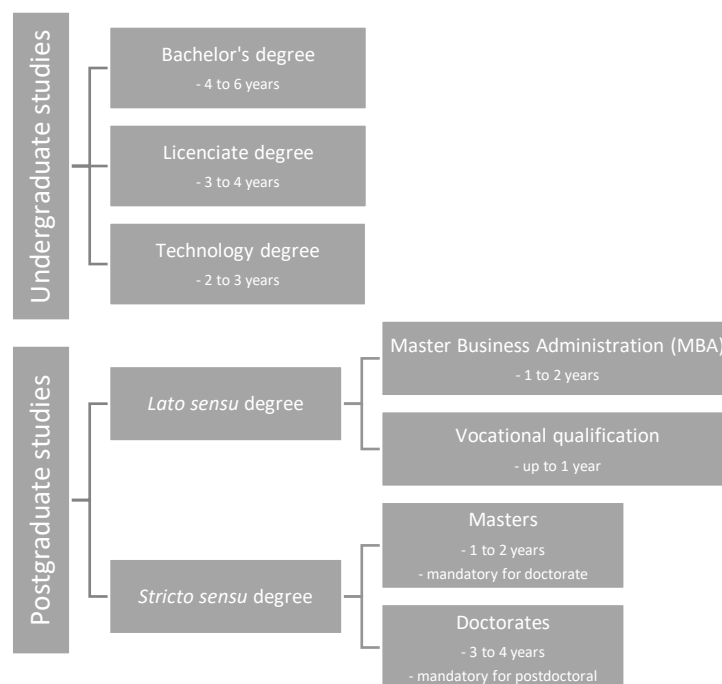
**Figure 1: Brazilian education system structure**

According to the latest national census on higher education, in 2017 there were over 2,448 higher education institutions (HEI) (either public or private) recognised by the Brazilian Ministry of Education (MEC) throughout the country, with over 8,290,911 students registered (National Institute of Educational Studies and Research Anísio Teixeira, 2018) (**Figure 2**).



**Figure 2: Brazilian HEI distribution**

Prospective university students must take an exam to enter any higher education institution and in Brazil the academic year begins in February. Besides traditional face-to-face learning courses, distance learning courses are also offered, both for undergraduate and postgraduate programmes (except for *stricto sensu*<sup>3</sup>) (BRAZIL, 2001) (Figure 3). In 2017 face-to-face undergraduate students were predominantly young adults aged 18 to 21 years, whilst distance learning students were a bit older, aged 21 to 29 years (National Institute of Educational Studies and Research Anísio Teixeira, 2018).

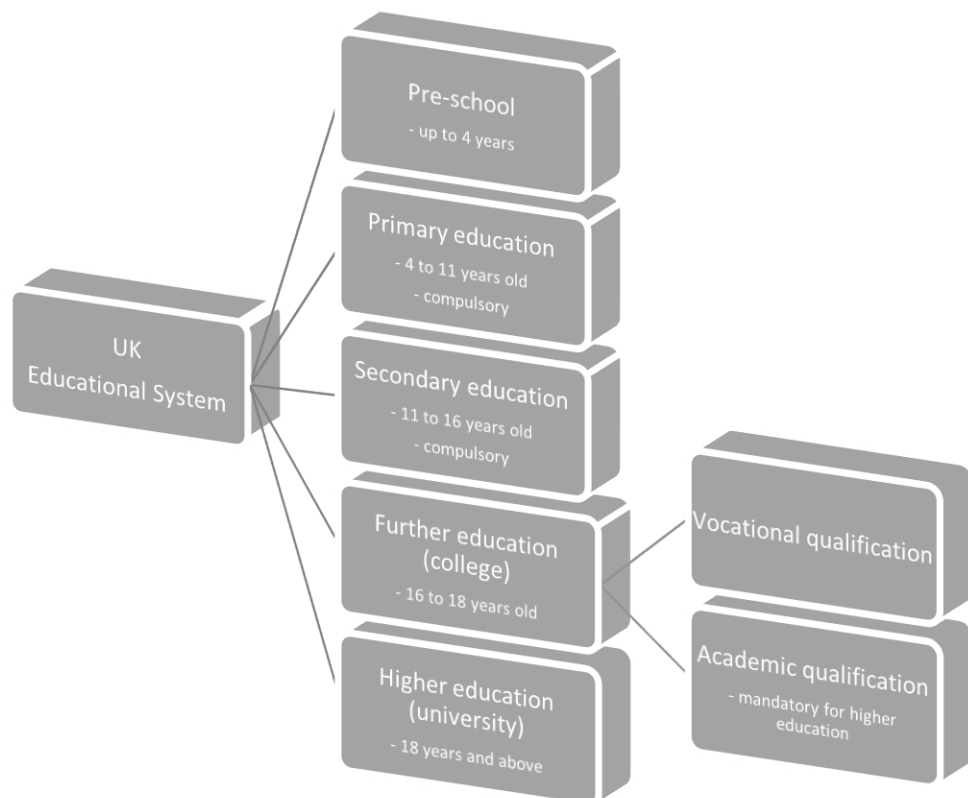


**Figure 3: Brazilian higher education qualification degrees**

<sup>3</sup> There are two types of postgraduate programs in Brazil. *Lato sensu* programmes which are short-course (usually a minimum of 360 hours) and students are awarded a certificate; and *stricto sensu* programmes, which usually take a couple of years and in the end, students are awarded a diploma.

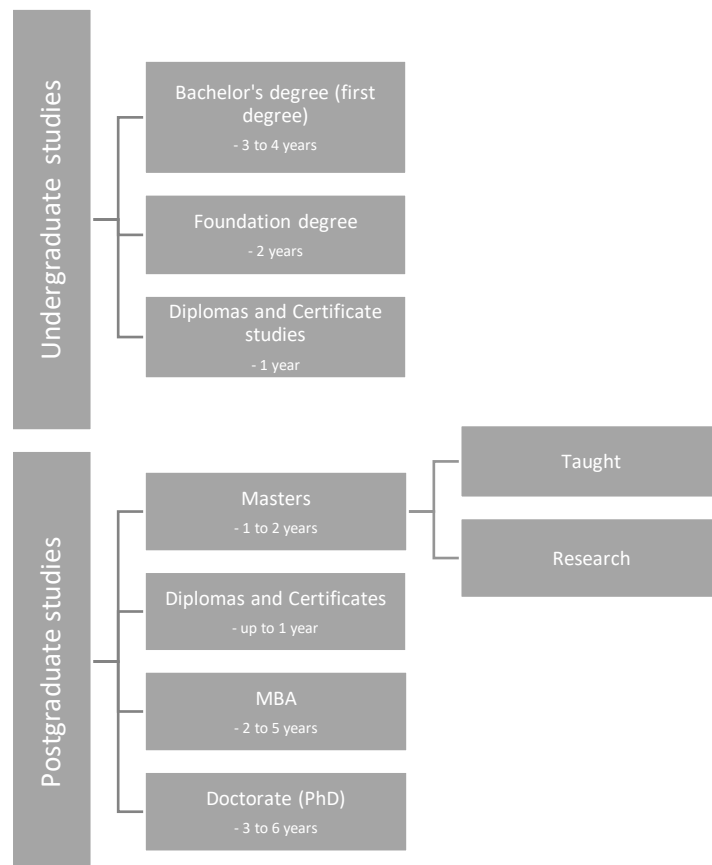
It is important to understand that a postdoctoral qualification is not considered an academic degree but a moment for developing skills and independency in a field of knowledge. In Brazil the highest academic qualification is called “livre-docencia” and comes after the postdoctoral position through curriculum evaluation, writing a thesis based on independent scholarship and an oral presentation (BRAZIL, 1972, BRAZIL, 1974, BRAZIL, 1975).

In the UK, data from the ONS showed that in 2017 the population was estimated at over 66 million people, with England accounting for over 55 million (Office for National Statistics, 2018b). Unlike the Brazilian education system, in the UK there are five educational stages (pre-school is optional) and schools can be either state institutions (funded by the government) or independent (**Figure 4**) (Her Majesty's Stationery Office, 2015a).



**Figure 4: UK education system structure**

In 2016/17, the UK Higher Education Statistics Agency<sup>4</sup> (HESA) listed 162 publicly and five privately funded higher education providers throughout the country with over 2.32 million students registered on either undergraduate or postgraduate courses (**Figure 5**). The HESA census also showed that the majority of university students were aged 20 years or under.



**Figure 5: UK higher education qualification degrees**

## 2.3 Young people, students and alcohol consumption

### 2.3.1 Drinking levels

The latest WHO report on alcohol use shows that worldwide, 44.5% of the population aged 15 years and above never consume alcohol and almost 43.0% are current drinkers (had consumed alcohol in the past 12 months). In 2016 the average

<sup>4</sup> <https://www.hesa.ac.uk/data-and-analysis/students/whos-in-he>

world alcohol consumption per capita was 6.4 litres of pure alcohol. In Brazil, 21.4% of the population aged 15 years and above never consumed alcohol and alcohol consumption per capita in 2016 was 7.8 litres of pure alcohol. In the UK, 11.0% of the population aged 15 years and above never consumed alcohol and alcohol consumption per capita was 11.4 litres of pure alcohol (World Health Organization, 2018).

In Brazil, alcohol consumption amongst secondary school students (15 to 17 years old) (Galduróz et al., 2004a, Galduróz et al., 2010, Malta et al., 2011, Madruga et al., 2012) and university students (Kerr-Corrêa et al., 2001, Stempliuk et al., 2005, Baumgarten et al., 2012, Machado et al., 2015, Pinheiro et al., 2017) have been considered an important public health. Moreover, amongst young people aged 10 to 24 years alcohol consumption is considered a major risk for premature death and disability (Gore et al., 2011).

Brazil is the eighth-largest economy in the world by size and it has a considerable potential for market growth for the alcohol industry. In 2016 the most consumed beverage was beer, accounting for 62.0% of total consumption in the country, followed by spirits (34.0%), wine (3.0%) and other alcoholic beverages (<1.0%). Within the UK, wine accounted for 36.0% of total consumption in the country, followed by beer (35.0%), spirits (22.0%) and other (7.0%) (World Health Organization, 2018).

The legal age of alcohol consumption in Brazil is 18 years (Law nº 9,294) (BRAZIL, 1996), however Brazilian research suggests that adolescents usually begin to drink by the age of 10 (Paiva et al., 2015, Reis and Oliveira, 2015). For instance, the first study that estimated the prevalence of alcohol use among Brazilians aged 12 to 65 years old, was conducted in 2001 by CEBRID, based at UNIFESP, and it showed that alcohol-related problems were greater than those related to other drugs. Overall, from the total sample (N= 8,589), 68.7% had used alcohol at some point in their lifetime. Amongst Brazilians aged 12-17 years; 18-24 years; 25-34 years and over 35 the lifetime use of alcohol was 48.3%, 73.2%, 76.5%; and 70.1%, respectively (Carlini et al., 2002).

Regarding Brazil's student population, in 2004 a study conducted with 1,990 students aged 11 to 21 years old, revealed that 65.2% of the sample reported consuming alcohol; 44.3% in the last 30 days of the survey; 11.7% reported consuming 6 or more times in the last 30 days; and 6.7% reported consuming 20 or more times in the last 30 days (Vieira et al., 2007). In 2009 the first epidemiological study on alcohol consumption and other drugs amongst university students (aged 18 or older) throughout the 27 capitals (N= 12,711) revealed that 86.2% of the sample consumed alcohol; 72.0% reported drinking alcohol in the last 12 months prior to the survey and 60.5% in the last 30 days (National Drug Policy Secretary, 2010). These findings highlight the importance of understanding alcohol use amongst Brazilian university students since available evidence shows high levels of alcohol consumption when compared with the general population and secondary school students (high school) (Kerr-Corrêa et al., 2001, Galduróz et al., 2004b, Stempliuk et al., 2005, Carlini et al., 2006, Carlini et al., 2011, Pinheiro et al., 2017).

Worldwide drinking rates amongst young people aged 15 to 19 years vary between regions, with the highest rates in the European region (43.8%), followed by the Americas (38.2%) and Western Pacific (37.9%) (World Health Organization, 2018). Within the UK context, evidence shows that alcohol consumption is a particular concern for the government and local authorities, in particular amongst young people and students. The opposite of Brazil, in England young people aged 16 – 17 years old accompanied by an adult can drink alcohol with a meal, although they cannot buy alcohol<sup>5</sup>. However, English research suggests underage drinking is an important issue of concern since recent data revealed that 38.0% of English young people aged 11 – 15 years old have drunk alcohol (Office for National Statistics, 2017).

A recent English survey on drinking habits amongst adults aged 16 years and over revealed that in 2017, 57.0% of the respondents consumed alcohol (defined as drinking an alcoholic drink in the last 12 months), accounting for 29.2 million adults in England (Office for National Statistics, 2018a).

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<sup>5</sup> <https://www.gov.uk/alcohol-young-people-law>

Regarding the student population, data revealed that in 2016, 44.0% of secondary pupils (aged 11 to 15 years old) had drunk alcohol (Office for National Statistics, 2017); further, almost 9.0% drink alcohol at least once a week (regular drinkers) and most likely during the weekends. As for university students registered in higher education within the UK, the 2017/18 National Union of Students (NUS) survey conducted amongst 2,215 students aged 18 years and over revealed that nearly 50.0% of the students were regular drinkers (National Union of Students, 2018).

### *2.3.2 The binge drinking pattern of alcohol consumption*

The latest WHO report suggests that alcohol is one of the most widely consumed psychoactive substance in the world (World Health Organization, 2018). The drinking pattern of alcohol consumption is related to the number of drinks and the rate at which a person consume alcohol, and the commonly known binge drinking pattern involves drinking large amounts of alcohol in a short period of time seems to be associated with increased risks for injuries and diseases (Rehm et al., 2010, Kuntsche et al., 2017).

According to the WHO (2018), in 2016 18.2% of the global population aged 15 years or more reported binge drinking, with regional differences and variations. Binge drinking was higher in Europe (26.5%), western pacific (21.9%) and the Americas (21.3%) and reached its peak amongst young people aged 20 – 24 years old. In Brazil in particular, 19.4% of the population (aged 15 years or more) reported binge drinking (in 2010 the rate was 12.7%). Of note, there is no official Brazilian definition for binge drinking, yet many of the national published research studies adopt the definition of consuming five measures<sup>6</sup> or more of alcohol in one single occasion for men, and four measures or more for women (Silveira et al., 2008).

The Brazilian annual telephone survey aimed at collecting data on chronic non-communicable diseases, such as diabetes, cancer and arterial hypertension and also monitoring related risk factors such as alcohol use, smoking, eating patterns/disorders

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<sup>6</sup> One dose contains approximately 8 – 13 g of pure alcohol



and physical inactivity, known as “Vigilância de fatores de risco e proteção para doenças crônicas por inquérito telefônico” (VIGITEL)<sup>7</sup> [Surveillance of Risk Factors and Protection for Chronic Diseases by Telephone Inquiry], revealed a small decrease in binge drinking pattern amongst population. In 2017, data showed that of 53,034 nationals aged 18 years and above the 19.1% practiced binge drinking in the past 30 days (BRAZIL, 2018).

The first national survey conducted with 3,007 Brazilians (2,346 adults aged 18 years old or over and 661 adolescents aged 14 – 17 years old) (Laranjeira et al., 2007) showed that in the 12 months prior to survey, 28.0% and 16.0% of the adults and adolescents, respectively, practiced binge drinking. Results also showed significant associations between binge drinking and age amongst the adult population: people aged 18 – 24 years showed a prevalence of 40.0%; for people aged 25 – 34 years the prevalence was 37.0%; for people aged 35 – 44 years it was 28.0%; for 45 to 59 year olds, 20.0%; and amongst those aged 60 years or older the prevalence was 10.0%. These findings suggest that binge drinking occurs across all ages in Brazil, however it is most prevalent amongst young people.

Regarding the student population, in 2009 the first national epidemiological survey on alcohol consumption and other drugs conducted with 12,711 university students aged 18 or older revealed that, in the past 12 months and in the past 30 days, 35.7% and 25.3% of university students respectively practiced binge drinking (National Drug Policy Secretary, 2010). Later in 2011, a study conducted amongst 2,691 high school students aged 14 – 19 years old from the city of São Paulo, revealed that 34.5% of them reported engaging in binge drinking in the 30 days prior to the research and this behaviour was further associated with frequency of going on a night out (Sanchez et al., 2011). Recent data show that in 2016, 56.0% of Brazilian drinkers aged 15 – 19 years reported binge drinking at least once in the past 30 days (World Health Organization, 2018).

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<sup>7</sup><http://portalm.sau.de.gov.br/vigilancia-em-sau.de/indicadores-de-sau.de/vigilancia-de-fatores-de-risco-e-protecao-para-doencas-cronicas-por-inquerito-telefonico-vigitel>

Although Brazilian research suggests that students' drinking pattern have been characterised by binge drinking (National Drug Policy Secretary, 2010, Bedendo et al., 2017), evidence on alcohol consumption amongst university students in Brazil is still in its infancy (Carlini et al., 2006, Silva et al., 2006, Chiapetti and Serbena, 2007, National Drug Policy Secretary, 2010, Brandão et al., 2011, De Carvalho e Martins et al., 2016). Such findings reinforce the need for a better understanding of alcohol consumption among students and for the development of specific prevention and policy measures, since they appear to be the most at risk population (National Drug Policy Secretary, 2010).

Europe has the highest level of binge drinking amongst people aged 15 years or over. In the UK in particular, the WHO report on alcohol and health shows a binge drinking prevalence of 29.8%; and amongst drinkers aged 15 – 19 years the prevalence is 52.4% (World Health Organization, 2018). In contrast to the Brazilian scenario, the UK has a specific definition of what constitutes a drink, and this is termed an “alcohol unit”, which is equal to 10 ml or 8 g of pure alcohol<sup>8</sup>. The UK National Health Service (NHS) (National Health Service, 2014) defines binge drinking as “drinking lots of alcohol in a short space of time or drinking to get drunk”. Recently, the UK government decided to lower the number of alcohol units: it is recommended that both men and women should not drink more than 14 units a week (e.g., 6 pints of beer or 1.4 bottles of wine); the previous guideline was 14-21 units per week for women and 21-28 units per week for men and exceeding this drinking levels is considered harmful drinking pattern as it can causes health problems (Chief Medical Officers, 2016).

For statistical purposes, the UK measures binge drinking as exceeding eight units of alcohol for men and six units for women. In 2017, a British report showed a high prevalence of binge drinking amongst adults aged 16 – 24 years. Data revealed that 26.2% of drinkers aged 16 years and over binged on their heaviest drinking day, accounting for 7.8 million adults in England and, of the English regions, the North West showed the highest prevalence of drinkers who binged (33.3%) (Office for National

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<sup>8</sup> <https://www.nhs.uk/live-well/alcohol-support/calculating-alcohol-units/>

Statistics, 2018a). Furthermore, binge drinking was also observed amongst drinkers aged 11 – 15 years old, with a prevalence of 23.0% (Office for National Statistics, 2017).

Drinking norms are related to what is normally or typically expected in a given population. In the UK, binge drinking has been considered the norm amongst university students (Davoren et al., 2016a, Davoren et al., 2016b). However, recent trends reveal decreasing levels of alcohol use amongst British young people aged 16 and over; since 2005, data show that the proportion of young people practicing binge drinking fell by more than a third (from 29.0% to 17.0%) (Office for National Statistics, 2018a). Moreover, the latest National Union of Students (NUS) research showed that although 19.0% of UK students reported getting drunk on purpose once a week, 21.0% of the sample reported to not drink alcohol at all (National Union of Students, 2018). Possible reasons for this shift can be linked to economic issues, immigration from non-drinking cultures, rise of digital technologies and changes to drinking norms and lifestyle (Ng Fat et al., 2018, Oldham et al., 2018).

### *2.3.3 Alcohol-related harms*

Globally, alcohol is consumed in different sociocultural contexts and is considered the major drug that is culturally accepted. International evidence shows strong associations between binge drinking and increased related-harms, including unintentional injury, driving under the influence, assaults and troubles with the law (Hingson et al., 2002, Wechsler et al., 2002, Jennison, 2004, Silva et al., 2006, Nunes et al., 2012, White and Hingson, 2013, Davoren et al., 2016b).

Whilst patterns of consumption vary between continents and countries, alcohol consumption places huge burdens on population health, being responsible for about 3 million deaths (5.3% of all deaths) worldwide. In 2016, approximately 0.9 million deaths were associated with alcohol, including road traffic injuries (373,000 deaths), self-harm (146,000 deaths) and violence (88,000 deaths) (World Health Organization, 2018). The European region has the highest proportion of all deaths

caused by alcohol (10.1%) followed by the Americas region (5.5%) (World Health Organization, 2018).

The first Regional Status Report on Alcohol and Health published in 2015 by the Pan American Health Organization (PAHO) showed that in 2012, complications of alcohol use contributed to the death of almost 300,000 people aged 15 – 49 years old within the Americas Region. Just for young people aged 15 – 19 years old, in 2010 alcohol contributed to almost 14,000 deaths (Pan American Health Organization, 2015).

In Latin America, alcohol-related injuries are major contributors to the burden of disease (Sepúlveda and Murray, 2014). The WHO global status report showed that in 2016, amongst Brazilian men and women aged 15 years or over, alcohol was associated with 69.5% and 42.6% of hepatic cirrhosis cases, 36.7% and 23.0% of road traffic accidents, and 8.7% and 2.2% of cancer rates - respectively. As for alcohol use disorders (including alcohol dependence and harmful alcohol use), the prevalence amongst the population aged 15 years or over was 4.2% (6.9% men and 1.6% of women) (World Health Organization, 2018).

Although binge drinking patterns are not well evidenced in the Brazilian literature (Silveira et al., 2008), there has been greater interest in understanding the impacts of alcohol use, since international research suggests binge drinking being associated with increased levels of traffic accidents and episodes of violence (Naimi et al., 2003, Measham and Brain, 2005). Brazil ranks in fifth position regarding countries with the highest rates for traffic accident-related deaths with an estimated 46,935 deaths due to road traffic fatal injury in 2013 (World Health Organization, 2015). The annual number of deaths and severely injured victims accounts for over 150,000 people, and the costs per year are estimated around 28 billion Brazilian Reals (R\$) (Bacchieri and Barros, 2011).

Evidence suggests that binge drinking is associated with trauma and traffic injuries (World Health Organization, 2018) and in Brazil it is considered a high-risk

factor both for drivers and for other road users (Naimi et al., 2003, Segatto et al., 2008, Pan American Health Organization, 2015), being associated with compromising drivers' skills and impairing their motor coordination, i.e., increasing the risk of involvement in traffic law violations and accidents (Pechansky et al., 2010, Pechansky et al., 2012). Data show associations between road traffic accidents and alcohol use during weekend nights in Brazil (De Boni et al., 2008a, Pechansky et al., 2010, Pechansky et al., 2012, Aguilera et al., 2015, Ulinski et al., 2016), including amongst young adults aged 18 – 25 years (Pinsky et al., 2004). Furthermore, research suggests that people of this age who reported drinking alcohol, intended to drive afterwards (De Boni et al., 2008a, Pechansky et al., 2009, Castroand et al., 2012, Ulinski et al., 2016). It is important to highlight that none of these individuals considered the possibility of requesting someone to drive or to take a taxi, which might be associated with the low perception of risk for drinking and driving of these individuals certainly caused by alcohol intoxication.

Furthermore, in Brazil programs raising awareness of problems associated with alcohol consumption are scant and alcohol advertising in the country is not restricted (Faria et al., 2011). Corroborating with international evidence from Australia and UK (Winter et al., 2008, Office of Communications, 2013), Brazil has high rates of alcohol advertising exposure among young people aged 14 – 17 years and adults (aged 18 and over) (Pinsky et al., 2010). In Brazil, there is evidence suggesting that alcohol advertising may increase children and adolescents' chances to initiate alcohol consumption at an earlier age and are more likely to consume alcohol in a binge pattern (Collins et al., 2007, Faria et al., 2011). Likewise, in the UK evidence also suggest association between individual exposure to alcohol advertising and young people's drinking behaviours (Anderson et al., 2009b, Anderson, 2009, Smith and Foxcroft, 2009, Gordon et al., 2010a, Gordon et al., 2010b).

In England, harmful drinking is considered the biggest risk factor attributable to early mortality, ill-health and disability for those aged 15 to 49 years (Forouzanfar et al., 2015). A British report showed that in 2017/18 there were 338,000 estimated alcohol-related hospital admissions and 5,800 alcohol-related deaths (Office for

National Statistics, 2018d). As for drink and drive incidents in England, data show that in 2016 an estimated 9,040 people were killed or injured (Office for National Statistics, 2018c).

The city of Liverpool, in particular is one of the cities that has high levels of alcohol consumption, including binge drinking hence high burdens of alcohol-related harms, such as hospital admissions, violence and crimes (Public Health England, 2018). The 2018 Crime Survey for England and Wales (CSEW; which surveyed adults aged 16 years and over) (Office for National Statistics, 2019) revealed that in the 12 months prior to the interviews, 39.0% of violent incidents were considered alcohol-related. Moreover, the report also showed that most violent incidents occurred over the weekend (62.0%) at night (61.0%).

International scholars, including from the UK (Glindemann et al., 2007, Moore et al., 2007, Clapp et al., 2009, Bellis et al., 2010, Boyd et al., 2018) and Brazil (De Boni et al., 2008b, Schmitz et al., 2014) have shown the important associations between drunkenness, BAC levels and harms within nightlife settings, particularly road traffic accidents (Hingson and Winter, 2003, Connor et al., 2004, Lardelli-Claret et al., 2006, Abreu et al., 2010). Research has suggested that lowering the alcohol limit in England and Wales could possibly further reduce road traffic incidents (Allsop, 2015).

The authors Calafat et al. (2011), Sanchez et al. (2011), Carlini et al. (2014, 2017) suggest pubs, bars and nightclubs are the main locales of alcohol use and are associated with increased chances of people reporting episodes of violence (Budd, 2003, Hughes et al., 2008a, Blay et al., 2010, Schnitzer et al., 2010), sexual risk behaviours (Luke et al., 2002, Bellis et al., 2008, Calafat et al., 2011) and road traffic accidents (Livingston et al., 2007). Consequently, to reduce these harms it is necessary to reduce overall level of alcohol consumption.

## 2.4 Factors associated with students' alcohol consumption

### 2.4.1 *Gender and alcohol use*

Alcohol-related harms include both health problems and social problems (World Health Organization, 2018), yet these consequences may vary across gender and particularly across cultures. Gender differences in alcohol consumption, including those amongst student populations, has been a subject of interest for academics across the world (Kuntsche et al., 2004, Wilsnack et al., 2005, Popova et al., 2007, Schulte et al., 2009, Wilsnack et al., 2009, Connor et al., 2010, Davoren et al., 2015).

Although recent data for Great Britain suggests a change to young adult's drinking patterns, binge drinking levels are still high for both genders (28.7% of men and 25.6% of women) (Office for National Statistics, 2018a). Data indicate that over the years, there's been a notable convergence between the sexes and a relative increase in young women's binge drinking levels and self-reported drunkenness (Mäkelä et al., 2006, Measham and Østergaard, 2009, Atkinson et al., 2012, Griffin et al., 2012, Slade et al., 2016, Office for National Statistics, 2017, Office for National Statistics, 2018a). In Brazil, there is a lack of studies investigating gender differences in alcohol consumption, however the few existing studies suggest that young women are catching up to men's levels of alcohol consumption (Galduróz and Caetano, 2004, Wagner et al., 2007, Kerr-Corrêa et al., 2008, Wolle et al., 2011).

Once alcohol is ingested in small quantities, it causes a stimulating effect and disinhibition. Higher levels can affect a person's sensory, perceptual, cognitive and motor skills (Cook and Durrance, 2013). Evidence shows that alcohol has different effects and greater impacts on the female body when compared with the male body, as when ingesting the same amount of alcohol, women tend to have a higher BAC than men and thus, are more susceptible to the effects of alcohol on the body (Bennett and Williams, 2003, Mancinelli and Guiducci, 2004). From a public health perspective, assessing gender differences in alcohol use are important because it allows understanding for how alcohol can affect men and women differently, and thus, support the development of more targeted prevention and intervention strategies (Holmila and Raitasalo, 2005, Wolle et al., 2011).

Studies show that there are also important gender differences related to the psychological and social motives for drinking. When drinking, prevailing social norms mean that often women are expected to remain 'decent and responsible' (Hutton et al., 2016). However, according to Lyons and Willott (2008) there's been a markable shift in young women's alcohol consumption, particularly in levels of binge drinking behaviour and public drunkenness (Wilsnack et al., 2005, Mäkelä et al., 2006, Wilsnack et al., 2009), suggesting that social norms around women's alcohol use may be changing.

Women's drinking has been historically more restricted and discouraged by society in order to prevent possible negative effects that drinking may have in women's social behaviour, respectability and femininity (Measham, 2002, Griffin et al., 2012, Bailey et al., 2015, Hutton et al., 2016). In Brazil, the existing literature suggests that there has been a gender convergence in drinking quantities and frequencies (Wagner et al., 2007, Kerr-Corrêa et al., 2008) possibly associated with sociocultural factors (Galduróz and Caetano, 2004) and changes in gender roles (Wilsnack et al., 2000). In European countries, including the UK, this gender convergence in how much and how often people drink has also been observed (Room and Mäkelä, 2000, Leifman, 2001, Beccaria and Guidoni, 2002, Ahlström, 2007) suggesting that attitudes towards women's drinking have become more liberal.

Thus, binge drinking, which was once considered a "masculine" behaviour, is now more acceptable and prevalent amongst the female population within nightlife settings (Lyons and Willott, 2008, Ritchie et al., 2009, Atkinson et al., 2012, Atkinson and Sumnall, 2016, Nicholls, 2016a, Atkinson and Sumnall, 2017). Authors consider this public demonstration of drinking behaviour as part of a process of increasing gender equality and an attempt to challenge the norms expected of women regarding drinking behaviours (Griffin et al., 2012). However this markable shift has aroused important public concerns such as the increasing chances of women experiencing alcohol-related harms, including unprotected sex and violence (Jackson and Tinkler, 2007, MacLean, 2016).



#### 2.4.2 Alcohol and culture

Drinking culture is related to the traditions and social behaviours associated with alcohol consumption and like gender, culture is considered one of the determinants of how a person drinks alcohol. Over many years, alcohol has been a socially acceptable intoxicating substance embedded in all human culture. For instance, according to Babor et al., (2010) alcohol has been considered by most of the cultures as an ordinary commodity that can be consumed at any time and occasion, for purposes including celebration, comfort and socialization. Therefore, to understand the factors associated with alcohol use across different countries, it is important to understand the norms and beliefs behind each drinking culture (Room, 2001, Kuntsche et al., 2006c, Kuntsche and Labhart, 2012, Kuntsche et al., 2014).

In Latin America (including Brazil), during the period of colonization between the 16<sup>th</sup> and 17<sup>th</sup> century, the Tupinambás were the first indigenous groups that communicated with Europeans and like the majority of the Brazilian native people, they relied exclusively on agriculture and held deep knowledge of fermenting techniques, particularly of grains and roots (Pierce and Toxqui, 2014). According to Fernandes (2009) the Brazilian native people used to produce a wide range of beverages from fermenting grains, including the *cauim*.

*Cauim* was considered a sacred beverage not to be consumed daily but only during certain religious occasions such as weddings, rites of passage and funerals, in which drinking and getting drunk was expected and accepted amongst the indigenous group. Later, the trade and consumption of alcohol influenced the economic and cultural development of colonies. In other words, to promote colonization by attracting friendship and goodwill of natives, alcohol was used in exchange for slaves and so European distilled beverages were introduced in Brazil, and consequently drinking patterns were radically changed and drunkenness was spread amongst its population (Fernandes, 2009, Pierce and Toxqui, 2014).

Within the UK context, drinking during meals, rites of passage, religious events, weddings and even funerals have been prevalent throughout history and often seen as normal and even beneficial. In the past, the Church claimed that alcohol was a gift from God and should be consumed in moderation for pleasure; heavy labor would be alleviated by alcohol and instead of water, alcohol was consumed as it was considered to be safer (Borsay, 2006, Holt, 2006, Martin, 2006, Berridge et al., 2007, Jennings, 2016).

Drunkenness has been found throughout UK history, with little stigma attached to it in the past. In the 16<sup>th</sup> and 17<sup>th</sup> century, the development of alcohol production in Europe, encouraged by public policy (e.g., through new ways of distilling and brewing alcohol), led to a steep rise in consumption. Gin, in particular was consumed due to its low price and easy accessibility, and during that time getting drunk was deeply embedded within British social life and celebrations (Abel, 2001, Borsay, 2006, Berridge et al., 2007). Soon, this excessive consumption of gin was associated with the extensive health and social problems that arose.

From this, during the 19th and 20th centuries, attitudes towards binge drinking in the UK started to change. Growing concerns over alcohol-related problems and an increasing criticism of drunkenness began to emerge and drinking started being looked at as a disease. Consequently, this led to the emergence of the public health model and the government launched campaigns and strategies to address this harmful drinking culture. This included taxation and regulations in gin's sales and production, in order to diminish the problem of drunkenness and reduce alcohol harms, such as violence, costs to economy. Women's drinking was also addressed as they were considered to be "corrupted" by gin which highlights perceptions of respectability with women's excessive drinking considered unfeminine (Jernigan, 2000a, Jernigan, 2000b, Abel, 2001, Berridge et al., 2007, Griffin et al., 2012).

Overall, when considering the political aspects associated with alcohol, the state has always been considered key in defining alcohol distribution within society. In the past other parts of the world implemented tougher alcohol control strategies in

order to reduce associated problems, such as the national prohibition on the sale of alcohol in the USA and alcohol taxes and licensing laws in Britain which promoted drinking in moderation rather than abstinence (Yokoe, 2019, Joyce, 2013). On the other hand, in Brazil (in the past and present) there are no national laws prohibiting the sale of alcoholic beverages nor regulating it (Laranjeira, 2007).

The rise in alcohol consumption and its affordability in the past changed the cultural position of alcohol as it became more available (Room et al., 2005). Within the UK scenario, Jennings (2016) and Nicholls (2009) argue that pubs are an institution central to everyday life in English society and that throughout history it changed from a place where people used to go to solely get drunk to a more “respectable” social space in which people could actually hang, seat and socialize rather than just get drunk. Moreover, within the current UK scenario, such manipulation of social spaces has been often associated with changes in women’s drinking behaviours as bars, pubs and nightclubs (and alcohol market itself) began targeting women in order to attract them more to drinking environments (Gutzke, 2014).

In the UK, attitudes towards drinking are often associated with the positive expectation of drinking alcohol in all sorts of social practices as a constructive part of daily life, as a way of social bonding and even loosening inhibitions. Typically, celebrations without alcohol are considered incomplete, it is considered normal to have a drink during meals and people tend to be encouraged to drink to socialize during events (Wilson, 2005, Thurnell-Read, 2015, Alcohol Change UK, 2018b). However in the current world wide’s society, including in Brazil and the UK, alcohol use has become a great matter of global concern due to its complex association with health as a leading risk factor for disease burden (World Health Organization, 2018).

The concepts of “wet” and “dry” societies which are based on drinking patterns, the extent of drunkenness and drinking problems of a particular country (Room, 1989, Room and Mäkelä, 2000) have been used to explain the cultural position of alcohol in order to understand how drinking cultures vary across countries. “Wet or Mediterranean or integrated” drinking cultures i.e., Southern Europe (“wine

cultures”), refers to societies that have more positive beliefs and expectancies about alcohol, in which there’s a complete integration of alcohol in social life. Alcohol is usually consumed during meals within a family context and whilst socializing. “Wet” cultures tend to have a lower prevalence of abstainers; lower drunkenness levels; less strict alcohol rules; and a higher prevalence of alcohol-related harms such as diseases and mortality. On the other hand, “dry or Nordic or ambivalent” drinking cultures (i.e., Northern Europe; “beer or spirits cultures”), refers to societies in which there’s more negative belief and expectancies towards alcohol, usually alcohol is not considered part of daily life, but when it is consumed it is consumed “heavily”. “Dry” cultures have a higher number of abstainers; rules against intoxication are stricter; there are higher number of drunkenness rates and alcohol-related problems such as violence and disorderly behaviours) (Room, 2001, Kuntsche et al., 2004, Ahlström, 2007, Kuntsche et al., 2015).

Interestingly, authors suggest that there has been a convergence in drinking cultures in Europe and thus, a diminished “wet” and “dry” distinction (Room and Mäkelä, 2000, Leifman, 2001, Beccaria and Guidoni, 2002, Room, 2007, Gordon et al., 2012). For instance, in traditional “beer culture” society, the preference for wine is increasing, and in traditional “wine culture” society, beer consumption is increasing (Leifman, 2001, Gordon et al., 2012). It is also suggested that alcohol industry strategies aimed at targeting young people when launching new drinks (such as alcopops and caffeinated alcoholic drinks) has been an important factor influencing this cultural convergence in drinking cultures (Mart, 2011).

In the past the UK has been considered as a “dry” society (Room and Mäkelä, 2000), however, recent findings from a recent UK study suggests that the UK cultural drinking pattern is changing by showing characteristics of both “wet” and “dry” societies as a result of globalization of alcohol market and liberalisation of alcohol policy and practice (Ally et al., 2016). For instance, Ally et al., (2016) argue that due to changes in alcohol retailing and licensing laws, alcohol became increasingly available particularly amongst young people and started to be more consumed as accompaniment with food during family meals. Furthermore, the authors revealed

that almost half (46.0%) of the drinking occasions in the UK amongst adults involved moderate and relaxed drinking at home (Ally et al., 2016).

Brazil has a complex picture of drinking and its related problems. The latest WHO report (World Health Organization, 2018) revealed that though there is considerable abstinence amongst the population aged 15 years or over (59.7%, versus 26.6% in the UK), especially women (72.7%, versus 37.0% in the UK), there is also a considerably high prevalence of binge drinking and alcohol-related problems (National Drug Policy Secretary, 2010, Bedendo et al., 2017, World Health Organization, 2018). Strictly speaking, many Brazilians do not drink, but those who do tend to drink large amounts of alcohol that increases their chances of experiencing alcohol-related problems. Within this context, Brazil has characteristics of “dry” societies, however it is important to acknowledge that to date no studies have investigated the role and cultural position of alcohol and drinking norms in Brazil. Literature in this area has mainly focused on North American and European studies (Kuntsche et al., 2010, Hasking et al., 2011, Kuntsche et al., 2014).

Young adults’ drinking and drunkenness have always been a concern as they tend to practice binge drinking more than other age groups (Seaman and Ikegwuonu, 2010, Nicholls, 2010, Niland et al., 2013, d’Abbs, 2015). The beginning of the acid house and rave scene in British towns and cities in the late 1980s changed the UK nighttime economy (discussed in more detail in section 2.4.5.1) with a shift away from traditional pubs to nightclubs which led alcohol industry to redesign alcohol as an attempt to increase appeal to young adults (Measham, 2006, Measham, 2008). Since then, alcohol became more affordable and available and British young adults’ drinking pattern has been often associated with binge drinking and a heavier drinking culture, including amongst the female population and during specific occasions and environments that have reputation for excessive alcohol consumption, e.g. weekends and before going out (which will be discussed in the following section) (Gill, 2002, Gmel et al., 2003, Measham and Brain, 2005, Kuntsche et al., 2006a, Kuntsche et al., 2006b, Kuntsche et al., 2006c, Holloway et al., 2008, Griffin et al., 2009, Holloway et al., 2009, Jayne et al., 2011, Atkinson and Sumnall, 2016, Nicholls, 2016a, Atkinson and Sumnall, 2017). For

instance, results from a focus groups conducted amongst British students aged between 16 to 21 years old revealed that drinking before going out was associated with specific social activities, such as socialising, 'getting ready' for a night out and taking photographs (Atkinson and Sumnall, 2017). In order to understand how drinking cultures vary across countries and thus developing effective strategies within the alcohol policy context, knowledge regarding the factors associated with young people's drinking culture such as motivations and expectancies is needed, particularly in low-middle income countries (LMIC) like Brazil, where there is a lack of epidemiological and sociological studies on alcohol consumption.

#### *2.4.3 Normative beliefs and misperceptions of students' drinking culture*

It is argued that firstly an individual has a belief about something in order to develop an attitude towards something. For instance, one of the concepts associated with excessive drinking behaviour amongst university students has been underpinned by the social norm's theory. In summary, social norms are beliefs about normative attitudes and behaviours and the role it has on individual's decision-making around these perceptions (Perkins and Berkowitz, 1986).

According to its assumptions, social norms theory suggests that individual behaviour can be influenced by their own perceptions of what others accept and expect, and how they act (Perkins and Berkowitz, 1986). Within the alcohol literature, the perception of how much others drink (i.e., thinking that others drink more than they actually do) has been an important matter of concern. Research on alcohol use suggest that young adults, particularly students tend to overestimate the permissiveness of others' beliefs (descriptive norms) and attitudes (injunctive norms) towards alcohol consumption and consequently these perceptions have a major influence on individuals' drinking behaviour (Perkins, 2002, Lewis and Neighbors, 2006, Neighbors et al., 2007a, Dumas et al., 2018, Dumas et al., 2019, John and Alwyn, 2014).

Amongst student populations, descriptive norms are associated with individual's perceptions of their peer's drinking prevalence, i.e., students tend to

overestimate peer's drinking frequency (Borsari and Carey, 2001, Neighbors et al., 2004, Lewis and Neighbors, 2006), whereas injunctive norms are associated with individual's perceptions of how acceptable their peers find a behaviour, i.e., students tend to overestimate peer's drinking approval (Borsari and Carey, 2003, Prince et al., 2015). In summary, this overestimation, or misperception has been considered an important factor in influencing students' drinking, and thus correcting such misperceptions can influence individual behaviour change, i.e., decrease individual alcohol consumption (Perkins and Wechsler, 1996, Perkins et al., 1999).

It is argued that expectancies or beliefs about the effects of alcohol (perceived consequences) are predictions of students' drinking behaviour (Ham and Hope, 2003, Borsari et al., 2007b, Zamboanga et al., 2010, Leeman et al., 2012). Thus, individual alcohol consumption is motivated by learned expectations of the effects of alcohol use (either positive or negative effects) from past drinking experiences (Jones et al., 2001).

A wide range of international evidence suggests a significant association between students' peer influences and normative beliefs with students' attitudes towards alcohol consumption, such as positive expectancies on the effects of alcohol (i.e., positive outcomes from drinking such as socialising, sexual facilitation, overcome shyness); peers' positive acceptance about drinking and, overestimation about their peers' drinking levels, which tend to increase their own consumption and consequently greater risks of experiencing alcohol-related consequences (Borsari and Carey, 2001, Perkins, 2002, Borsari and Carey, 2003, Lewis and Neighbors, 2006, Neighbors et al., 2007a, Chauvin, 2012, LaBrie et al., 2012a, DiBello et al., 2018, Dumas et al., 2018, Simons-Morton et al., 2018). Within the UK, students' positive expectations towards alcohol consumption during university are high and often associated with socialising with friends and participating in university promoted events which are usually focused around alcohol consumption (Bewick et al., 2008a, Conroy and de Visser, 2013, Brown and Murphy, 2018, Fuller et al., 2018).

Students' social lives have been widely associated with alcohol consumption (Gill, 2002, Parker and Williams, 2003, Paduani et al., 2008, Van Havere et al., 2011, de

Visser et al., 2013, Rossheim et al., 2013) which can affect students' academic performance, such as missing class, falling behind and having lower grades (Wechsler et al., 2002, Bewick et al., 2008a, Atwell et al., 2011, Santos et al., 2013). It can also increase their exposure to other risky behaviours, such as drink driving, violence, road traffic accidents (Cardoso et al., 2015) and use of other drugs (Pechansky et al., 2004, Pillon et al., 2005, Silva et al., 2006, Castaldelli-Maia et al., 2014, Cardoso et al., 2015). Despite this, excessive alcohol use seems to be enforced and valued by peers (Christmas and Seymour, 2014) which could be related to students' perceived social norms and positive expectancies towards an excessive drinking culture associated with university life (Chauvin, 2012, Merrill et al., 2018a, Merrill et al., 2018b). Hence, in order to inform relevant measures aimed at reducing students' drunkenness levels and its related harms it is important to investigate and understand the relationship between university students' drinking culture and the wider social and cultural norms around alcohol consumption (Monk and Heim, 2013).

A growing body of research suggests an important association regarding the settings in which students' drinking behaviours takes place with increased alcohol-related harms (Neighbors et al., 2006b, Pedersen and Labrie, 2007, Neighbors et al., 2011a, O'Grady et al., 2011, Neighbors et al., 2012, Rossheim et al., 2013, Pedersen et al., 2014, Zamboanga et al., 2014). In both the UK and Brazil, nightlife settings have a major role in students' alcohol consumption (Hughes et al., 2009, Bellis et al., 2010, Jones et al., 2010, Rowe et al., 2010, Calafat et al., 2011, Sanchez et al., 2011, Demant, 2013). Understanding the way in which alcohol is consumed by university students and the practices they engage in, in particular binge drinking pattern within the nightlife context (Szmigin et al., 2008, Griffin et al., 2009, Hughes et al., 2009, Lewis et al., 2009, Glassman et al., 2010, Hunt et al., 2014, Nordfjærn et al., 2016) is as important as understanding the implications that alcohol can cause at individual and societal levels (Okoro et al., 2004, Craigs et al., 2012, de Visser et al., 2013, Longstaff et al., 2014) because gaining deeper knowledge in students' drinking attitudes and beliefs could help creating opportunities to change perceptions.



Within a social and cultural environment with positive expectancies towards excessive drinking students are more prone to drink, as it can be perceived to be an accepted social behaviour. Literature suggests that interventions based on social norms theory aimed at correcting students' misperceptions about alcohol consumption can influence change of behaviour, i.e., reduce drinking levels (Perkins, 2002), however students' drinking patterns should be considered in their broader contextual and social aspects (Foxcroft et al., 2015), highlighting the need for more qualitative research aimed at investigating university students' perceptions and expectations towards alcohol use, particularly within nightlife settings.

#### *2.4.4 Alcohol and pleasure*

In the UK, research highlights that since the mid-1990s, alcohol plays an important role for young people's drinking culture. Going out and drinking on weekends within city centre nightlife venues is an important leisure activity amongst young people, and for women is a symbol of increasing gender equality and empowerment (Room and Mäkelä, 2000, Measham, 2004b, Griffin et al., 2012, Nicholls, 2012, Lyons et al., 2017). Drinking holds a positive connotation for young adults, particularly for students whose aim at getting deliberately drunk is focused on the pleasure of experiencing the effects of alcohol intoxication (Brain, 2000, Duff, 2008, Fry, 2011).

Qualitative research on meanings of alcohol consumption amongst students suggests that the types of occasions in which alcohol is consumed (i.e., drinking practice) is mainly about pleasure where it involves having fun, excitement, relaxing and socialising by helping to overcome shyness and thus, promoting a sense of belonging (Guise and Gill, 2007, Lyons and Willott, 2008, Griffin et al., 2009, Fry, 2011, de Visser et al., 2013, Niland et al., 2013, Lyons et al., 2014). This belonging is positively related to various aspects of students' experiences whilst at university, particularly social recognition and acceptance (Wilcox et al., 2005) in which alcohol is usually the main feature. Moreover, amongst female students it involves socialising with friends when planning for a night out (Lyons and Willott, 2008, Szmigin et al., 2008, Macneela

and Bredin, 2011, Atkinson and Sumnall, 2016, Nicholls, 2016a). From this, to help inform the development of future alcohol interventions aimed at reducing students' excessive alcohol consumption it is important to consider their drinking behaviours as a shared social and pleasurable practice.

University life involves a lot of changes, including autonomy and independence in being far from home and from parental supervision, accompanied by increases in social interaction and consequently increases in alcohol consumption (KerrCorrêa et al., 2002, Weitzman et al., 2003, Ilhan et al., 2009, Haas et al., 2012, Lorant et al., 2013). Internationally, including in the UK, an extensive volume of research has been conducted to investigate students' drinking patterns. This evidence highlights increasing levels of binge drinking and drunkenness amongst students compared with the general adult population (Gill, 2002, McCabe, 2002, O'Malley and Johnston, 2002, Ham and Hope, 2003, Kypri et al., 2005, Carey et al., 2007, Mongan et al., 2009, Kypri et al., 2009, Wicki et al., 2010, Chiauzzi et al., 2013, Davoren et al., 2015, Davoren et al., 2016a, Davoren et al., 2016b), and with those who do not attend university (Balodis et al., 2009, Heather et al., 2011).

The university environment has a strong influence on young people's alcohol consumption. Amongst students, getting drunk is a normalized and acceptable behaviour, viewed as a symbol of adulthood and identity (de Visser et al., 2013, Conroy and de Visser, 2014, Davoren et al., 2016a, Supski et al., 2017). Within nightlife settings, alcohol also plays an important role for students (Conroy and de Visser, 2014, Davies et al., 2018) representing a culture of intoxication (Measham and Brain, 2005) which is focused on leisure and the pursuit of getting deliberately drunk (Measham, 2004b, Seaman and Ikegwonu, 2010). Alcohol consumption within nightlife settings and its harmful effects have been well described in the literature, however in order to develop and implement effective measures aimed at reducing drunkenness and its harms it is important to recognise the pleasure and sociability involved in young people's drinking behaviours, particularly for students (Duff, 2008, Szmigin et al., 2008, Fry, 2011).

## 2.4.5 *Wider context of students' nightlife drinking culture*

### 2.4.5.1 Alcohol and nightlife environment

The nightlife of São Paulo has a wide-ranging selection of bars, live music and nightclubs, ranking in fourth position for the best nightlife in the world according to the Cable News Network (CNN) channel (Manson, 2014), and raising almost R\$ 2.4 billion per year for the Brazilian night-time economy (Muniz et al., 2014). In São Paulo, also known as “the city that never sleeps”, patrons can attend all types of nightlife venues all week long, such as regular pop-dance music places, rock, R&B, samba, electronic, Brazilian funk (a popular music genre with sexual connotation dancing movements and explicit lyrics), and “forró” (a typical Brazilian dancing style).

The UK's nightlife is also very diverse. You can choose from sitting in a traditional English pub, or a modern bar, eating at a wide range of restaurants, “clubbing” in your favourite nightclub whether it's R&B, '80s pop, dance, techno, rock or indie, going to theatres, or joining a crowd in many music festivals across the country. Liverpool in particular is famous for being birth place of The Beatles and was heralded as the European City of Culture in 2008 (Bellis and Hughes, 2005). The city is considered one of the most popular nightlife areas in the UK and it has a large university student body, attracting many tourists and students from all over the world. The range of night-time venues is vast, including bars, traditional and famous pubs, and a few nightclubs<sup>9</sup>. In contrast to São Paulo's nightlife, where people usually go to one or two places at a time for a night out, in most parts of the UK, including in Liverpool, the night out will often start with people going to several bars and then possibly a nightclub.

Though trends on alcohol consumption show decreasing drinking levels amongst young adults in the UK (Office for National Statistics, 2018a), research investigating their drinking culture suggest that drinking and drunkenness have been considered a normalized and acceptable feature of British young adults' social nightlife

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<sup>9</sup> <https://www.visitliverpool.com/food-and-drink/bars-and-nightlife>

and identities (Measham, 2008) since getting deliberately drunk has been associated with socializing with friends and a sense of belonging (Duff, 2008, Szmigin et al., 2008, Fry, 2011).

The UK has diverse nightlife drinking environments and important changes have occurred over the years to increase the appeal for young customers which could explain British young adults' behaviours (particularly students) towards harmful use of alcohol. For instance, changes were made to alcohol products. This included the alcohol industry effort in developing new alcoholic beverages aimed at young people which emphasised the positive aspects of consuming alcohol (e.g., sweet-flavoured alcopops and spirit mixers), the bars sales' strategies (e.g., shots and cheap discounts) to attract more consumers particularly students and the development of higher strength alcoholic drinks (e.g., beer, ciders, wine) (Measham, 2008). These changes to alcohol products together with the redesign of alcohol licensed leisure venues from quiet areas to recreational "themed" party venues aimed at young people, alongside the considerable growth in the number of retailers supplying alcohol began to modify the British towns and cities centres. This was further heightened by the liberalisation of UK alcohol licensing laws for late or 24-hours license and the relaxation of closing time in an attempt to create a more "relaxed" Mediterranean drinking culture, characterized by moderate daily alcohol consumption as opposed to the traditional British "intoxicated weekends" drinking culture (Brain, 2000, Parker and Williams, 2003, Measham, 2004b, Measham and Brain, 2005, Measham, 2008, Szmigin et al., 2008, Bellis and Hughes, 2011).

Qualitative UK studies suggest that getting extremely drunk is often considered as an end in itself and as a socially and culturally accepted and expected behaviour amongst students (Szmigin et al., 2008, Hunt et al., 2014, Bailey et al., 2015). It is argued that changes such as deregulation, alcohol promotions and increased density of "drinking venues" (pubs, clubs, themed bars and cafes) encouraged even more consumption which contributed to the emergence of a determined "culture of intoxication" amongst young adults aimed at a "controlled loss of control" when going out (Brain, 2000, Measham, 2002, Measham, 2006).

Regarding women's drinking within nightlife settings in particular, it is often considered as a risky behaviour for experiencing alcohol-related harms (e.g., violence and dependence) and problems associated with femininity (Day et al., 2003, Day et al., 2004). However, there is still evidence suggesting that women's drinking patterns are catching up with men's, raising scholars' attention for this particular behaviour amongst this sub-population (Holmila and Raitasalo, 2005). It is suggested that increasing levels in women's drinking may be associated with changes in women's social positions, such as women's economic empowerment and better employment opportunities, which could be further related to what is described as the "feminisation" of city centre drinking spaces, in which women started to be able to participate into "traditionally male" social activities, particularly public drinking (Wilsnack et al., 2000, Lyons and Willott, 2008). Furthermore, amongst female populations authors suggest that such "determined" public drunkenness has also become increasingly tolerated and normalised since nightlife-drinking venues have become more "feminized spaces" (e.g., changes in alcoholic beverages and alcohol advertising and marketing aimed at young female population) often associated with socialization (Measham, 2004b, Measham and Brain, 2005, Szmigin et al., 2008, Griffin et al., 2012, Bailey et al., 2015). It is important to highlight that amongst male and female students, such pursuit of "determined" drunkenness can be achieved not only when going out to bars, pubs and nightclubs, but also during pre-drinking (which will be discussed in the next section).

Overall, it is important to understand wider aspects of changes in alcohol consumption amongst students, as well as the norms associated with it. Unlike the UK, in Brazil there is no current evidence exploring the wider cultural norms associated with students' nightlife drinking culture. This highlights the need for investigating these broader aspects in order to have an in-depth understanding of the problem with students' drinking patterns in the nightlife context.

When going out in the UK, students often move from one establishment (bars, pubs or nightclubs) to another and most of these social spaces are dominated by point

of sale promotions for branded alcohol products (Measham, 2004a, Mistral et al., 2006). Worldwide, regulating alcohol marketing is a complex issue as it can range from no regulation at all (either statutory or self-regulation) to complete banning. Two regulatory systems are known: the legal control in which there are required restrictions by the government on alcohol advertising and content and the ethical control (commonly called self-regulation) in which the alcohol industry adopts voluntary advertising and marketing codes to regulate the content of advertising messages to not encourage excessive consumption or irresponsible behaviours (Gordon et al., 2010a).

In Brazil the current policy for controlling alcohol advertising is based on the self-regulation system overseen by the non-government advertising organisation called “Conselho Nacional de Auto-regulamentação Publicitária” (CONAR<sup>10</sup>) [National Council for Self-Regulation in Advertising] (Conselho Nacional de Auto-regulamentação Publicitária, n.d.). Likewise, the UK also has a self-regulation policy managed by non-government organisations such as the Advertising Standards Authority (ASA<sup>11</sup>) and alcohol industry funded bodies such as the Portman Group<sup>12</sup>, which are responsible for advertising and packaging, respectively. Evidence on the effectiveness of self-regulation policy in developing countries is still scant, particularly in Brazil (Vendrame et al., 2010, Noel et al., 2017b, Babor et al., 2018). In the UK, authors argue that there has been a failure of the self-regulation system since data suggest that alcohol marketing has been impacting upon young people’s drinking behaviour, including within the nightlife environment context (Atkinson et al., 2017a, Monteiro et al., 2017, Noel et al., 2017a, Alcohol Change UK, 2018a, Babor et al., 2018). Although the content of alcohol advertising in the UK is restricted, alcohol promotions are still evident. Ross-Houle & Quigg (2019) argue that alcohol retailers and advertising in the UK usually has students as targets, which could explain the increased levels of binge drinking during nights out amongst this population (Measham, 2008).

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<sup>10</sup> <http://www.conar.org.br/>

<sup>11</sup> <https://www.asa.org.uk/>

<sup>12</sup> <https://www.portmangroup.org.uk/>

Nightclubs are described as one of the most important and common places that young adults go to seek pleasure and entertainment (Calafat et al., 2003), and yet inside those venues there is more chances of experiencing risky behaviours (Graham et al., 2006a) by breaking social rules and using drugs for pleasure (Duff, 2008). Studies show that UK nightlife environments are characterised by high levels of intoxication (Hughes et al., 2008a, Bellis and Hughes, 2011, Quigg et al., 2015a, Quigg et al., 2015b). For example, a cross-sectional survey conducted among 380 nightlife patrons aged 18 – 35 years (Hughes et al., 2008a) showed that across the total sample, the mean number of alcohol units consumed prior to and during the night out was 20.2. This corroborates with other European studies that show higher levels of intoxication among British nightlife participants (Hughes et al., 2011b) and students (Quigg et al., 2013), particularly amongst female population.

In Brazil, despite having a strong leisure culture, especially in São Paulo, epidemiological data on nightlife risky behaviours is still scant. Developing effective harm reduction policies for nightlife patrons is necessary but first it is important to understand the environment itself. The first study designed to evaluate the prevalence of risk behaviours by nightlife patrons, known as “Balada com Ciência”<sup>13</sup> was conducted in 2013. The study was designed with multi-stage data collection and also used multiple instruments and technologies. Findings revealed high levels of alcohol use and drunkenness amongst nightlife patrons, with similar proportion between genders (Santos et al., 2015b, Sanchez et al., 2015, Santos et al., 2015c).

Hence, it is important to have a more comprehensive understanding on how young people’s drinking culture vary across countries in order to develop and implement effective interventions aimed at reducing alcohol consumption and its harms within nightlife settings. Further, it is necessary to consider not only the nightlife environment itself but also the role that alcohol has on students’ drinking culture (Room and Mäkelä, 2000, Griffin et al., 2012, Nicholls, 2012, Lyons et al., 2017) in order to address young people’s drunkenness levels and consequently alcohol consumption

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<sup>13</sup> [www.baladacomciencia.com.br](http://www.baladacomciencia.com.br)

during and before going out (Room and Mäkelä, 2000, Barton and Husk, 2012, Griffin et al., 2012, Nicholls, 2012, Lyons et al., 2017).

#### 2.4.5.2 Pre-drinking behaviour

Worldwide, several studies have identified harmful patterns of nightlife alcohol use and related problems (Borsari et al., 2007a, Hughes et al., 2008a, LaBrie and Pedersen, 2008, Wells et al., 2009, LaBrie et al., 2011, Barton and Husk, 2014, Labhart et al., 2014, O'Rourke et al., 2016, Davies and Paltoglou, 2019) including the widespread phenomenon of pre-drinking - drinking in private settings before going on a night out (Pedersen and Labrie, 2007, Wells et al., 2009, DeJong et al., 2010) and other drinking patterns such as side-loading or en-route loading (drinking while traveling to and between licensed premises) and back-loading (i.e., drinking alcohol in parties after a night out) (Holloway et al., 2008, Forsyth, 2010, Miller et al., 2012, Wickham, 2012, Quigg et al., 2015a, Quigg et al., 2015b).

Motivations for pre-drinking are generally strategic and associated with the intention of getting drunk (Pedersen and Labrie, 2007, Pedersen et al., 2009, DeJong et al., 2010), reducing social anxiety or saving money (Forsyth, 2006, Grazian, 2007, Wells et al., 2009, Read et al., 2010, Bachrach et al., 2012, LaBrie et al., 2012b, Foster and Ferguson, 2014). However, evidence linking pre-drinking motives and the negative consequences of drinking are still needed, because usually the motives are viewed from a positive angle, i.e., related to relaxing before going out, controlling the type of alcohol that will be consumed, or even assuming the chance of meeting a future partner (LaBrie et al., 2012b).

Pre-drinking has been established as part of USA (Pedersen and Labrie, 2007, Pedersen et al., 2009, DeJong et al., 2010) and UK university students' social nightlife (Hammersley and Ditton, 2005, Barton and Husk, 2012, Roberts, 2013, Barton and Husk, 2014, McClatchley et al., 2014, Ally et al., 2016, Savic et al., 2016, Atkinson and Sumnall, 2017, Supski et al., 2017) and is characterised by excessive drinking (e.g. binge drinking) and intoxication (Engineer et al., 2003, McKinney and Coyle, 2005, Moriarty



and Gilmore, 2006, Hughes and Bellis, 2007, Wells et al., 2009, Hughes et al., 2011b, Hughes et al., 2011c, Foster and Ferguson, 2014). The authors Barton and Husk (2012) found that drinking prior going out in the UK is clearly a significant part of the young British people's night out, with a pre-drinking prevalence of 66.0% amongst people aged 17 – 30 years; further, it is considered an important social event where friends socialize before entering a nightclub.

Although recent analysis of British surveys revealed that young adult's alcohol consumption levels has decreased (Office for National Statistics, 2018a), high levels of drunkenness has been a normalised and a positively expected behaviour within nightlife settings, often associated with social interaction both amongst men and women (Griffin et al., 2009, Seaman and Ikegwuonu, 2010, Labhart and Kuntsche, 2017, Davies et al., 2018, Hill et al., 2018, Hughes et al., 2019). For instance, a qualitative UK study revealed that pre-drinking for British students aged 16-21 years old was considered central in meeting new people, socialising with friends, "getting ready" for the night out and taking photographs (Atkinson and Sumnall, 2017).

More importantly, authors have suggested that there may be significant gender differences regarding pre-drinking practice and motivations (Wells et al., 2009, Szmigin et al., 2011, Østergaard and Andrade, 2013, Barton and Husk, 2014, Atkinson and Sumnall, 2016, Atkinson and Sumnall, 2019). In England, a study conducted amongst nightlife patrons aged 18-35 years old (N= 380) showed that 55% of men and 60% of women pre-drink before going on a night out (Hughes et al., 2008a). Another survey conducted in four European countries among nightlife patrons (Hughes et al., 2011b) showed that most participants, including 61.4% of the British nightlife patrons, had practiced pre-drinking, with women reporting higher levels of pre-drinking. These findings corroborate others indicating higher levels of pre-drinking amongst the UK population, particularly with the female population (Holloway et al., 2008, Ritchie et al., 2009, Barton and Husk, 2012), and university students (Barton and Husk, 2014, McClatchley et al., 2014, Østergaard and Skov, 2014, Atkinson and Sumnall, 2017).

Brazil has just begun to investigate drinking behaviours in nightlife settings. The authors Santos et al., (2015b) conducted the first epidemiological research on nightlife settings in 2013, in the largest city in Brazil: São Paulo. They explored drinking behaviours and levels of drunkenness within the nightlife environment and observed that 41.3% of the sample (N= 2,422) reported pre-drinking on the night of the interview. Moreover, corroborating with previous international research (Read et al., 2010, Reed et al., 2011, Wahl et al., 2013) in Brazil, pre-drinking was higher amongst men than women (49.2% versus 29.0%, respectively) (Santos et al., 2015a).

Pre-drinking has been linked with higher levels of alcohol consumption and related harms. Studies have found that pre-drinkers tend to drink almost twice as much on pre-drinking evenings compared to other evenings (LaBrie and Pedersen, 2008, Barnett et al., 2013, Labhart et al., 2013) and they usually drink more often and in more quantities per occasion compared to non-pre-drinkers (Kenney et al., 2010, Read et al., 2010, Barry et al., 2013, Santos et al., 2015b). However, further evidence regarding the differences in students' pre-drinking practice and motivations are still needed in order to have a deeper understanding of how pre-drinking is rooted within students' lives and how it can vary across different drinking cultures and countries and consequently, develop effective interventions (Labhart et al., 2017, Ferris et al., 2019).

Research suggests that one of the main motives for pre-drinking is to drink to get drunk (Laranjeira et al., 2007, Sanchez et al., 2011) which leads to higher consumption of alcohol over a night out (Hughes et al., 2008a, Barton and Husk, 2012, Labhart et al., 2013, Labhart et al., 2014, McClatchley et al., 2014, Østergaard and Skov, 2014, Miller et al., 2016), increasing the risk of individuals experiencing alcoholic blackouts, vomiting (LaBrie et al., 2011), alcohol poisoning (LaBrie and Pedersen, 2008), impaired motor coordination and cognitive skills (Kenney et al., 2010) and alcohol-related violence (Borsari et al., 2007a). The breadth of literature published on pre-drinking behaviour highlights the problem associated with alcohol consumption within nightlife settings (Borsari et al., 2007a, Hughes et al., 2008a, Wells et al., 2009, Foster and Ferguson, 2014, Pennay et al., 2015, Santos et al., 2015b, Curtis et al., 2016,

Miller et al., 2016, Hyder et al., 2018) especially because binge drinking usually occurs during pre-drinking events.

Pre-drinking is considered an important event before going on a night out amongst young adults (Hughes et al., 2008a, Bellis et al., 2010, Barton and Husk, 2012, LaBrie et al., 2012b, Barry et al., 2013, Hummer et al., 2013, Barton and Husk, 2014, Foster and Ferguson, 2014, Labhart et al., 2014, O'Rourke et al., 2016) and has been associated with many risk factors within the nightlife environment, such as intention to get drunk (Wells et al., 2009, Christmas and Seymour, 2014) and violence (Hughes et al., 2008a, McClatchley et al., 2014, Santos et al., 2015b). A survey conducted in Liverpool (Hughes et al., 2008a) showed some negative nightlife experiences suffered in the last 12 months by the nightlife patrons, such as: being involved in a fight; being verbally and sexually violated or to being too drunk to walk, also, those harms were more likely to occur amongst pre-drinkers ( $p < 0.05$ ). Yet, little is known in developing-countries including in Brazil. Thus, preventing pre-drinking may be a crucial strategy to reduce excessive alcohol consumption and related harms in the nightlife context.

#### *2.4.6 Methodological challenges of researching students' alcohol consumption*

In Brazil and the UK, evidence suggests high levels of alcohol consumption amongst university students (Snow et al., 2003, Silva et al., 2006, Bewick et al., 2008a, Heather et al., 2011, O'Brien et al., 2014, Davoren et al., 2016b, Bedendo et al., 2017, Pinheiro et al., 2017) and across the field, quantitative methods have been the main research tool used to investigate students' alcohol use. Still, quantitative studies can present some limitations in relation to gaining deeper knowledge on students' drinking practices (including within the nightlife context) as they usually report students' drinking quantities and frequencies only and they can vary in their methods and sampling strategies.

Across international literature including in the UK a variety of student populations have been used to investigate alcohol use (Gill, 2002, Snow et al., 2003, Bewick et al., 2008a, Heather et al., 2011) and previous UK findings suggest selection

bias is an important issue when conducting research amongst university students (Gill, 2002, Davoren et al., 2016b). For instance, there is evidence in Brazil and the UK which has investigated students' alcohol use, however these studies have been conducted amongst students from a specific course or area (e.g., medical students) (Pickard et al., 2000, Silva et al., 2006, Paduani et al., 2008, Pedrosa et al., 2011, Machado et al., 2015, Pinheiro et al., 2017). Likewise, other Brazilian and UK studies have investigated alcohol use amongst students at a specific time point across the academic year (e.g., during first year when students feel more independent with less responsibilities so the chances of going out and drinking large amounts of alcohol frequently are higher whereas throughout the years, workload is increased so students might reduce their drinking quantities and frequencies) (Pickard et al., 2000, Pillon et al., 2005). Yet, narrowing the sampling frame can affect validity of findings since it would not represent the wider student population and it would also not represent a typical drinking trend.

Studies use a wide range of self-report measures of alcohol consumption such as alcohol units and screening tools (e.g., the Alcohol Use Disorders Identification Test (AUDIT) and two short versions of the AUDIT known as the CAGE questionnaire and Fast Alcohol Screening Test (FAST) (Snow et al., 2003, Heather et al., 2011, O'Brien et al., 2014, Davoren et al., 2016b), which can be problematic when interpreting students' drinking levels in relation to the accuracy of such measurements. It is important to note that each of these studies used different selection of academic "time-frame" and specific campuses (e.g., first year students only, two different universities and one campus only, respectively), which can make the interpretations of findings complicated. Also, limitations during analysis and interpretation of findings may happen when students' studies adopt questionnaires that use a specific "time-frame" such as monthly, weekly or daily alcohol intake. This is because depending on the chosen "time-frame" individuals can sometimes over or under approximate their drinking levels due to the different occasions that may or may not have happened during that chosen "time-frame" (e.g., asking weekly/monthly recall during Fresher's week students might over underestimate their drinking levels (El Ansari and Stock, 2010, de Visser and McDonnell, 2012). To minimise selection and recall bias, the

questionnaires developed for the current research were designed for all university students registered at LJMU and UNIFESP and included beverage specific measures in order to reduce students' alcohol intake variations (see Figures 9 and 10, pages 102 and 103, respectively). Drinking behaviours were assessed during a "typical" week to enhance reliable and valid measures (Dawson, 2003, Ekholm et al., 2011).

Normally self-report measures rely on the individual's knowledge to reflect and estimate their own quantity and frequency; however, it is argued that asking for recall introduces potential bias, such as social desirability in which respondents inaccurately answer the questions in a manner that will be viewed favourably by others. Therefore inaccurate information may arise from these measures as participants tend to over- or under-estimate their alcohol consumption (van de Mortel, 2008, Crutzen and Göritz, 2011). To minimise such fulfilling bias, for study 1 an online survey was chosen for this PhD research in which individuals can reflect about their alcohol consumption in their own convenient space which can reduce the social desirability issue (Crutzen and Göritz, 2011, Fricker, 2017). Furthermore, an online survey can help in making the sample more diverse by reaching populations not always easily accessible (e.g., restricted geographically) (Wright, 2005). Respondents were informed of the complete anonymity of the questionnaire, so they would be able to respond in their own time without a researcher present and they were given the option to drop-out if they felt uncomfortable answering the survey. For study 2, focus groups were utilised and the sampling method relied mainly (but not only) on social network bonds in order to increase study engagement and enhance participant disclosure.

## 2.5 Alcohol policy and practice in Brazil and the UK

Understanding pre-drinking and its context-specific drinking behaviour is necessary for targeting specific prevention strategies (Neighbors et al., 2007b). The strong associations between pre-drinking behaviours, high alcohol consumption and alcohol-related harm show that nightlife interventions should not only be designated to the environment itself, but also consider the full period of alcohol consumption prior to and during a night out (Calafat et al., 2012).

In Brazil, the few policies and laws that exist are focused on reducing drinking and driving issues. Since the first time when the Brazilian National Traffic Council “Conselho Nacional de Trânsito (CONTRAN)” established an alcohol limit of 0.8 g/L (grams of alcohol per litre of blood) (BRAZIL, 2010), the legislative system has undergone numerous modifications (see Box 1), including the reduction of the BAC limit, after evidence showing effectiveness on reducing road traffic injuries (Liberatti et al., 2001, Andreuccetti et al., 2011, Campos et al., 2013). Thus, following the implementation of the Dry Law in 2008, the Brazilian government decided to restrict it even more with Law nº 12,760 (BRAZIL, 2012), which brought some important changes, such as:

- a) Reduction of BAC levels to zero tolerance;
- b) Reduction of breath alcohol concentration (BrAC) tolerance levels of 0.05 mg/L due to breathalysers’ margin of error;
- c) Increasing the administrative offence fine amount to R\$ 1,915.40 (doubled if driver is caught for the second time); and
- d) Besides the clinical exam and breathalyser test to decide a criminal offence (if a driver is caught with BAC level of 0.6 g/L or BrAC of 0.3 mg/L), other resources were included to determine a criminal offence, such as eye testimony, photos, videos and signs of changes in psychomotor ability (BRAZIL, 2013) (e.g., lethargy behaviour, red eyes, exhaling alcohol and aggressive behaviour).

**Box 1: Brazilian alcohol drink and drive legislation**

1997 - Brazilian Traffic Code (BTC) implemented (Law nº 9,503) and set a BAC limit of 0.6 g/L or BrAC 0.33 mg/L (milligrams of alcohol per air expelled through breathalyser) for both administrative and criminal sanctions, a fine R\$ 955, temporary suspension of driving license and detention (6 to 36 months) (BRAZIL, 1997).

2008 - “Lei Seca” [Dry Law] (Law nº 11,705) implemented (BRAZIL, 2008). It changed the BTC section on BAC levels, setting any BAC (or BrAC) as an infraction, though there were limits:

- BAC limit for administrative sanction of 0.2 g/L (or BrAC 0.1 mg/L) – driver fined approximately R\$ 957.40 (doubled if caught for the second time) and temporary driving license suspended for 12 months;
- BAC limit for criminal sanction of 0.6 g/L (or BrAC 0.34 mg/L) – driving license suspended and detention of 6 to 36 months.

Later in 2016 some other changes happened at the Dry Law with the implementation of Law nº 13,281 (BRAZIL, 2016), including:

- a) Increasing further the administrative offence fine to R\$ 2,934.70 (doubled if a driver is caught for the second time); and,
- b) Setting as an infraction refusing the breathalyser test, i.e., driver is fined R\$ 2,934.70 and possible driving license suspension for 12 months.

As for convictions for driving under the influence of alcohol or other drugs, in 2017 the Brazilian government implemented Law Nº 13,546 (BRAZIL, 2017) that increased further the penalties imposed in case of homicide or serious injuries. Before implementation convictions were: 2 to 4 years of incarceration (in case of homicide) and 6 months to 2 years (for serious injuries). After implementation convictions changed to 5 to 8 years and 2 to 5 years, respectively. However, a person can still be released if they pay bail of approximately R\$ 60,000.

Bachieri and Barros (2011) showed that Brazil has been trying to address traffic accident rates although no changes have been observed yet for many reasons, such as poor conditions of roads, no alternative ways of transportation, heavy interstate traffic on single-lane highways and low utilization of railroads. Brazil is one of the countries that established zero tolerance for drivers with any BAC and one of the 130 countries

that use the Breathalyzer test as a guarantee of the compliance of the law, although national data on BAC amongst drivers is not well distributed across the country (Pechansky and Chandran, 2012) and Brazilian drivers can decline to do the Breathalyzer test claiming people's right to not to be compelled to incriminate themselves or to confess their guilt (Pelição et al., 2016).

Globally, evidence shows that levels of alcohol consumption are influenced by access to alcohol - how easy it is to purchase or consume alcohol (availability), how cheap alcohol is (affordability) and the social norms surrounding its consumption (acceptability) (House of Commons, 2012, World Health Organization, 2018). In Brazil, the legal age for buying and drinking alcohol is 18 years and just recently the government made it an offence to sell alcohol to minors, under age of 18 (Law Nº 13,106) (BRAZIL, 2015). There are no restrictions in Brazilian legislation for the sale of alcohol to inebriated people, prices are relatively low and current policies allow drinking in public, including on streets, beaches and in parks. Epidemiological research on alcohol consumption is needed to form the basis of policies aimed at decreasing harmful use of alcohol within nightlife settings, reducing intoxication by alcohol, and thereby decreasing violent episodes and other risk behaviours associated with alcohol.

UK alcohol policy is focused on the regulation of alcohol sales<sup>14</sup> and consumption (Nicholls, 2009). Since the mid-16<sup>th</sup> century England has been creating and implementing alcohol drinking measures and laws to reduce alcohol-related problems and to have better management of drinking environments (Nicholls, 2009). The Licensing Act 2003 ("2003 Act") (Her Majesty's Stationery Office, 2003) is an Act of Parliament applied to licensing on and off-premises<sup>15</sup> in England and Wales that sell/supply alcohol, in an effort to prevent alcohol-related crime and anti-social behaviour, as well as to provide public safety and protection of children from harms. For instance, sales to inebriated people are regulated by Section 141 of Licensing Act 2003 (Her Majesty's Stationery Office, 2003), which says it is an offence to sell or

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<sup>14</sup> <https://www.gov.uk/guidance/alcohol-licensing>

<sup>15</sup> On-licensed: premises that are authorised to sell alcohol for consumption on the premises (e.g., restaurants, bars and pubs). Off-licensed: premises that are authorised to sell alcohol for consumption off the premises only (e.g., shops and off-licences).



attempt to sell alcohol to an inebriated person. Moreover, it is an offence to even purchase alcohol on behalf of an inebriated person and fines can reach up to £1000. As for drunk or disorderly behaviour, Section 143 of the Licensing Act 2003 says it is an offence for a drunk or disorderly person, without reasonable excuse, to fail to leave licensed premises following request from a constable or a person who works at such premises, or even to enter or attempt to enter such premises after being told not to do so. Fines can be up to £200 (Her Majesty's Stationery Office, 2003).

Alcohol use amongst children within nightlife settings is also regulated by the Licensing Act 2003 (Her Majesty's Stationery Office, 2003) and according to this Act, in England and Wales, for minors under the age of 18 years it is illegal to buy or try to buy alcohol and to drink in licensed premises (e.g., bars, pubs or restaurants). Fines for selling/supplying alcohol to children are up to £5,000 but can be increased to £20,000 if persistently done. Plus, under Section 146 it is illegal for someone to sell alcohol to a minor and for an adult to buy or try to buy alcohol for a minor. However, young people aged 16 – 17 years old can drink beer, wine or cider with a meal, if bought and accompanied by an adult<sup>16</sup> (Section 150).

It is also important to mention the UK Government Act known as The Crime and Disorder Act 1998 (c.37) that gave statutory responsibility to local authorities and police to work together in partnership in order to identify and implement strategies for tackling problems related to crime, disorder, substance misuse and anti-social behaviour (Her Majesty's Stationery Office, 1998). These partnerships are known as Community Safety Partnerships (CSPs).

Unlike the Brazilian scenario, where there is no legislation on drinking in public places, some public areas in the UK are controlled by Public Spaces Protection Orders (PSPOs), created by the 2014 Anti-Social Behaviour, Crime and Policing Act, under Section 59 (Her Majesty's Stationery Office, 2014). This order allows local authorities to apply certain conditions and restrictions on people within a designated area. To tackle drinking in public spaces for example, the PSPO for alcohol control implemented

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<sup>16</sup> <https://www.gov.uk/alcohol-young-people-law>

in May 2018 has the force of a law and under Section 63 it is an offence to ignore a request to stop drinking or to surrender alcohol in a designated area and the person can be punished with a fine up to £500, or prosecution.

Most UK licensed premises that operate late at night employ door supervisors (commonly called “bouncers”) in order to maintain order and security around the premises, including nightlife patrons who may be involved in violent behaviours due to excessive drunkenness (Hobbs et al., 2003). Unlike Brazil, UK door supervisors are allowed to refuse entry for inebriated people.

In 2010 the UK government revised the Licensing Act 2003 and some important changes occurred (Nicholls et al., 2015). Specifically, on and off-licensed premises can apply for 24-hour licensing, therefore increasing access to alcohol by drunken nightlife patrons (Hough and Hunter, 2008, Pike et al., 2008) which can influence more violent incidents such as road traffic accidents (Bellis et al., 2006, Hough and Hunter, 2008, Hughes et al., 2008a). In response, measures and interventions to reduce alcohol-related harms within nightlife settings have been implemented in an effort to protect the safety of nightlife patrons and to stop violence and disorder (Bellis and Hughes, 2011). Hence, in 2012, the UK government published a national “Alcohol Strategy” in an effort to tackle alcohol use amongst the population and its related problems, including violence and disorder incidents (Her Majesty's Stationery Office, 2012).

Regarding drink driving legislation, the UK laws date back to the 20<sup>th</sup> century when the Road Safety Act 1967 introduced a BAC limit for the first time and the breathalyser test in certain circumstances (Her Majesty's Stationery Office, 1967). England, Wales and Northern Ireland share the same legislation (the legal limit is 35 micrograms (mcg) of alcohol per 100 millilitres (ml) of breath, 80 Milligrams (mg) of alcohol per 100 ml of blood or 107 mg per 100 ml of urine, whilst Scotland has separate jurisdiction (22 mcg of alcohol per 100 ml of breath, 50 mg of alcohol per 100 ml of blood or 67 mg per 100 ml of urine) (Her Majesty's Stationery Office, 2015b). In the

UK, penalties<sup>17</sup> for drivers caught over the limit depend upon the offence committed and include incarceration, fines and driving license suspension, as follows:

- a) To be in charge of a vehicle while above the legal limit the person is sentenced to 3 months incarceration, paying up to £2,500 in fines and can be banned from driving;
- b) To drive or attempt to drive while above the legal limit, the person is sentenced to 6 months incarceration, an unlimited fine and a driving ban for at least 1 year (3 years if convicted twice in 10 years);
- c) To refuse a breathalyser test or to provide a sample of blood or urine for analysis, the person is sentenced to 6 months incarceration, an unlimited fine and a ban from driving for at least 1 year;
- d) To cause death by careless driving when under the influence of drink, the person is sentenced to 14 years' incarceration, an unlimited fine, a ban from driving for at least 2 years and an extended driving test before their licence is returned.

Drivers guilty of driving over the limit can also face other problems such as increased car insurance costs, criminal records on their driving license and possible difficulties travelling to other countries (e.g., the USA).

According to Tunbridge and Harrison (2017), public attitudes to drink driving in Great Britain have changed over the last 50 years with active effective enforcement (e.g., first time offenders are suspended for driving for one year, sentenced to penalties and expensive fines) and increased education campaigns on the dangers of drink driving and the consequences of such behaviour.

Studies show that the more cheaply alcohol is sold, the more is consumed, therefore increasing levels of drunkenness (Chaloupka et al., 2002, Wagenaar et al., 2009). Evidence shows the possibility of reducing violent crime by 2.1% if establishing a minimum price of 50 p per unit (Meier et al., 2008). Moreover, data also show that a 10.0% increase in alcohol price could reduce consumption by 5.0%, which could lead to 1,300 fewer alcohol-related deaths and 61,000 fewer alcohol-related hospital

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<sup>17</sup> <https://www.gov.uk/drink-driving-penalties>

admissions in a few years (Angus et al., 2015). Yet, some people still have concern about creating an MUP as it could penalise not only heavy drinkers who tend to choose to buy cheaper alcohol, but moderate drinkers as well (Crawford et al., 2012). In 2017 the UK Supreme Court ruled that Scotland could set an MUP and in 2018 an MUP of 50 p was implemented<sup>18</sup>. England and Wales are still considering the idea.

Despite UK nightlife patrons’ and students’ acceptance of higher levels of drunkenness during a night out, and lower public awareness of alcohol policy, evidence still reinforces the need for measures to increase public awareness of alcohol policy (i.e. sales and provision of alcohol to inebriated people) to address harmful use of alcohol and its related harms within the nightlife settings (Hughes and Anderson, 2008, Quigg et al., 2016). Likewise, despite the Brazilian Government’s effort to reduce incidents related to drinking and driving by enacting stricter legislation, strategies to guarantee compliance with the law (e.g., through random sobriety checkpoints) are still needed in order to educate the population as findings still suggest a high prevalence of drinking and driving offences due to cultural aspects (e.g., alcohol advertisements are always associated with positive experiences) and also because people are often not subject to prosecutions (Pechansky et al., 2012, De Boni et al., 2013, Schmitz et al., 2014, Aguilera et al., 2015). **Table 1** illustrates a summary of the differences on alcohol policy and legislation between Brazil and England.

**Table 1: Summary of the differences in alcohol policy and legislation in Brazil and in England**

	BRAZIL	ENGLAND
Minimum legal age for buying alcohol	18	18
Restrictions for alcohol use amongst minors aged 5 – 16 years old	Yes	Partial
Restrictions for alcohol sales to inebriated people	None	Yes
Restrictions for drinking in public spaces	None	Partial
Maximum legal BAC when driving	Zero	80 mg/L

## 2.6 Prevention in nightlife settings in Brazil and the UK

<sup>18</sup> <https://www.gov.scot/Topics/Health/Services/Alcohol/minimum-pricing>

In Brazil, the first and only epidemiological research on patterns of alcohol consumption in nightclubs was conducted in 2013 in the city of São Paulo (Santos et al., 2015b). To reduce excessive drinking and its related harms in the nightlife environment, a brief online intervention was conducted amongst young nightlife patrons based in São Paulo and findings revealed a small but significant reduction in binge drinking practice amongst nightlife patrons after 6 months of exposure to the intervention (Baldin et al., 2018, Sanchez and Sanudo, 2018). Generally, internet-based interventions have been developed for addressing alcohol and substance use amongst young people and/or students through a social norm approach by reducing students' misperceptions of their peers' alcohol consumption and, consequently their own consumption through normative feedback (Rooke et al., 2010, Tait and Christensen, 2010, McAlaney et al., 2011, Kypri et al., 2014).

However, whilst the Brazilian evidence base is limited, internationally, including in the UK, evidence for nightlife interventions is strongest for community based multi-component interventions rather than single interventions. An example of such an approach is the Stockholm Prevents Alcohol and Drug Problems (STAD) project which is a multi-agency partnership initiated in 1996 aimed at reducing alcohol-related harms in nightlife settings by combining community mobilisation with training programmes on responsible bar serving and improvements to safety or/and education strategies (Wallin et al., 2002, Wallin et al., 2003, Wallin and Andreásson, 2004, Holder and Treno, 2005, Wallin and Andreasson, 2005, Wallin et al., 2005, Månsdotter et al., 2007, Calafat et al., 2009b, Jones et al., 2010, Bolier et al., 2011, Trollidal et al., 2013, Treno et al., 2014, Quigg et al., 2018).

In order to tackle the problems related alcohol consumption within nightlife settings, including pre-drinking behaviour, local authorities in the UK have been investing in several initiatives and interventions, such as increasing awareness of legislation on preventing sales of alcohol to inebriated people and promoting responsible drinking within these settings (Quigg et al., 2015a, Quigg et al., 2015b, Quigg et al., 2016, Quigg et al., 2018); improving strategies in policing, security and surveillance in nightclubs and bars (Hughes and Bellis, 2007) and measures to deal with

alcohol content and information by implementing unit and warning labels on alcohol beverages (Wigg and Stafford, 2016, Shemilt et al., 2017, Blackwell et al., 2018, Vasiljevic et al., 2018).

Unlike the Brazilian scenario where to date there are no strategies to develop a safer and healthier nightlife environment through multi-component interventions, in England and Wales such strategies are widely used. In Liverpool, the city has been investing and developing a lot of programs modelled on STAD to prevent harmful use of alcohol and pre-drinking behaviour amongst nightlife users and its related harms within nightlife settings (Quigg et al., 2015a, Quigg et al., 2015b, Quigg et al., 2016, Quigg et al., 2018).

In 2013, the first UK study exploring alcohol sales to inebriated people within nightlife settings was conducted in Liverpool. The study involved actors attempting to buy alcohol whilst showing signs of extreme drunkenness, and results showed high levels of alcohol service (84.0%), suggesting that the law prohibiting alcohol sales to inebriated people was not effectively enforced (Hughes et al., 2014). As such, in 2014 researchers in Liverpool alongside local police designed and implemented an intervention pilot project known as “Drink Less, Enjoy More” aimed at reducing drunkenness in town by improving nightlife users’ and bar staff awareness that it is illegal to serve and buy alcohol for someone who is clearly drunk, so promoting responsible drinking amongst nightlife users (Quigg et al., 2015b, Quigg et al., 2016). The project included media awareness raising, bar staff training and increased enforcement. Findings from this pilot study revealed an increased awareness of legislation on alcohol sales to inebriated people amongst nightlife patrons and amongst bar staff, and increased compliance with the law by bar servers.

Further, the well-established Liverpool community safety partnership “Citysafe”, a three-year strategic multitask plan comprised of local authorities, universities and local business that includes alcohol-related initiatives within nightlife environments, such as extended late-night transportation (so violent and anti-social incidents were not related to taxi queues after a night out) and the “Drink Less, Enjoy More” campaign

has helped the city to tackle problems related to crime and anti-social behaviours (Liverpool City Council, 2017).

Related specifically to students, within the UK an initiative known as “NUS Alcohol Impact”<sup>19</sup> was developed by the NUS to work with students’ unions from UK-based universities in order to promote a responsible drinking culture amongst university students by implementing interventions (e.g., creating alcohol-free spaces and alcohol-free events across campuses and partnership with sports clubs and the local community). The Liverpool Students’ Union works together with LJMU, which is one of the pilot institutions involved in this initiative. Annually the NUS conduct a survey of students’ attitudes, behaviours and experiences as part of this Alcohol Impact initiative. In Brazil there have been no similar initiatives to date.

## 2.7 Conceptual framework

### 2.7.1 *The social ecological model of health*

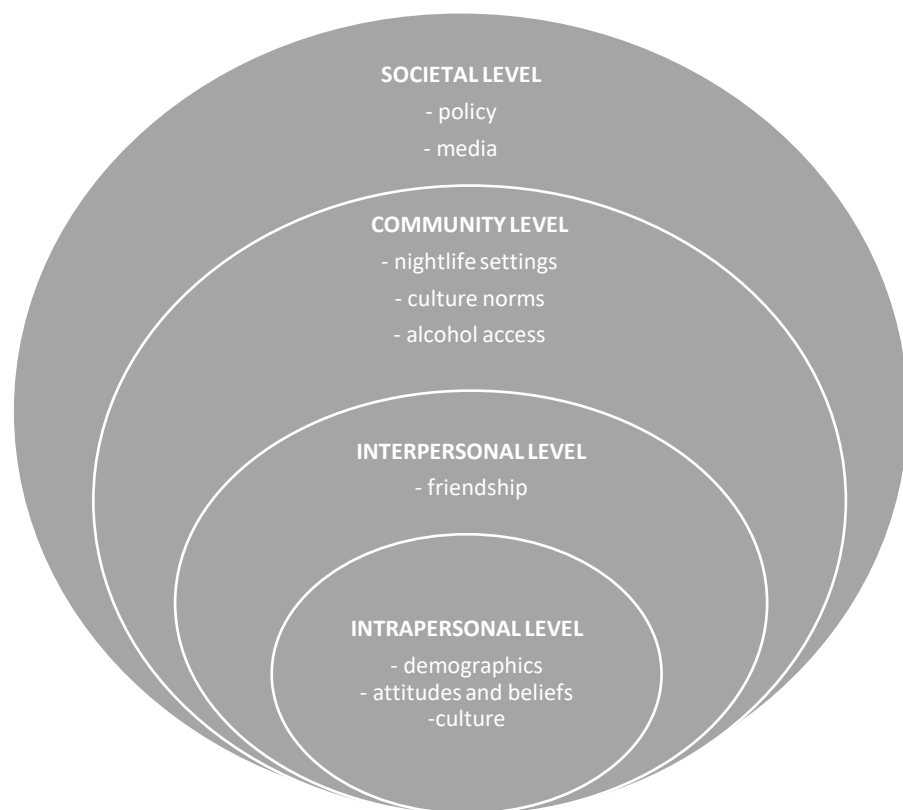
The research conducted for this thesis has a cross-cultural design, and for that reason factors within a wider system of intrapersonal and interpersonal beliefs, behaviours, contexts and culture were important in order to explain students’ drinking behaviour, particularly why university students’ drinking behaviours within nightlife settings may differ between Brazil and the UK.

The social ecological model is a theory-based multi-level framework first developed by Urie Bronfenbrenner and further adapted by many researchers in the public health and prevention areas for understanding influences on health-related behaviour whose concept extends beyond the role of individual choice, ranging from individual, interpersonal factors and wider environment (McLeroy et al., 1988, Bronfenbrenner, 1994),

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<sup>19</sup> <https://alcoholimpact.nus.org.uk>

As the study compared two different countries and cultures, addressing wider contextual factors in the framework was important to explore levels of factors within the wider system. For this research programme factors influencing students' drinking behaviours will be referred to as intrapersonal factors (e.g., influences of personal knowledge, attitudes and beliefs); interpersonal (e.g., influences of family, friends and work groups); community (e.g., influences from the social norms within the environment, such as nightlife venues) and societal factors (e.g., influences from policies, laws, regulations and media campaigns). An outline of the socio-ecological factors considered in this programme of research is presented in **Figure 6**.



**Figure 6: Ecological model applied to university student drinking within nightlife settings. Developed from Bronfenbrenner (1994)**

The literature shows that amongst university students, general alcohol intervention strategies focused only at the individual level have little to no sign of effectiveness (Walters and Neighbors, 2005, Dejong et al., 2009, Rooke et al., 2010,



Schuckit et al., 2012) when compared with alcohol interventions based on the social ecological model (Neighbors et al., 2006a, Vantamay, 2009, Paek and Hove, 2012, Gruenewald et al., 2014, Sudhinaraset et al., 2016, Stellefson et al., 2019, Tonkuriman et al., 2019). Bronfenbrenner's socio-ecological model has been suggested to help designing social norm interventions (Cislaghi and Heise, 2018a, Cislaghi and Heise, 2018b, Cislaghi and Heise, 2018c, Miller and Prentice, 2016). However, most of the findings within the literature on health sciences focused on providing a healthier behaviour change and attitudes towards alcohol by correcting students' misperceptions and so reducing risky behaviours emerge from studies conducted in high income countries (HIC), including the USA (Borsari and Carey, 2000, Baer et al., 2001, Borsari and Carey, 2003, Mattern and Neighbors, 2004, DeJong et al., 2006, Lewis and Neighbors, 2006, Martens et al., 2006, Lewis et al., 2007, Neighbors et al., 2007a, Neighbors et al., 2008, Carey et al., 2018) and the UK (McAlaney and McMahon, 2007, Bewick et al., 2008b, Bewick et al., 2010, John and Alwyn, 2014, Robinson et al., 2014, Stock et al., 2014, Foxcroft et al., 2015, McAlaney et al., 2015, Taylor et al., 2015, Prestwich et al., 2016, Supski et al., 2017), leaving a gap in knowledge in LMIC.

According to Perkins and Berkowitz (1986) across different cultures it is important to consider environmental and interpersonal factors rather than just the individual factors in order to effectively implement social norm interventions aimed at changing university students' drinking behaviours. This is important since harmful use of alcohol has been suggested as part of student life and, thus, it is normalised, particularly in specific situations or events that may encourage such behaviour, including nightlife settings (Lewis et al., 2009, Neighbors et al., 2011a, Gant and Terry, 2017, Mackinnon et al., 2017, Dumas et al., 2018). As such, in order to inform the development and enable the implementation of effective alcohol prevention strategies aimed at university students and situations that encourage harmful drinking behaviour (e.g., nightlife), it is essential to investigate these students' individual and social factors (e.g., social norms and attitudes) related to drinking behaviour since they often have positive expectancies towards alcohol consumption (Neighbors et al., 2007a, Neighbors et al., 2011b, John and Alwyn, 2014, Gant and Terry, 2017, Dumas et al., 2018, Griffin et al., 2018, DiBello et al., 2019).

One of the important differences from the outset in designing this research was the difference in alcohol policies in England and Brazil. Within the public health field, the social ecological approach describes the multiple factors that influence human behaviour within a wider system, and so provides a comprehensive perspective which can help with understanding and developing population level intervention strategies, rather than individual strategies to promote behaviour change, particularly amongst university students (Crosby et al., 2013, Sudhinaraset et al., 2016).

According to Sallis, Owen and Fisher (2008) behaviour change on an individual level can be influenced by many external factors, including social norms and policies, which is relevant when using an ecological model to investigate differences between countries and how to address university student's drinking behaviour within nightlife settings from a policy perspective. However, the authors argue that the model can be weakened by the difficulties in establishing how factors at each different level influence behaviour.

According to the socioecological model, multiple levels of factors influence an individual's behaviour. For this study:

*The intrapersonal factors* focused on individual characteristics and normative perceptions and expectations towards alcohol use that could affect students' drinking behaviours in order to help developing effective health information and guidance about alcohol consumption. In Brazil, nightlife studies are still scant which leaves a gap, particularly for qualitative studies which aim to understand students' experiences, perceptions and expectations of the nightlife drinking culture. Much of the UK and the first and only Brazilian published studies on students' alcohol use within nightlife settings are quantitative research that do not offer in-depth understanding of the complex social and cultural perceptions around students' drinking patterns. Therefore, more qualitative studies aimed at investigating students' beliefs and experiences of alcohol use during night outs are needed, particularly in Brazil. To gather multiple perspectives, a mixed method research was developed to explore differences in the prevalence of Brazilian and UK students' nightlife drinking experiences through

quantitative procedure. Qualitative measures were then adopted to gain an in-depth understanding of Brazilian students' perceptions of the nightlife drinking experience in the UK.

*The interpersonal factors* focused on understanding how students' social relationships (e.g., friends) may influence harmful drinking within nightlife settings which could help identify and develop effective measures aimed at behaviour change. Given limited knowledge on students' nightlife-drinking behaviours (including pre-drinking) particularly in Brazil, in order to explore the importance of how alcohol is used by students within the social dynamic's context, a mixed method study was chosen for this research. First, a quantitative approach was adopted to measure the prevalence of Brazilian and UK students' drinking patterns within nightlife settings (Study 1, Chapter 4). Then, a qualitative approach was adopted to further understand the context of this social drinking experience (Study 2, Chapter 5).

*The community factors* included the broader levels of social and cultural norms around drinking behaviours during nights out and the accessibility of alcohol within these environments. Unlike the UK scenario, nightlife-based literature is still scant in Brazil. In order to gain a different perspective of the Brazilian nightlife and alcohol landscape (when compared with the UK scenario), focus groups interviews were conducted amongst Brazilian students currently living in the UK to explore Brazilian students' experiences and perceived expectations of alcohol use and its availability within the UK nightlife context (Study 2, Chapter 5).

*The societal factors* focused on exploring students' perceptions on the possible influence of certain alcohol policy on their drinking behaviours. In order to understand the wider UK and Brazilian alcohol context, an extensive literature review on youth drinking trends and nightlife environments was undertaken as it is important to consider the context of students' drinking culture during nights out within the wider alcohol context, particularly regarding alcohol policies. The perceived impact that societal factors might have on students' drinking behaviour will be summarised in the final integration chapter (Chapter 6).

Overall, alcohol use amongst university students within nightlife settings is a multifaceted behaviour influenced by many factors; therefore, an ecological approach

of investigating such problem may be the most appropriate method to make important and sustained behavioural changes. Consequently, comprehensive interventions strategies aimed at increasing university students' awareness of alcohol-related problems and changing their individual attitudes and beliefs towards alcohol within nightlife settings are urgently needed, particularly in Brazil.

## 2.8 Gaps in the literature

This study sought to contribute to existing knowledge by increasing the understanding of alcohol use amongst university students during night outs, including pre-drinking behaviour. Although Brazil and the UK differ in many aspects, the literature review of this research programme suggests that nightlife settings in both countries are often characterized by high levels of drunkenness and associated harms (Hughes et al., 2008a, Bellis et al., 2010, McClatchley et al., 2014, Santos et al., 2015b).

Alcohol consumption is perceived to be the main feature of UK students' nightlife experience (Parker and Williams, 2003). Two UK studies using anonymous surveys with pre-and post-interventions aimed to explore drinking behaviours (including pre-drinking), levels of drunkenness, use of the nightlife environment and alcohol policy awareness amongst conducted in 2014 in the North-West of England (N= 214) (Quigg et al., 2015b) and in 2015 in South Wales (N= 253) (Quigg et al., 2015a) revealed high levels of expected alcohol consumption and drunkenness and that getting drunk was found to be socially acceptable within nightlife settings. It appears that amongst young adults in the UK, alcohol consumption is strongly associated with a sense of belonging and social activities, such as socialising with peers, including within the nightlife context (Griffin et al., 2009, Seaman and Ikegwuonu, 2010). Also, corroborating with previous research Measham and Brain (2005) & Hughes et al., (2014) found that getting drunk during nights out in the UK is a culturally accepted and expected behaviour amongst young adults. This includes during pre-drinking, which appears to be a common feature of students' nightlife experience in the UK, often focused on high levels of alcohol consumption (Hughes et al., 2008a, Wells et al., 2009, Bellis and Hughes, 2011, Hughes et al., 2012, McClatchley et al., 2014).

Although Brazilian nightlife settings are suggested to be the main locations for binge drinking (Laranjeira et al., 2007, Sanchez et al., 2011), unlike the UK scenario, to date there is a lack of studies which aim to understand Brazilian students' nightlife-drinking behaviours, including pre-drinking. The first and only Brazilian epidemiological study was conducted in 2013 amongst nightlife patrons from the city of São Paulo (N= 2,422) (Santos et al., 2015b) using a survey method designed to intercept and measure characteristics and behaviours at the precise moment they occur (Voas et al., 2006). The tool developed for the study was based on previous UK studies (Bellis et al., 2010, Hughes et al., 2011b, Hughes et al., 2011c) that explored alcohol consumption (such as pre-drinking) and other risk behaviours within nightlife settings. **Table 2** illustrates a summary of the findings from the Brazilian (Santos et al., 2015b) and UK studies (Quigg et al., 2015b, Quigg et al., 2015a).

**Table 2: Summary of the Brazilian and UK studies**

	BRAZIL		UK	
Country region	São Paulo	England	South Wales	
Sample size	2,422	214	253	
Gender	60.7% male	50.0% male	60.1% male	
Age (mean)	25 years old	24 years old	25 years old	
Pre-drinking on the night of the survey	41.3%	65.4%	63.2%	

Previous UK studies (Quigg et al., 2015b, Quigg et al., 2015a) showed that pre-drinking was higher in women whereas in Brazil it was more prevalent amongst men (Santos et al., 2015b). When considering gender differences in drinking pattern during pre-drinking and over the course of the night out, in Brazil men and women showed similar proportion of binge drinking (Santos et al., 2015b, Santos et al., 2015a). On the other hand, the UK studies suggested that during pre-drinking and over the course of the night out men reported drinking significantly more alcohol than women (Quigg et al., 2015b, Quigg et al., 2015a).

Similar to the UK findings (Quigg et al., 2015b, Quigg et al., 2015a), it seems that pre-drinking behaviour and high levels of alcohol consumption in Brazil also seem

to be the norm amongst young adults (Santos et al., 2015b). Moreover, corroborating with previous UK studies (Bellis et al., 2008, Hughes et al., 2008a, Labhart et al., 2013), Brazilian findings suggest that binge drinking is associated with pre-drinking behaviour, and thus with increased chances of men and women experiencing risk behaviours such as drinking and driving, sexual behaviours and violence (Santos et al., 2015b).

International literature suggest that pre-drinking can result in more consumption over the night out (LaBrie and Pedersen, 2008) and thus, contributing to a higher BAC (Read et al., 2010). Interestingly, in Brazil previous nightlife research showed that during pre-drinking and over the course of the night out, women drank similarly to men when considering their BrAC levels and alcohol doses. However, when pre-drinking status was removed from the analysis findings showed that men consumed more than women over the course of the night out, but presented the same BrAC levels and proportion of binge drinking than women (Santos et al., 2015a). It is argued that drinking the same amount of alcohol may result in higher BAC in women (when compared with men) (Wilsnack et al., 2005), and consequently, their chances of experiencing similar alcohol-related harms to men are increased (Mallett et al., 2009).

Gender differences in alcohol consumption seems to be a worldwide concern, evidence suggests a convergence in female and male drinking patterns (Wilsnack et al., 2005, Mäkelä et al., 2006, Wilsnack et al., 2009). It can be argued that these previous Brazilian (Santos et al., 2015a, Santos et al., 2015b) and the UK studies (Quigg et al., 2015a, Quigg et al., 2015b) support prior research that suggest that pre-drinking behaviour and its related harms are more prevalent among men (Hughes et al., 2008a). However, literature suggests that there's been a narrowing of the gender gap (Slade et al., 2016) particularly for pre-drinking in the UK (Atkinson and Sumnall, 2017, Hughes et al., 2011b), which could be explained by the influences of changes in women's cultural roles and changes to the UK nightlife environment. This has contributed to the development of a culture of intoxication, particularly amongst the female population (Measham and Brain, 2005, Griffin et al., 2012, Bailey et al., 2015). This shift in women's drinking pattern, in particular regarding pre-drinking behaviour is worrying

because it can influence women's risk-taking and risk perceptions of experiencing alcohol-related harms (Jackson and Tinkler, 2007, MacLean, 2016).

In Brazil the reason of this shift in women's drinking patterns is still unclear as unfortunately there are a lack of studies exploring gender differences in alcohol consumption, particularly within the nightlife context (e.g., during pre-drinking behaviour) to make proper assumptions. Therefore, understanding the factors that drive these differences in men and women's drinking behaviours, particularly amongst the female population whose drinking levels and practice of pre-drinking seems to be increasing over the years (Hughes et al., 2011b, Zamboanga et al., 2013, Atkinson and Sumnall, 2017) is needed in order to help the development of effective preventive strategies for both genders, especially in Brazil.

In summary, although not a new phenomenon pre-drinking seems to be a prevalent and common behaviour amongst young adult's nights out in Brazil and the UK, especially amongst students. However, little is known about Brazilian and UK students' pre-drinking motivations and the perceptions of impacts of alcohol policy upon this kind of behaviour. In the UK, a wide range of policies and interventions have been implemented to reduce harms associated with drunkenness within nightlife settings. However, it is argued that reducing drunkenness is a complex task, since getting drunk during night outs is often considered the norm amongst students (Hughes et al., 2008a, Bellis and Hughes, 2011, Hughes et al., 2012, McClatchley et al., 2014). Therefore, data on students' perceptions and expectations towards alcohol use during night outs and pre-drinking is needed in order to have an in-depth knowledge about the embedded nature of students' excessive alcohol use within the nightlife context, and thus develop effective interventions, particularly in Brazil where efforts in reducing alcohol use within nightlife context is still in its infancy.

This study aimed at exploring and contrasting university students' nightlife drinking patterns through a cross-cultural lens, in relation to attitudes and practices of alcohol use and pre-drinking in Brazil and the UK, as well as the impact of existing policy on drinking behaviours. A wide range of evidence suggests that Brazil and the UK are

characterised by high levels of alcohol consumption (Robinson and Harris, 2011, Laranjeira et al., 2014) including in the nightlife context, where harmful use of alcohol has been associated with excessive drunkenness, drug use, unintentional injuries, violence, risky sexual behaviour and driving under the influence of alcohol and illicit drugs (Bolier et al., 2011).

Most of the comprehensive epidemiological studies on identifying types and extent of harms within the nightlife settings, such as intoxication (Hughes et al., 2009), traffic accidents (Calafat et al., 2009a), risky sexual behaviour (Bellis et al., 2008) have been conducted in HIC such as Europe (Bellis et al., 2008, Hughes et al., 2008a, Bellis et al., 2010, Schnitzer et al., 2010, Hughes et al., 2011c, Tutenges, 2012, McClatchley et al., 2014), which leaves a gap in LMICs, such as Brazil. To minimize the harms associated with excessive drunkenness within nightlife settings (Hughes et al., 2008a, Østergaard and Andrade, 2013) many countries including the UK, have been trying to create measures aimed at reducing violence, unintentional injuries and other risks associated with nightlife settings (Bellis and Hughes, 2011, Jones and Smith, 2011, Hughes et al., 2014), however there is little evidence on pre-drinking behaviour and how to prevent it, particularly in LMICs. Moreover, the existing HIC policy and prevention practice research may not be applicable to LMICs such as Brazil therefore, cross-cultural comparisons research is needed in order to inform interventions and policy development.

To my knowledge this research is the first attempt to extensively explore pre-drinking behaviour from a cross-cultural perspective in Brazil. This PhD research aims to address the research gaps not only in Brazil, but also in the UK, and seeks to contribute new knowledge to the existing evidence. The findings make a significant contribution to the existing literature, specifically regarding the importance of understanding students' drinking behaviour. Furthermore, comparing nightlife drinking behaviours in Liverpool and São Paulo, and the policy, structural and cultural factors that drive them, provides an important and highly original opportunity to examine how policy may be developed to reduce harm in both drinking environments.



## 2.9 Summary

This chapter provided an overview of the literature on Brazilian and UK students' alcohol drinking patterns, including the phenomenon pre-drinking and policy frameworks to prevent alcohol-related harms in both countries. This literature review highlights the under researched nature and understanding of pre-drinking behaviour amongst students within nightlife settings in Brazil and in the UK. Despite this, national and international evidence on alcohol-related harms indicates that pre-drinking amongst students is an important public health issue. The next chapter will give an overview of the methodology chosen for this research and the methods used in each phase of the study.

### 3.1 Introduction

This chapter gives an overview of the overall methodology underpinning this research. Specifically, mixed method research, data collection methods, ethical considerations, issues of validity and trustworthiness and limitations are described in this section.

### 3.2 Aims and research questions

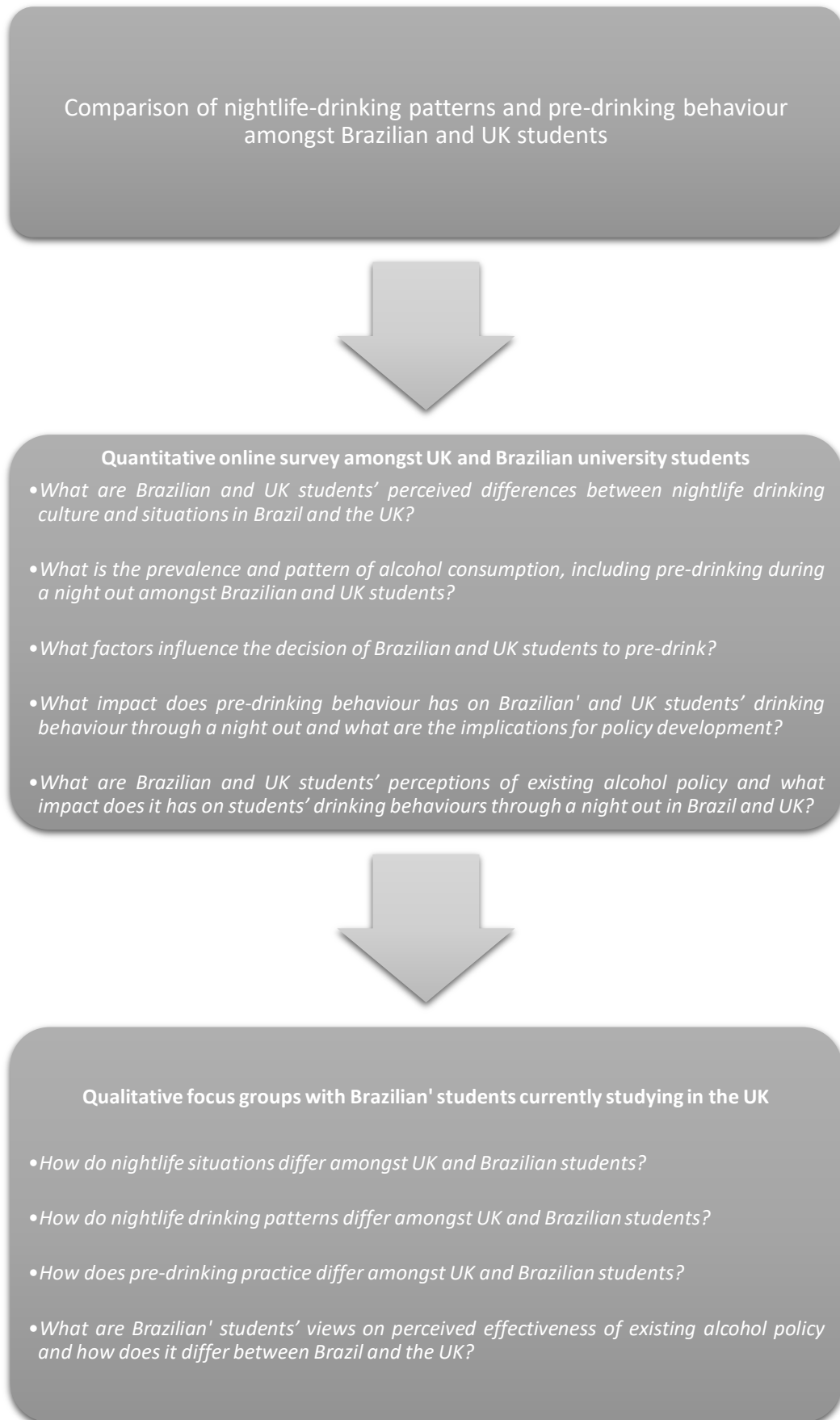
The purpose of this mixed methods study was to investigate the prevalence of and attitudes towards alcohol consumption during a night out, including the practice of pre-drinking, and perceptions of existing alcohol policy regarding alcohol use amongst university students in Brazil and the UK.

The overall aim of this research was to compare and contrast two different countries and cultures. One country where there is not much research, policy or practice regarding alcohol consumption and nightlife (Brazil), and one where there is more research and relevant policy and practice (UK). The specific research questions guiding this research were:

- 1) What are the differences between the UK and Brazil in students' perspectives of the nightlife drinking culture and situations?
- 2) How do nightlife drinking patterns differ amongst UK and Brazilian students?
- 3) What is the prevalence and pattern of alcohol consumption, including pre-drinking during a night out amongst Brazilian and UK students?
- 4) What factors influence the decision of Brazilian and UK students to pre-drink?
- 5) How does pre-drinking practice differ amongst UK and Brazilian students?

- 6) What impact does pre-drinking have on Brazilian and UK students' drinking behaviour through a night out and what are the implications for policy development?
- 7) What impact do students perceive that alcohol policy measures would have on students' drinking behaviours on a night out in Brazil and UK?

This research is divided into two distinct studies. Study 1, a quantitative online survey conducted with Brazilian and UK students and Study 2, qualitative focus groups with Brazilian students currently living in the UK. **Figure 7** shows the questions guiding each component of the overall study.



**Figure 7: Overview of research project and the research questions guiding the individual studies**

### 3.3 Mixed Methods Research

#### 3.3.1 *The nature of mixed methods research (MMR)*

Morgan (2007) defines paradigms as: “Systems of beliefs and practices that influence how researchers select both the questions they study and methods that they use to study them” (p. 49). In simple terms, paradigms guide researchers’ decision making. This mixed method study used a pragmatic approach as a research design, in which researchers can be more flexible and not tied up to one single methodology, i.e., both quantitative and qualitative methods are required and combined to have an in-depth understanding of a problem (Creswell, 2018). For mixed method research (MMR) pragmatism has been identified as the most suitable paradigm (Patton, 2002, Teddlie and Tashakkori, 2003, Johnson and Onwuegbuzie, 2004, Teddlie and Tashakkori, 2006, Morgan, 2007, Denscombe, 2008, Teddlie and Tashakkori, 2009, Creswell and Clark, 2017) as it is focused on “what works” to address research problems (Patton, 2002, Creswell and Clark, 2017).

University students’ drinking attitudes and their perceptions of alcohol policy effectiveness towards alcohol use during a night out are inherently complex and to limit this research to one single methodology would not be appropriate to understand and explore such complexities.

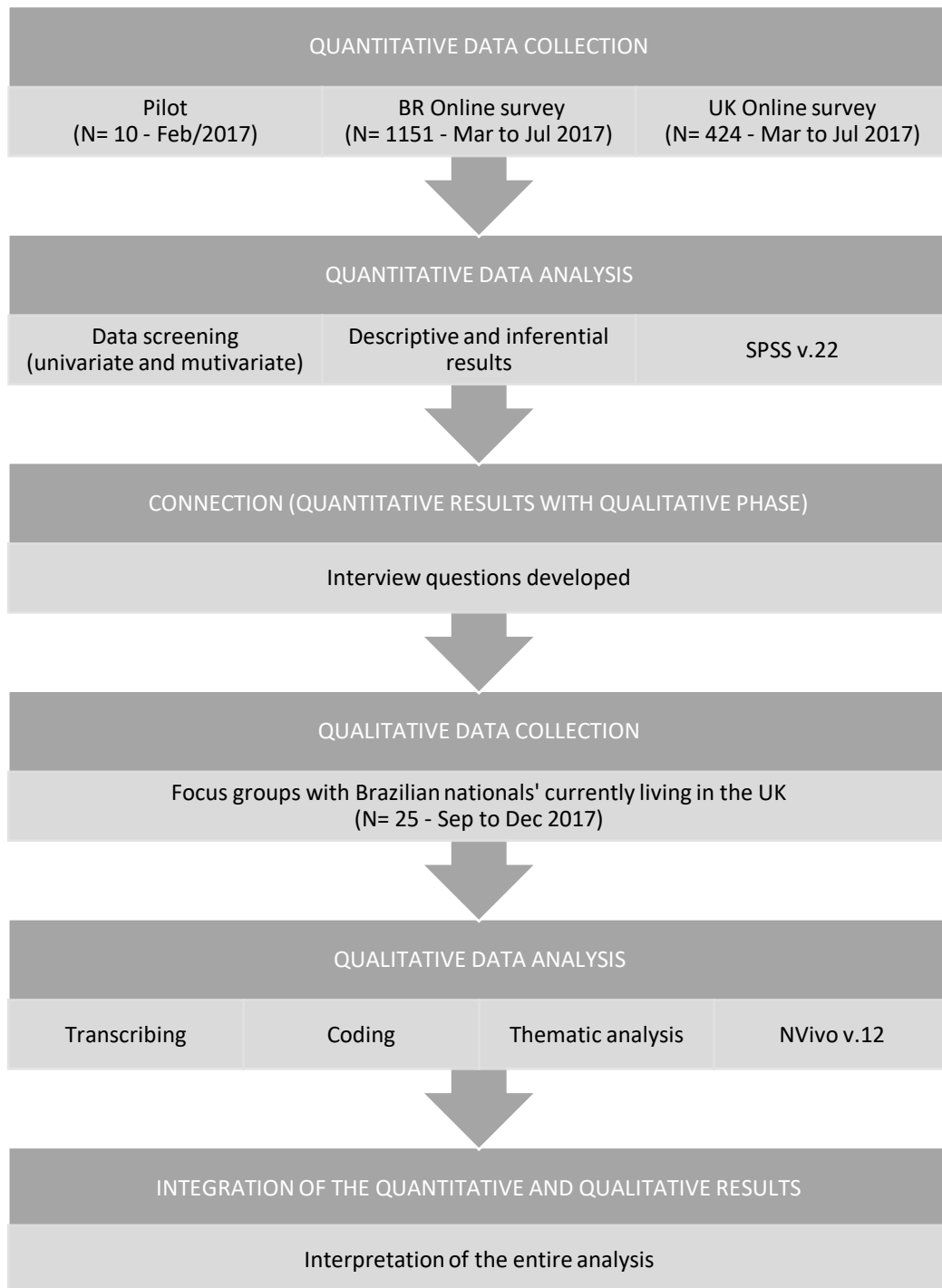
Research on nightlife-drinking patterns and pre-drinking behaviour in Brazil and the UK have employed either quantitative (Østergaard and Andrade, 2013, Santos et al., 2015b) or qualitative methods (Foster and Heyman, 2013) to investigate students’ attitudes and motives for alcohol use, and some conclusions can be made about university students’ drinking levels. There is however a lack of studies integrating quantitative and qualitative methodologies that further develop an understanding of students’ nightlife-drinking patterns and its implications for the nightlife context, particularly in Brazil.

The combination of quantitative and qualitative methods in the same study (Leech and Onwuegbuzie, 2009) has been an important topic of discussion in the applied social sciences literature (Creswell et al., 2003, Tashakkori and Teddlie, 2003b, Teddlie and Tashakkori, 2003, Johnson and Onwuegbuzie, 2004, Morgan, 2007, Leech and Onwuegbuzie, 2009). Conducting MMR allows the researcher to provide a more comprehensive understanding of a topic rather than using a single method by integrating the strengths of each method and at the same time compensating their weaknesses (Tashakkori and Teddlie, 2003a, Johnson and Onwuegbuzie, 2004, Johnson et al., 2007, Creswell and Clark, 2017). MMR research on alcohol use amongst young people, in particular students, has been growing in the literature in the past 20 years (Beccaria and Sande, 2003, Järvinen and Østergaard, 2009, Measham and Østergaard, 2009, Østergaard, 2009, Macneela and Bredin, 2011, Atkinson et al., 2012, de Visser and McDonnell, 2012, de Visser et al., 2015, Gill et al., 2016, Attwood et al., 2017, Li et al., 2017).

As previously described, the current research was grounded in a theoretical model of behaviour change and focused on the research problem instead of being limited to one single methodology. Hence, choosing an MMR design for the current research would therefore address the quantitative variables of university students' nightlife-drinking patterns, including pre-drinking behaviour, whilst also exploring further influences related to those variables through focus group interviews. Additionally, in the UK but mostly in Brazil, there is limited of research that explores university students' attitudes and practice of alcohol use in the nightlife.

To explore Brazilian and UK students' drinking behaviours within nightlife settings a mixed-methods QUAN→qual sequential explanatory design has been adopted (Creswell and Clark, 2017), consisting of two phases in which the quantitative phase was dominant, and its results were used to plan and inform the smaller qualitative phase of the study (Morse, 2003, Creswell and Clark, 2017, Creswell, 2018). Further, after the qualitative data were collected and analysed, results were connected for the purpose of complementarity to gain a better understanding from both phases (Greene et al., 1989). Such sequential triangulation was chosen as it increases the

validity of the research by using independent but complementary quantitative and qualitative research strategies (Denzin, 1970, Ivankova et al., 2006, Creswell and Clark, 2017). **Figure 8** shows the sequence in which each step of the project was conducted.



**Figure 8: Visual diagram of a sequential explanatory study design to explain findings**

Based on the ecological theory previously described in which no single factor can explain people’s behaviour, the pragmatic approach adopted in this research

allowed the researcher to focus on the real problem by using different methods that work together for a better understanding of students' drinking behaviours (Creswell, 2018). Hence the aim of the quantitative phase of the study (Study 1) was to explore students' experiences of pre-drinking and alcohol consumption in nightlife settings and investigate the perceived impact of alcohol policies and nightlife factors on students' drinking behaviour. Findings from this part of the study informed the focus-group qualitative interviews (Study 2) that explored Brazilian university students' perspectives of the drinking culture in the UK, compared to Brazilian culture.

This research commenced in early 2016 and data collection was concluded at the end of 2017. The two studies included in this mixed methods study and the specific methods used for each one are outlined in **Table 3**. A brief description of the objectives of each of the included studies is presented in the following section of this chapter.

**Table 3: Overview of the research project**

Study	Study design	Recruitment	Participants	Data collection	Data analysis
1	Cross-sectional survey	E-mail invitations and social media (e.g., Facebook)	Brazilian and UK university students	Questionnaire	Descriptive, between samples comparisons, and hierarchical regression analysis
2	Focus groups	Email invitations, social media (e.g., Facebook) and informal networks	Brazilian students living in the UK	Semi-structured interviews	Deductive thematic analysis

### 3.3.2 Research studies

The research combined two different data collection methods in order to gain a better understanding regarding students' drinking behaviours within nightlife settings: an online survey with Brazilian and UK students (Study 1) and focus groups with Brazilian nationals living in the UK (Study 2). The objectives of each method in each study is provided below. However, for reasons of space and ease of reading, the



sampling criteria, data collection procedures and data analysis used in each study are described in each respective chapter (Chapters 4 and 5).

#### 3.3.2.1 Study 1: Quantitative online survey

To investigate and understand public health problems, quantitative research design has been considered the standard method as its approach is more objectively based on testing theories and tracing trends by means of statistical procedures, e.g., through surveys (Tariq and Woodman, 2013).

The aim of this cross-sectional survey was to explore perspectives and experiences of pre-drinking and alcohol consumption during a night out amongst university students in Brazil and the UK and investigate the perceived effects of alcohol policies and nightlife factors on students' drinking behaviour. The specific objectives of this study were to:

- i. Examine the prevalence and pattern of alcohol consumption amongst Brazilian and UK students;
- ii. Examine and compare pre-drinking prevalence and associated factors amongst Brazilian and UK students;
- iii. Examine the perceived impact that pre-drinking and alcohol policies have on students' drinking behaviour;
- iv. Investigate Brazilian and UK students' behaviours during a night out; and,
- v. Explore Brazilian and UK students' alcohol related harms during a night out.

Ethical approval was granted for this study by LJMU ethics committee, in the UK (approval granted in April 2016 – ref code 16/CPH/005); and by UNIFESP in Brazil (approval granted in December 2016 - protocol number 1.845.314 CAAE: 61290216.3.0000.5505). See APPENDIX A for approval letters from the ethics committee and Chapter 4 for full details of the study.

#### 3.3.2.2 Study 2: Qualitative focus groups

On the other hand, the qualitative research approach is more interpretative based on generating hypothesis and giving meaning to context through open ended textual data (Tariq and Woodman, 2013).

This study aimed to investigate and understand Brazilian students' perspectives of the drinking culture in the UK compared with Brazil. More specifically, the objectives were to:

- i. Explore Brazilian students' perceptions of the nightlife environment in the UK, compared to that in Brazil;
- ii. Understand how nightlife drinking patterns in the UK differ from the Brazilian scenario;
- iii. Explore Brazilian students' experiences and perceptions of alcohol use during pre-drinking practice;
- iv. Compare attitudes, practices of alcohol use, and perceptions of alcohol policy in Brazil and the UK; and
- v. Explore perceptions of what influence alcohol policy has on Brazilian and UK university students' drinking behaviour during a night out.

Ethical approval was granted for this study by LJMU ethics committee (approval granted in November 2017 – ref code 17/PHI/002). See APPENDIX B for approval letter from the ethics committee and Chapter 5 for full details of the study.

### 3.4 Research quality

According to Tashakkori and Teddlie (2003a), validity has been one of the most important issues in MMR. The term "validity" is mainly used in quantitative studies and it is related to the extent to which instruments (e.g., surveys) accurately measure what they claim to measure (Creswell, 2018). Traditionally, discussions about validity in MMR have been addressed separately from quantitative and qualitative perspectives without mixing both methodologies (Tashakkori and Teddlie, 1998, Tashakkori and Teddlie, 2003a). Later, the authors Onwuegbuzie and Johnson (2006) identified nine types of legitimization process in relation to quality issues in MMR, though separate

quality assessments from both quantitative and qualitative perspectives (validity and trustworthiness respectively) still needed to be included while conducting MMR.

In the following sections criteria for ensuring validity of the quantitative methods (study 1) and trustworthiness of the qualitative methods (study 2) are described whilst the MMR legitimisation process (Onwuegbuzie and Johnson, 2006) is described in the final chapter along with the MMR synthesis of findings (Chapter 6).

#### *3.4.1 Validity, Reliability and Generalisability*

According to Bryman (2016) validity and reliability are important aspects to be considered when conducting quantitative research regarding the rigour of the measure, i.e., whether a measure is accurately capturing what it is supposed to and whether the measure is reliable.

The research tool used in the quantitative study (Study 1) was a questionnaire developed after an extensive review of the literature and through a combination of existing measures. Also, it was developed with assistance from the supervisory team who had extensive experience in conducting survey research within nightlife settings (see section 5.4.2 for full description of the included measures).

Though no testing of the validity and reliability of the measures from the current study was done, items included in the survey were thoroughly discussed with the supervisory team and tested in the pilot study with 10 students who were invited to give qualitative feedback and annotate the questionnaire in order to establish face validity and improve reliability. However, it is important to acknowledge the limitation regarding this lack of validity and reliability testing as the items used in the questionnaires may not have enough validity and reliability in the two different countries.

Moreover, another important aspect to be considered when conducting quantitative research refers to social desirability bias and underreporting issues, which

occur when respondents tend to answer questions in a way that is more socially acceptable than their true behaviour, especially when exploring attitudes towards alcohol consumption (Johnson and van De Vijver, 2003, Livingston and Callinan, 2015).

Generalisability of findings also needs to be mentioned (Bryman, 2016) as it can be acknowledged as a limitation for the current study as this cross-cultural research was designed for two different countries, a developing country in South America and a developed one in Europe; therefore the generalisability of the current findings may be limited.

### 3.4.2 Trustworthiness

Unlike quantitative research, where concepts of reliability, validity and generalisability are the important things to consider for ensuring the rigour of the findings, qualitative research has a different approach.

According to Guba (1981) it is important to consider four aspects to assure trustworthiness in qualitative research, such as the truth value of the findings, applicability, consistency, and neutrality. Such concepts were further developed into credibility, transferability, dependability, and confirmability (Shenton, 2004). **Table 4** summarises the strategies used for ensuring trustworthiness in the current qualitative research based on Lincoln and Guba (1985) criteria.

**Table 4: Strategies for ensuring trustworthiness in qualitative studies**

Strategy	Approach undertaken in the research
Credibility	<i>Reflexivity:</i> field notes were taken for each interview of the focus groups which included reflection upon my own background (young Brazilian PhD student living abroad) in relation to the participants that I interviewed that were further used and revisited at the analysis stage and throughout the thesis.
	<i>Peer examination:</i> regular meetings with a supervisor who specialises in qualitative research were made to discuss the process of data collection, coding, development of themes and analysis as a way of addressing accurate interpretation of the data.

(continue)

Strategy	Approach undertaken in the research
Credibility	<p><i>Interview technique:</i> focus groups were conducted using semi-structured interviews format and prompts were used to re-phrase questions.</p> <p><i>Triangulation:</i> to ensure credibility triangulation of the research findings was conducted.</p>
Transferability	<p><i>Dense description:</i> regular meetings with the supervisory team were conducted in order to help assuring credibility and transferability to the research by checking if the research process and design was clear enough and easy to be followed within both countries. A detailed description of the study process and samples were provided.</p>
Dependability	<p><i>Peer examination:</i> throughout this phase, the data collection and analysis process were reviewed by a supervisor who specialises in qualitative research for continue improvement of the study.</p>
Confirmability	<p><i>Reflexivity:</i> my constant reflection on my own beliefs and assumptions during the study was an important strategy to reduce bias and ensure confirmability.</p> <p><i>Triangulation:</i> to ensure confirmability and to reduce bias as well, triangulation of the research findings was conducted.</p>

### 3.4.3 Translation

Cross-cultural research on drinking patterns in different cultures and languages is important for clarifying differences, as well as for identifying similarities, though it has its limitations regarding the translation aspect in both quantitative and qualitative research. As a bilingual researcher, fluent in both English and Portuguese (native speaker), this current research did not require any assistance with translation. However, to ensure consistency and validity in the translated material a few approaches were adopted.

In quantitative research for example, to compare data across language groups it is important that questionnaires are developed accordingly for each culture to ensure that responses are conceptually and functionally equivalent (Deutscher, 1973, Hunt, 1995, Herdman et al., 1998, Hunt, 1998). For qualitative research language barriers and translation issues are even more complex, as specific meanings or concepts as well as interpretations might get lost when translated from one language to another (Temple and Young, 2004, Tsai et al., 2004, Squires, 2008, van Nes et al., 2010). Hence, during the translation process researchers need to be consistent with

the concepts and metaphors within each of the social and cultural contexts (Green and Thorogood, 2018).

All the research tools, such as the research proposal, ethics application and data collection instruments, were initially developed in English and subsequently translated into Portuguese. For questions regarding differences between the two countries on drinking environments (e.g., questions that required answers about on and off-licensed premises settings) more details were provided about what the question was about and how to answer it for the Brazilian students, since in Brazil there is no such distinction.

To ensure reliability and validity in the translation process, back-translation was used for the development of the questionnaires used in the quantitative phase (Study 1) as well as for the semi-structured interview used in the qualitative phase (Study 2). Back-translation is a validating strategy in which the original material is translated, then a reviewer translates it into English and subsequently the two versions are compared in order to ensure that translated materials cover all the aspects of the original material (Cha et al., 2007, Pym, 2014).

The research proposal and also the ethics application documents were only translated by one reviewer. As for the questionnaire from Study 1, this was back translated by two independent reviewers, who were both native in Portuguese and also fluent in English. The final Portuguese version was reviewed by the Brazilian co-supervisor. The interview protocol for Study 2 was not back translated, however it was reviewed by the supervisory team and the Brazilian co-supervisor to ensure content validity and appropriate translation.

As a Brazilian researcher and a native Portuguese speaker, the qualitative interviews for the focus groups (with Brazilian students) were conducted in the researcher's native language. According to Temple and Young (2004) meanings can easily be distorted or even lost during the translation process. Hence, in this current study transcripts from Study 2 were not translated; instead each interview was

analysed in the original language (Portuguese) as there were some words or concepts that have literally no direct translation to English. Consequently, only relevant excerpts from the interviews were translated in order to present representative quotes.

In this current study it is vital to acknowledge the challenges and limitations on translating qualitative research as they might have had an impact on the interpretation phase.

### 3.5 Limitations

Through this chapter, attention was given not only to describe the strengths of the mixed methods approach but also to acknowledge the limitations and complexities of such methodology. For ease of reading, the limitations of each individual study are presented in each respective chapter (4 and 5) along with the data collection procedures and results of each study. The overall strengths and limitations of the research are presented in the final chapter with MMR synthesis results (Chapter 6).

### 3.6 Summary

This chapter has provided an overview of the mixed methods research design including both methodologies chosen for this research. The research used a sequential mixed method design which combined the two studies outlined; a quantitative online survey conducted with Brazilian and UK students and qualitative focus groups with Brazilian nationals currently living in the UK. Aspects of this cross-cultural research and issues regarding the research quality were also discussed. The next chapters present the findings from the two studies, presented individually for Study 1 (Chapter 4) and Study 2 (Chapter 5), and concluding with the mixed methods synthesis and general discussion (Chapter 6).

#### 4.1 Introduction

The aim of this chapter is to further explore gaps in the research regarding university students' nightlife-drinking attitudes, including prevalence of pre-drinking behaviour and investigate the perceived policy effectiveness towards drinking behaviours. The chapter presents findings from Study 1, a quantitative online survey amongst university students from São Paulo, Brazil and Liverpool, in England.

#### 4.2 Aims and objectives

The aim of this study was to investigate the prevalence and factors associated with alcohol use during a night out and pre-drinking behaviour amongst Brazilian and UK students, and investigate the perceived effects of alcohol policies and nightlife factors on students' drinking behaviour. The specific objectives were to:

- i. Examine the prevalence and pattern of alcohol consumption amongst Brazilian and UK students;
- ii. Examine and compare pre-drinking prevalence and associated factors amongst Brazilian and UK students;
- iii. Examine the perceived impact that pre-drinking and alcohol policies have on students' drinking behaviour;
- iv. Investigate Brazilian and UK students' behaviours during a night out;
- v. Explore Brazilian and UK students' alcohol related harms during a night out.

#### 4.3 Pilot study

A pilot questionnaire was developed specifically for the purpose of the current study and was based on previously used nightlife surveys (for details of included



questions see section 4.4.2). To test the developed questionnaire a convenience sample of five English and five Portuguese students was recruited through informal networks. The pilot study was conducted in February 2017.

The questionnaire was translated into Portuguese and back translated (see section 3.4.3) to ensure accuracy of the included items (see section 3.4.1). Respondents were requested to read it and provide feedback on items that were unclear.

#### 4.4 Sampling strategy

LJMU, based in Liverpool (UK), is a university with three campuses and almost 21,000 students from around 100 countries (17,837 undergraduate students and 2,806 postgraduate students) (Liverpool John Moores University, n.d.). UNIFESP based in the state of São Paulo (Brazil), is a federal university with six campuses in different cities, with almost 19,000 students (12,723 undergraduate students and 5,335 postgraduate students) (Federal University of Sao Paulo, n.d.).

Using the sample size calculator by Raosoft, Inc (Raosoft, 2004), based on a 50% rate of population sample, 5% margin of error and 95% CI, the estimated sample needed in the two locations was 378 LJMU students and 375 UNIFESP students.

##### 4.4.1 Procedures and Participants

Using the Bristol Online Survey tool<sup>20</sup>, a quantitative online survey was conducted with undergraduate and postgraduate students aged 18 plus years enrolled at LJMU and UNIFESP, from March to July 2017. Students were approached by their e-mail contact supplied by each education institution. School directors from each institution received an e-mail introducing the study and asking them to act as gatekeepers (APPENDIX C). They were informed that this would involve them sending

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<sup>20</sup> <https://www.onlinesurveys.ac.uk/>

an e-mail to the students (APPENDIX D) that introduced the study and sought their voluntary and confidential participation, with a link to the online participant information sheet (APPENDIX E) and questionnaire. The participant information sheet assured participants that their responses would remain confidential, be stored securely and be anonymised during data interpretation. Through completing the survey, participants were notified that they were giving informed consent. An estimated 12,896 e-mails were sent to Brazilian students and 860 to UK students.

To boost participation, online recruitment using social media (e.g., Facebook and Twitter) was also used amongst students who participated in LJMU and UNIFESP university online groups. The online invitation detailed the research aims and methods and provided the link to the online participant information sheet and questionnaire.

Results from the Bristol Online Survey showed that in Brazil, 10,261 students opened the survey. Of 1,491 that completed the questionnaire, 340 were screened out (22.8%), resulting on a response rate of 14.5% which generated a final sample of 1,151 students. In the UK, 13,466 students opened the survey. Of 493 that completed the questionnaire, 69 were screened out (14.0%), resulting on a response rate of 3.7%, which generated a final sample of 424 students.

#### 4.4.2 Questionnaires

Existing surveys used to explore alcohol consumption and related harms in UK nightlife settings (Bellis et al., 2010, Hughes et al., 2011b, Hughes et al., 2011c) and in Brazil (Santos et al., 2015b) were reviewed and adapted to each country to inform the development of the questionnaire used in this study. The survey was produced in both the English and Portuguese languages (APPENDIX F) for the UK and Brazilian samples respectively and covered the following measures:

Sociodemographic characteristics

Variables included:

- Age [*What is your age?* with the options of: 18-21; 22-25; 26-29; 30-33, and 34+ years];
- Gender [*How would you describe your gender?* with the options of: *Female; Male; Transgender; Other* and *Prefer not to say*];
- Ethnicity [*Choose one option that best describes your ethnic group or background,* with the options of: *White; Asian; Black; Mixed* and *Other*];
- Academic year [*Which academic year are you in?*<sup>21</sup>]; and
- Residence [*Do you currently live in Liverpool/São Paulo?* with the options of: *Yes* and *No*].

#### Alcohol drinking patterns

To investigate students' overall alcohol consumption, the question *How often do you drink alcohol?* [with the options of: *Never; Monthly or less; 2 to 3 times a month; Once a week; 2-4 days a week* and *5 or more times a week*] was used as a condition to complete the survey. Those who answered *Never* were screened out of the survey and directed to the end of it.

Of drinkers, students were asked about their drinking pattern [*What would you do on a typical week whilst at university?* with the options of: *I would normally go out and NOT drink; I would normally go out and drink; I would normally stay home and not drink; I would normally stay home and drink; I would normally stay home, pre-drink and then go out and not drink;* and *I would normally stay home, pre-drink and then go out and drink more*].

#### Students' social events

Variable included:

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<sup>21</sup> UK and Brazilian educational system are different and so were the variables. For the UK survey the options were: *1<sup>st</sup> year; 2<sup>nd</sup> year; 3<sup>rd</sup> year; 4<sup>th</sup> year; post graduate (masters) and post graduate research.* For the Brazilian survey options were: *1<sup>st</sup> year; 2<sup>nd</sup> year; 3<sup>rd</sup> year; 4<sup>th</sup> year; 5<sup>th</sup> year; 6<sup>th</sup> year; masters; PhD and post-PhD.*

- Frequency of attendance [*Whilst at university, how often do you participate in the following social events - Nightclubs, Bars/pubs, House parties, Dinner Parties, Theatre, Concerts (live bands) and Sports events?* with the options of: *More than once a week; Once a week; Once or twice a month; Less than monthly and Never*];

#### Pre-drinking

Pre-drinking was defined by the response to *Would you normally pre-drink before going out?* with the options of: *Yes* and *No*. It also included pre-drinking characteristics such as:

- Place for practice [*Where would you normally pre-drink?* with the options of: *Own home; Friend's home; Outside (park, beach) and Other*];
- General motivations [*What are your reasons for pre-drinking?* with options of - students could have ticked more than one - *Part of going out; To socialise with your friends; To save money; To not go out sober; To lose control; To deliberately get drunk; To increase my confidence; Relaxation (to feel less stressed); To feel like part of a group; To have a good time; To increase your mood; To reduce your anxiety and Other*];
- Main motivation [*What is your main reason for pre-drinking?* with options of: *Part of going out; To socialise with your friends; To save money; To not go out sober; To lose control; To deliberately get drunk; To increase my confidence; Relaxation (to feel less stressed); To feel like part of a group; To have a good time; To increase your mood; To reduce your anxiety and Other*];
- Food consumption [*Would you typically consume any food during pre-drinking events?* with the options of: *Yes (snacks), Yes (a meal) and No*]; and
- Drinking time [*What time would you typically start drinking during pre-drinking events?* with the options of: *Before 4 pm; 4 - 5:59 pm; 6 - 7:59 pm; 8 - 9:59 pm; 10 - 11:59 pm; 12 pm or later and N/A*].

## Nightlife settings characteristics

In order to investigate students' social nightlife behaviours, questions from this section were developed to investigate such behaviours within two specific drinking settings: 1) nightclubs, bars and pubs and 2) house parties.

Variables included:

- Time for going out to [*What time would you typically go out to nightclubs, bars/pubs and house parties?* with the options of: *Before 7 pm; 7 – 8:59 pm; 9 – 10:59 pm; 11 pm – 12:59 am; 1 – 2:59 am; 3 – 4:59 am* and *N/A*] and time that night out ends [*What time do you usually end your night out after going to nightclubs, bars/pubs and house parties?* with the options of: *11 pm – 12:59 am; 1 – 2:59 am; 3 – 4:59 am; 5 – 6:59 am; 7 am or later* and *N/A*];
- Type of transportation used for going out and for going home [*When going out/going home to/from nightclubs, bars/pubs and house parties do you usually use?* with the options of: *Public transportation; Cab; Drive; Walk* and *Take a lift with friends*];
- After nightlife activity [*What do you typically like to do after going to nightclubs, bars/pubs and house parties?* with the options of: *Go to another party; Carry on drinking alcohol; Go straight home and don't consume alcohol; Get some food* and *Other*].

Alcohol consumption within nightlife settings (type and quantity of alcohol)

This included the variable: *How many of each of these drinks - Spirits, Wine, Beer, Alcopop and Other - would you have a) during pre-drinking events; b) at nightclubs, bars/pubs; and c) at house parties;* with the options of: *0, 1, 2, 3, 4, 5, 6, 7, 8, 9, 10 and 11+*. The UK and Brazilian drinks measures included in the questionnaires are presented in **Figure 9** and **10**, respectively.

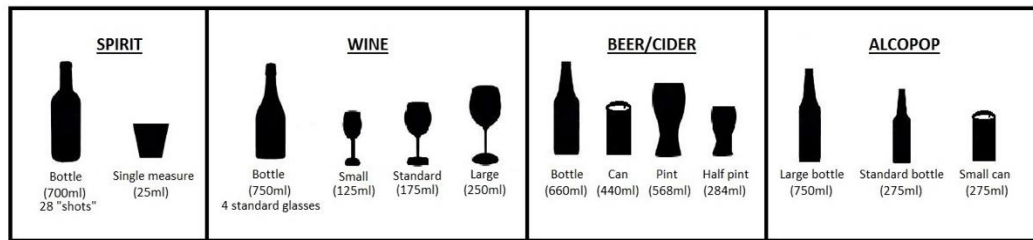


Figure 9: Drinks measures included in the UK questionnaire



Figure 10: Drinks measures included in the Brazilian questionnaire (in Portuguese)

## Drunkenness levels

Questions from this section were developed to investigate students' perceived drunkenness levels within two specific drinking settings: 1) nightclubs, bars and pubs and 2) house parties. Using a scale of 1 (completely sober) to 10 (very drunk), students were asked about:

- Perceived level of drunkenness that people reach within nightlife settings [*What do you think is the typical level of drunkenness that people reach at: a) nightclubs, bars and pubs; b) at house parties*];
- Drunkenness levels during pre-drinking events [*How drunk do you usually get during pre-drinking before going to: a) nightclubs, bars and pubs; b) house parties*]; and
- Drunkenness levels at the end of a night out [*How drunk are you typically at the end of: a) nightclubs, bars and pubs; b) house parties*].

## Students' attitudes towards alcohol policy

The perceived impact that alcohol policies may or may not have on students' drinking behaviour was defined by the response to *My pre-drinking habit / My overall alcohol consumption would Decrease, Increase or Remain the same*, with the options of: *Yes* and *No*. The alcohol policies included:

- Changes in alcohol price: *a) If prices increased in on-licensed premises and b) in off-licensed premises;*
- Changes in alcohol sales in off-licensed premises: *a) If sales would be restricted to a designated time and b) designated areas;*
- Changes within nightlife settings characteristics': *a) If bars/pubs/nightclubs closed by 2 am and b) If bars/pubs/nightclubs increase their bouncers' numbers for supervision; c) If bars/pubs/nightclubs were prohibited to offer alcohol discounts (e.g., 2 for 1);*
- Changes in alcohol serving within drinking settings: *a) If bars/pubs/nightclubs staff did not serve alcohol to drunk people; and b) If bars/pubs/nightclubs offer cheaper soft drinks options;*
- Changes in alcohol advertising and marketing: *a) If alcohol product labels were more legible with nutritional and alcohol content, and b) If all alcohol promotions and advertising were prohibited;*
- Local authorities' policy implementation: *a) If there was an active enforcement of ban on sales to drunk people in on and off-licensed premises; b) If drunken and disorderly people in public places were penalised; c) If local authorities create alcohol-free public spaces; d) If authorities apply higher drink driving limits to prevent alcohol-related accidents; e) If random breath test were conducted at bars/pubs/nightclubs entrance; and f) If theatres or concerts decide to give free entrance for people who are not drinking.*

## Alcohol-related harms

Questions from this section were developed to investigate harms associated within two specific drinking settings: 1) nightclubs, bars and pubs and 2) house

parties<sup>22</sup>. Students' past 12 months experience of alcohol-related harms included the following risks for each drinking setting - *Nightclubs, bars/pubs, and House parties*:

- *Have you suffered any kind of road traffic accident?*
- *Have you suffered any kind of physical violence such as fights or assaults?*
- *Have you suffered any kind of sexual harassment?*
- *Have you had unprotected sex?*
- *Have you regretted a decision to engage in sexual activity?*
- *Have you suffered any kind of alcohol-related effects such as blackouts, vomiting, passing out or coma?*
- *Have you fallen asleep somewhere inappropriate?*
- *Have you woken up feeling embarrassed about things you have done the night before?*
- *Were you refused entry to a nightclub, bar or pub for being too drunk?*
- *Have you spoiled someone's night out for being too drunk?*
- *Have you failed to attend at university because of drinking?*
- *Have you missed exams because of drinking?*
- *Have you missed work because of drinking?*

#### 4.4.3 Data analysis

Data was analysed using IBM SPSS Statistics 24. To facilitate interpretation of results some similar categories with low frequencies were grouped and missing values excluded:

- Age: a) 18-21 [18-21]; b) 22-25 [22-25] and c) 26+ [26-29, 30-33, and 34+ years];
- Gender: a) Female [*Female*], b) Male [*Male*] and Other<sup>23</sup> [*Transgender, Other and Prefer not to say*];

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<sup>22</sup> For each one of the drinking settings, the following conditions were used for the analysis (a) students who attended nightclubs, bars and pubs and (b) students who attended house parties. Students who had not suffered any of the risks within each drinking settings ticked a N/A option.

<sup>23</sup> 13 missing cases (0.8%) were excluded



- Marital status: a) Single [*Single*] and b) In a relationship [*Dating and Long-term relationship*];
- Ethnicity: a) White [*White*] and b) Other [*Asian, Black, Mixed and Other*];
- Academic year<sup>24</sup>: a) Undergraduate students and b) Post-graduate students;
- Alcohol drinking frequency: a) Weekday only [*Mondays, Tuesdays, Wednesdays, Thursdays*]; b) Weekend only [*Fridays, Saturdays and Sundays*] and c) Either;
- Food consumption during pre-drinking events: a) Yes [*Yes, snacks and Yes, a meal*] and b) No;
- Time for starting drinking during pre-drinking events<sup>25</sup>: a) Before 5:59 pm [*Before 4 pm and 4 - 5:59 pm*]; b) 6 – 9:59 pm [*6 - 7:59 pm and 8 - 9:59 pm*], and c) After 10 pm [*10 - 11:59 pm and 12 am or later*];
- Nightclubs, bars/pubs and House party's attendance: a) Yes [*More than once a week, Once a week, Once or twice a month and Less than monthly*] and b) No [*Never*];
- Time for going out<sup>26</sup>: a) Before 8:59 pm [*Before 7 pm and 7 – 8:59 pm*]; b) 9 – 10:59 pm; c) 11 pm – 12:59 am; and d) 1 – 4:59 am [*1 – 2:59 am and 3 – 4:59 am*], and;
- Time that night out ends<sup>27</sup>: a) 11 pm - 12:59 am; b) 1 – 2:59 am; c) 3 – 4:59 am; and d) 5 am or later [*5 – 6:59 am and 7 am or later*].

With so many differences between the two countries regarding type of drinks and glass sizes, and the fact that the Brazilian government does not have an official alcohol guideline, the variables related to quantity of alcohol were recoded using the UK Chief Medical Officers (CMO) alcohol guidelines, according to which one unit is

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<sup>24</sup> UK undergraduate students were grouped into [*1<sup>st</sup> year; 2<sup>nd</sup> year; 3<sup>rd</sup> year; and 4<sup>th</sup> year*; and Post-graduate students were grouped into [*postgraduate (masters) and post graduate research*]. Brazilian undergraduate students were grouped into [*1<sup>st</sup> year; 2<sup>nd</sup> year; 3<sup>rd</sup> year; 4<sup>th</sup> year; 5<sup>th</sup> year; and 6<sup>th</sup> year*] and Post-graduate students were grouped into [*masters; PhD and post-PhD*].

<sup>25</sup> For each pre-drinking event (before going to nightclubs, bars and pubs and before going to house parties), 10 (1.2%) and 112 (14.8%) missing cases respectively, were excluded.

<sup>26</sup> For each drinking settings (nightclubs, bars and pubs and house parties), 35 (2.3%) and 27 (2.1%) missing cases respectively, were excluded.

<sup>27</sup> For each drinking settings (nightclubs, bars and pubs and house parties), 20 (1.3%) and 32 (2.5%) missing cases respectively, were excluded.

equal to 10 ml or 8 g of pure alcohol and men and women are advised not to drink more than 14 units a week on a regular basis (Chief Medical Officers, 2016). Plus, to calculate the alcohol amount consumed and comparison between countries (Brazil has different glass/bottle sizes), drinks were coded into standard UK units<sup>28</sup> by multiplying the total volume of an alcoholic drink (ml) by its alcohol content (using its ABV measure – alcohol by volume) and dividing the result by 1,000 (**Table 5**).

**Table 5: Brazil and UK drinks measures included in the questionnaires**

	Country			
	UK		Brazil	
	(ml)	Units	(ml)	Units
Spirits (ABV 37.5% – 40%)				
Bottle	700	26	1000 / 750	37.5 / 30
Single measure (standard)	25	1	40	1.6
Double measure	50	2	-	-
Wine (ABV 12%)				
Bottle	750	9	750	9
Small glass	125	1.5	-	-
Standard glass	175	2.1	150	1.8
Large glass	250	3.0	-	-
Beer/cider (3.6% - 5%)				
Bottle	330	1.7	600 / 355	3 / 1.7
Can	440	2.0	350 / 300	1.7 / 1.5
Pint of regular beer/cider	568	2.0	-	-
½ pint of regular beer/cider	284	1.1	-	-
Alcopop (ABV 5.5%)				
Large bottle	700	2.8	-	-
Standard bottle	275	1.5	275	1.5
Can	250	1.3	-	-

To examine the differences between the two countries in students' alcohol consumption whilst at university; students' pre-drinking behaviour; students' behaviour within nightlife settings; the perceived impact that alcohol policy would have on students' drinking habit; and students' alcohol-related harms, frequency tables and descriptive statistics were computed and explored using Chi-Square tests ( $\chi^2$ ).

For the continuous variables that had a non-normal distribution - students' drunkenness levels and types and quantity of alcohol consumed within drinking settings – data were analysed by using Mann-Whitney *U* test to explore the difference in medians between groups.

<sup>28</sup> <https://www.nhs.uk/Livewell/alcohol/Pages/alcohol-units.aspx>

Two individual models of logistic regression were built and split by country (Brazil and UK) to further explore the differences between them. The first method of logistic regression applied to explore factors associated with students' pre-drinking habit was an enter method in which all independent variables were entered in the model at the same time. Pre-drinking was used as the dependent variable and the following independent variables were analysed: age, gender, marital status, ethnicity and academic year. The second model was built to explore students' pre-drinking habit as a risk factor for alcohol-related harms amongst nightclubs, bars/pubs and house parties' goers. The same method of logistic regression described above was applied, using pre-drinking as the independent variable controlled by sociodemographic variables (age, gender, marital status, ethnicity, academic year and overall alcohol consumption in each of the drinking settings: nightclubs, bars/pubs and house parties) and each risky behaviour evaluated as dependent variables. It is important to note that the overall drinking amount was included in the model as a controlled variable because the analysis aimed to investigate how pre-drinking behaviour would affect alcohol-related harms and not how much students reported to drink during the night out so it was important to control for overall alcohol consumption.

Evidence on how to inform choice of variable entry is scant. For this current exploratory study unlike the stepwise method of logistic regression which allows the computer software to determine which variables to include; the enter method seemed to be best applicable as variable entry choices are based on the researcher's research questions (Judd and McClelland, 1989).

## 4.5 Results

### 4.5.1 *Students' sample characteristics*

It is important to establish certain caveats here. The study did not try to measure significant differences between countries given the different demographics and non-representative samples. There were significant differences between the

university students from Brazil and UK in terms of socio-demographic characteristics. Data are presented in **Table 6**. Of the 1,151 Brazilian and 424 UK students surveyed, the majority of participants were aged 18 – 25 years (BR: 78.8% UK: 81.5%;  $\chi^2(2)=38.54, p<0.001$ )<sup>29</sup>; self-categorised as being of white ethnicity (BR: 71.4% UK: 89.4%,  $\chi^2(1)=55.26, p<0.001$ ) and undergraduate students (BR: 88.2% UK: 71.2%;  $\chi^2(1)=65.05, p<0.001$ ). Plus, data also show that 59.4% of Brazilian students were single compared with 45.5% in the UK ( $\chi^2(1)=24.28, p<0.001$ ). Interestingly, in Brazil and in the UK, the majority of participants were women (BR: 59.1% UK: 65.3%;  $\chi^2(1)=4.89, p=0.027$ ) which did not reflect previous findings from the first and only Brazilian nightlife study (Santos et al., 2015a, Santos et al., 2015b) and the UK studies (Quigg et al., 2015a, Quigg et al., 2015b) in which the majority of respondents were male nightlife users. Whilst evidence suggests that women are engaging in nightlife more in recent years, the differences in sample gender across these studies may be due to differences in sampling recruitment methods.

**Table 6: Brazilian (N=1151) and UK students' (N=424) sociodemographic characteristics**

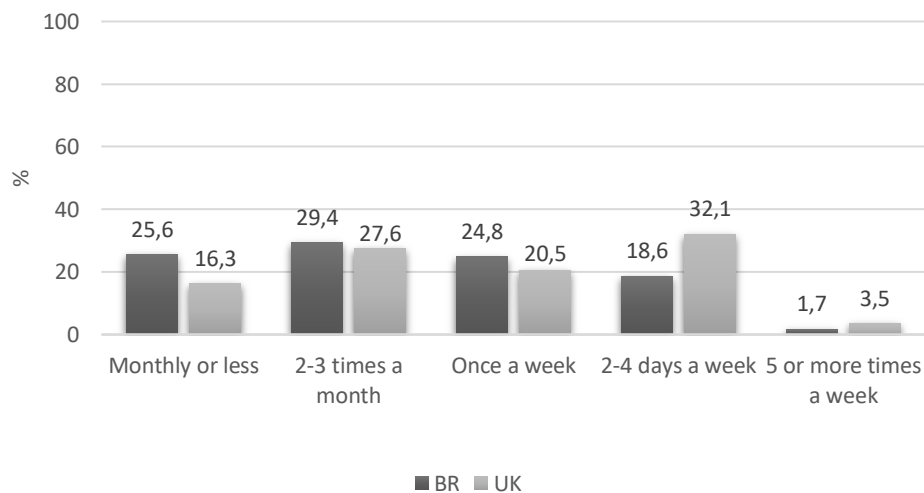
	Settings				p value
	BRAZIL N=1,151		UK N=424		
	N	%	N	%	
<b>Age (years)</b>					<b>&lt;0.001</b>
18-21	450	39.1	237	55.9	
22-25	457	39.7	108	25.5	
26+	244	21.2	79	18.6	
<b>Gender</b>					<b>0.027</b>
Female	678	59.1	271	65.3	
Male	469	40.9	144	34.7	
<b>Marital status</b>					<b>&lt;0.001</b>
Single	684	59.4	193	45.5	
In a relationship	467	40.6	231	54.5	
<b>Ethnic group</b>					<b>&lt;0.001</b>
White	822	71.4	379	89.4	
Other	329	28.6	45	10.6	
<b>Academic year</b>					<b>&lt;0.001</b>
Undergraduate	1015	88.2	302	71.2	
Post-graduate	136	11.8	122	28.8	

<sup>29</sup> Chi-Square statistics will be reported with degrees of freedom in parentheses, the Pearson chi-square value and the significance level, as follows:  $\chi^2(df)=\text{Pearson value}, p \text{ value}$ .

There were significant differences in UK and Brazilian student participation in social events whilst at university. Of the total sample, the vast majority of participants in Brazil and in the UK reported attending nightclubs, bars and pubs [BR (N=1,105, 96.0%) UK (N=422, 99.5%);  $\chi^2(1)=13.02, p<0.001$ ]. As for house parties, no significant differences were observed between the samples [BR (N=952, 82.7%) UK (N=349, 82.3%),  $\chi^2(1)=0.03, p=0.853$ ].

#### 4.5.2 Students' overall drinking pattern

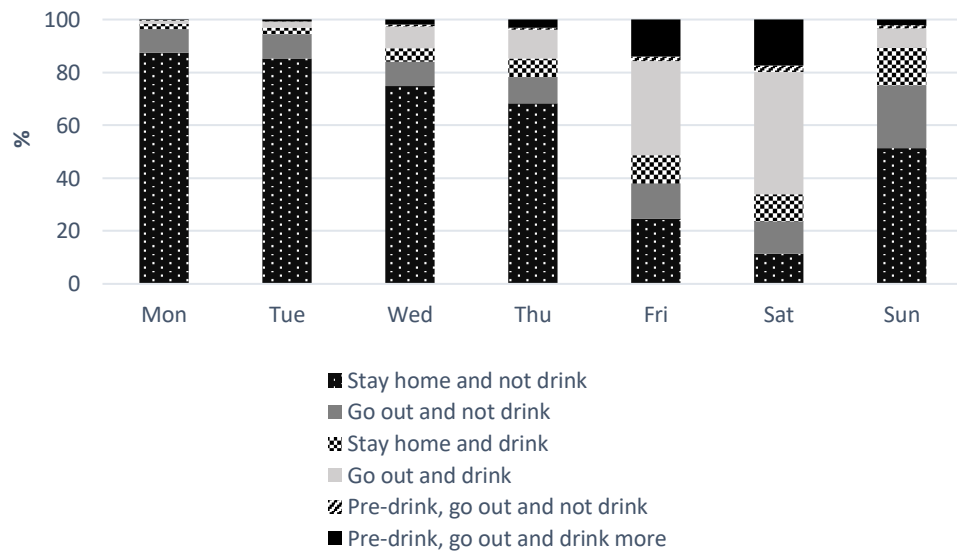
Although **Figure 11** shows that similar proportions of Brazilian and UK students who reported drinking 2 – 3 times a month (29.4% and 27.6% respectively), more UK students reported drinking 2 – 4 days a week (32.1%) when compared with Brazil (18.6%) and a very small proportion of students from both countries reported drinking 5 or more times a week (BR: 1.7% UK: 3.5%) ( $\chi^2(4)=44.89, p<0.001$ ). These findings are similar to previous findings that suggest higher levels of alcohol consumption amongst UK students when compared to international students (Gill, 2002, Dantzer et al., 2006, Bewick et al., 2008a, Davoren et al., 2016b).



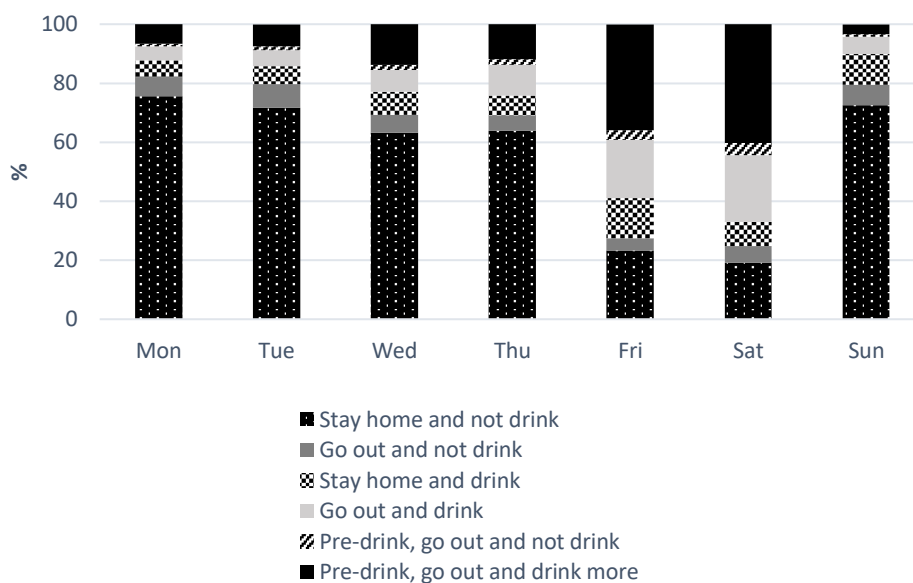
**Figure 11: Brazilian (N=1,151) and UK (N=424) students' overall alcohol drinking frequency**

#### 4.5.3 Students' weekly drinking behaviour

Although there is limited population data available on the prevalence of pre-drinking behaviour, the available evidence suggest that pre-drinking is part of the young adults’ nightlife experience in Brazil and particularly in the UK (Hughes et al., 2008a, Barton and Husk, 2012, Santos et al., 2015b). Findings from the current research shows that there were significant differences between the Brazilian and UK student samples regarding their drinking behaviour whilst at university. **Figure 12** and **Figure 13** show that on a typical week (from Mondays to Sundays) pre-drinking is more prevalent amongst UK students, whereas in Brazil such behaviour is more common only Fridays and Saturdays. For more information on individual tables, see APPENDIX G.



**Figure 12: Brazilian students’ alcohol drinking pattern whilst at university (N=1,151)**



**Figure 13: UK students' alcohol drinking pattern whilst at university (N=424)**

#### 4.5.4 Students' pre-drinking behaviour

There was a substantial and significant difference between the two samples regarding pre-drinking behaviour. Of the total sample, many more Brazilian students reported not pre-drinking (56.0%, compared with 17.2% in the UK;  $\chi^2(1)=187.46$ ,  $p<0.001$ ). Amongst those who reported pre-drinking, there were also significant differences between Brazilian and UK pre-drinkers' habits. For instance, fewer students in the UK reported pre-drinking to save money (44.7%) when compared with Brazil (64.9%) ( $\chi^2(12)=56.13$ ,  $p<0.001$ ). In Brazil, the most common setting for practicing pre-drinking was at a friend's home (44.6%, compared with 45.3% in the UK) whilst in the UK it was in their own home (54.1%, compared with 24.3% in Brazil). Interestingly, in Brazil 29.6% of the students reported practicing pre-drinking outside (e.g. beaches, parks etc.) compared with 0.0% in the UK ( $\chi^2(3)=156.40$ ,  $p<0.001$ ). Overall, current findings seems to corroborate previous nightlife research conducted in the UK (Hughes et al., 2008a, Wells et al., 2009, Bellis and Hughes, 2011, Hughes et al., 2012, McClatchley et al., 2014) and in Brazil (Santos et al., 2015b) that suggest pre-drinking is a common and socially accepted behaviour often associated with saving money and socializing with peers. Data are presented in **Table 7**.

**Table 7: Pre-drinking characteristics amongst Brazilian and UK students**

	Settings				<i>p</i> value
	BRAZIL		UK		
	N	%	N	%	
<b>Pre-drinking practice</b>					<b>&lt;0.001</b>
Yes	507	44.0	351	82.8	
No	644	56.0	73	17.2	
<b>Of pre-drinkers</b>	<b>N=507</b>		<b>N=351</b>		
<b>Pre-drinking place</b>					<b>&lt;0.001</b>
At home	123	24.3	190	54.1	
At a friend's home	226	44.6	159	45.3	
Outside (beaches, parks...)	150	29.6	0	0.0	
Other local	8	1.6	2	0.6	
<b>Pre-drinking main reason</b>					<b>&lt;0.001</b>
Part of going out	19	3.7	35	10.0	
To socialize	57	11.2	55	15.7	
To save money	329	64.9	157	44.7	
To not go out sober	23	4.5	37	10.5	
To lose control	3	0.6	0	0.0	
To get drunk	10	2.0	9	2.6	
To increase confidence	3	0.6	8	2.3	
To relax	11	2.2	5	1.4	
To feel part of a group	5	1.0	2	0.6	
To have fun	34	6.7	22	6.3	
To increase mood	4	0.8	7	2.0	
To reduce anxiety	8	1.6	11	3.1	
Other motive	1	0.2	3	0.9	

a) Food consumption

- ✓ Pre-drinking before going to nightclubs, bars and pubs

A greater proportion of the Brazilian pre-drinkers' sample (N=505) reported consuming food (80.4%) whilst pre-drinking, compared with 69.4% in the UK (N=350) ( $\chi^2(1)=13.59, p<0.001$ ).

- ✓ Pre-drinking before going to house parties

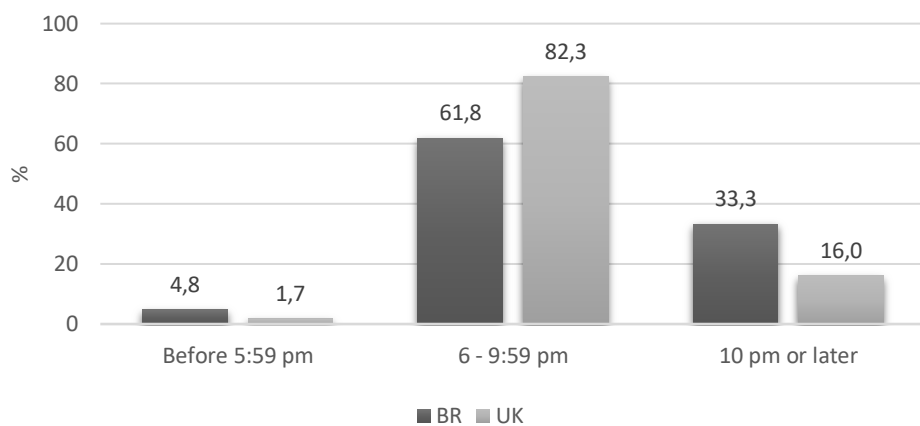
There was no significant difference in Brazilian and UK students' food consumption during pre-drinking before going to house parties settings [BR (N=458, 74.7%) UK (N=300, 68.3%),  $\chi^2(1)=3.62, p=0.057$ ].



b) Time pre-drinking commenced

- ✓ Pre-drinking before going to nightclubs, bars and pubs

Although the majority of students reported starting pre-drinking between 6–9:59 pm (BR: 61.8% UK: 82.3%), 33.3% of the Brazilian students started at 10 pm or later, compared with 16.0% in the UK ( $X^2(2)=41.44$ ,  $p<0.001$ ) (**Figure 14**).

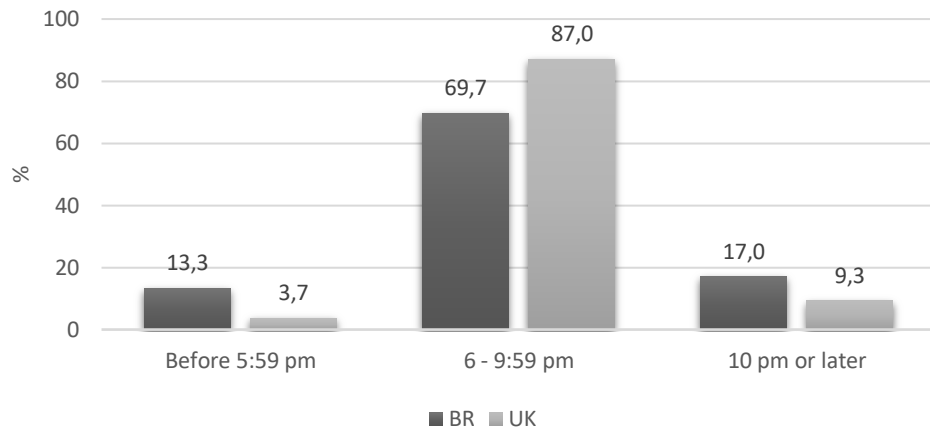


Note: limited to students who pre-drank and attended nightclubs, bars and pubs

**Figure 14: Brazilian (N=495) and UK (N=350) students' time to start drinking during pre-drinking before going to nightclubs, bars and pubs**

- ✓ Pre-drinking before going to house parties

Before going to house parties, although the majority of students reported starting pre-drinking between 6 – 9:59 pm (BR: 69.7% UK: 87.0%), 13.3% of Brazilian students start to drink before 5:59 pm, compared with 3.7% in the UK ( $X^2(2)=28.60$ ,  $p<0.001$ ) (**Figure 15**).



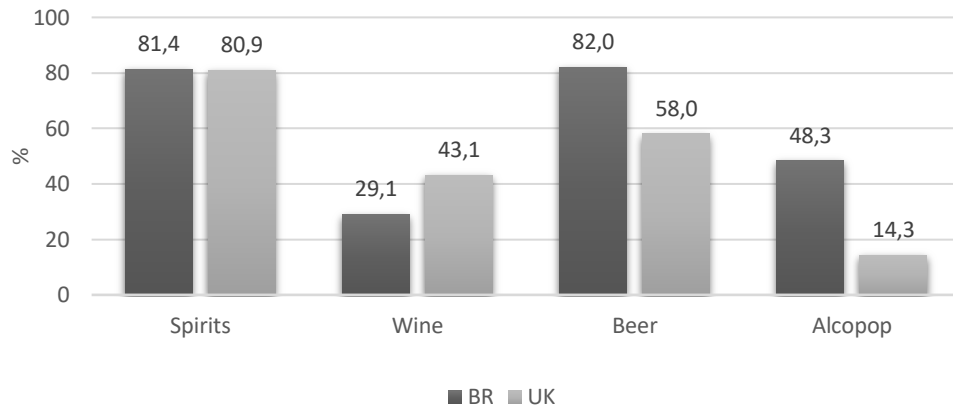
Note: limited to students who pre-drank and attended house parties

**Figure 15: Brazilian (N=376) and UK (N=270) students' time to start drinking during pre-drinking before going to house parties**

c) Types of alcohol consumed

- ✓ Pre-drinking before going to nightclubs, bars and pubs

During pre-drinking before going to nightclubs, bars and pubs no significant difference was observed with regards to Brazilian and UK students' spirits consumption (BR: 81.4% UK: 80.9%,  $\chi^2(1)=0.03$ ,  $p=0.846$ ). The types of alcohol consumed with the highest proportions in Brazil were beer (82.0%, compared with 58.0% in the UK;  $\chi^2(1)=59.17$ ,  $p<0.001$ ), spirits (81.4%, compared with 80.9% in the UK), followed by alcopops (48.3%, compared with 14.3% in the UK  $\chi^2(1)=106.11$ ,  $p<0.001$ ) and wine (29.1%, compared with 43.1% in the UK ( $\chi^2(1)=17.93$ ,  $p<0.001$ )) (Figure 16).

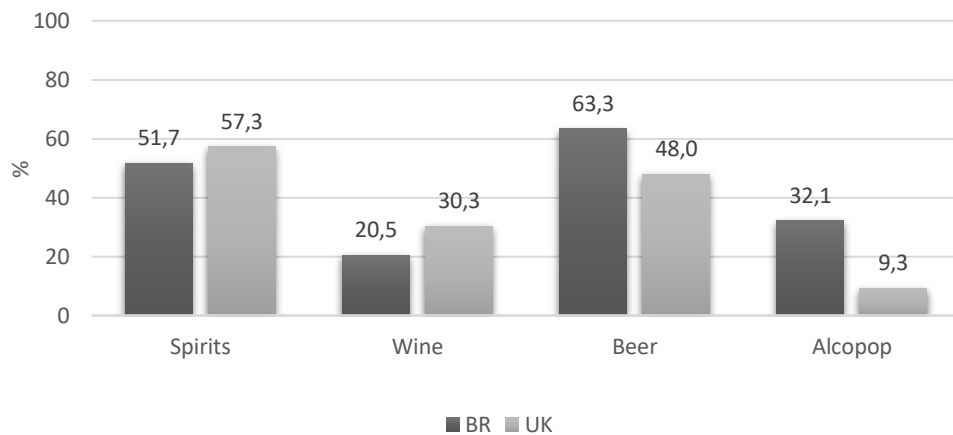


Note: limited to students who pre-drank and attended nightclubs, bars and pubs

**Figure 16: Brazilian (N=505) and UK (N=350) students' drinks consumed during pre-drinking before going to nightclubs, bars and pubs**

✓ Pre-drinking before going to house parties

During pre-drinking before going to house parties no significant difference was observed between Brazilian and UK students' spirits consumption (BR: 51.7% UK: 57.3%;  $\chi^2(1)=2.27$ ,  $p=0.131$ ). The types of alcohol consumed with the highest proportions within house parties in Brazil were also beer (63.3%, compared with 48.0% in the UK;  $\chi^2(1)=17.38$ ,  $p<0.001$ ), spirits (51.7%, compared with 57.3% in the UK), alcopops (32.1%, compared with 9.3% in the UK;  $\chi^2(1)=52.89$ ,  $p<0.001$ ) and wine (20.5%, compared with 30.3% in the UK  $\chi^2(1)=9.45$ ,  $p=0.002$ ) (Figure 17).



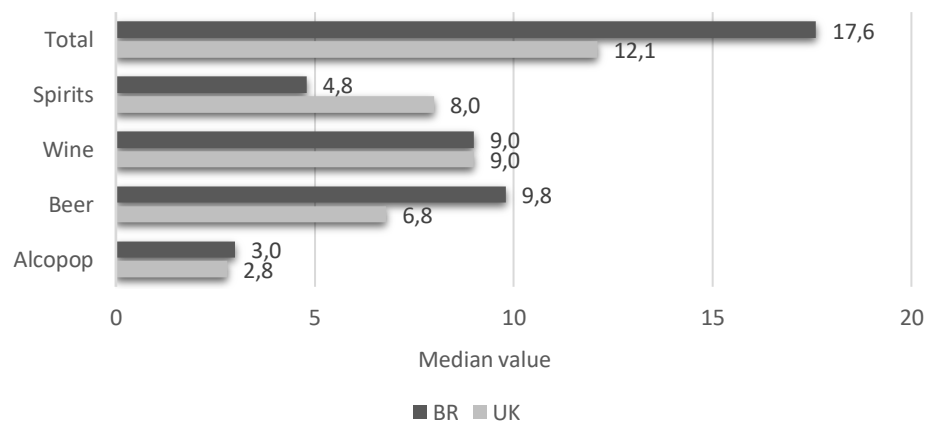
Note: limited to students who pre-drank and attended house parties

**Figure 17: Brazilian (N=458) and UK (N=300) students' drinks consumed during pre-drinking before going to house parties**

d) Quantity of alcohol consumed during pre-drinking

- ✓ Pre-drinking before going to nightclubs, bars and pubs

Data show significant differences between Brazilian and UK students regarding the median number of units for alcohol consumption while pre-drinking before going to nightclubs, bars and pubs. Of total alcohol (those who drank spirits, wine, beer and alcopops), Brazilian students typically reported drinking 17.6 units compared with 12.1 in the UK ( $U=70817.0, p<0.001$ )<sup>30</sup>. Of those who drank only spirits during pre-drinking before going out, Brazilian students reported drinking 4.8 units of spirits, compared with 8.0 units in the UK ( $U=51871.5, p=0.015$ ). Of those who only drank wine, Brazilian and UK students reported drinking 9.0 units of wine ( $U=9501.0, p=0.028$ )<sup>31</sup>. And, of those who drank only beer, Brazilian students reported drinking 9.8 units of beer, compared with 6.8 units in the UK ( $U=32814.5, p<0.001$ ). Of those who drank only alcopop, there was no significant difference in the median number of units (BR: 3.0 UK: 2.8;  $U=5442.5, p=0.220$ ) (Figure 18).



Note: limited to students who pre-drank and participated into nightclubs, bars and pubs

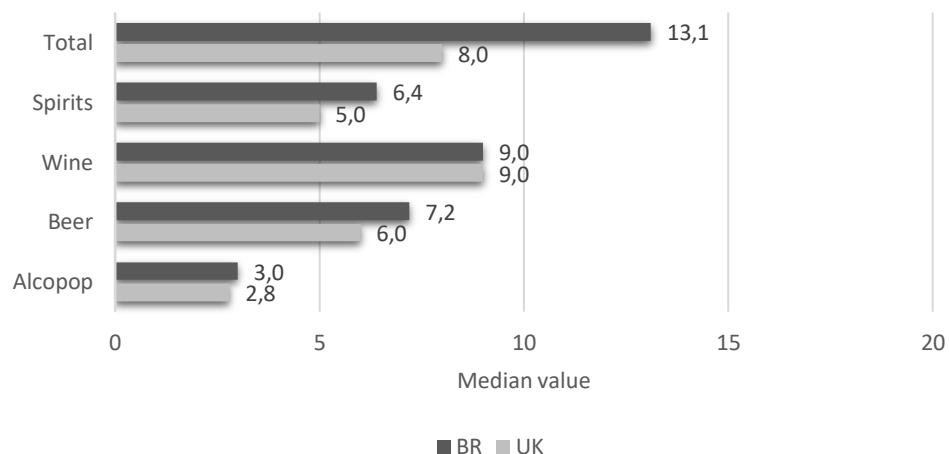
**Figure 18: Brazilian (N=502) and UK (N=350) students' median alcohol consumption during pre-drinking before going to nightclubs, bars and pubs**

<sup>30</sup> Mann-Whitney  $U$  test will be reported with the value of  $U$  following the significance level, as follows:  
 $U=U$  value,  $p$  value.

<sup>31</sup> Whilst medians are the same the distributions are significantly different. The Brazilian and the UK distribution shows a stronger skew to the right, however the modal value is "5" in Brazil, compared to UK where the modal is "10" (see APPENDIX H.1)

✓ Pre-drinking before going to house parties

Data show significant differences between Brazilian and UK students regarding the median number of units for alcohol consumption while pre-drinking before going to house parties. Of total alcohol (those who drank spirits, wine, beer and alcopops), Brazilian students reported drinking 13.1 units compared with 8.0 in the UK ( $U=34919.5, p<0.001$ ). Of those who drank only spirits during pre-drinking before going to house parties, Brazilian students reported drinking 6.4 units of spirits, compared with 5.0 in the UK ( $U=17336.0, p=0.010$ ). Of those who drank only beer, Brazilian students reported drinking 7.2 units of beer, compared with 6.0 units in the UK ( $U=17223.5, p=0.003$ ). Of those who drank only wine there was no significant difference in the median number of units (BR: 9.0 UK: 9.0;  $U=3905.0, p=0.299$ ). Likewise, of those who drank only alcopop there was also no significant difference in the median number of units (BR: 3.0 UK: 2.8;  $U=1982.0, p=0.752$ ) (Figure 19).



Note: limited to students who pre-drank and participated into house parties

**Figure 19: Brazilian (N=364) and UK (N=262) students' median alcohol consumption during pre-drinking before going to house parties**

#### 4.5.5 Factors associated with pre-drinking amongst students

To explore and compare which factors are associated with pre-drinking amongst Brazilian and UK students, a logistic regression model was run using pre-

drinking as the dependent variable. The following variables were analysed as independent variables: sociodemographic characteristics (age, gender, marital status, ethnicity and academic year). Results from the regression analysis are shown in **Table 8**.

In Brazil, male and single students (OR: 1.42, CI: 1.12 – 1.81;  $p=0.004$ ; OR: 1.74, CI: 1.36 – 2.23;  $p<0.001$ , respectively) had greater odds of practicing pre-drinking, compared with the UK, where younger [aged 18 – 21 years (OR: 5.00, CI: 2.06 – 12.12,  $p<0.001$ ); aged 22 – 25 years (OR: 2.52, CI: 1.27 – 4.96,  $p=0.008$ ) undergraduate students (OR: 3.84, CI: 1.86 – 7.94;  $p<0.001$ ) had greater odds of practicing pre-drinking.

**Table 8: Factors associated with pre-drinking amongst Brazilian (N=1,151) and UK students (N=424)**

	Settings					
	BRAZIL			UK		
	OR	CI 95%	<i>p</i> value	OR	CI 95%	<i>p</i> value
<b>Age (years)</b>						
18-21	1.26	0.88 – 1.78	0.193	5.00	2.06 – 12.12	<b>&lt;0.001</b>
22-25	1.14	0.82 – 1.60	0.414	2.52	1.27 – 4.96	<b>0.008</b>
26+ (ref)	1.00	-	-	1.00	-	-
<b>Gender</b>						
Male	1.42	1.12 – 1.81	<b>0.004</b>	0.92	0.50 – 1.71	0.810
Female (ref)	1.00	-	-	1.00	-	-
<b>Marital status</b>						
Single	1.74	1.36 – 2.23	<b>&lt;0.001</b>	1.05	0.58 – 1.90	0.870
In a relationship (ref)	1.00	-	-	1.00	-	-
<b>Ethnic group</b>						
White	1.10	0.84 – 1.43	0.463	0.85	0.36 – 2.01	0.715
Other (ref)	1.00	-	-	1.00	-	-
<b>Academic year</b>						
Undergraduate	1.13	0.75 – 1.70	0.542	3.84	1.86 – 7.94	<b>&lt;0.001</b>
Post-graduate (ref)	1.00	-	-	1.00	-	-

Note: reference for categories for each variable are identified with (ref).

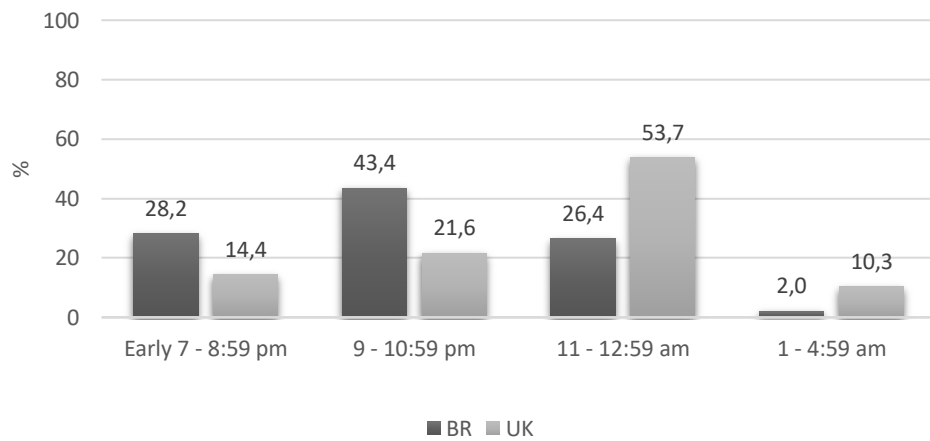
#### 4.5.6 Students' behaviour within nightlife settings

This section explores Brazilian and UK students' behaviour within nightlife settings and findings suggest that there are some structural and cultural differences in how nightclubs, bars, pubs and house parties work in Brazil and in the UK.

a) Time going out

- ✓ To nightclubs, bars and pubs

In Brazil, the most common time that students reported going out was between 9 – 10:59 pm (43.4%, compared with 21.6% in the UK). Amongst UK students, the most common time to go out to nightclubs, bars and pubs was after 11 pm (53.7%, compared with 26.4% in Brazil) ( $\chi^2(3)=176.65$ ,  $p<0.001$ ) (Figure 20).

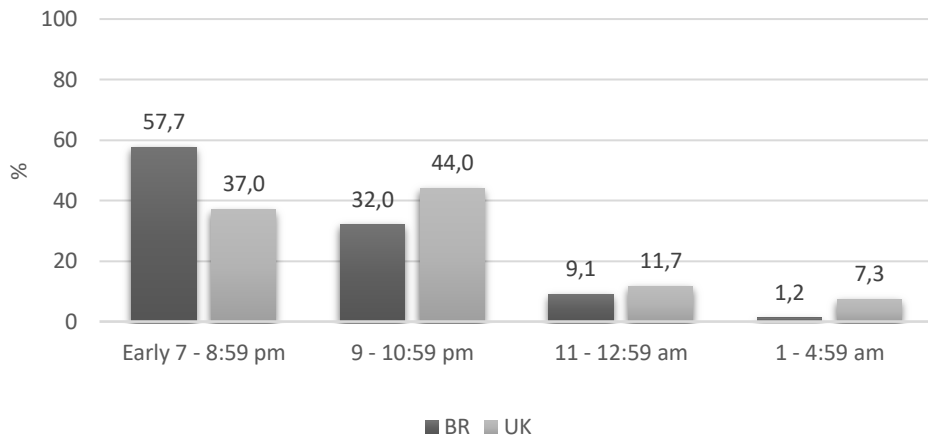


Note: limited to students who participated into nightclubs, bars and pubs

Figure 20: Brazilian (N=1,075) and UK (N=417) students' time for going out to nightclubs, bars and pubs

- ✓ To house parties

As for house parties, in Brazil the most common time that students reported to go out was between 7 pm – 8:59 am (57.7%, compared with 37.0% in the UK). Amongst UK students, the most common time to go out to house parties was after 9 pm (44.0%, compared with 32.0% in Brazil) ( $\chi^2(3)=65.86$ ,  $p<0.001$ ) (Figure 21).



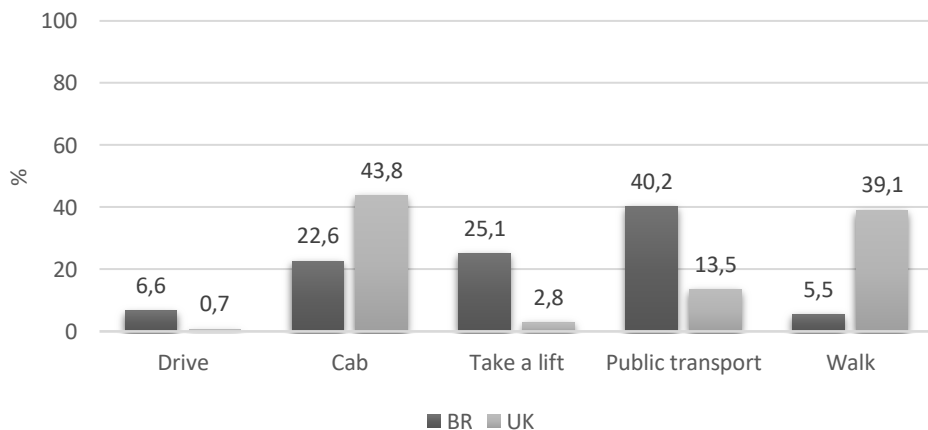
Note: limited to students who attended house parties

**Figure 21: Brazilian (N=933) and UK (N=341) students' time for going out to house parties**

b) Type of transportation used for going out

- ✓ To nightclubs, bars and pubs

In Brazil, the most common method of going out to nightclubs, bars and pubs amongst students was by public transport (40.2%, compared with 13.5% in the UK). Amongst UK students, the most common method of going out was by cab (43.8%, compared with 22.6% in Brazil), followed by walking (39.1%, compared with 5.5% in Brazil) ( $\chi^2(4)=448.14, p<0.001$ ) (Figure 22).



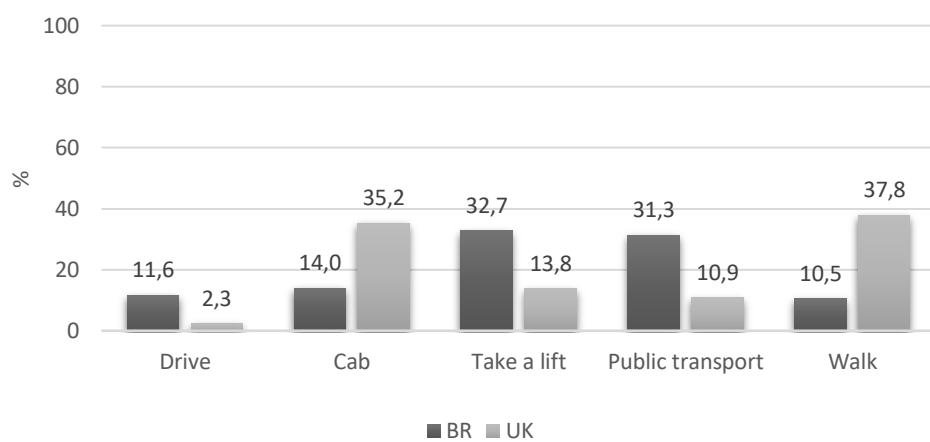
Note: limited to students who participated into nightclubs, bars and pubs

**Figure 22: Brazilian (N=1,105) and UK (N=422) students' type of transportation for going out to nightclubs, bars and pubs**



- ✓ To house parties

As for transportation to go out to house parties, in Brazil the most common method of going out was by taking lift (32.7%, compared to 13.8% in the UK). Amongst UK students the most common method of going out to house parties was walking (37.8%, compared to 10.5% in Brazil), followed by taking a cab (35.2%, compared with 14.0% in Brazil) ( $\chi^2(4)=264.08, p<0.001$ ) (Figure 23).



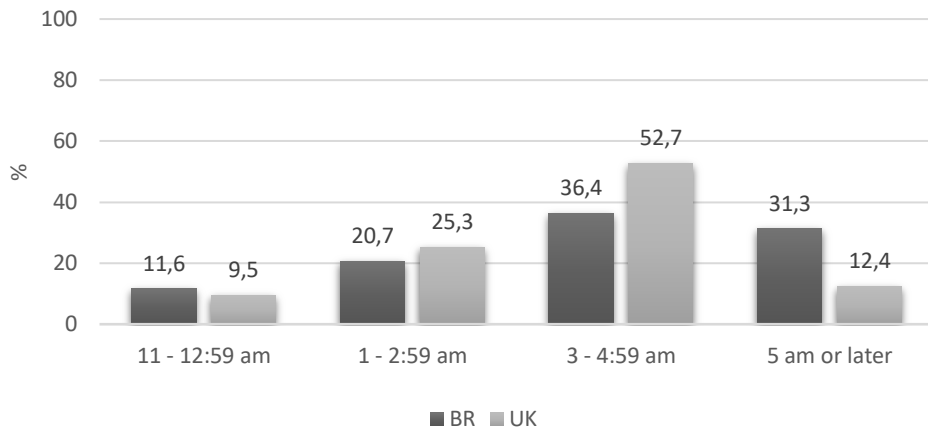
Note: limited to students who attended house parties

**Figure 23: Brazilian (N=952) and UK (N=349) students' type of transportation for going out to house parties**

c) Time that the night out ends

- ✓ After going to nightclubs, bars and pubs

Even though the most common time that students' night out ends in Brazil and the UK was between 3 – 4:59 am (BR: 36.4% UK: 52.7%), data show that in Brazil, 31.3% of the students end the night out 5 am or later, compared with 12.4% in the UK ( $\chi^2(3)=65.39, p<0.001$ ) (Figure 24).

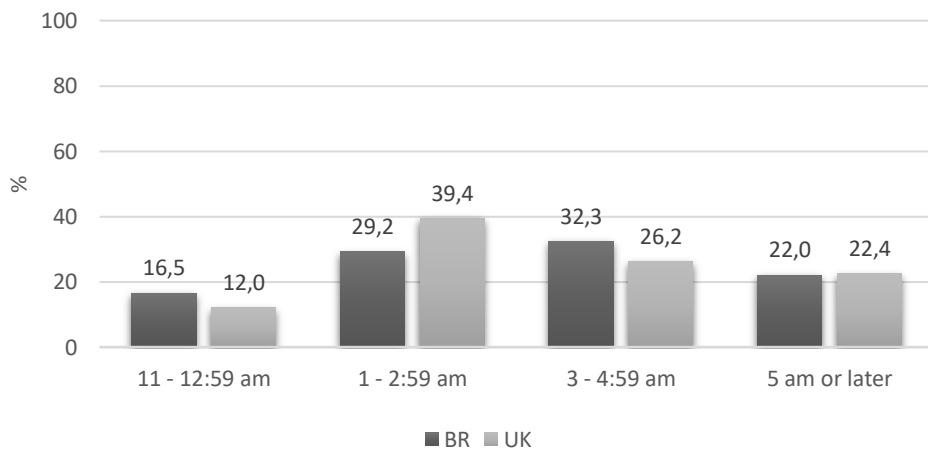


Note: limited to students who participated into nightclubs, bars and pubs

**Figure 24: Brazilian (N=1,088) and UK (N=419) students' time that night out ends after going to nightclubs, bars and pubs**

✓ After going to house parties

In Brazil the most common time that a night out ends after going to house parties was between 3 – 4:59 (32.3%, compared with 26.2% in the UK). Amongst UK students, the most common time that night out ends was between 1 – 2:59 am (39.4%, compared with 29.2% in Brazil) ( $\chi^2(3)=14.58, p=0.002$ ) (Figure 25).



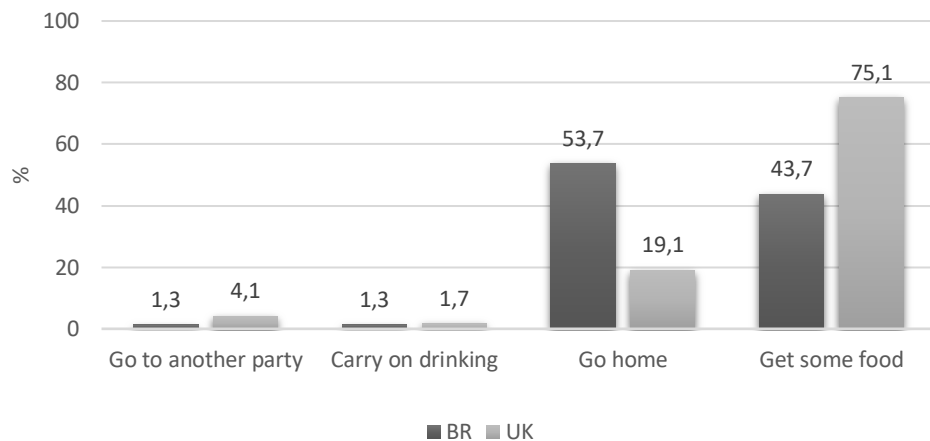
Note: limited to students who attended house parties

**Figure 25: Brazilian (N=926) and UK (N=343) students' time that night out ends after going to house parties**

d) After night out activity

✓ After going to nightclubs, bars and pubs

In Brazil, after attending nightclubs, bars and pubs the most common activity amongst Brazilian students was to go home (53.7%, compared with 19.1% in the UK). Amongst UK students, the most common activity after a night out was to get some food (75.1%, compared with 43.7% in Brazil) ( $\chi^2(3)=150.44, p<0.001$ ) (**Figure 26**).

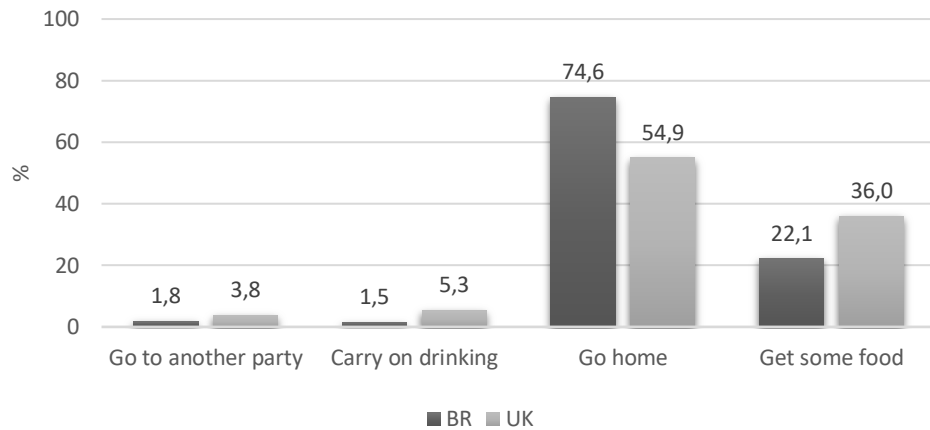


Note: limited to students who participated into nightclubs, bars and pubs

**Figure 26: Brazilian (N=1,093) and UK (N=418) students' night out after nightclubs, bars and pubs**

✓ After going to house parties

In Brazil, after going to house parties the most common activity after a night out was also to go home (74.6%, compared with 54.9% in the UK). Amongst UK students, the most common activity after a night out was also to get some food (36.0%, compared with 22.1% in Brazil) ( $\chi^2(3)=51.39, p<0.001$ ) (**Figure 27**).



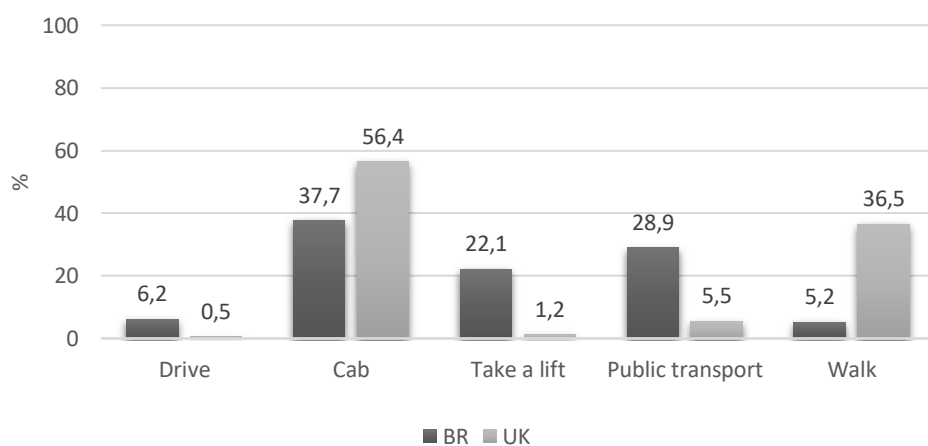
Note: limited to students who attended house parties

**Figure 27: Brazilian (N=934) and UK (N=339) students' night out after house parties**

e) Type of transportation used for going home

✓ After going to nightclubs, bars and pubs

The most common method of getting home amongst Brazilian students was to take a cab (37.7%, compared with 56.4% in the UK). Amongst UK students, the most common method of getting home was to walk (36.5%, compared with 5.2% in Brazil) ( $\chi^2(4)=419.82, p<0.001$ ) (Figure 28).



Note: limited to students who participated into nightclubs, bars and pubs

**Figure 28: Brazilian (N=1,105) and UK (N=422) students' type of transportation used for going home after going to nightclubs, bars and pubs**

- ✓ After going to house parties

Then most common method of getting home amongst Brazilian students was to get a lift (31.6%, compared with 6.9% in the UK). Amongst UK students, the most common method of getting home was to take a cab (55.9%, compared with 27.4% in Brazil), followed by walking (33.0%, compared with 10.3% in Brazil) ( $\chi^2(4)=277.06$ ,  $p<0.001$ ) (Figure 29).

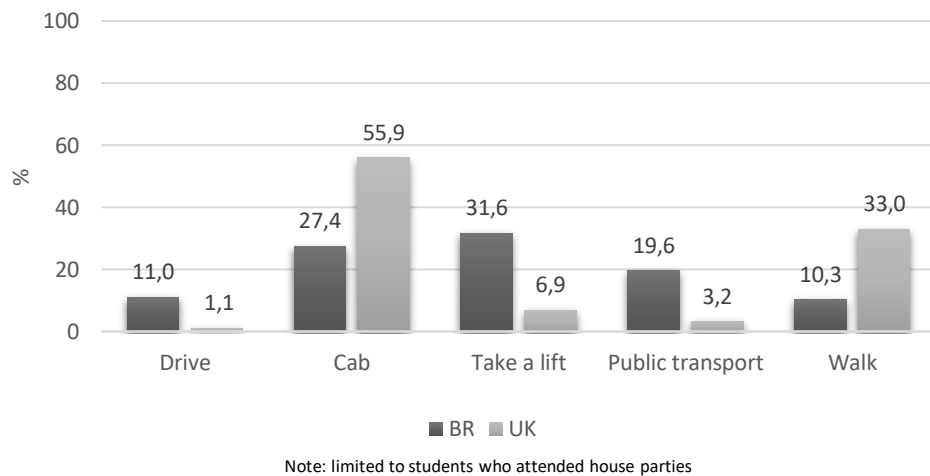
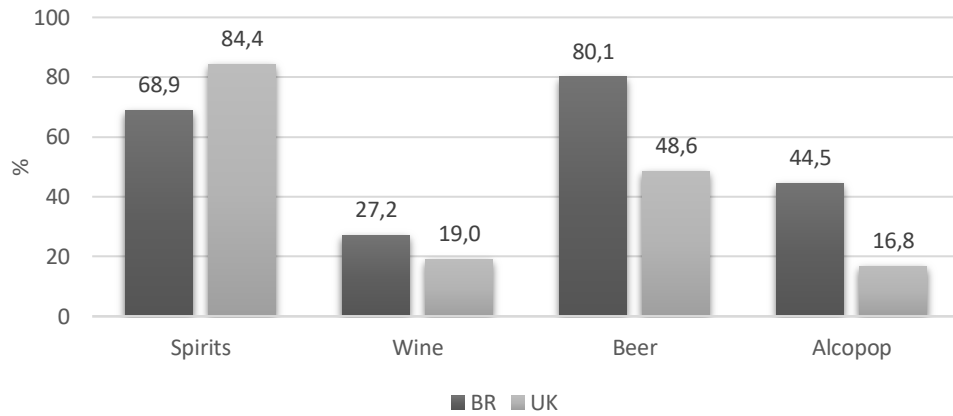


Figure 29: Brazilian (N=952) and UK (N=349) students' type of transportation used for going home after going to house parties

f) Type of alcohol consumed

- ✓ At nightclubs, bars and pubs

Of drinkers who reported going out to these settings, the types of alcohol consumed with the highest proportions in Brazil were beer (80.1%, compared with 48.6% in the UK;  $\chi^2(1)=148.44$ ,  $p<0.001$ ), spirits (68.9%, compared with 84.4% in the UK;  $\chi^2(1)=37.31$ ,  $p<0.001$ ), alcopops (44.5%, compared with 16.8% in the UK;  $\chi^2(1)=100.66$ ,  $p<0.001$ ) and wine (27.2%, compared with 19.0% in the UK;  $\chi^2(1)=11.18$ ,  $p=0.001$ ) (Figure 30).

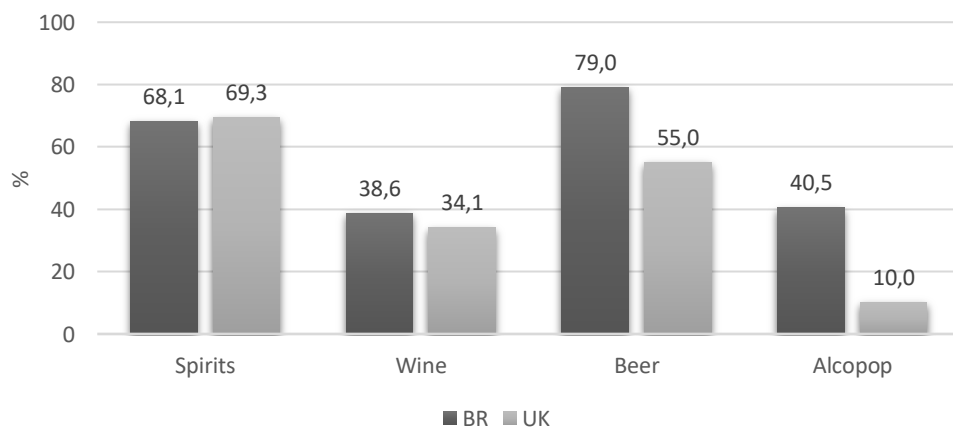


Note: limited to students who attended nightclubs, bars and pubs

**Figure 30: Brazilian (N=1,105) and UK (N=422) students' drinks consumed at nightclubs, bars/pubs**

✓ House parties

Of drinkers who reported going to house parties, no significant difference between the countries was observed in the consumption of spirits (BR: 68.1% UK: 69.3%;  $\chi^2(1)=0.19$ ,  $p=0.661$ ) and wine (BR: 38.6% UK: 34.1%;  $\chi^2(1)=2.16$ ,  $p=0.141$ ). The types of alcohol consumed at house parties with the highest proportions in Brazil were beer (79.0%, compared with 55.0% in the UK;  $\chi^2(1)=73.73$ ,  $p<0.001$ ), spirits (BR: 68.1% UK: 69.3%), alcopops (40.5%, compared with 10.0% in the UK;  $\chi^2(1)=108.66$ ,  $p<0.001$ ) and wine (BR: 38.6% UK: 34.1%) (**Figure 31**).



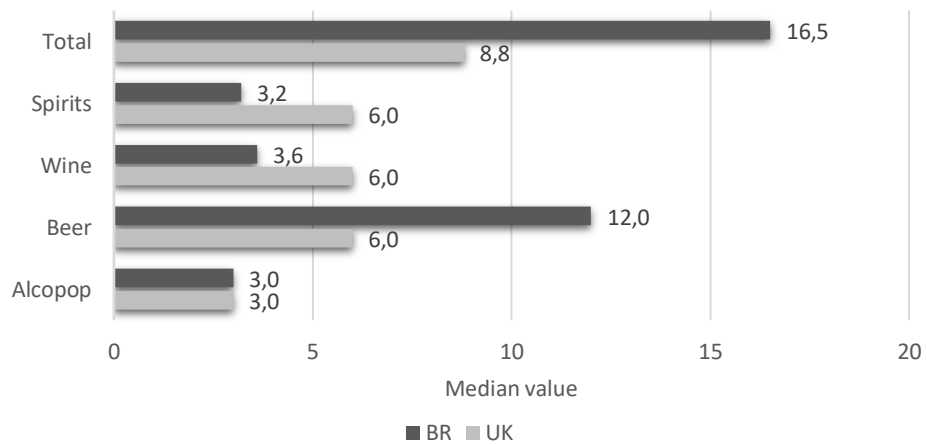
Note: limited to students who attended house parties

**Figure 31: Brazilian (N=952) and UK (N=349) students' drinks consumed at house parties**

g) Quantity of alcohol consumed

✓ At nightclubs, bars and pubs

Of drinkers who reported going out to nightclubs, bars and pubs, data show significant differences between the samples regarding the median number of units consumed whilst in such settings. Of total alcohol (those who drank spirits, wine, beer and alcopops), Brazilian students reported drinking 16.5 units compared with 8.8 in the UK ( $U=147020.0$ ,  $p<0.001$ ). Of those who drank only beer at nightclubs, bars and pubs, Brazilian students reported drinking 12.0 units of beer, compared with 6.0 units in the UK ( $U=57014.0$ ,  $p<0.001$ ). Of those who only drank spirits, Brazilian students reported drinking 3.2 units of spirits, compared with 6.0 units in the UK ( $U=108378.0$ ,  $p<0.001$ ). Of those who drank only wine there was no significant difference between the samples in the median number of units for wine (BR: 3.6 UK: 6.0;  $U=10797.0$ ,  $p=0.150$ ). And, of those who drank only alcopop there was also no significant difference between the samples in the median number of units (BR: 3.0 UK: 3.0;  $U=17407.5$ ,  $p=0.963$ ) (**Figure 32**).

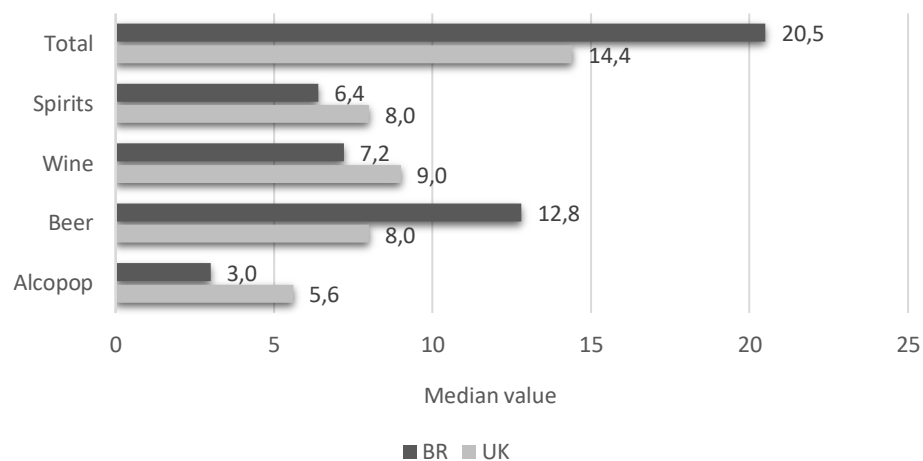


Note: limited to students who participated into nightclubs, bars and pubs

**Figure 32: Brazilian (N=1,088) and UK (N=418) students' alcohol consumption at nightclubs, bars and pubs**

✓ House parties

Of drinkers who reported going out to house parties, data show significant differences between the samples regarding the median number of units consumed whilst in such settings. Of total alcohol (those who drank spirits, wine, beer and alcopops), Brazilian students reported drinking 20.5 units compared with 14.4 units in the UK ( $U=127315.0$ ,  $p<0.001$ ). Of those who drank only wine at nightclubs, bars and pubs, Brazilian students reported drinking 7.2 units of wine, compared with 9.0 units in the UK ( $U=15552.0$ ,  $p<0.001$ ). Of those who drank only beer, Brazilian students reported drinking 12.8 units of beer, compared with 8.0 units in the UK ( $U=50949.0$ ,  $p<0.001$ ). Of those who drank only spirits, there was no significant difference in the median number of units for spirits (BR: 6.4 UK: 8.0;  $U=72342.0$ ,  $p=0.075$ ). And, of those who drank only alcopops, there was also no significant difference between the samples in the median number of units (BR: 3.0 UK: 5.6;  $U=5574.0$ ,  $p=0.080$ ) (Figure 33).



Note: limited to students who participated into house parties

Figure 33: Brazilian (N=936) and UK (N=341) students' alcohol consumption at house parties

#### 4.5.7 Factors associated with pre-drinking amongst student nightlife patrons

This section explores which factors influenced student decision making to pre-drink. Findings suggest that the differences in how nightlife environments work in Brazil and in the UK could be associated with students' decision to pre-drink.

##### Nightclubs, bars and pubs patrons



To explore which factors are associated with pre-drinking amongst students who go to nightclubs, bars and pubs, a logistic regression model was run using pre-drinking as the dependent variable. The following variables were analysed as independent variables: sociodemographic characteristics (age, gender, marital status, ethnicity and academic year) and students' behaviour within nightclubs, bars and pubs. Results from the regression analysis are shown on **Table 9**.

In Brazil, male students' nightclubs, bars/pubs goers (OR: 1.73, CI: 1.30 – 2.29;  $p < 0.001$ ) who reported going out between 9 pm and 12:59 am [9 – 10:59 pm (OR: 1.58, CI: 1.10 – 2.27,  $p = 0.012$ ) 11 pm – 12:59 (OR: 2.65, CI: 1.75 – 4.01,  $p < 0.001$ )] and those who reported ending the night out after 1 am [1 – 2:59 am (OR: 2.69, CI: 1.37 – 5.31,  $p = 0.004$ ); 3 – 4:59 am (OR: 6.53, CI: 3.39 – 12.59,  $p < 0.001$ ) after 5 am (OR: 9.20, CI: 4.71 – 17.95,  $p < 0.001$ )] had greater odds of practicing pre-drinking. In the UK, students who reported going out to nightclubs, bars and pub after 9 pm [9 – 10:59 pm (OR: 5.39, CI: 2.09 – 13.88,  $p < 0.001$ ); 11 pm – 12:59 am (OR: 13.99, CI: 4.37 – 44.79,  $p < 0.001$ ); 1 – 4:59 am (OR: 10.99, CI: 1.88 – 64.26,  $p = 0.008$ )] and those who reported ending the night out after 3 am [3 – 4:59 (OR: 5.49, CI: 1.71 – 17.62,  $p = 0.004$ ); after 5 am (OR: 7.16, CI: 1.04 – 49.13,  $p = 0.045$ )] had greater odds of practicing pre-drinking.

**Table 9: Factors associated with pre-drinking amongst Brazilian (N=1,105) and UK students' (N=422) nightclubs, bars and pubs goers**

Nightlife setting						
Nightclubs, bars and pubs						
	BRAZIL N=1,105			UK N=422		
	OR	CI 95%	<i>p</i> value	OR	CI 95%	<i>p</i> value
<b>Age (years)</b>						
18-21	1.15	0.77 – 1.71	0.494	2.38	0.69 – 8.22	0.168
22-25	0.99	0.68 – 1.45	0.980	1.73	0.69 – 4.33	0.238
26+ (ref)	1.00	-	-	1.00	-	-
<b>Gender</b>						
Male	1.73	1.30 – 2.29	<b>&lt;0.001</b>	1.38	0.60 – 3.15	0.445
Female (ref)	1.00	-	-	1.00	-	-
<b>Marital status</b>						
Single	1.23	0.93 – 1.64	0.142	0.48	0.21 – 1.07	0.076
In a relationship (ref)	1.00	-	-	1.00	-	-
<b>Ethnic group</b>						
White	1.12	0.83 – 1.51	0.449	1.78	0.59 – 5.32	0.300

(continue)

Nightlife setting						
Nightclubs, bars and pubs						
	BRAZIL N=1,105			UK N=422		
	OR	CI 95%	p value	OR	CI 95%	p value
Other (ref)	1.00	-	-	1.00	-	-
<b>Academic year</b>						
Undergraduate	0.89	0.56 – 1.42	0.645	2.33	0.91 – 5.94	0.076
Post-graduate (ref)	1.00	-	-	1.00	-	-
<b>Time for going out</b>						
Early 7 – 8:59 pm (ref)	1.00	-	-	1.00	-	-
9 – 10:59 pm	1.58	1.10 – 2.27	<b>0.012</b>	5.39	2.09 – 13.88	<b>&lt;0.001</b>
11 pm – 12:59 am	2.65	1.75 – 4.01	<b>&lt;0.001</b>	13.99	4.37 – 44.79	<b>&lt;0.001</b>
1 – 4:59 am	2.53	0.92 – 6.94	0.071	10.99	1.88 – 64.26	<b>0.008</b>
<b>Transport for going out</b>						
Drive	0.49	0.08 – 3.06	0.449	0.26	0.01 – 6.33	0.416
Cab	1.10	0.46 – 2.65	0.824	1.86	0.56 – 6.12	0.305
Take a lift	1.14	0.46 – 2.79	0.774	1.05	0.15 – 7.36	0.958
Public transport	0.88	0.37 – 2.10	0.780	0.89	0.23 – 3.44	0.875
Walk (ref)	1.00	-	-	1.00	-	-
<b>Time that night out ends</b>						
11 pm - 12:59 am (ref)	1.00	-	-	1.00	-	-
1 – 2:59 am	2.69	1.37 – 5.31	<b>0.004</b>	2.20	0.73 – 6.64	0.159
3 – 4:59 am	6.53	3.39 – 12.59	<b>&lt;0.001</b>	5.49	1.71 – 17.62	<b>0.004</b>
5 am or later	9.20	4.71 – 17.95	<b>&lt;0.001</b>	7.16	1.04 – 49.13	<b>0.045</b>
<b>Transport for going home</b>						
Drive	0.51	0.08 – 3.31	0.483	0.00	0.00 - .	0.999
Cab	0.83	0.35 – 1.94	0.668	2.30	0.70 – 7.48	0.165
Take a lift	0.53	0.21 – 1.31	0.172	0.50	0.04 – 5.44	0.575
Public transport	1.12	0.46 – 2.73	0.794	2.42	0.41 – 14.34	0.327
Walk (ref)	1.00	-	-	1.00	-	-

Note: reference for categories for each variable are identified with (ref). This analysis was limited to students who participated to nightclubs, bars and pubs.

### House party patrons

To explore and compare which factors are associated with pre-drinking amongst students who go to house parties, a logistic regression model was run using pre-drinking as the dependent variable. The following variables were analysed as independent variables: sociodemographic characteristics (age, gender, marital status, ethnicity and academic year) and students' behaviour within house parties. Results from the regression analysis are shown on **Table 10**.

In Brazil, single students' house parties' goers (OR: 1.34, CI: 1.00 – 1.80,  $p=0.049$ ) who reported going out 9 – 10:59 pm (OR: 1.51, CI: 1.10 – 2.08,  $p=0.010$ ) and those who reported ending the night after 1 am [1 – 2:59 am (OR: 2.22, CI: 1.37 – 3.57,  $p=0.001$ ); 3 – 4:59 am (OR: 4.25, CI: 2.62 – 6.88,  $p<0.001$ ) after 5 am (OR: 4.21, CI: 2.51 – 7.06,  $p<0.001$ )] had greater odds of practicing pre-drinking. In the UK, younger [aged 18 – 21 years (OR: 8.12, CI: 2.08 – 31.67,  $p=0.003$ ) and aged 22 – 25 years (OR: 4.69, CI: 1.62 – 13.61,  $p=0.004$ )] undergraduate students house parties' patrons (OR: 3.42, CI: 1.10 – 10.62,  $p=0.033$ ) who reported ending the night out after 1 am [1 – 2:59 am (OR: 3.78, CI: 1.27 – 11.22,  $p=0.017$ ); 3 – 4:59 am (OR: 10.46, CI: 2.56 – 42.76,  $p=0.001$ ) after 5 am (OR: 9.89, CI: 1.94 – 50.46,  $p=0.006$ )] and those who reported going home by cab (OR: 3.73, CI: 1.02 – 13.54,  $p=0.045$ ) had higher odds of practicing pre-drinking. It was also observed that students who reported going out to house parties by lift with friends had lower odds of practicing pre-drinking (OR 0.11 CI: 0.02 – 0.58,  $p=0.010$ ), compared with students who reported walking to it. Data also show that UK students who reported to end the night out at house parties after 1 am [1 – 2:59 am (OR: 3.78, CI: 1.27 – 11.22,  $p=0.017$ ); 3 – 4:59 am (OR: 10.46, CI: 2.56 – 42.76,  $p=0.001$ ) after 5 am (OR: 9.89, CI: 1.94 – 50.46,  $p=0.006$ )] and those who reported to go home by cab had higher chances to pre-drink (OR: 3.73, CI: 1.02 – 13.54,  $p=0.045$ ).

**Table 10: Factors associated with pre-drinking amongst Brazilian (N= 952) and UK students' (N= 349) house parties' goers**

	Nightlife setting					
	House parties					
	BRAZIL N=952			UK N=349		
	OR	CI 95%	<i>p</i> value	OR	CI 95%	<i>p</i> value
<b>Age (years)</b>						
18-21	1.05	0.70 – 1.59	0.797	8.12	2.08 – 31.67	<b>0.003</b>
22-25	0.94	0.64 – 1.38	0.765	4.69	1.62 – 13.61	<b>0.004</b>
26+ (ref)	1.00	-	-	1.00	-	-
<b>Gender</b>						
Male	1.33	0.99 – 1.77	0.052	1.26	0.51 – 3.11	0.616
Female (ref)	1.00	-	-	1.00	-	-
<b>Marital status</b>						
Single	1.34	1.00 – 1.80	<b>0.049</b>	0.47	0.19 – 1.14	0.097
In a relationship (ref)	1.00	-	-	1.00	-	-
<b>Ethnic group</b>						
White	1.15	0.84 – 1.57	0.360	0.70	0.18 – 2.67	0.603

(continue)

Nightlife setting						
	House parties					
	BRAZIL N=952			BRAZIL N=952		
	OR	CI 95%	p value	OR	CI 95%	p value
Other (ref)	1.00	-	-	1.00	-	-
<b>Academic year</b>						
Undergraduate	1.24	0.77 – 1.98	0.374	3.42	1.10 – 10.62	<b>0.033</b>
Post-graduate (ref)	1.00	-	-	1.00	-	-
<b>Time for going out</b>						
Early 7 – 8:59 pm (ref)	1.00	-	-	1.00	-	-
9 – 10:59 pm	1.51	1.10 – 2.08	0.010	1.56	0.57 – 4.21	0.378
11 pm – 12:59 am	0.97	0.58 – 1.61	0.919	0.51	0.10 – 2.49	0.407
1 – 4:59 am	0.55	0.14 – 2.07	0.381	0.43	0.06 – 2.72	0.371
<b>Transport for going out</b>						
Drive	0.63	0.15 – 2.50	0.513	0.48	0.03 – 6.64	0.590
Cab	0.69	0.30 – 1.56	0.375	0.59	0.14 – 2.40	0.462
Take a lift	0.76	0.37 – 1.59	0.480	0.11	0.02 – 0.58	<b>0.010</b>
Public transport	0.61	0.28 – 1.31	0.207	0.47	0.09 – 2.53	0.385
Walk (ref)	1.00	-	-	1.00	-	-
<b>Time that night out ends</b>						
11 pm - 12:59 am (ref)	1.00	-	-	1.00	-	-
1 – 2:59 am	2.22	1.37 – 3.57	<b>0.001</b>	3.78	1.27 – 11.22	<b>0.017</b>
3 – 4:59 am	4.25	2.62 – 6.88	<b>&lt;0.001</b>	10.46	2.56 – 42.76	<b>0.001</b>
5 am or later	4.21	2.51 – 7.06	<b>&lt;0.001</b>	9.89	1.94 – 50.46	<b>0.006</b>
<b>Transport for going home</b>						
Drive	0.75	0.18 – 3.08	0.693	0.03	0.00 – 1.72	0.093
Cab	1.23	0.57 – 2.62	0.593	3.73	1.02 – 13.54	<b>0.045</b>
Take a lift	0.71	0.34 – 1.49	0.373	1.87	0.31 – 11.18	0.490
Public transport	1.44	0.64 – 3.26	0.371	1.32	0.11 – 15.71	0.825
Walk (ref)	1.00	-	-	1.00	-	-

Note: reference for categories for each variable are identified with (ref). This analysis was limited to students who participated to house parties.

#### 4.5.8 Students' perceived levels of drunkenness

Social norms theory suggests that students commonly misperceive the amount of alcohol consumed by others, believing it to be higher than it actually is and subsequently alter their own drinking behaviour to match what they perceive to be normal (Perkins, 2002, Lewis and Neighbors, 2006, Neighbors et al., 2007a, Dumas et al., 2018, Dumas et al., 2019). Brazilian (National Drug Policy Secretary, 2010, Bedendo et al., 2017). UK studies (Davoren et al., 2016b, Davoren et al., 2016a) suggest binge drinking to be a common drinking pattern amongst university students. For instance, in the UK Gill (2002) found that university students had increased drinking levels than

non-university students and that drinking large amounts of alcohol is deeply rooted within the university culture and often considered part of university life.

This section explores student alcohol use and drunkenness. Using a scale of 1 (completely sober) to 10 (very drunk), students were asked about the perceived level of drunkenness that people reach during pre-drinking; during a night out and at the end of a night out. It is important to note that medians from drunkenness levels were very similar between Brazilian and UK students in all situations, whether during pre-drinking, during a night out or at the end of a night out (**Figure 34**).

✓ At nightclubs, bars and pubs

Data show significant differences regarding the median values for drunkenness levels during pre-drinking event [BR (N=505, median 5.0) UK (N=350, median 5.0);  $U=73829.5$ ;  $p<0.001$ ]<sup>32</sup>; during a night out [BR (N=1,151, median 8.0) UK (N=424, median 8.0);  $U=217685.5$ ;  $p=0.001$ ]<sup>33</sup>; and at the end of a night out [BR (N=1,105, median 6.0) UK (N=422, median 7.0);  $U=167839.5$ ;  $p<0.001$ ].

✓ At house parties

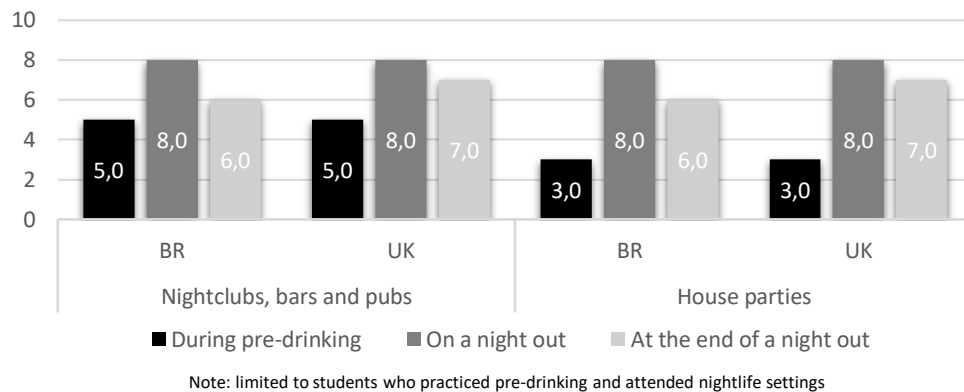
There was no significant difference between the samples for the median value for drunkenness levels during pre-drinking event [BR (N=458, median 3.0) UK (N=300, median 3.0);  $U=63744.0$   $p=0.089$ ]. Yet, significant differences were observed regarding the median values for drunkenness levels during a night out at house parties [BR (N=1,151, median 8.0) UK (N=424, median 8.0);  $U=195561.0$ ;  $p<0.001$ ]<sup>34</sup> and at the end of the night out [BR (N=952, median 6.0) UK (N=349, median 7.0);  $U=132205.0$ ;  $p<0.001$ ].

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<sup>32</sup> The Brazilian and the UK data represent a bell-shaped distribution, however the modal value for drunk in Brazil is “5”, compared to UK where the modal value is “6” (see APPENDIX H.2).

<sup>33</sup> The Brazilian data shows double-peaked distribution, with modal value “8” and “10” for drunk in Brazil (compared to UK data which presents a stronger skew to the left with modal value “8” for drunk) (see APPENDIX H.3).

<sup>34</sup> The Brazilian and the UK distribution show a stronger skew to the left, however the modal value for drunk in Brazil is “10”, compared to UK where the modal value is “8” (see APPENDIX H.4).



**Figure 34: Brazilian and UK students' median score for perceived drunkenness levels within nightlife settings**

#### 4.5.9 Students' attitudes towards alcohol policies

This section explores students' perceptions of alcohol policy and its perceived impact on their drinking behaviour.

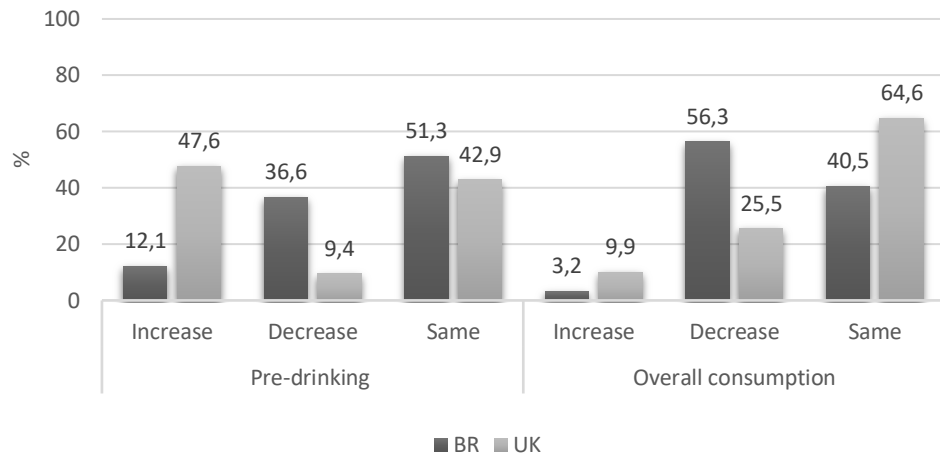
Changes in alcohol price (e.g., increasing alcohol drinks)

##### a) In on-licensed premises

In Brazil, pre-drinking levels were perceived to increase by 12.1% of the students (compared with 47.6% in the UK) ( $\chi^2(2)=263.49, p<0.001$ ) if alcohol prices increased in on-licensed premises (see Box 2). Overall alcohol consumption was perceived to decrease by 56.3% of the students (compared with 25.5% in the UK) ( $\chi^2(2)=127.42, p<0.001$ ) (Figure 35).

#### Box 2: Unregulated market

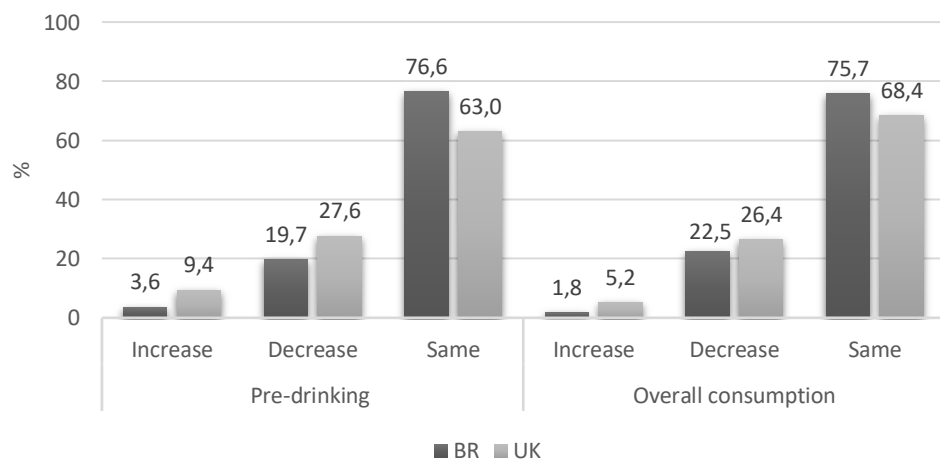
Unlike the UK scenario, in Brazil the alcohol market is not regulated and prices are relatively low. Plus, there is no distinction between drinking premises (e.g., in and off-licensed).



**Figure 35: Brazilian (N= 1,151) and UK (N=424) students' alcohol policy perception: increasing alcohol price in on-licensed premises**

b) In off-licensed premises

Even though pre-drinking and overall alcohol consumption levels were perceived to remain the same by a greater proportion of the students from both countries if off-licensed premises increased alcohol prices (BR: 76.6% UK: 63.0% and BR: 75.7% UK: 68.4%, respectively), data show that in Brazil pre-drinking levels were perceived to decrease by 19.7% of the students (compared with 27.6% in the UK) ( $\chi^2(2)=36.63, p<0.001$ ). Students' overall alcohol consumption was perceived to decrease by 22.5% of the Brazilian students (compared with 26.4% in the UK) ( $\chi^2(2)=17.08, p<0.001$ ) (Figure 36).



**Figure 36: Brazilian (N= 1,151) and UK (N=424) students' alcohol policy perception: increasing alcohol price in off-licensed premises**

## Changes in alcohol sales in off-licensed premises

### a) To designated time

Even though pre-drinking and overall alcohol consumption levels were perceived to remain the same by a greater proportion of the students from both countries if alcohol sales in off-licensed premises were restricted to a designated time (see Box 3) (BR: 78.4% UK: 80.0% and BR: 78.5% UK: 81.8%, respectively), data show that in Brazil pre-drinking levels were perceived to decrease by 18.6% of the students (compared with 12.3% in the UK) ( $\chi^2(2)=23.58$ ,  $p<0.001$ ). Students' overall alcohol consumption was perceived to decrease by 20.1% of the Brazilian students (compared with 14.2% in the UK) ( $\chi^2(2)=16.44$ ,  $p<0.001$ ) (Figure 37).

#### Box 3: UK extended licensing hours for alcohol sales

A change occurred in the UK Act 2003 and on and off-licensed premises can now apply for 24-hour licensing (Nicholls et al., 2015). In Brazil there is no such regulation.

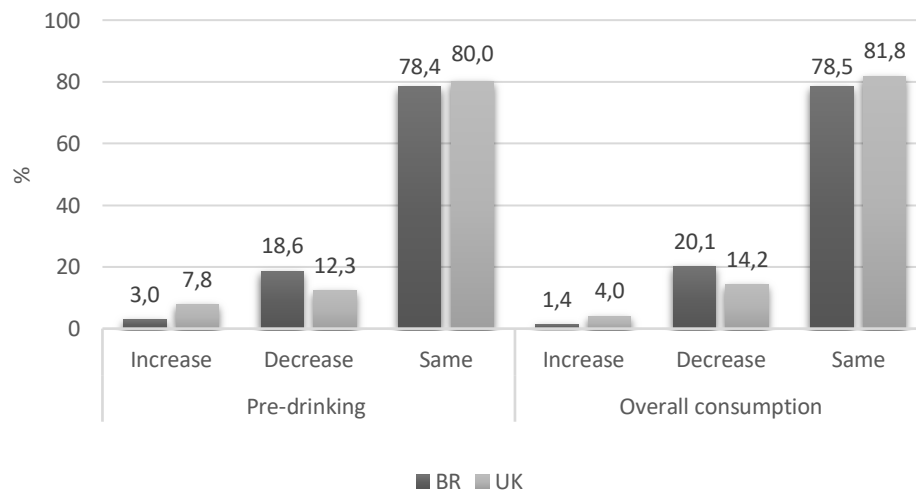
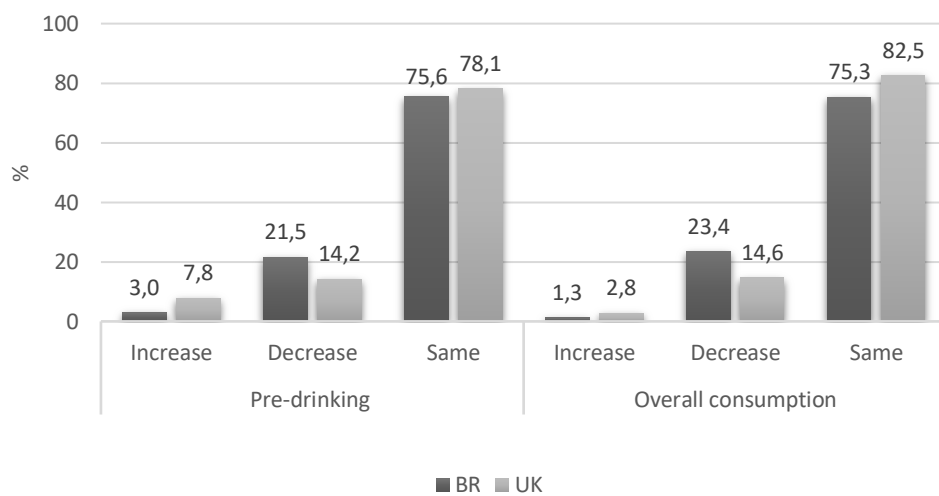


Figure 37: Brazilian (N= 1,151) and UK (N=424) students' alcohol policy perception: changing alcohol sales in off-licensed premises to designated time

### b) To designated area (e.g., to specific areas or neighbourhoods in the city)



Though pre-drinking and overall alcohol consumption levels were perceived to remain the same by a greater proportion of the students from both countries if alcohol sales in off-licensed premises would be restrict to specific areas in the city (BR: 75.6% UK: 78.1% and BR: 75.3% UK: 82.5%, respectively), in Brazil pre-drinking levels were perceived to decrease by 21.5% of the students (compared with 14.2% in the UK) ( $\chi^2(2)=25.72, p<0.001$ ). Students' overall alcohol consumption was perceived to decrease by 23.4% of the Brazilian students (compared with 14.6% in the UK) ( $\chi^2(2)=17.59, p<0.001$ ) (Figure 38).



**Figure 38: Brazilian (N= 1,151) and UK (N=424) students' alcohol policy perception: changing alcohol sales in off-licensed premises to designated areas**

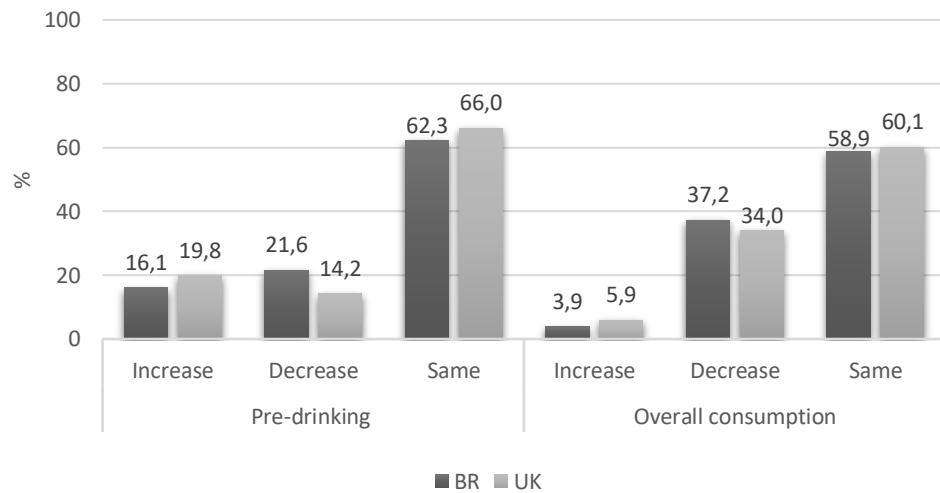
#### Changes within nightlife settings

##### a) Closing time by 2 am<sup>35</sup>

Even though pre-drinking levels were perceived to remain the same by a greater proportion of the students from both countries if nightlife settings closed their establishments by 2 am (BR: 62.3% UK: 66.0), in Brazil pre-drinking levels were perceived to decrease by 21.6% of the students (compared with 14.2% in the UK) ( $\chi^2$

<sup>35</sup> Most of the nightlife settings within both countries are open until later in the night or early morning (e.g., 3 am - 7 am).

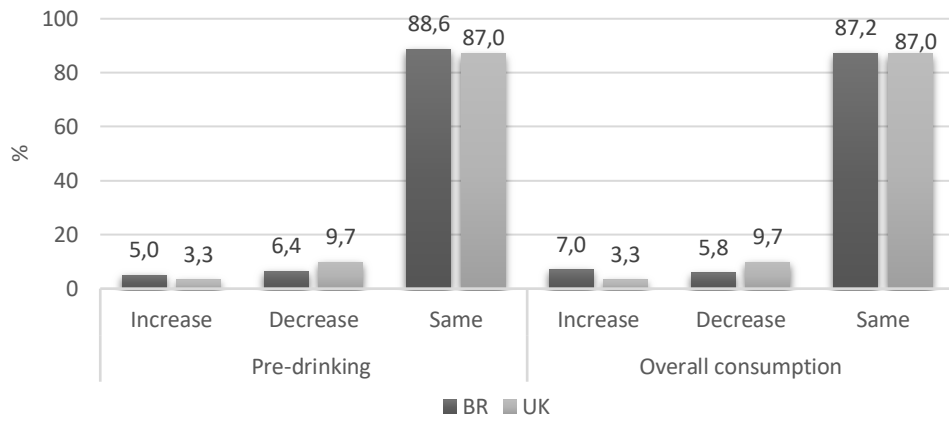
(2)=12.06,  $p=0.002$ ). As for students' overall alcohol consumption, there was no significant difference between the two samples ( $X^2(2)=3.71, p=0.156$ ) (Figure 39).



**Figure 39: Brazilian (N= 1,151) and UK (N=424) students' alcohol policy perception: closing nightlife venues by 2 am**

b) Increasing bouncers' numbers

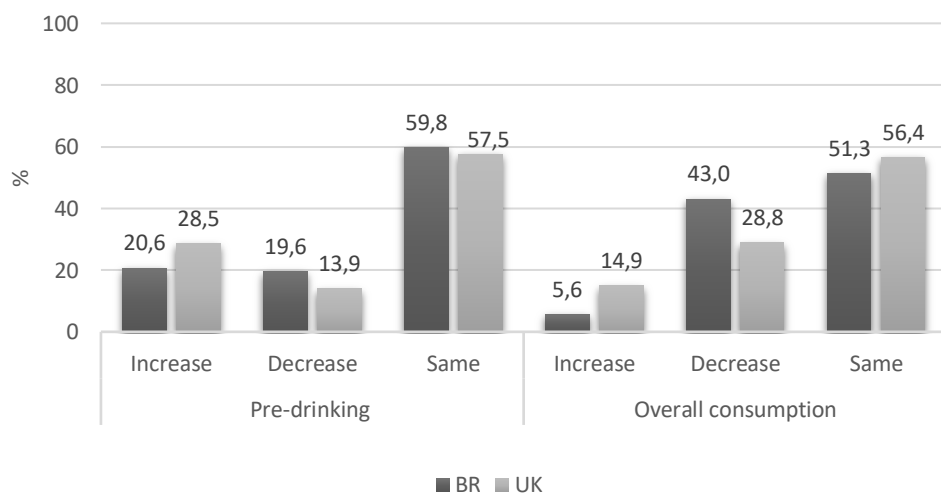
Even though pre-drinking and overall alcohol consumption levels were perceived to remain the same by a greater proportion of the students from both countries if nightlife settings increased their door supervisor numbers (BR: 88.6% UK: 87.0% and BR: 87.2% UK: 87.0%, respectively), in Brazil pre-drinking levels were perceived to decrease by 6.4% of the students (compared with 9.7% in the UK) ( $X^2(2)=6.41, p=0.040$ ). Students' overall alcohol consumption was perceived to decrease by 5.8% of the Brazilian students (compared with 9.7% in the UK) ( $X^2(2)=13.60, p=0.001$ ) (Figure 40).



**Figure 40: Brazilian (N= 1,151) and UK (N=424) students' alcohol policy perception: increasing bouncers' numbers**

c) Prohibiting alcohol discounts (e.g., 2 for 1)

Even though pre-drinking levels were perceived to remain the same by a greater proportion of the students from both countries if nightlife settings were prohibited from offering alcohol discounts (e.g., 2 for 1 or open bar parties) (BR: 59.8% UK: 57.5%), in Brazil pre-drinking levels were perceived to decrease by 19.6% of the students (compared with 13.9% in UK) ( $\chi^2 (2)=14.47, p=0.001$ ). Student's overall alcohol consumption was perceived to decrease by 43.0% of the Brazilian students (compared with 28.8% in the UK) ( $\chi^2 (2)=49.85, p<0.001$ ) (**Figure 41**).



**Figure 41: Brazilian (N= 1,151) and UK (N=424) students' alcohol policy perception: prohibiting alcohol discounts within nightlife settings**

## Changes in serving service within nightlife settings

### a) Not serving alcohol to drunk people

Even though pre-drinking and overall alcohol consumption levels were perceived to remain the same by a greater proportion of the students from both countries if nightlife settings were prohibited to serve alcohol to drunk people (see Box 4) (BR: 62.7% UK: 73.1 and BR: 55.1% UK: 69.1%, respectively), in Brazil pre-drinking levels were perceived to decrease by 22.4% of the students (compared with 17.0% in the UK) ( $\chi^2 (2)=15.08, p=0.001$ ). Students' overall alcohol consumption was perceived to decrease by 41.6% of the Brazilian students (compared with 27.1% in the UK) ( $\chi^2 (2)=27.80, p<0.001$ ) (Figure 42).

#### Box 4: Legislation on alcohol sales to drunk people

In Brazil, there is no legislation prohibiting alcohol sales to drunk people whilst in the UK it is illegal (under Section 141 of Licensing Act 2003) (Her Majesty's Stationery Office, 2003) even though studies show that many nightlife patrons are not aware of this law and it is often not enforced (Hughes et al., 2014). Recent work in Liverpool has aimed to increase awareness and compliance with the law (Quigg et al., 2018).

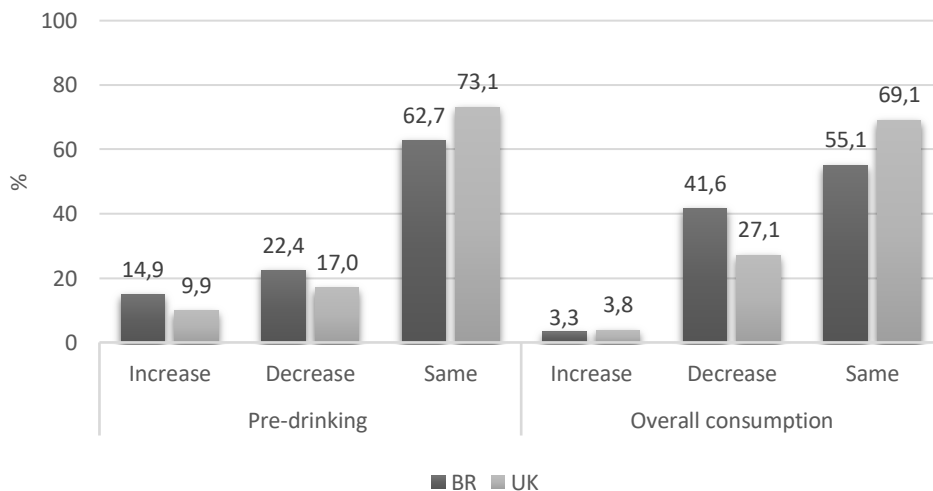
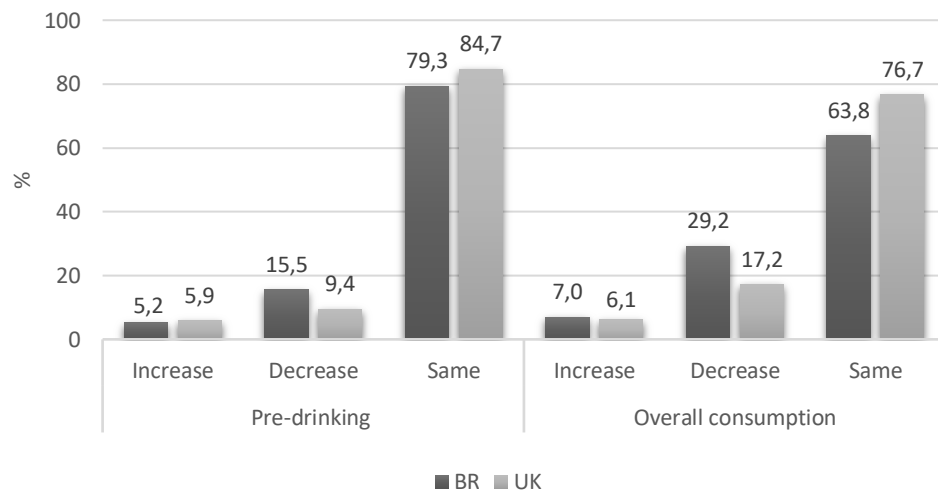


Figure 42: Brazilian (N= 1,151) and UK (N=424) students' alcohol policy perception: not serving alcohol to drunk people

## b) Offering cheaper soft drinks options

Though pre-drinking and overall alcohol consumption levels were perceived to remain the same by a greater proportion of the students from both countries if nightlife settings offered cheaper soft drinks options (BR: 79.3% UK: 84.7% and BR: 63.8% UK: 76.7%, respectively), in Brazil pre-drinking levels were perceived to decrease by 15.5% of the students (compared with 9.4% in the UK) ( $X^2(2)=9.50, p=0.009$ ). Students' overall alcohol consumption was perceived to decrease by 29.2% of the Brazilian students (compared with 17.2% in the UK) ( $X^2(2)=25.13, p<0.001$ ) (**Figure 43**).

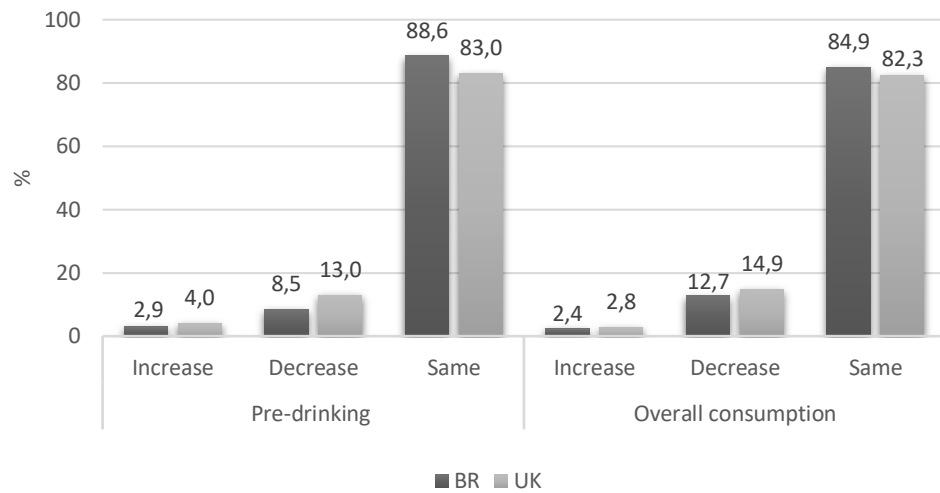


**Figure 43: Brazilian (N= 1,151) and UK (N=424) students' alcohol policy perception: offering cheaper soft drinks within nightlife settings**

## Changes in alcohol marketing and advertising

### a) Alcohol products' labelling more legible with its nutrition and content

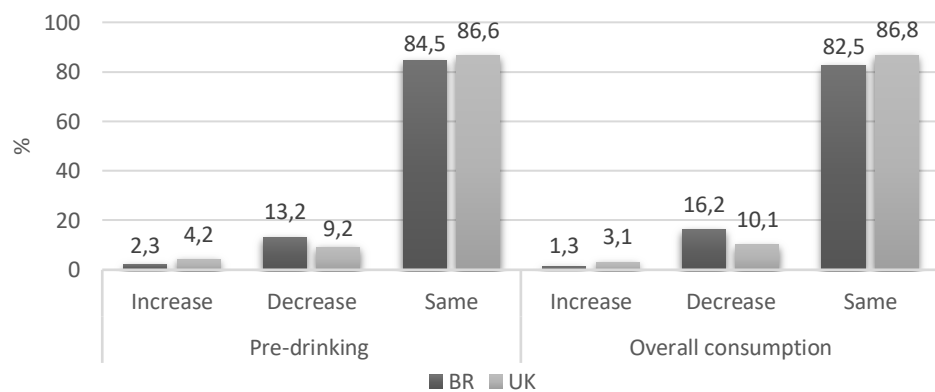
Even though pre-drinking levels were perceived to remain the same by a greater proportion of the students from both countries if alcoholic drinks labels were more legible with its content (BR: 88.6% UK: 83.0), in Brazil pre-drinking levels were perceived to decrease by 8.5% of the students (compared with 13.0% in the UK) ( $X^2(2)=8.72, p=0.013$ ). As for students' overall alcohol consumption, there was no significant difference between the two samples ( $X^2(2)=1.54, p=0.463$ ) (**Figure 44**).



**Figure 44: Brazilian (N= 1,151) and UK (N=424) students' alcohol policy perception: alcohol products' labels more legible**

b) Prohibiting all alcohol promotions and advertising

Even though pre-drinking and overall alcohol consumption levels were perceived to remain the same by a greater proportion of the students from both countries if there was a ban on alcohol promotions and advertisings (BR: 84.5% UK: 86.6% and BR: 82.5% UK: 86.8%, respectively), in Brazil pre-drinking levels were perceived to decrease by 13.2% of students (compared with 9.2% in the UK) ( $\chi^2(2)=8.62, p=0.013$ ). Students' overall alcohol consumption was perceived to decrease by 16.2% of the Brazilian students (compared with 10.1% in the UK) ( $\chi^2(2)=13.80, p=0.001$ ) (Figure 45).

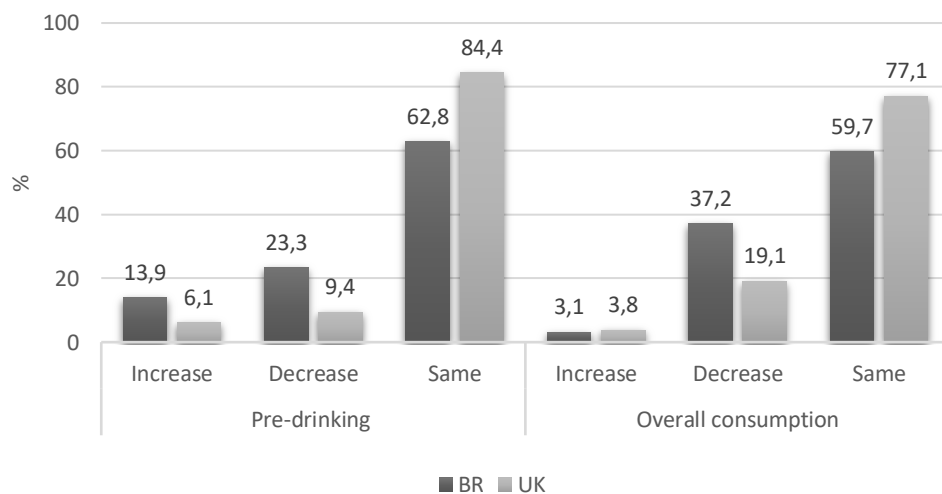


**Figure 45: Brazilian (N= 1,151) and UK (N=424) students' alcohol policy perception: prohibiting all alcohol promotions and advertising**

## Local authorities' policy implementation

### a) Ban on alcohol sales to drunk people

Even though pre-drinking and overall alcohol consumption levels were perceived to remain the same by a greater proportion of the students from both countries if there was an active ban on alcohol sales to drunk people in on and off-licensed premises (BR: 62.8% UK: 84.4% and BR: 59.7% UK: 77.1%, respectively), in Brazil pre-drinking levels were perceived to decrease by 23.3% of the students (compared with 9.4% in the UK) ( $\chi^2(2)=67.33, p<0.001$ ). Students' overall alcohol consumption was perceived to decrease by 37.2% of the Brazilian students (compared with 19.1% in the UK) ( $\chi^2(2)=46.36, p<0.001$ ) (Figure 46).



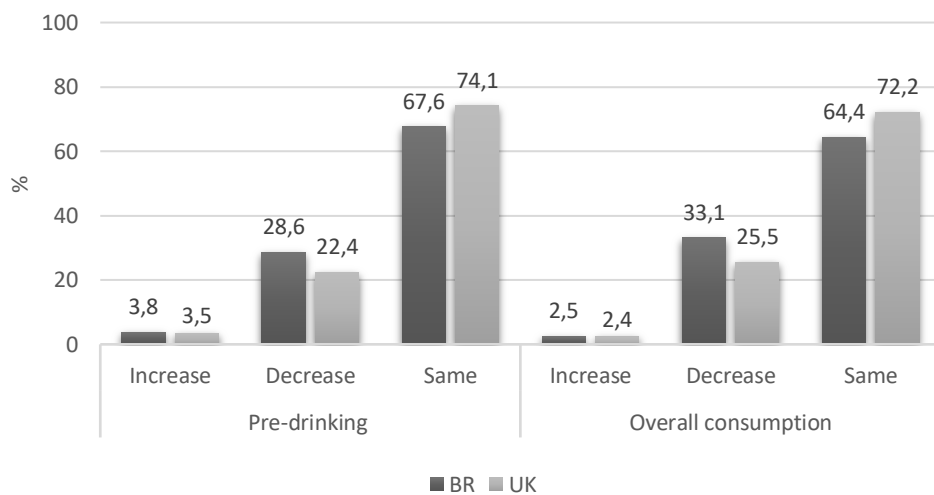
**Figure 46: Brazilian (N= 1,151) and UK (N=424) students' alcohol policy perception: active enforcement of ban on sales to drunk people in *on* and *off-licensed* premises**

### b) Penalisation of drunk and disorderly people within public spaces

Even though pre-drinking and overall alcohol consumption levels were perceived to remain the same by a greater proportion of the students from both countries if drunken and disorderly people within public spaces were actively penalised by local authorities for their behaviour (see Box 5) (BR: 67.6% UK: 74.1% and BR: 64.4% UK: 72.2%, respectively), in Brazil pre-drinking levels were perceived to decrease by 28.6% of the students (compared with 22.4% in the UK) ( $\chi^2(2)=6.32, p=0.042$ ). Students' overall alcohol consumption was perceived to decrease by 33.1% of the Brazilian students (compared with 25.5% in the UK) ( $\chi^2(2)=8.67, p=0.013$ ) (Figure 47).

**Box 5: Drunk and disorderly behaviour legislation**

In Brazil, there is no legislation on drunk and disorderly behaviour within public spaces, whilst in the UK it is considered an offence for example, for a drunk or disorderly person, without reasonable excuse, to fail to leave licensed premises following request to do so, or even enter or attempt to enter at such premises after being told not to do so (Section 143 of Licensing act 2003) (Her Majesty's Stationery Office, 2003).



**Figure 47: Brazilian (N= 1,151) and UK (N=424) students' alcohol policy perception: penalising drunken and disorderly people within public spaces**

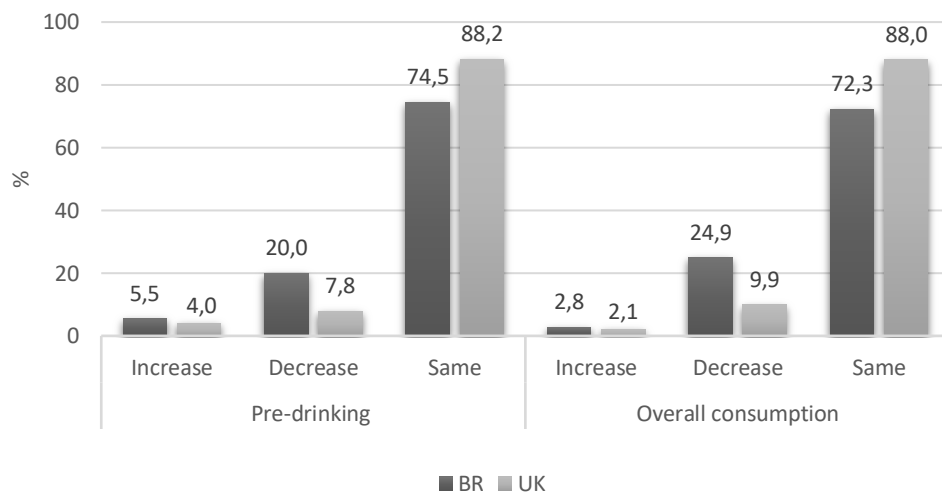
c) Creating alcohol-free public spaces



Even though pre-drinking and overall alcohol consumption levels were perceived to remain the same by a greater proportion of the students from both countries if local authorities created alcohol-free public spaces (see Box 6) (BR: 74.5% UK: 88.2% and BR: 72.3% UK: 88.0%, respectively), in Brazil pre-drinking levels were perceived to decrease by 20.0% of the students (compared with 7.8% in the UK) ( $\chi^2(2)=36.32, p<0.001$ ). Students' overall alcohol consumption was perceived to decrease by 24.9% of the Brazilian students (compared with 9.9% in the UK) ( $\chi^2(2)=43.98, p<0.001$ ) (**Figure 48**).

**Box 6: Alcohol-free public spaces**

In Brazil there is no control for drinking in public spaces, such as streets, parks and beaches. In the UK only people aged over 18 years are allowed to, except within certain designated areas (Her Majesty's Stationery Office, 2014).



**Figure 48: Brazilian (N= 1,151) and UK (N=424) students' alcohol policy perception: creating of alcohol-free public spaces**

d) Implementing higher alcohol-driving limits to prevent alcohol-related accidents

Even though pre-drinking and overall alcohol consumption levels were perceived to remain the same by a greater proportion of the students from both countries if local authorities increased higher BAC levels tolerance (see Box 7) (BR: 83.7% UK: 89.2% and BR: 80.4% UK: 90.1, respectively), in Brazil pre-drinking levels were perceived to decrease by 9.8% of the students (compared with 7.5% in the UK) ( $\chi^2 (2)=8.49, p=0.014$ ). Students' overall alcohol consumption was perceived to decrease by 11.6% of the Brazilian students (compared with 8.3% in the UK) ( $\chi^2 (2)=26.87, p<0.001$ ) (Figure 50).

**Box 7: Brazilian and UK drink-driving regulation**

BRAZIL	UK
<ul style="list-style-type: none"> <li>• BAC level of tolerance: 0.0</li> <li>• BrAC level of tolerance: 0.05 mg/L</li> <li>• Administrative offence:               <ul style="list-style-type: none"> <li>- BAC above 0.0</li> <li>- BrAC 0.05 - 0.33 mg/L</li> </ul> </li> <li>• Criminal offence:               <ul style="list-style-type: none"> <li>- BAC above 0.6 g/L</li> <li>- BrAC above 0.34 mg/L</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>• BAC level of tolerance: 0.08 g/L</li> <li>• BrAC level of tolerance: 0.35 mg/L</li> <li>• Administrative and criminal offence               <ul style="list-style-type: none"> <li>- BAC above 0.08 g/L</li> <li>- BrAC above 0.35 mg/L</li> </ul> </li> </ul>

Figure 49: Overview of Brazilian and UK drink-driving regulation

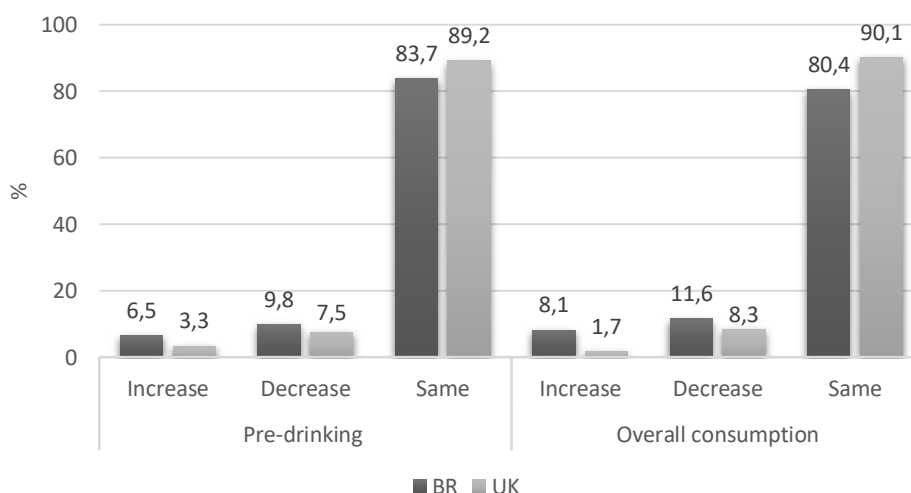
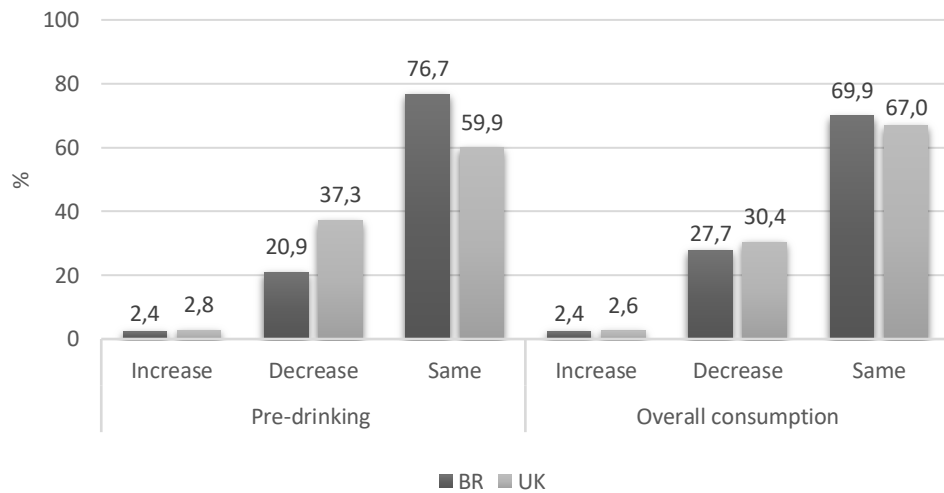


Figure 50: Brazilian (N= 1,151) and UK (N=424) students' alcohol policy perception: implementing higher driver limits

e) Breath tests within nightlife settings

Even though pre-drinking levels were perceived to remain the same by a greater proportion of the students from both countries if random breath tests were conducted at nightclubs, bars and pubs (BR: 76.7% UK: 59.9%), in Brazil pre-drinking levels were perceived to decrease by 20.9% of the students (compared with 37.3% in

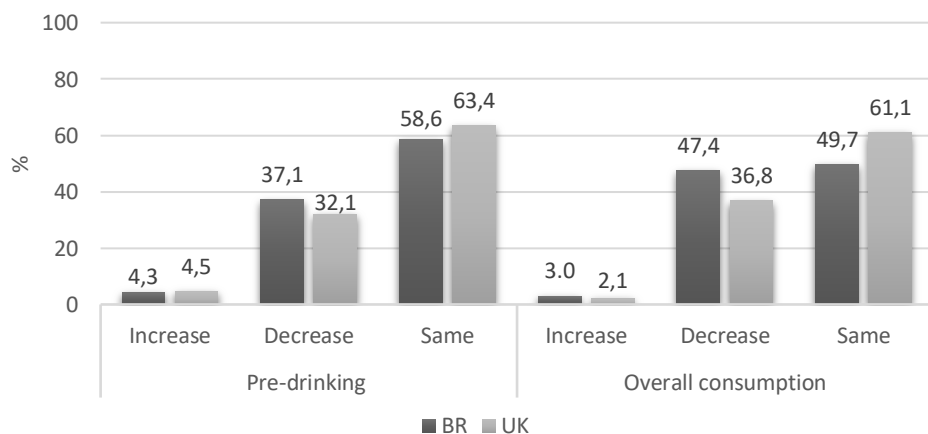
the UK ( $\chi^2 (2)=45.35, p<0.001$ ). As for students' overall alcohol consumption, there was no significant difference between the two samples ( $\chi^2 (2)=1.20, p=0.548$ ) (**Figure 51**).



**Figure 51: Brazilian (N= 1,151) and UK (N=424) students' alcohol policy perception: conducting random breath tests at nightclubs, bars and pubs entrance**

f) Free entrance to venues for people that are not drinking

Although there was no significant difference between the two samples regarding students' pre-drinking levels if theatres or concerts provided free entrance for patrons that were not drinking ( $\chi^2 (2)=3.41, p=0.181$ ), data show that in Brazil overall alcohol consumption was perceived to decrease by 47.4% of the students (compared with 36.8% in the UK) ( $\chi^2 (2)=16.16, p<0.001$ ) (**Figure 52**).



**Figure 52: Brazilian (N= 1,151) and UK (N=424) students' alcohol policy perception: offering free entrance to theatres or concerts for people that are not drinking**

#### 4.5.10 *Students' nightlife alcohol-related harms*

Findings from the latest WHO report suggest alcohol is an important contributor to the global burden of disease and a significant precursor to injury and violence (World Health Organization, 2018). In this section, Brazilian and UK students were compared regarding experiencing any kind of alcohol related harms in the last 12 months after attending nightlife settings - nightclubs, bars/pubs (**Table 11**) and house parties (**Table 12**).

##### After going to nightclubs, bars and pubs

Although there was no significant difference between the two samples regarding experiencing road traffic accidents in the past 12 months after going to nightclubs, bars and pubs ( $\chi^2 (1)=0.08, p=0.773$ ), in Brazil 6.2% of the students reported experiencing physical violence, compared with 15.2% in the UK ( $\chi^2 (1)=31.40, p<0.001$ ). In the past 12 months, after going to nightclubs, bars and pubs in Brazil, 17.6% of the students reported experiencing sexual harassment (compared with 22.7% in the UK) ( $\chi^2 (1)=5.15, p=0.023$ ), and 15.2% reported practicing unprotected sex (compared with 20.4% in the UK) ( $\chi^2 (1)=5.89, p=0.015$ ). There was no significant difference between the two samples regarding students regretting decisions to engage in sexual activity after going to nightclubs, bars and pubs in Brazil and the UK ( $\chi^2 (1)=3.34, p=0.068$ ).

In the past 12 months, in Brazil 41.1% of the students reported experiencing blackouts, vomiting or coma after going to nightclubs, bars and pubs, compared with 52.8% in the UK ( $\chi^2 (1)=16.31, p<0.001$ ). Although there was no significant difference between the two samples regarding students falling asleep somewhere inappropriate in the past 12 months after going to nightclubs, bars and pubs ( $\chi^2 (1)=0.12, p=0.724$ ), 32.6% of the Brazilian students reported waking up feeling embarrassed about things done on the night before (compared with 47.4% in the UK) ( $\chi^2 (1)=28.85, p<0.001$ ). It was also observed that 1.9% of the Brazilian students reported being refused entry to

another nightlife venue after going to nightclubs, bars and pubs (compared with 16.8% in the UK) ( $\chi^2(1)=120.13, p<0.001$ ). Moreover, in Brazil 13.6% of the students reported spoiling someone's night out for being too drunk, compared with 19.2% in the UK ( $\chi^2(1)=7.51, p=0.006$ ).

Although there was no significant difference between the two samples regarding students missing exams because of drinking in the past 12 months after going to nightclubs, bars and pubs ( $\chi^2(1)=1.08, p=0.298$ ), in Brazil 15.8% of the students reported failing to attend at university (compared with 42.2% in the UK) ( $\chi^2(1)=119.23, p<0.001$ ) and 4.5% reported missing work because of drinking after going to nightclubs, bars and pubs (compared with 8.3% in the UK) ( $\chi^2(1)=8.25, p=0.004$ ).

**Table 11: Brazilian (N=1,105) and UK (N=422) students' past 12 months alcohol-related harms after experiences after attending nightclubs, bars and pubs**

	Nightlife setting				p value
	Nightclubs, bars and pubs				
	BRAZIL N=1,105		UK N=422		
	N	%	N	%	
Experienced any kind of road traffic accident	36	3.3	15	3.6	0.773
Experienced any kind of physical violence	68	6.2	64	15.2	<0.001
Experienced any kind of sexual harassment	195	17.6	96	22.7	0.023
Had unprotected sex	168	15.2	86	20.4	0.015
Regretted a decision to engage in sexual activity	106	9.6	54	12.8	0.068
Experienced blackouts, vomiting or coma	457	41.4	223	52.8	<0.001
Fallen asleep somewhere inappropriate	152	13.8	61	14.5	0.724
Woke up feeling embarrassed	360	32.6	200	47.4	<0.001
Were refused entry to a nightclub, bar or pub	21	1.9	71	16.8	<0.001
Spoiled someone's night out for being too drunk	150	13.6	81	19.2	0.006
Failed to attend at university	175	15.8	178	42.2	<0.001
Missed exams because of drinking	25	2.3	6	1.4	0.298
Missed work because of drinking	50	4.5	35	8.3	0.004

### After house parties

Although there was no significant difference between the two samples regarding experiencing physical violence in the past 12 months after going to house parties ( $\chi^2(1)=0.61, p=0.435$ ), in Brazil 2.0% of the students reported experiencing road

traffic accidents after going to house parties, compared with 0.3% in the UK ( $\chi^2(1)=4.92, p=0.026$ ).

In the past 12 months, after going to house parties in Brazil 6.6% of the students reported experiencing sexual harassment (compared with 3.7% in the UK) ( $\chi^2(1)=3.88, p=0.049$ ), and 15.7% reported practicing unprotected sex after going to house parties (compared with 8.3% in the UK) ( $\chi^2(1)=11.65, p=0.001$ ). There was no significant difference between the two samples regarding students regretting decisions to engage in sexual activity after going to house parties in Brazil and the UK ( $\chi^2(1)=3.41, p=0.065$ ).

In the past 12 months, in Brazil, 36.0% of the students reported experiencing blackouts, vomiting or coma after going to house parties, compared with 27.2% in the UK ( $\chi^2(1)=8.87, p=0.003$ ). There was no significant difference between the two samples regarding students falling asleep somewhere inappropriate ( $\chi^2(1)=0.72, p=0.395$ ) and waking up feeling embarrassed about things done on the night before in the past 12 months after going to house parties ( $\chi^2(1)=0.97, p=0.323$ ).

Data show that in Brazil 0.1% of the students reported being refused entry to a nightlife venue, compared with 0.9% in the UK ( $\chi^2(1)=4.74, p=0.029$ ). Moreover, in Brazil 9.7% of the students reported spoiling someone's night out for being too drunk after going to house parties, compared with 5.7% in the UK ( $\chi^2(1)=5.02, p=0.025$ ).

Although there was no significant difference between the two samples regarding students failing to attend at university ( $\chi^2(1)=0.00, p=0.952$ ) and missing exams in the past 12 months after going to house parties ( $\chi^2(1)=1.98, p=0.159$ ), in Brazil 3.3% of the students reported missing work after going to house parties, compared with 6.9% in the UK ( $\chi^2(1)=8.26, p=0.004$ ).

**Table 12: Brazilian (N=952) and UK (N=349) students' past 12 months alcohol-related harms experiences after attending house parties**

	Nightlife setting				
	House parties				p value
	BRAZIL N=952		UK N=349		
	N	%	N	%	
Suffered any kind of road traffic accident	19	2.0	1	0.3	<b>0.026</b>
Suffered any kind of physical violence	25	2.6	12	3.4	0.435
Suffered any kind of sexual harassment	63	6.6	13	3.7	<b>0.049</b>
Had unprotected sex	149	15.7	29	8.3	<b>0.001</b>
Regretted a decision to engage in sexual activity	91	9.6	22	6.3	0.065
Suffered blackouts, vomiting or coma	343	36.0	95	27.2	<b>0.003</b>
Fallen asleep somewhere inappropriate	126	13.2	40	11.5	0.395
Woke up feeling embarrassed	255	26.8	84	24.1	0.323
Were refused entry to a nightclub, bar or pub	1	0.1	3	0.9	<b>0.029</b>
Spoiled someone's night out for being too drunk	92	9.7	20	5.7	<b>0.025</b>
Failed to attend at university	146	15.3	54	15.5	0.952
Missed exams because of drinking	19	2.0	3	0.9	0.159
Missed work because of drinking	31	3.3	24	6.9	<b>0.004</b>

#### 4.5.11 Pre-drinking as a risk factor for alcohol-related harms amongst nightlife patrons

In the UK and in Brazil previous nightlife research has suggested that pre-drinkers tend to drink more than non-pre-drinkers (Hughes et al., 2008a, Barton and Husk, 2012, Barton and Husk, 2014, Santos et al., 2015b), and consequently experience higher levels of drunkenness as a result as well as increased negative health and social consequences such as violence, blackouts, hangovers and risky sexual behaviours (Hughes et al., 2008a, Bellis and Hughes, 2011, Barton and Husk, 2012, Barton and Husk, 2014, Santos et al., 2015b). In this section, to explore and compare pre-drinking behaviour as a risk factor for alcohol related harms amongst student nightlife patrons, a logistic regression model (enter method) was run using pre-drinking as the independent variable (controlled by sociodemographic variables such as age, gender, marital status, ethnicity, academic year and overall alcohol consumption within both settings: nightclubs, bars/pubs and house parties). Each of the following risk behaviour variables were analysed as dependent variables:

- Experienced any kind of road traffic accident;
- Experienced any kind of physical violence;
- Experienced any kind of sexual harassment;

- Practiced unprotected sex;
- Regretted a decision to engage in sexual activity;
- Experienced alcohol drunkenness effects (e.g. blackouts, vomiting, passing out, coma);
- Fallen asleep somewhere inappropriate;
- Woken up feeling embarrassed about things done the night before;
- Were refused entry to a nightclub, bar or pub for being too drunk;
- Spoiled someone's night out for being too drunk;
- Failed to attend at university because of drinking;
- Missed exams because of drinking; and,
- Missed work because of drinking.

**Table 13** provides a summary of the results from the adjusted regression analysis.

#### After going to nightclubs, bars and pubs

After going to nightclubs, bars and pubs, in Brazil pre-drinkers had 3.65 greater odds of reporting any kind of road traffic accident (CI: 1.66 – 7.99,  $p=0.001$ ), whilst in the UK due to low numbers it was impossible to do meaningful calculation on such behaviour (full logistic regressions are presented in APPENDIX I.1).

After going to nightclubs, bars and pubs, in Brazil pre-drinkers had 2.42 greater odds of reporting any kind of physical violence (CI: 1.40 – 4.17,  $p=0.001$ ), whilst in the UK no association was observed (OR: 1.72, CI: 0.55 – 5.38,  $p=0.345$ ) (full logistic regressions are presented in APPENDIX I.2).

After going to nightclubs, bars and pubs, in Brazil and the UK, no association was observed between pre-drinkers and reporting any kind of sexual harassment [BR (OR: 1.38, CI: 0.98 – 1.93,  $p=0.060$ ) UK (OR: 1.84, CI: 0.74 – 4.54,  $p=0.186$ ) (full logistic regressions are presented in APPENDIX I.3). However, regarding practicing risky sexual behaviours, in Brazil pre-drinkers had 1.91 greater odds of having unprotected sex



after going to nightclubs, bars and pubs (CI: 1.36 – 2.70,  $p < 0.001$ ), whilst in the UK no association was observed (OR: 2.29, CI: 0.82 – 6.34,  $p = 0.110$ ) (full logistic regressions are presented in APPENDIX I.4). Moreover, in Brazil pre-drinkers had 3.01 greater odds of regretting a decision to engage in sexual activity after going to nightclubs, bars and pubs (CI: 1.93 – 4.69,  $p < 0.001$ ), whilst in the UK no association was observed (OR: 3.56, CI: 0.78 – 16.16,  $p = 0.099$ ) (full logistic regressions are presented in APPENDIX I.5).

After going to nightclubs, bars and pubs, in Brazil pre-drinkers had 2.18 greater odds of experiencing blackouts, vomiting or coma (CI: 1.69 – 2.80,  $p < 0.001$ ), compared with the UK, where pre-drinkers had 3.86 greater odds (CI: 1.98 – 7.52,  $p < 0.001$ ) (full logistic regressions are presented in APPENDIX I.6).

After going to nightclubs, bars and pubs, in Brazil pre-drinkers had 2.30 greater odds of falling asleep somewhere inappropriate (CI: 1.58 – 3.33,  $p < 0.001$ ) (full logistic regressions are presented in APPENDIX I.7); 7.07 greater odds of being refused entry to a venue for being too drunk (CI: 2.04 – 24.48,  $p = 0.002$ ) (full logistic regressions are presented in APPENDIX I.9), and 1.94 greater odds of spoiling someone's night out for being too drunk (CI: 1.36 – 2.78,  $p < 0.001$ ) (full logistic regressions are presented in APPENDIX I.10), whilst in the UK no association was observed (OR: 1.53, CI: 0.49 – 4.76,  $p = 0.457$ ; OR: 2.54, CI: 0.82 – 7.90,  $p = 0.106$ ; OR: 1.57, CI: 0.64 – 3.86,  $p = 0.324$ , respectively).

Data show that after going to nightclubs, bars and pubs, in Brazil pre-drinkers has 1.84 greater odds of waking up feeling embarrassed about things done on the night before (CI: 1.42 – 2.39,  $p < 0.001$ ), compared with the UK, where pre-drinkers had 2.02 greater odds (CI: 1.07 – 3.82,  $p = 0.030$ ) (full logistic regressions are presented in APPENDIX I.8).

After going to nightclubs, bars and pubs, in Brazil pre-drinkers had 2.91 greater odds of failing to attend at university because of drinking (CI: 2.05 – 4.14,  $p < 0.001$ ), compared with the UK, where pre-drinkers had 4.17 greater odds (CI: 1.77 – 9.82,  $p = 0.001$ ) (full logistic regressions are presented in APPENDIX I.11). Regarding missing

exams because of drinking after going to house parties, in Brazil no association was observed (OR: 1.99, CI: 0.85 – 4.68,  $p=0.111$ ). In the UK, due to low numbers it was impossible to do meaningful calculation on such behaviour (full logistic regressions are presented in APPENDIX I.12).

After going to nightclubs, bars and pubs, in Brazil pre-drinkers had 2.38 greater odds of missing work because of drinking (CI: 1.29 – 4.41,  $p=0.005$ ), whilst in the UK, no association was observed (OR: 7.26, CI: 0.90 – 58.11,  $p=0.061$ ) (full logistic regressions are presented in APPENDIX I.13).

#### After going to house parties

After going to house parties in Brazil no association was observed between pre-drinkers and reporting any kind of road traffic accident (OR: 2.31, CI: 0.85 – 6.27,  $p=0.101$ ) (full logistic regressions are presented in APPENDIX I.1) nor any kind of physical violence (OR: 1.66, CI: 0.70 – 3.92,  $p=0.249$ ) (full logistic regressions are presented in APPENDIX I.2). In the UK, due to low numbers it was impossible to do meaningful calculation on such behaviours.

After going to house parties, in Brazil and the UK, no association was observed between pre-drinkers and reporting any kind of sexual harassment [BR (OR: 1.29, CI: 0.75 – 2.22,  $p=0.345$ ) UK (OR: 0.53, CI: 0.05 – 4.91,  $p=0.578$ ) (full logistic regressions are presented in APPENDIX I.3)]. However, regarding practicing risky sexual behaviours, in Brazil pre-drinkers had 1.77 greater odds of having unprotected sex after going to house parties (CI: 1.22 – 2.56,  $p=0.002$ ), whilst in the UK no association was observed (OR: 1.47, CI: 0.30 – 7.14,  $p=0.631$ ) (full logistic regressions are presented in APPENDIX I.4). Moreover, in Brazil pre-drinkers had 2.37 greater odds of regretting a decision to engage in sexual activity after going to house parties (CI: 1.48 – 3.80,  $p<0.001$ ), whilst in the UK no association was observed (OR: 1.18, CI: 0.24 – 5.72,  $p=0.838$ ) (full logistic regressions are presented in APPENDIX I.5).

After going to house parties, in Brazil pre-drinkers had 2.36 greater odds of experiencing blackouts, vomiting or coma (CI: 1.78 – 3.12,  $p<0.001$ ), compared with the UK, where pre-drinkers had 4.70 greater odds (CI: 1.35 – 16.35,  $p=0.015$ ) (full logistic regressions are presented in APPENDIX I.6).

After going to house parties, in Brazil pre-drinkers had 2.99 greater odds of falling asleep somewhere inappropriate (CI: 1.94 – 4.59,  $p<0.001$ ) (full logistic regressions are presented in APPENDIX I.7); 2.16 greater odds of waking up embarrassed about things done on the night before (CI: 1.60 – 2.93,  $p<0.001$ ) (full logistic regressions are presented in APPENDIX I.8), and 1.66 greater odds of spoiling someone's night out for being too drunk (CI: 1.06 – 2.61,  $p=0.026$ ) (full logistic regressions are presented in APPENDIX I.10), whilst in the UK no association was observed (OR: 5.45, CI: 0.69 – 43.06,  $p=0.107$ ; OR: 2.16, CI: 0.75 – 6.17,  $p=0.150$ ; OR: 0.94, CI: 0.10 – 8.26,  $p=0.960$ , respectively).

Regarding being refused entry to a venue for being too drunk after going to house parties in Brazil and the UK, due to low numbers it was impossible to do meaningful calculation on such behaviour (full logistic regressions are presented in APPENDIX I.9).

After going to house parties, in Brazil pre-drinkers had 3.09 greater odds of failing to attend at university because of drinking (CI: 2.08 – 4.61,  $p<0.001$ ), whilst in the UK, no association was observed (OR: 1.29, CI: 0.40 – 4.11,  $p=0.666$ ) (full logistic regressions are presented in APPENDIX I.11). Regarding missing exams because of drinking after going to house parties, in Brazil, pre-drinkers had 9.26 greater odds (CI: 2.08 – 41.24,  $p=0.003$ ) (full logistic regressions are presented in APPENDIX I.12). In the UK, due to low numbers it was impossible to do meaningful calculation on such behaviour. After going to house parties, in Brazil pre-drinkers had 2.38 greater odds of missing work because of drinking (CI: 1.08 – 5.24,  $p=0.031$ ), whilst in the UK, no association was observed (OR: 3.97, CI: 0.47 – 33.14,  $p=0.203$ ) (full logistic regressions are presented in APPENDIX I.13).

**Table 13: Students' pre-drinking behaviour as a risk factor for alcohol-related harms after attending nightclubs, bars and pubs [N=1,105 (BR) N=422 (UK)] and house parties' settings [N=952 (BR) N=349 (UK)]**

	Nightlife settings											
	Nightclubs, bars and pubs						House parties					
	BRAZIL N=1,105			UK N=422			BRAZIL N=952			UK N=349		
	OR	CI 95%	p value	OR	CI 95%	p value	OR	CI 95%	p value	OR	CI 95%	p value
Suffered any kind of road traffic accident	3.65	1.66 – 7.99	<b>0.001</b>	*	*	*	2.31	0.85 – 6.27	0.101	*	*	*
Suffered any kind of physical violence	2.42	1.40 – 4.17	<b>0.001</b>	1.72	0.55 – 5.38	0.345	1.66	0.70 – 3.92	0.249	*	*	*
Suffered any kind of sexual harassment	1.38	0.98 – 1.93	0.060	1.84	0.74 – 4.54	0.186	1.29	0.75 – 2.22	0.345	0.53	0.05 – 4.91	0.578
Had unprotected sex	1.91	1.36 – 2.70	<b>&lt;0.001</b>	2.29	0.82 – 6.34	0.110	1.77	1.22 – 2.56	<b>0.002</b>	1.47	0.30 – 7.14	0.631
Regretted a decision to engage in sexual activity	3.01	1.93 – 4.69	<b>&lt;0.001</b>	3.56	0.78 – 16.16	0.099	2.37	1.48 – 3.80	<b>&lt;0.001</b>	1.18	0.24 – 5.72	0.838
Suffered blackouts, vomiting or coma	2.18	1.69 – 2.80	<b>&lt;0.001</b>	3.86	1.98 – 7.52	<b>&lt;0.001</b>	2.36	1.78 – 3.12	<b>&lt;0.001</b>	4.70	1.35 – 16.35	<b>0.015</b>
Fallen asleep somewhere inappropriate	2.30	1.58 – 3.33	<b>&lt;0.001</b>	1.53	0.49 – 4.76	0.457	2.99	1.94 – 4.59	<b>&lt;0.001</b>	5.45	0.69 – 43.06	0.107
Woke up feeling embarrassed	1.84	1.42 – 2.39	<b>&lt;0.001</b>	2.02	1.07 – 3.82	<b>0.030</b>	2.16	1.60 – 2.93	<b>&lt;0.001</b>	2.16	0.75 – 6.17	0.150
Were refused entry to a nightclub, bar or pub	7.07	2.04 – 24.48	<b>0.002</b>	2.54	0.82 – 7.90	0.106	*	*	*	*	*	*
Spoiled someone's night out for being too drunk	1.94	1.36 – 2.78	<b>&lt;0.001</b>	1.57	0.64 – 3.86	0.324	1.66	1.06 – 2.61	<b>0.026</b>	0.94	0.10 – 8.26	0.960
Failed to attend at university	2.91	2.05 – 4.14	<b>&lt;0.001</b>	4.17	1.77 – 9.82	<b>0.001</b>	3.09	2.08 – 4.61	<b>&lt;0.001</b>	1.29	0.40 – 4.11	0.666
Missed exams because of drinking	1.99	0.85 – 4.68	0.111	*	*	*	9.26	2.08 – 41.24	<b>0.003</b>	*	*	*
Missed work because of drinking	2.38	1.29 – 4.41	<b>0.005</b>	7.26	0.90 – 58.11	0.061	2.38	1.08 – 5.24	<b>0.031</b>	3.97	0.47 – 33.14	0.203

Note: (\*) due to low numbers it was impossible to do meaningful calculations. Regressions controlled by sociodemographic variables (age, gender, marital status, ethnicity, academic year and overall alcohol consumption within both nightlife-drinking settings).

## 4.6 Discussion

The aim of this quantitative study was to investigate Brazilian and UK university students' perspectives and experiences of pre-drinking and alcohol consumption within nightlife settings and also explore the perceived effects that alcohol policies and nightlife factors could have on students' drinking behaviour. This research has contributed to current understanding of pre-drinking behaviour amongst students in a variety of ways. The results explain why students choose to drink before going out to nightclubs, bars, pubs and house parties, and the risks associated whilst doing so. Overall, the findings showed significant differences in the prevalence of pre-drinking and alcohol consumption between the country samples. Importantly, the findings also tell us more about students' attitudes and perceptions towards existent alcohol policies. Comparing two countries, from two different cultures has also revealed how students from Brazil and UK have different views and beliefs, and how this might shape their drinking behaviour in the nightlife context, leading to different experiences, as well as distinct drinking and pre-drinking patterns. This section will discuss the implications of the results in relation to the existing literature and suggestions for future research and practice.

The literature has identified pre-drinking as part of students' nightlife culture. Although the samples cannot be considered representative, our results suggest higher prevalence of pre-drinking amongst students in the UK sample (82.5%) than in the Brazilian sample (44.0%). To define and compare drinking patterns within nightlife settings between countries is difficult because it can be influenced by the culture of alcohol use, its pharmacokinetic aspects (Lange and Voas, 2001, Courtney and Polich, 2009) and policy on alcohol consumption of each country (Greenfield and Room, 1997, Heath, 2000, Brand et al., 2007, Paschall et al., 2012). For example, according to Holmes et al. (2016), the British culture is characterised by excessive alcohol consumption, having among the highest levels of binge drinking in the world, ranked 13<sup>th</sup> out of 196 countries (World Health Organization, 2014).

The NHS refers to binge drinking as “drinking lots of alcohol in a short space of time or drinking to get drunk”, which researchers commonly define as consuming more than 6 units of alcohol in a single session for men and women<sup>36</sup>. Whilst in Brazil, though binge drinking is the most prevalent risk behaviour amongst nightlife patrons (Sanchez et al., 2015, Santos et al., 2015b) there is no official standard definition for binge drinking, and no previous study on Brazilian nightlife environments that allows a proper comparison for trends.

Drinking to get drunk is something widely described as socially and culturally acceptable by university students from Brazil (Peucker et al., 2006, Brandão et al., 2011, Pedrosa et al., 2011, Bedendo et al., 2017) and the UK (Hebden et al., 2015, Thurnell-Read, 2015, Fjær et al., 2016, Thurnell-Read et al., 2018) as key for social interaction (de Visser et al., 2013, Davoren et al., 2016b) especially within nightlife settings (Quigg et al., 2015a, Quigg et al., 2015b, Sanchez et al., 2015). Findings from the current study suggest higher levels of alcohol consumption amongst Brazilian students when compared with UK students. In Brazil it was observed that students reported drinking around 17.6 units of alcohol during pre-drinking before going to nightclubs, bars and pubs whilst in the UK, the median number of units reported by students was of 12.1, a difference of approximately 30.0%. Likewise, at the end of a night in Brazil, students reported to drink around 16.5 units of alcohol, whereas in the UK the median number of units reported was 8.8, i.e., almost half of the Brazilian amount.

Findings from this study fill one of the gaps on Brazilian binge drinking research by investigating students’ attitudes towards alcohol consumption within nightlife settings, yet more research is needed to explore pre-drinking behaviour and students’ alcohol consumption. Literature shows that culture is one of the factors influencing drinking patterns (Room, 2001, Kuntsche et al., 2006c, Kuntsche and Labhart, 2012, Kuntsche et al., 2014), which can differentiate between “wet” and “dry” countries (Room, 1989, Room and Mäkelä, 2000).

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<sup>36</sup> Extracted from the NHS website: <https://www.nhs.uk/live-well/alcohol-support/binge-drinking-effects/>

Current results showed that even though UK students reported pre-drinking more than Brazilian students, when Brazilian students pre-drink they reported drinking higher amounts of alcohol, compared with when UK students pre-drink. Furthermore, findings also indicated significant association between pre-drinkers and increased risks of reporting certain alcohol-related harms within nightlife settings, being particularly higher amongst UK students when compared with Brazil. Interestingly, it was observed that even though Brazilian pre-drinkers reported drinking higher amounts of alcohol during pre-drinking events, they reported experiencing less alcohol drunkenness effects (e.g., vomiting, blackouts and coma) after a night out, which could be explained by the difference between the two countries on the culture of alcohol use during a night out. Brazilian students might have drinking patterns that resembles the “wet” Mediterranean drinking culture, such as students drinking more but experiencing less intoxication, and alcohol being mostly consumed in specific social events (e.g., weekends’ night out). Also, Brazilian students might have different drinking patterns when compared with UK students, i.e., to avoid experiencing drunkenness effects they might not, for example, drink large amounts of alcohol at once. Instead, they might drink a large quantity over a large interval of time. Yet more research is needed to understand students’ drinking culture during a night out (particularly in Brazil where there’s a lack of studies) which was one of the topics further explored in the next part of this mixed-method research.

Additionally, this variation in Brazilian and UK students’ drinking patterns could be associated with the differences in alcohol brands and content between the two countries. In our study significant differences were observed regarding students’ drinks preferences during pre-drinking events and during a night out. During pre-drinking events, Brazilian and UK students reported beer as the most preferable drink, followed by alcopop and wine, which corroborate previous research that showed beer as the most popular drink in Brazil (Laranjeira et al., 2010, Santos et al., 2015b) and in the UK (Office for National Statistics, 2018a). Although, is important to consider the differences on the alcohol content. For example, the opposite of Brazil, where the most popular and affordable beer is not strong, in many parts of the world, including the UK, beers are classified as low, medium and high-strength (Bamforth, 2002), and previous research

had already suggested associations between these high-strength beer and harmful drinking in the UK (Lachenmeier et al., 2015). Also, at nightclubs, bars and pubs the most preferable drinks reported by UK students were spirits (compared with beer as the most preferable in Brazil), which have been associated with a rapid increase in BAC levels when compared with beer and wine (Mitchell Jr et al., 2014) and greater alcohol consumption (Kuntsche et al., 2006a). Thus, UK students' major preference for drinking spirits when going out after drinking large amounts of cheap beer during pre-drinking could explain why they reported experiencing more drunkenness effects than Brazilian students, therefore such findings provide support for developing and implementing interventions to change alcohol availability. This is an important finding that reflects previous research suggesting the association between pre-drinking and higher blood alcohol concentration (Read et al., 2010, Barry et al., 2013, Santos et al., 2015b) and consequently increased risks of reporting episodes of drunkenness such as blackouts (LaBrie and Pedersen, 2008, LaBrie et al., 2011, Østergaard and Skov, 2014), violence (Borsari et al., 2007a, Wahl et al., 2010, Zamboanga et al., 2011, Wahl et al., 2013) and risky sexual behaviours (Borsari et al., 2007a, Bellis et al., 2008).

In the UK, within the university context there are a wide range of negative health and social outcomes from harmful use of alcohol (Pickard et al., 2000, Penny and Armstrong-Hallam, 2010, El Ansari et al., 2013). For instance, a study conducted at a British university revealed many short-term and long-term adverse outcomes amongst students, such as hangovers, vomiting, missing classes, academic problems, violence and risky sexual behaviour (e.g., having unprotected sex and regretting a decision to engage in sexual activity) (Penny and Armstrong-Hallam, 2010). The current findings revealed that in the UK, pre-drinking practice had a greater influence on university students' academic lives when compared with Brazil. This corroborate previous UK studies that suggest a significant association between students' alcohol use and increased risks of reporting alcohol-related harms, including lower university performance (Pickard et al., 2000, El Ansari et al., 2013).

Although current findings revealed a non-significant association between UK pre-drinkers and risky sexual behaviour, amongst Brazilian pre-drinkers' alcohol might



have greater influence on their perception of risk by lowering inhibitions and increasing confidence (when compared with UK pre-drinkers) as current results indicated a significant association between Brazilian pre-drinkers and increased risks of reporting risky sexual behaviour, such as practicing unprotected sex and regretting a decision to engage in sexual activity. Regarding Brazil, the current findings corroborate with previous nightlife research conducted in Brazil that indicated a significant association between Brazilian pre-drinkers and increased risks of reporting physical violence and risky sexual behaviours (Santos et al., 2015b, Santos et al., 2015a).

Amongst university students the consumption of alcohol can be conceptualised as a social practice. Therefore it is argued that there are many different ways that students drink alcohol, including at parties, on the street or at home (Ally et al., 2016, Blue et al., 2016, Supski et al., 2017). Plus, drinking and drunkenness is often associated with young adults' social lives, particularly amongst students within the nightlife context (Measham, 2008, Seaman and Ikegwuonu, 2010). In the UK, but mostly in Brazil, little research have been undertaken on students' nightlife drinking experiences (e.g., during pre-drinking). This highlights the need for more research investigating their motivations and expectations towards alcohol use in order to develop an understanding of how risk is related to the many different ways that students drink alcohol, particularly during pre-drinking (Ally et al., 2016).

In order to develop effective measures aimed at reducing drunkenness and its related harms it is important to investigate how drinking culture vary across countries. Overall findings show that in the UK, students have nightlife-drinking patterns that resembles the "dry" Nordic drinking culture such as the preference for spirits and experiencing more intoxication. Interestingly, Brazil seems to have both "wet" and "dry" drinking culture characteristics, i.e., the "dry" culture drinking preference for beer and "wet" culture of drinking more but experiencing less intoxication. Though no previous research on drinking culture has been conducted in Brazil to allow comparison for trends, the current findings suggest an integration of both "wet" and "dry" characteristics within society. Previous research has observed an integration of some of

the “wet” drinking patterns characteristics (e.g., having a drink during family meals) within the British “dry” drinking culture (Ally et al., 2016).

Research on pre-drinking and its association with alcohol-related harms has become a public health concern of many researchers including in the UK (Calafat et al., 2009a, Bolier et al., 2011, Hughes et al., 2011c, Roberts, 2013, McClatchley et al., 2014, Østergaard and Skov, 2014, Quigg et al., 2014) where the country has been trying to tackle problems associated with harmful use of alcohol within nightlife settings by developing and implementing specific alcohol policies (Hughes et al., 2012, Quigg et al., 2014) that differ from the laws applied in Brazil. These policies are mainly designated to reduce alcohol affordability (e.g. through implementing higher prices and taxes), availability (e.g. through implementing licenses and restrictions on alcohol sales and outlets); restrict alcohol marketing and advertising; and to reduce harms associated with harmful drinking (e.g. through implementing restrictions on BAC levels for driving) (Holder and Treno, 2005, Nicholls, 2016b).

According to Stockwell and Chikritzhs (2009) the changes in UK legislation that allowed alcohol-selling venues to be open until late-night are associated with increasing levels of alcohol consumption. This could also explain the fact that people are going out later. Results regarding students’ drinking behaviour within nightlife settings suggest that students’ nights out usually start at home during pre-drinking, but more importantly it showed that students who go out later and stay out later were more likely to pre-drink, i.e., they extended the drunkenness effects and alcohol consumption over the night out, which corroborates previous nightlife research (Clapp et al., 2006, Labhart et al., 2013, Carlini et al., 2014).

Another interesting finding on students’ pre-drinking behaviour was related to the differences between the countries in which pre-drinking occurs. Results found in this study corroborate previous evidences in which pre-drinking practice occurs within unregulated environments, including at home homes or at a friends’ house (Hughes et al., 2008a, Santos et al., 2015b). Interestingly, it was observed that almost 30.0% of the Brazilian students reported pre-drinking in public spaces (e.g., beaches and parks)

compared with 0.0% in the UK. The climate difference between the two countries could explain why Brazilian students pre-drink outside. Besides, unlike Brazil, the UK government has an alcohol-free public spaces policy in order to restrict alcohol consumption.

Moreover, findings also suggested a significant association between students' perceptions of the impact of implementing alcohol-free public spaces in Brazil on their drinking behaviours, with decreased levels of pre-drinking behaviour and alcohol consumption amongst Brazilian students, which gives supports for the Brazilian scenario to implement and apply penalties for drunken and disorderly individuals to reduce pre-drinking, and consequently students' drunkenness within nightlife settings. An interesting approach could be for Brazilian nightclubs' and bars owners to simply increase door staff numbers since the current study revealed significant statistical results between the samples on Brazilian' students' perceived effectiveness of door supervisors' numbers towards their drinking behaviours within nightlife settings.

In the UK, according to the Licensing Act 2003 (Her Majesty's Stationery Office, 2003) licensed premises are responsible for refusing alcohol sales to inebriated people and as such door supervisors can refuse entry if an individual is drunk and disorderly. Interestingly, corroborating with previous UK research which suggests positive impact of door staff using breathalysers to control violent behaviour and drunkenness amongst nightlife patrons before entering nightclubs, bars and pubs, and thus, helping controlling pre-drinking behaviour and its related harms (Boyd et al., 2018, Farrimond et al., 2018), results from the current study also revealed significant association between students' perceptions of the scenario on increasing door supervisors' numbers with reduced pre-drinking behaviour amongst UK university students.

A wide range of studies show that alcohol consumption can be reduced by increasing taxes and prices, i.e., making it less available (Campbell et al., 2009, Hahn et al., 2010, Malta et al., 2010, Middleton et al., 2010, Hahn et al., 2012, Cook et al., 2014, World Health Organization, 2014). Findings from the current research corroborate previous studies in which pre-drinking is associated with rapid consumption of large

amounts of cheaper off-license alcohol (Engineer et al., 2003, McKinney and Coyle, 2005, Foster et al., 2010, Craig et al., 2012, Østergaard and Andrade, 2013, Østergaard and Skov, 2014).

The availability of cheap alcohol has a strong influence on students' drinking patterns, including students' pre-drinking behaviour (Kuo et al., 2003, Romano et al., 2007, Rabinovich et al., 2009, Wells et al., 2009). In this research there were significant statistical results between the samples on the perceived impact of increasing alcohol prices in off-licenses could have on Brazilian and UK student's pre-drinking levels and consequently overall alcohol consumption, which highlights the importance of economic influence and developing stricter alcohol policy target for this population (Casswell and Thamarangsi, 2009, Lonsdale et al., 2012, Nordlund, 2013). Yet, it is noteworthy that pre-drinking behaviour amongst students is a complex issue, as it goes beyond the economic factor e.g., students also pre-drink to socialize, which can be a challenge when developing policy and implementing interventions since those aimed at price increase (e.g., MUP) would only change behaviour of a few (Barton and Husk, 2012, Østergaard and Andrade, 2013, Barton and Husk, 2014, Foster and Ferguson, 2014, Atkinson et al., 2017b). And thus, further research exploring the meaningful cultural and social aspects related to students pre-drinking practice is needed.

Unfortunately, the opposite to the UK, in Brazil, where the legal drinking age is also 18, the alcohol market is not regulated, there are no licenses for alcohol-selling venues (Laranjeira, 2007, Carlini et al., 2014), no laws to control closing hours for nightlife establishments, no efficient control on alcohol advertising (Pinsky and El Jundi, 2008, Vendrame et al., 2010, Faria et al., 2011) and it is legal to serve alcohol to inebriated people (Duailibi and Laranjeira, 2007, Sanchez, 2017). The lack of control of these alcohol policies by the government allows a more permissive environment for excessive drinking (Laranjeira et al., 2007, Ally et al., 2014, Purshouse et al., 2017). Within nightlife settings it is important to clarify that alcohol can be sold cheaply not only in off-licensed settings, but also at on-licensed ones during promotional nights in which young people, especially students, are attracted with the intention to get drunk (Kuo et al., 2003, Forsyth et al., 2005, Thombs et al., 2008, Meier et al., 2010, Jones and

Smith, 2011, Carlini et al., 2014). Effective measures are clearly required to reduce students' drunkenness and pre-drinking behaviour, e.g. banning alcohol discounts prices and promotions, including open bar scheme in Brazil and combo discounts at nightclubs, bars and pubs so that students would not have access to cheap alcohol (Brennan et al., 2016, Carlini, 2016).

To choose the appropriate intervention it is important to consider the acceptance among the population and investigate its effectiveness. For example, in Brazil, studies showed that most of the population support increasing taxes on alcoholic drinks (Pinsky and Laranjeira, 2007), limiting hours and places for alcohol sales (Duailibi et al., 2007) and restricting alcohol advertising on TV (Pinsky et al., 2010). Interestingly, in the current research there were some statistical significant differences amongst Brazilian students' perceptions of the impact of banning alcohol sales to drunk people within Brazilian nightlife settings (where there is no law restricting sales to drunk individuals) on their pre-drinking behaviour and consequently overall alcohol consumption, when compared with the UK, where it is already illegal to sell alcohol to drunk individuals. This is an important and interesting finding because a previous study conducted with Brazilian nightlife patrons (Carlini and Sanchez, 2018) showed that patrons rejected the idea of imposing law-controls on alcohol sales to inebriated people as unfortunately, selling alcohol to inebriated people is part of the Brazilian nightlife culture.

Brazilian nationals' views on alcohol-related harms such as selling alcohol to inebriated people and driving under the influence of alcohol might have been shifting after the recent change to drink and drive legislation. This might have been reflected in results from the current research. Going out for a night out in Brazil, specifically in São Paulo (the biggest city in the country with a lot of bars and nightclubs spread across the city) is different from going out in the UK, where most of the venues are concentrated within a walking distance from the city centre area. Within big cities in Brazil it is common to use public transportation to go out or even drive. Results from the current study showed that Brazilian students go out earlier and return later than UK students. Also, it was found that in Brazil, students tend to use public transport for going out and

for returning home. However, it is important to note that public transportation in most of the cities in Brazil only works up until 11 pm and re-opens in the early morning (4 - 5 am). Hence, providing late night transportation in Brazil could help reducing drunkenness, and consequently its harms (e.g., drink and drive) within nightlife settings as students would have affordable options to go home, rather than keep drinking until early morning waiting for the bus/metro or cabs to be available (Bellis and Hughes, 2011).

In Brazil there has been active law enforcement from the government and police, as previous studies showed the positive impact on road traffic and drink and drive incidents after reducing BAC levels (Liberatti et al., 2001, Andreuccetti et al., 2011, Campos et al., 2013, Malta et al., 2014). Previous studies conducted in Brazil and in the UK on alcohol policy suggest that laws and regulations are effective when backed up with enforcement (Lenk et al., 2006, Hughes and Anderson, 2008, Anderson et al., 2009a, Babor et al., 2010, Andreuccetti et al., 2011, Hughes et al., 2014). For instance, in order to guarantee compliance of the law (e.g., for drunk driving), particularly in Brazil, where Brazilian population sense of punishment was once considered poor and low (Pechansky and Chandran, 2012, Gjerde et al., 2014), education and information campaigns are important in order to clarify and remind, not only students, but also the population in general about the risks associated with alcohol consumption and the consequences of breaking the law.

While the findings from this study resonate with previous studies on high levels of alcohol consumption during pre-drinking behaviour and its associated-risks, this study highlights and reinforces the importance of local authorities, government and venues owners to cooperate in order to reduce excessive drinking and alcohol-related harms by developing and implementing efficient and well-accepted policies for each one of the countries. Future research on pre-drinking practice and students' drinking behaviour within nightlife settings would fill the gaps on the importance and impact that pre-drinking has into students' drinking patterns and would give further insight of how it can be better managed to minimise its related harms.

## 4.7 Strengths and limitations

This study has some strengths and limitations that need to be addressed. The socio-ecological model developed for this research was aimed at understanding the social and environmental influences that could impact students' drinking attitudes and behaviours. Regarding student' alcohol consumption, individuals are inserted in the microsystem level (their home, work and university) which is then inserted at a broader community level. Using such model can help gaining a deeper understanding of how these multi-level influences affect both students and the nightlife environment in order to develop effective strategies to reduce drunkenness and its related harms.

This is the first study of its kind to compare alcohol use and pre-drinking practice in countries with different drinking guidelines and culture. The study fills a gap in a previously limited field of research in Brazil particularly and suggests the need for more research on students' pre-drinking habit and its risks to develop more efficient alcohol policy.

According to Nulty (2008) online surveys are much less likely to achieve responses rates as high as face-to-face or paper administrative surveys, which can be observed at the current research as response rates were 14.5% for the Brazilian survey and 3.7% for the UK. However, the survey did not attempt to recruit representative samples from each country but rather samples of alcohol consumers and nightlife users in order to explore behaviours amongst such individuals and associations with pre-loading. Despite the lower rates, this study managed to get a large Brazilian sample, which was very interesting because unlike the UK, in Brazil it is not as common for students to receive invitations for online research.

Potential selection bias also needs to be acknowledged as the recruitment process was a little challenging. Initially the surveys were sent to students' e-mails however, not all students replied or completed the surveys, since the numbers of completed surveys for both countries were too low. So, online recruitment through LJMU and UNIFESP Facebook groups and Twitter was conducted. Even though during

the recruitment process a lot of Brazilian and UK students accessed the survey but did not complete it, there was a lot of positive feedback especially from the Brazilian sample regarding students' opinions and interest in the topic.

Brazil is much younger than Europe, which can affect culture, norms and beliefs. Given the cross-sectional design of this study and the cultural differences between the two countries, causal relations between alcohol policies and drinking variables within nightlife settings cannot be established. São Paulo in Brazil, and Liverpool in the UK, have different patterns of alcohol consumption amongst students, as well as different nightlife culture, e.g., house parties and pre-drinking in the UK can be seen as the same thing, whereas in Brazil they are two different things. For instance, most Brazilian' house parties are considered the main event of the night where the individual will stay the entire night. Therefore, results may not be generalizable to England and Brazil as a whole nor representative of UK and Brazilian university students in general. Also, some of the individual nightlife alcohol-related risks were not possible to do meaningful calculations due to low numbers, further research with increased numbers should be considered.

Likewise, the questionnaire was designed and adapted for both countries but since Brazil and the UK have different nightlife structures (e.g., distinction between on and off-licensed premises), findings regarding students' perceived effectiveness of existing alcohol policy towards drinking behaviours may not be comparable since there might have been some difficulties with Brazilian students' interpretation of the survey. Additionally, asking about people's alcohol consumption is a concern issue since they tend to answer a question in a way that they believe is socially acceptable (van de Mortel, 2008). For this reason, the pilot study tested not only whether interviewees understood the questions but also if they felt able to answer it, also the wording and translation process were carefully thought in order to avoid judgmental questions.

#### 4.8 Summary

This quantitative study of 1,151 Brazilian and 424 UK students suggested that pre-drinking in English students is more prevalent than in Brazilian students. Overall,



pre-drinking is a problem amongst younger students in both countries, and it was associated with alcohol-related harms. Findings indicated that UK students seems to be at most risk within nightlife settings when compared with Brazilian students. This is important for informing specific and efficient alcohol policies and interventions within nightlife settings. From a harm reduction perspective, future research should look further into Brazilian and UK pre-drinking behaviour practice, in order to investigate such practice as part of students' drinking culture. The findings also showed that alcohol policies and interventions within nightlife contexts are important areas for practice and future research.

## 5.1 Introduction

The first part of the study was a quantitative phase to explore motivations and expectancies towards alcohol consumption held by the Brazilian and UK university students in order to understand the differences and similarities between the two nationalities in relation to drinking patterns within nightlife settings and perceived policy effectiveness. A number of key areas of interest for this research were highlighted and so a qualitative study was utilised to further explore Brazilian students' experiences and perceptions of the drinking culture in the UK in comparison to Brazil, in order to help inform responses to Brazilian student drinking. This chapter presents findings from a qualitative focus group study, conducted with 25 Brazilian students currently living in the UK, to explore their perceptions of alcohol consumption within UK nightlife settings, compared to Brazilian settings.

The chapter is set out in several different sections including an overview of the aims and the research question followed by the description of the methodology used. Further, the chapter describes the process of analysis and shows how alcohol use in the UK nightlife context is viewed in diverse ways within the Brazilian culture context, and how moral beliefs underpin perceptions and attitudes. The key findings from the themes that emerged from the framework analysis are also presented followed by a discussion of how findings contribute to the existing literature.

## 5.2 Aims and research question

The aim of this study was to explore Brazilian students' perspectives of and insights into the drinking culture in the UK, compared to Brazilian culture. The specific objectives were to:

- i. Explore Brazilian students' perceptions of the nightlife environment in the UK, compared to Brazil;
- ii. Understand how nightlife drinking patterns in the UK differ from the Brazilian scenario;
- iii. Explore Brazilian students' experiences and perceptions of alcohol use during pre-drinking practice;
- iv. Compare attitudes, practices of alcohol use, and perceptions of alcohol policy in Brazil and the UK; and
- v. Explore perceptions of what influence alcohol policies may have on Brazilian and UK university students' drinking behaviour during a night out.

### 5.3 Sampling strategy

To have more in-depth knowledge of the differences between the UK and Brazil in student drinking patterns and nightlife situations, a qualitative approach was chosen for this phase. This method allows the researcher to understand the complex and subjective meanings that individuals give to their own experiences (Denzin and Lincoln, 2018). Hence, focus group interviews were held with Brazilian undergraduate and postgraduate students who were currently living in England. Focus groups were used to complement the quantitative phase by creating a more comprehensive picture of alcohol use during night out.

#### 5.3.1 *Procedure and participants*

The use of focus groups is an efficient method to investigate and understand perceptions and attitudes of a particular group towards a particular subject as participants are encouraged to talk to each other and share their opinions, memories and experiences in a non-threatening setting, usually via a moderator who tries to engage participants throughout the interviews and keep them on the topic (Morgan and Spanish, 1984, Litosseliti, 2003, Krueger and Casey, 2014).

Focus groups offer exploratory and information-rich data related to a topic, making the discussions an important tool for exploring respondents' awareness, behaviour, experiences and motivations. They have been a useful tool for gathering information for practice development, especially in alcohol studies amongst students (Howard et al., 2007, DeJong et al., 2010, Barry and Goodson, 2011, Bachrach et al., 2012, Lear et al., 2014). Moreover, focus groups have been suggested as a useful tool for mixed methods study and triangulation processes (Teddlie and Yu, 2007).

A range of approaches were used to recruit participants for the study, such as Facebook, informal networks, the International Student's Office from Liverpool John Moores University and the Brazilian embassy. Online snowball sampling was also utilised. Initially the researcher developed an advertisement document in Portuguese for recruitment purposes which provided brief information about the study and contact details (APPENDIX I). Potential participants contacted the researcher and were informed about the purpose of the research and its confidentiality and provided with a participant information sheet (APPENDIX J). This included the purpose of the study, procedure for participation, confidential management of the data, and that participation in the study could be withdrawn at any time. These potential participants nominated other potential participants amongst their friends. The study was conducted during September – December 2017.

For those who met the criteria and agreed to participate, at the time of the focus groups participants were asked to provide written consent to take part in the study (APPENDIX K) and were given an opportunity to ask any further questions about the study. Interviews were conducted at a site chosen by participants including at university premises and in one case at a participant's own home and lasted between 60 and 90 minutes. The interviews were anonymised, digitally recorded with permission, conducted and transcribed verbatim in Portuguese. At the end of the discussions, participants received a copy of the consent form and were thanked for their time. All participants were provided with a £10 shopping voucher for their participation. The final sample comprised 25 Brazilian students currently living in the UK. Socio-demographic data is presented on **Table 14**.

**Table 14: Brazilian focus groups participants sociodemographic characteristics**

Focus groups	Participants (N= 25)	Male (Female)	Age (mean)	UK country region (place of living)	Focus groups location
FG01	4	2 (2)	27.0	North West	University
FG02	4	1 (3)	30.2	North West	University
FG03	4	2 (2)	32.0	North West	Home
FG04	4	2 (2)	29.5	Yorkshire	University
FG05	4	1 (3)	27.5	West Midlands	University
FG06	5	2 (3)	28.8	South East	University

### 5.3.2 Interview instrument

The focus groups helped gaining a deeper understanding of the factors influencing students' drinking practices during nights out. However, practical limitations are important to acknowledge as focus group interviews were conducted by the principal researcher who had no previous experience in conducting qualitative data collection.

The literature suggests that although a small group environment may encourage participants to feel more relaxed and talk about a particular subject, sometimes it can have the opposite effect depending on the subject, i.e., participants might not be willing to talk freely or sometimes one participant's answers can influence the rest of the group (Kitzinger, 1995). In order to reduce bias whilst collecting the data, the researcher used an approach of active listening as a technique to encourage participants to share information. Also, a topic guide was developed which was informed by findings identified in study 1 to help generate in-depth discussion and conversation with participants on key areas of interest. It also helped the researcher to keep participants focused on the topic. The following areas were explored:

- Nightlife culture

Nightlife culture was explored by asking participants to describe in detail their experiences within Brazilian and UK nightlife alongside their perceptions of any similarities or differences between the two countries regarding levels of alcohol consumption, drinking patterns, drunken behaviours and physical environments.

Participants were questioned about when, where, with whom and why they go out. Also, their personal drinking patterns were explored as well as the drinking patterns of their peers and associates. Not all the above issues were asked in questions by the researcher; many of them emerged during the conversation without any prompts.

- Pre-drinking phenomenon

Participants' own perceptions about pre-drinking were explored either through their own experiences of drinking or/and from their observations. Questions which were discussed within this theme included: what constitutes pre-drinking, what motivates people to pre-drink and what the differences in pre-drinking practice in Brazil and in the UK are.

- Awareness and perceptions of alcohol policy

Participants' awareness and perceptions on alcohol policies was explored either through their own knowledge on policies, interventions or campaigns or/and from their observations from both countries. Issues that were discussed within this theme included: perceptions on drinking and driving incidents, restrictions on alcohol sales, and drunk and disorderly people within nightlife settings.

### *5.3.3 Data analysis*

All the interviews were audio recorded with permission from the participants and transcribed verbatim. All the interviews were conducted and transcribed in Portuguese as there were some words or concepts that have no direct translation to English. Only relevant excerpts from the interviews were translated into English in order to present representative quotes (see section 3.4.3 on Translation). The selected quotes were intended to demonstrate and give examples of norms or shared perceptions that have emerged during the coding and analysis of the research.

For the current study, data was analysed using the framework deductive approach (Richie and Spencer, 1994, Ritchie and Lewis, 2003), in which concepts and

ideas were used to code and interpret the data. Data were organised and analysed using NVivo12 (QSR International Pty Ltd, 2012). The stages of this analysis were the following:

- 1) **Familiarization to identify initial themes or concepts:** this was achieved by listening and re-listening to the focus groups interviews, then reading and re-reading the transcripts for complete immersion in the data. In order to address the specific research questions, data were initially coded and organized in a deductive, meaningful and systematic way. Interesting features, words, sections and sentences that were relevant to or captured something interesting about the research questions were highlighted and codes were created using NVivo hierarchical node labelling system.
- 2) **Constructing an initial conceptual framework:** Initially, the codes and ideas were broad and descriptive, closely resembling the key areas of interest of the interview guide (e.g., nightlife drinking culture, drinking patterns, drunkenness levels, drinking environments and perceptions and awareness of alcohol policy). Then, more specific and conceptual emergent themes were identified and organised into clusters and analysed to identify sub-categories and relationships between categories. For example, Brazilian students' views on their perceived UK drinking culture and UK drinking intentions were compared, then those identified as such were labelled with "drinking to get drunk" code label. Further sub-themes were then generated and summarised the views that Brazilian students had about the UK drinking environments, for example: excessive drinking, drinking to have fun, and relationships between friendship and alcohol consumption.
- 3) **Indexing (coding):** this step involved applying the initial conceptual framework to the whole data set. The data were carefully and systematically read in order to identify the relevant aspects related to the research questions.
- 4) **Charting (sorting):** in this process, themes and sub-themes with similar content or properties were refined and organised into clusters in order to search for patterns, associations and concepts to shape the analysis and explain the findings. For example, sub-themes were grouped to form a main theme (e.g., "drinking to get drunk", "drunkenness levels", "the pleasure involved in drinking" and "friendship and socialisation" later became "attitudes towards

alcohol use”) and overarching themes were named accordingly to explain the findings of the data. This stage led to a refinement of categories. The final themes were discussed with a member of the supervisory team at several points in time. Although the overall index contains 13 sub-themes, they were grouped under just six main substantive headings. This phase also involved a generation of a conceptual framework with the main themes and sub-themes (**Table 15**); and,

- 5) **Mapping and interpretation:** this final stage involved summarising the data. The conceptual framework was used to find associations between the themes and sub-themes and thus providing explanations for the research questions. The supporting quotes were identified to illustrate and example the theme description. The analysis was written up, certifying that the presented findings were logical and coherent.

**Table 15: Conceptual framework for study of Brazilian students’ perspectives of the UK nightlife drinking culture**

Main themes	Sub-themes
1. Motivations for alcohol consumption	1.1 Drinking to get drunk
	1.2 The pleasure involved in drinking
	1.3 Friendship and socialisation
2. Factors influencing drinking patterns	2.1 Alcohol accessibility
	2.2 Alcohol and the financial issue
3. The food context	3.1 Alcohol as accompaniment with food
	3.2 Food and the nightlife environment
4. Alcohol and culture	4.1 The “heavy” drinking culture
	4.2 Perceived impact of living in the UK on Brazilian students' alcohol use
5. Alcohol and gender	5.1 Women’s drinking in context
	5.2 Drinking and its harms
6. Alcohol policy and practice	6.1 Law enforcement
	6.2 Culture of impunity

It is important to acknowledge that focus groups discussions were facilitated by the researcher as were the coding and analysis of the data. The coding framework was discussed at several points with the supervisory team once the themes had been



generated and named in order to ensure consistent application and to improve the reliability of the qualitative analysis of the data (Green and Thorogood, 2018).

Each focus group and related quotations are identified by a unique code constructed by using the abbreviation of focus group (FG) and the order of the focus group, followed by the abbreviation of gender (M for male and F for female), the number of gender (01, 02 or 03) and age (# in years Y). For example, FG01-M01-20Y designates the first male student (M) from the first focus group discussion (FG01) aged 20 (Y). The themes and sub-themes are presented below with supporting quotations from the transcripts.

## 5.4 Results

Twenty-five Brazilian students currently living in the UK participated in the study (see **Table 14** in section 5.3.1). The mean age of participants was 29.1 years and at the time of the focus groups 22 of the participants were registered as post-graduate students (18 PhD and 4 MPhil) and three had finished their graduate studies. All, but one of the Brazilian interviewees drank alcohol. One participant was diabetic and for that reason never consumed alcohol. Amongst Brazilian drinkers, their own drinking was suggested to be associated with socialising and with the satisfaction of feeling tipsy (never to the point of getting too drunk, but feeling relaxed, chatty and laughing). In their opinion, they did not drink as much or get as drunk as British students do, and do not experience associated impacts related to excessive alcohol consumption (e.g. delayed reactions, inability to walk or talk, vomiting).

The data analysis revealed six major themes, which explore Brazilian participants' perceptions, attitudes, experiences and beliefs about the differences between Brazilian and UK student drinking patterns and nightlife situations. The following sections provide the findings from each of these themes.

#### 5.4.1 Theme 1: Motivations for alcohol consumption

The “*motivations for alcohol consumption*” theme discusses how drinking alcohol was considered a common behaviour carried out by students. However, this theme also explores the perception that getting too drunk is not considered an acceptable behaviour by the Brazilian participants. The theme further draws upon the Brazilian students’ perceived expectations of drinking during nights out in the UK (when compared with Brazil) and the perceived normalised drinking behaviour of Brazilian and British students.

##### 5.4.1.1 Drinking to get drunk

This sub-theme captures Brazilian students’ perceptions of the differences in students’ drinking attitudes. During the interviews Brazilian participants revealed a recurring and prevalent opinion about how UK students were presumed to get drunk as a common and ritualised behaviour when going out: “*...for the night to be complete they have to cross the (drinking) limit...*” (FG03-M02-41Y).

Interestingly, a curious difference between the two countries was pointed out by the participants regarding their perceived drinking intentions when going out. Apparently, during nights out Brazilians were perceived to be more concerned with the socialising aspect when drinking, rather than deliberately getting drunk (as British students were presumed to do): “*I drink until certain point that I know I can wake up tomorrow feeling ok, and here (in the UK) I feel they are always losing their control*” (FG03-M01-30Y). Although Brazilian students recognised the possibility of getting drunk during a night out, they felt that this was not as much of a priority as it is for British students, who were suggested to intentionally get drunk to lose control when socialising, including the female population: “*...people here have no limits; they go until they cannot handle it anymore. For example, I always see women passed out on the floor and with some vomit around...*” (FG04-M02-39Y).

#### 5.4.1.2 The pleasure involved in drinking

The majority of Brazilian interviewees noted that drinking for pleasure was a key reason why both Brazilian and British students consumed alcohol, particularly to relax and socialise. Pre-drinking in particular was perceived to be a normal and widespread behaviour carried out by both Brazilian and UK students and seen as a convenient and socially acceptable form of socialising and relaxation. However, there were perceived differences between countries in the role that alcohol plays in achieving pleasure amongst students. As highlighted in the quote below, according to Brazilian participants' views, drinking was perceived to be synonymous with the determined pursuit of drunkenness amongst British students, something that was not perceived to be a focus for Brazilian students. During the interviews most participants agreed that they do pre-drink, however they felt that getting drunk during pre-drinking was not as much as a priority as it is for British students. In their view, pre-drinking was perceived to be an important part of UK students' night out ritual and that the pleasure of it involves drinking to get drunk: *"A British friend of mine told me that if they don't get hammered when they are going out, there is no fun..."* (FG04-M01-27Y), whereas in Brazil they felt that it is mainly related to socialising: *"When I go out to a proper night out (i.e., to a club where you won't be able to talk because there will be loud music and you will be dancing and drinking) I always pre-drink first to socialize with my friends for a bit"* (FG04-F01-27Y).

#### 5.4.1.3 Friendship and socialisation

Since drinking was assumed to be related with having fun and socialising, during the interviews Brazilian participants felt that there is an important relationship between students' alcohol consumption and friendship, and discussed how this can influence students' drinking behaviours: *"...when they (British students) are with their friends, it's like they have to drink to have fun..."* (FG04-F01-27Y). Participants felt that drinking is deeply embedded in the UK students' lifestyles. Brazilian interviewees assumed that there is a cultural expectation to drink in the UK and "resisting" to this perceived normalised drinking culture was thought to be something highly undesirable by British

students. In the UK not drinking was perceived to be something considered “abnormal”:  
*“...here (in the UK) when you are around friends, and everybody is drinking, eventually you will drink. You have to find a good excuse for not drinking to not be considered the “weird” one, for example taking antibiotics...” (FG04-F02-25Y).*

Further, with the perception that drinking is the “norm” within the UK, several participants presumed alcohol was the main facilitator for British students to go out and bond. There were some interesting discussions about the perceived association between alcohol consumption and personality in order to overcome shyness or social discomfort, particularly for British students (e.g., “the cold” European personality as Brazilians participants referred to it): *“...It is funny because you can see that it is not something natural for British students (to socialise without alcohol). At first is something mechanical like a robot but once people start drinking it’s another thing...” (FG03-M01-30Y).*

*“...I feel like we (Brazilians) are naturally more relaxed and they (British students) are not. So, when they are drinking, they feel more relaxed and freer to go wild, so they end up acting pretty different to how they are used to be when sober” (FG02-F03-29Y).*

Participants felt that when sober, British students were often formal and too serious: *“They (British people) have a colder and more reserved personality than us (Brazilians), and I feel they tend to use alcohol to help with this personality issue. I often see that when me and my lab colleagues go out on Fridays. At our department, every Friday the supervisors and students go out to a pub. I noticed that it’s some sort of ritual there. People would meet at the pub, and you could clearly see that my British friends’ expressions were already different. I mean, they were more relaxed, talking loudly and even touching each other’s shoulders (like when you are leaning into someone). So, I could see this more friendly approach when we were at the pub. However, in the next day during work, everyone would return to the formality, completely opposed to how they were on the day before...” (FG01-F01-33Y).*

#### 5.4.2 Theme 2: Factors influencing drinking patterns

This theme captures Brazilian participants' opinions concerning how often and how much students drink. Participants constructed views on how trends in alcohol consumption differed between Brazilian and British students, with the majority of Brazilian interviewees considering high levels of alcohol consumption in the UK to be spread across the culture, i.e., associated with any social activity and settings, including going to the movies. Conversely, in Brazil, drinking was perceived to be associated with regular social settings, i.e., when going out to bars or parties. The theme further explores the Brazilian students' perceptions of the UK students' social lifestyles, in which cheap alcohol is constantly available (including at university settings) thus contributing to the perceived British students' high levels of drunkenness within nightlife settings, particularly during pre-drinking practice.

##### 5.4.2.1 Alcohol accessibility

A reoccurring view held by Brazilian participants within and across the groups was that alcohol was perceived to be easily accessible for students and people in general in the UK. Additionally, participants discussed how alcohol is integrated to the UK culture: *"Funny thing is that at the movies they sell wine and beer, and this would never happen in Brazil. I mean, you would never see people getting in with their wine and beer to see a movie. That's weird for me, though I guess this is related to their culture: every social event there will be alcohol"* (FG01-M01-25Y).

The prevailing view amongst Brazilian participants during the interviews was that the frequent and easy access to alcohol within "non-drinking" settings (i.e., at the movies, theatres and particularly at universities) gave an impression that British students tend to drink higher quantities and more frequently than Brazilian students: *"...unlike us (Brazilians) they tend to drink a lot even during the week. In Brazil we tend to do it only during the weekends..."* (FG05-F01-31Y).

Contrary to the Brazilian setting, participants assumed that having pubs inside university premises increases students' opportunity to drink. For Brazilian interviewees such "easy access" to alcohol was perceived to be part of the student life in the UK. Respondents expressed their feelings about alcohol accessibility by students: *"something that is completely different here (in the UK) is that some universities have their own pub. I was talking with my Brazilian friends and they also thought this was different, because back home you don't have bars or pubs inside the University, you have to go out to drink whereas here you can drink inside the University"* (FG01-M02-26Y).

*"I noticed here that alcohol is present in every single Uni event. If there is a screening for a movie there will be beer. In Brazil I would never imagine this situation within universities for example. Here everybody, teachers and staff drink together..."* (FG01-F02-24Y).

From this, some participants believed that the easy accessibility of alcohol (particularly beer) within the UK nightlife context was also further associated with influencing Brazilian students' drinking behaviour: *"...I learned how to drink beer here in the UK. I didn't use to drink it back in Brazil because I didn't like the taste of it nor had the costume of doing it when going out. Here (in the UK), beers are tastier and cheaper..."* (FG06-F01-30Y).

#### 5.4.2.2 Alcohol and the financial issue

Interestingly, when discussing about the perceived differences between Brazilian and UK students' drinking patterns when going out, economy drinking (i.e., cheaper drinks) was assumed to encourage students drinking patterns. Some Brazilian participants gave the impression that the financial factor alongside the high density of drinking environments within the UK (when compared with Brazil), initiated their interest in new alcoholic drinks and flavours, beyond what is available in Brazil. Hence, for some participants their drinking behaviour has changed since they arrived in the UK. In their view, *"Regarding the money aspect, here (in the UK) alcohol is cheaper. You go at Tesco for example, the diversity of beer that here it cost around £3-£4 and in Brazil if*

*you could find this same beer, it would cost about R\$ 35 (approximately £7). So, if you already had a drinking habit before once you arrive in the UK you start to get more interested and curious. I can say for myself, when I arrived here, I was like – I want to try this, that, that other one and etc” (FG01-F01-33Y).*

Regarding pre-drinking event, Brazilian interviewees consistently referred to the economic factor (i.e., saving money they spent during a night out) as well as the main influence on students’ pre-drinking behaviour. A prevailing view within and across the groups was that overall pre-drinking saves money because no matter if you are in Brazil or in the UK, alcoholic drinks within nightlife settings are expensive: *“...a simple drink costs here £10, and you don’t go out and drink only one, so if you drink 3 that would cost us £30. This is impossible, as with this amount I can do groceries for one week” (FG04-F01-27Y).* Interestingly, participants gave the impression that drinking in the UK is still cheaper than drinking in Brazil: *“In Brazil any regular beer bottle of 330 ml will cost us at the night out R\$ 10 (approximately £2), here (in the UK) one pint which is more than 500 ml of good quality beer will cost us only £2 to £3” (FG05-F01-31Y).*

#### 5.4.3 Theme 3: The food context

This theme explores Brazilian students’ perceptions of drinking alcohol during meals as a traditional and accepted behaviour carried out by all British people. The theme further draws on the Brazilian participants’ perceived expectations and preconceptions of mixing drinking and eating, within nightlife settings.

##### 5.4.3.1 Alcohol as accompaniment with food

Mixing alcohol and food was presumed to be a traditional behaviour carried out by British people in general, particularly students. Brazilian participants presumed that alcohol was embedded within the UK drinking culture as part of daily activities, including family meals: *“...one time I went to my friend’s parents’ house for lunch time and she asked me what would I like to drink, and I answered “juice”. She looked at me laughing saying that I wasn’t funny and then offered me vodka instead...” (FG01-F01-33Y),* and

other social gatherings: *“...I noticed that here in the UK when people go out for dinner, they drink alcohol as accompaniment with their food. Few people drink water or juice...”* (FG04-F02-25Y), which was perceived to differ from the Brazilian scenario: *“...I feel that this (not having alcohol during meals) is a general thing amongst us (Brazilians). When we go out for a pizza, we first eat it with soft drink and then we can order a beer, or not. You won’t ever drink beer whilst eating the pizza. Whereas here in the UK, they do that...”* (FG04-F01-27Y).

#### 5.4.3.2 Food and the nightlife environment

Within this sub-theme, Brazilian participants discussed the perceived differences between the Brazilian and UK nightlife environment. For Brazilian participants, aspects of the physical structure of the nightlife environment in the UK were thought to be encouraging excessive drinking behaviour amongst students. Most of the Brazilian participants felt that UK nightlife differed from the Brazilian scenario in relation to food consumption and its availability within drinking environments: *“...here (in the UK) I don’t like going to nightclubs that much, nor bars or pubs that don’t serve food nor snacks, because when I drink I like having something to eat...”* (FG02-F03-29Y).

*“...I noticed that those pubs that actually sell food here in the UK, their kitchen closes really early, like 9 pm, so if you want to go out here you have to go really earlier (compared to Brazil) ...”* (FG03-M01-30Y).

Furthermore, Brazilian students’ perceptions of the differences between Brazilian and UK nightlife settings in relation to food availability was presumed to be associated with UK students’ high levels of drunkenness during a night out: *“...every time that my British friends from university invite me to go out, we end up in places that don’t sell food and consequently they spent most of their time just drinking alcohol...”* (FG02-F03-29Y). Interestingly, amongst Brazilian students, eating food before drinking was perceived to work as a “strategy” to avoid getting too drunk and consequently avoid experiencing alcohol-related harms: *“In Brazil if you are passing out because you drank too much, your friends will carry you home and sometimes even give you a bath.*



*Someone will say - it's over for you, next time try to drink less or eat more..." (FG04-F01-27Y).*

*"When my British and French friends were planning to go out at 9 pm for example, they didn't have this social habit of ours (of eating something before drinking). They used to arrive at our place at 8 pm, they would sit at the couch and drink without eating anything until they are ready to go. I used to make a joke that the world wasn't going to end to drink the way they were drinking. They used to say to me that they wanted to arrive there (at the bar) already drunk. So, you can see that their intention is to lose control" (FG01-F01-33Y). But more importantly, this "strategy" was perceived to be something embedded within the Brazilian culture: "...I think it's a Brazilian thing to have something to eat when we are drinking..." (FG01-M01-25Y).*

#### 5.4.4 Theme 4: Alcohol and culture

The *"alcohol and culture"* theme captures Brazilian participants' perceptions of the UK nightlife environment as a setting which is encouraging to students' excessive drinking, suggesting the importance of understanding the wider drinking context of students' drinking behaviours. A common view held by the interviewees was that when going out, British students were presumed to drink beyond Brazilian students' ideal levels of drunkenness. Brazilian participants used the strong adjective such as "heavy" to describe the UK nightlife drinking culture. The theme further explores participants' perceived views of the impacts of living in the UK on Brazilian students' alcohol use.

##### 5.4.4.1 The "heavy" drinking culture

Participants had constructed views on how the UK nightlife was perceived to be a more permissive environment for extreme drunkenness (when compared with Brazil). Brazilian interviewees assumed that British students' intent to get extremely drunk when going out alongside the perceived high numbers of drunk and passed out people on the streets and inside the venues along with the number of vomiting spots and broken glass within nightlife settings, gave an impression of a "heavier" UK drinking

culture when compared with the Brazilian culture: *“I got the feeling that when I go out here (in the UK) there are a lot of drunk people in the streets. In Brazil you expect to see this but only when you go to one place and inside that place people are drinking a lot. Here I feel like it is everywhere...”* (FG02-F02-30Y).

Moreover, amongst Brazilian participants the prevailing view at both a group and individual level was that pre-drinking practice in the UK was perceived to be characterised with extremely high levels of drunkenness: *“Here in the UK (pre-drinking) is a little bit different because afterwards, by the time people arrive at the parties they are already in another higher level of drunkenness”* (FG01-F02-24Y). Interestingly, only one female participant felt that pre-drinking practice amongst Brazilians and/or in Brazil can also be characterised with high levels of drunkenness as it represents an extension for alcohol consumption on a night out: *“...during the pre-drinks at my house we made some drinks, including caipirinha (Brazilian alcoholic drink), and when we arrived at the nightclub me and my other Brazilians’ friends who were at my house we ordered a lot of double shots of spirits at the venue because first, we had already arrived feeling a bit tipsy and second, we wanted to keep all the work (meaning: drunkenness) done during the pre-drinking, at the club. For me it’s all-or-nothing”* (FG06-F02-24Y).

#### 5.4.4.2 Perceived impact of living in the UK on Brazilian students’ alcohol use

Additionally, when discussing the perceptions around how much and often students drink, participants perceived themselves as drinking less than British due to the weather. Brazilian students felt that the difference between the weather in Brazil, that is the higher temperatures with the cold temperatures in the UK was perceived to influence Brazilian students’ drinking behaviours: *“...I don’t usually go out to drink when is cold here (in the UK), whereas in Brazil where is often hot, I go out to a lot of bars to have a drink and freshen up...”* (FG02-F01-31Y).

*“...My hometown in Brazil is a warm city, and when I was living there, I used to drink a lot more than nowadays. I think the climate might have influenced me. I mean, I like to drink cold beer and with the UK weather it’s impossible to do that...”* (FG05-F02-25Y).

Moreover, amongst Brazilian participants having alcohol as accompaniment with food was perceived to be embedded within the UK culture. Interestingly, most of the Brazilian participants believed that this perceived UK drinking behaviour was further associated with influencing their own drinking behaviour: *“gradually I felt that this (drinking alcohol whilst eating lunch) had some sort of influence on me because every now and then me and my friends we were naturally having a beer during our lunch breaks, however, this I would never do it in Brazil...”* (FG01-F01-33Y).

#### 5.4.5 Theme 5: Alcohol and gender

This theme captures Brazilian participants’ perceptions and expectations of excessive drinking during nights out as a normal behaviour carried out by both male and female university students. When discussing the perceived harms associated with nightlife settings, it was clear from the narratives that alcohol-related problems were presumed to differ between gender and countries.

##### 5.4.5.1 Women’s drinking in context

Participants had constructed views on how expectations towards men and women’s drinking behaviour differs. Since drinking to get drunk was assumed to be part of the British students’ drinking culture, including female population, for Brazilian participants the perceived expectation of British students to deliberately get drunk during pre-drinking behaviour reflected in participants’ perceived attitudes towards drunkenness for men and women. In summary, Brazilian students had constructed views on how gender roles across countries differed. It seems that in Brazil, women’s alcohol use is conceptualised differently (to men’s) when compared with UK women’s drinking. Unlike the UK scenario, in Brazil women are expected not to drink too much: *“...in Brazil there’s this idea that it is always bad to see a women passing out and vomiting, when compared with men...here I feel that people don’t judge this behaviour...”* (FG04-F01-27Y).

From a gender perspective, in Brazil drinking might have different meanings for women than for men: *"...personally, I think that there is a cultural difference (between Brazil and UK) regarding the social context to what students are going to do when going out. I mean in Brazil you see the guys "approaching" the girls, trying to take advantage and offering them drinks and sometimes the girls even accept the drinks to loosen up to be able to talk to them. Whereas here (in the UK) you see the girls drinking a lot because they really like to do so, and I feel that the sexual connotation that is often seen in Brazil does not exist here (in the UK) when going out..." (FG03-M02-41Y).*

*"...I noticed that here (in the UK) men go out to dance and hang out amongst their peer group, whereas in Brazil guys usually go out to "pick-up" girls..." (FG01-F02-24Y).*

#### 5.4.5.2 Drinking and its harms

According to Brazilian participants, losing control as a result of drinking alcohol was perceived to be the main problem associated with pre-drinking practice, as it increases the chances of both men and women becoming involved in violence and assaults, mainly in the Brazilian nightlife scenario: *"...losing control of drinking at home is the main problem because for some people that's the end of their night; however, for others, sometimes they decide to go out drunk and that's where the real problem occurs because outside on the streets you will have increased chances of experiencing other problems (than drinking too much). For example, near my place (in Rio) we either have to take the subway during the night and it's not safe for anyone (men or women) or drive which is worse. So, I feel that there (in Brazil) the chances of getting involved in traffic violence and assaults are higher..." (FG01-M01-25Y).*

However, gender differences were particularly visible in the discussions around drunkenness. Brazilian participants felt that female population in the UK drink more than Brazilian female population. But more importantly, amongst Brazilian participants drinking large quantities of alcohol was often perceived to increase the chances of women (when compared with men) in experiencing alcohol-related harms. UK females were perceived to experience more harms from effects of alcohol intoxication than

Brazilian females: *“...here (in the UK) I see a lot more of drunken women on the floor, almost passing out. I think that they (women) would not ever do that in Brazil because of the safety issue...”* (FG04-M01-27Y).

Though some participants felt that many health risks from drinking are the same for both gender (e.g., violence, vomiting and passing out): *“...although sometimes we (Brazilian students) drink a lot, I think that in Brazil we don’t often drink as much as British students do to the point of losing control of drinking and passing out on the streets because we are afraid of getting mugged...”* (FG04-F01-27Y), participants believed that there are additional risks for women particularly amongst the Brazilian female population: *“...when considering my hometown in Brazil I think I prefer the UK nightlife to the Brazilian nightlife, because unlike here (in the UK) within the Brazilian nightlife context I usually see a lot of guys fighting and always trying to “make a move...”* (FG01-F01-33Y).

*“...a group of drunken women walking on the streets in Brazil is a huge problem, because men will try to take advantage of it...”* (FG04-F01-27Y).

Participants believed that within the nightlife context in Brazil, women are at a greater risk of experiencing sexual harassment or assault. During nights out in Brazil, men were perceived to have more sexual interest towards women when compared with men from the UK: *“...when we go to nightclubs you see men here (in the UK) with their drinks on their hands, dancing and talking. You don’t see them trying to grab you or kissing you like in Brazil...”* (FG03-F02-26Y).

*“...unfortunately, if a group of drunken women is walking on the streets late night the chances of them been harassed (e.g. men trying to take them home or trying to hug or kiss them) are greater in Brazil than in the UK. I feel that here in the UK men’s overall respect towards women are greater because I noticed when going out here (in the UK) if a guy approaches you and you don’t show any interest at all in having a conversation, and yet the guy still insists, someone random or even the door supervisors will do something such as asking for the guy to leave...this would never happen in Brazil. I feel*

*that here in the UK the “don’t bother the other” culture is stronger, whereas in Brazil girls in particular they need to be more concerned about safety not only regarding sexual behaviour but also violence...” (FG04-F01-27Y).* From this, it seems that in Brazil women were more concerned about experiencing certain alcohol harms (e.g., sexual violence or harassment) and so they drink less to avoid such harms.

#### 5.4.6 Theme 6: Alcohol policy and practice

Within this theme, Brazilian students’ general knowledge and perceived effectiveness of some Brazilian and UK alcohol policies (such as not drinking and driving, restrictions on sales of alcohol to underage or inebriated people, and policies to manage drunk and disorderly behaviours) are explored. Based on all participants’ views: *“students in Brazil and in the UK are not interested in any kind of intervention or awareness on alcohol consumption more than get[ting] themselves drunk” (FG02-F01-31Y).* However, for Brazilian participants it was felt that the UK has stricter laws that are constantly enforced when compared with Brazil, where the scenario was perceived to be laxer with weak enforcement of regulations. The theme further explores Brazilian students’ views regarding some of the challenges relating to certain policy practices aimed at reducing alcohol-related harms within nightlife settings in Brazil. This included non-acceptance by the population and a lack of affordable options of transportation.

##### 5.4.6.1 Law enforcement

Within this sub-theme, Brazilian participants discussed the perceived effectiveness of law enforcement. Overall, according to Brazilian participants’ views, the UK was perceived to have more effective penalties and punishment for doing illegal things (such as drink and drive), which was then perceived to be the main factor associated with compliance to the law, when compared with Brazil. In their view, *“...here in the UK people go to court whereas in Brazil if you get caught you can just pay the bail and you are out; i.e., the law doesn’t really work the way it works here...” (FG03-M01-30Y).*

Although it's forbidden for minors (under the age of 18) to buy and drink alcohol in Brazil, during the focus groups there was a general consensus about how age restrictions in the UK (i.e., Challenge 25) were considered stricter than in Brazil: *"...here in the UK is more difficult to buy alcohol because you can't buy it without showing your ID. I think it's that 25 years thing..." (FG03-M01-30Y)*. According to all the participants, age regulations and restrictions were not properly implemented in Brazil. It was felt that this led to , increased alcohol access particularly amongst young people: *"...here (in the UK) 99.9% of the times they request our document when buying alcohol whereas in Brazil I witnessed a lot of younger people buying alcohol in the supermarket for example, even though they were clearly 12 or 13 years old. Here they ask for the document even if you appear to be old enough..." (FG03-M01-30Y)*.

Furthermore, since alcohol consumption in the UK nightlife was referred to be "heavier" than in Brazil, participants felt that the UK nightlife environment itself was characterised by extreme public drunkenness, loud noise, urinating, littering, with high numbers of inebriated people sleeping on the ground and also verbal disorder. However, despite these perceptions, participants felt that the UK has stricter and more effective restrictions (e.g., refused entry for inebriated people) applied for drunk and disorderly people when compared with Brazil: *"...the Brazilian way to do things doesn't exist here (in the UK), there are no small talks between them (door supervisors) and the nightlife patrons..." (FG01-F02-24Y)*. More importantly, such restrictions were perceived to be associated with participants feeling safer within the UK nightlife settings than in Brazil. In their view: *"...the UK is more concerned about the general wellbeing inside a venue...." (FG01-F01-33Y)*.

*"...If someone is causing trouble for example, they (door supervisors) simply remove the person from the place, and she/he is not allowed to enter. They (door supervisors) don't wait for the circus to burn (Brazilian expression for causing trouble such as fights) like in Brazil..." (FG01-F01-33Y)*.

#### 5.4.6.2 Culture of impunity

This sub-theme “*culture of impunity*” draws on Brazilian students’ preconceptions of how compliance with the law in the UK and Brazil differs. Opposed to the UK scenario, a low sense of following the law alongside low sense of fear of punishments were considered deeply embedded within the Brazilian culture.

Overwhelmingly, amongst Brazilian participants the UK students’ sense of following the law of drinking and driving was perceived to be greater than the Brazilians’ sense: “...here (in the UK) they are more concerned about drinking and driving. I would say that they are more afraid of getting caught by the police and losing their driving license...we don’t see that in Brazil” (FG01-F01-33Y).

*“I never saw a British person drink and drive afterwards. Most of the times I witnessed them refusing to drink at the club because they were driving” (FG06-F02-27Y).*

From this, participants felt that there is poor law enforcement in Brazil regarding drink-drive regulation: “...in Brazil the fear is associated with an economic factor of spending a lot of money with fines for breaking the rules and replacing documents whereas here (in the UK) the fear is going to court...” (FG03-M01-30Y). Unfortunately, the police force in Brazil was thought to be rooted in corruption as participants discussed how easy it is to bribe police officers during sobriety checkpoints. According to all participants’ views, the “Brazilian way to do things” was something embedded within the population culture. This was considered unique and exclusive to the Brazilian population. In simple terms, participants referred this as a behaviour associated with getting things done no matter how, but usually by breaking the laws: “...in Brazil the first reaction when you get a traffic fine is to whether you can persuade the police officer. That thing about the Brazilian way to do things, you know?” (FG01-F02-24Y).

Participants’ discussed how in Brazil the low sense of fear of being punished as well as not receiving proper penalties were presumed to be associated with the need for a stricter and more active system for compliance with the drink-drive law, as it was perceived to be in the UK: “...me and my brother we were going to a nightclub (in Brazil) and he was caught driving with a beer bottle in his hand. What happened was that when



*he saw the police sobriety checkpoint, he changed his route to another street but there was another sobriety checkpoint there because the police were expecting people to do that. So, whilst he was driving to this street, he tried to give his friend that was seating at the back his beer, but the police officer saw him and stopped us. He got a traffic fine for it plus another one for driving without his documents. It cost him R\$3,500 (approximately £700). Instead of us going home feeling sad for getting fined and everything, my brother's first reaction still was for going out to the club. He even joked saying that he was going to pay everyone's first round. At the end of the night, after drinking a lot at the club, he didn't even bother about what had happened earlier because he drove back home. He wasn't even concerned about the possibility of getting caught again" (FG06-F02-27Y).*

Regarding age restrictions for buying and consuming alcohol, Brazilian students' reflections the UKs well-established age checks system gave participants a comparison for Brazilian law. This led participants to discuss how a Brazilian law regarding the minimum legal age for buying and consuming alcohol needs to be stricter and actively enforced, as unfortunately people in Brazil do not often comply with the law: *"...I think the law here in the UK is stronger than in Brazil. For instance, there (in Brazil) it is forbidden to drink alcohol before you are 18 years old, but everyone starts drinking earlier at parties. So, this some sort of imply that the law is not a law, you know? It is more like an advice because people still break the law. Whereas here I get the feeling that people respect the law like if they do the opposite, they will go to jail for lifetime..." (FG06-F02-27Y).*

As for participants' views on the UK policy on prohibiting alcohol sales to inebriated people, very few Brazilian' respondents were aware of it: *"...someone mentioned to me about the law forbidding sales to drunk people. I could never imagine this happening in Brazil..." (FG01-F02-24Y).* Those who were aware were also opposed to this kind of policy in Brazil, suggesting it would not be an effective way to reduce alcohol consumption within nightlife settings.

Participants felt that in the UK, alcohol retailers were perceived to be more confident to say no to a drunk person trying to buy alcohol when compared with Brazil: *"...in the UK they don't have any problem to say no and not sell..." (FG03-M02-41Y)*. As alcohol sales are not as regulated as they are in the UK, Brazilian bar owners and/or alcohol sellers' main concern was perceived to be always related to earning money: *"...do you really think people in Brazil will want to stop selling and losing profit?! No, they won't" (FG03-F02-26Y)*. Therefore, it seems that amongst participants, it would be difficult for Brazilians to adhere to and follow the law because those interested in buying alcohol would find a way around it to enable them to buy alcohol (e.g., via the "Brazilian way to do things"). However, one participant suggested that if Brazilian legislation was stricter and constantly enforced as it was perceived to be in the UK, drinking levels could be affected: *"...I think it could help by not encouraging the consumption..." (FG02-F01-31Y)*.

Furthermore, Brazilian participants' views of what they considered to be the UK's firm approach of prohibiting inebriated people entering a venue were presumed to be associated with stricter law enforcement and an increased sense of fear by the population of being punished with penalties (i.e., respect for the law). According to participants, Brazilians' low sense of punishment and disrespect for authorities were perceived to be the clearest cultural difference between the two countries: *"...you know what is crazy? The fact that here in the UK if the door supervisor asks someone to leave the venue, the person will go with no problem, whereas in Brazil if the door supervisor asks a drunk guy to go away, he (door supervisor) just got himself into a huge fight..." (FG06-M01-31Y)*.

Despite the perceived high culture of impunity towards laws and regulations, particularly regarding the drink-drive law in Brazil, during the discussions Brazilian participants acknowledged the Brazilian government's efforts to develop and implement stricter and more effective alcohol policy, like the zero-tolerance law, are influencing people's behaviours: *"...I think we are already doing the right thing. The fine price for getting caught drinking and driving have been already influencing people's decisions for driving later after a night out. Moreover, I also witnessed some of my friends*

*losing their driving licence for drinking and driving. I just think that the next step is to find a way to effectively punish those who drive without documents...” (FG06-F02-27Y).* As a way of addressing the problem associated with people’s sense of impunity, Brazilian participants believed that providing more affordable options for late night transportation in Brazil would be helpful in reducing drunk driving incidents especially in big cities like São Paulo: *“...taxis are cheaper here (in the UK) compared to Brazil...” (FG02-F01-31Y).* Likewise, education campaigns were considered an effective and important policy practice to help reduce problems associated with drinking and driving: *“...law enforcement on drinking and driving has just began (in Brazil), I think that’s why Brazilians do it more than British people. To educate the population will take some time but hopefully in the future no one will ever do drive drunk anymore” (FG02-F02-30Y).*

## 5.5 Discussion

This qualitative study aimed to explore Brazilian’ students’ experiences and perceptions of the differences between students’ drinking patterns and nightlife situations within Brazil and UK. The findings indicate that before coming to the UK, Brazilian students had pre-conceived perceptions of a “heavy” UK drinking culture and knowledge of how alcohol is deeply embedded in the UK, particularly in the student life. Brazilian participants presented themselves as being naturally more sociable and drinking to get drunk was recognised as a main feature of the British students’ nightlife experiences. Brazilian participants discussed how amongst British student’s alcohol use works as a social lubricant and helps in overcoming shyness and social anxiety by lowering inhibitions around integration. Additionally, although there are different policies in place across the countries, UK alcohol policy was perceived to have greater effectiveness and influence on British students’ drinking behaviours, when compared with Brazilian policy.

Results from this study have developed the limited evidence base on the social and cultural norms of students’ nightlife drinking experiences, particularly amongst the Brazilian participants by providing multiple perspectives and insight into the possible influences on students’ drinking behaviour during nights out. Given limited knowledge

on Brazilian students' nightlife drinking experiences, these findings can be used to inform policy and practice in Brazil, to prevent excessive drinking within nightlife settings and to reduce alcohol-related harms.

The socio-ecological model underpinning this research was used to help understand the social, cultural and environmental influences that could impact students' drinking attitudes and behaviours. Regarding student alcohol consumption, individuals are inserted in the microsystem which is then inserted at a broader community level. Using the socio-ecological model can help gaining a deeper understanding of how these multi-level influences affect both students and the nightlife environment in order to develop effective strategies to reduce drunkenness. Six main themes emerged from the focus groups discussions which provided interesting discussions on the social and cultural differences regarding the context of alcohol use as well as its availability. This was anticipated to vary across countries, such as drinking during daily activities e.g. family meals and alcohol availability at certain social events including universities (Babor et al., 2010).

The findings indicated that participants perceived there to be differences between Brazil and the UK in students' drinking behaviours and nightlife situations. For example, participants felt that UK drinking culture is "heavier" than Brazilian drinking culture and that alcohol consumption is deeply rooted in the UK student and general culture (which was anticipated to be mainly focused on drinking large amounts of cheap alcohol, when compared with the Brazilian scenario). The findings also indicated that participants perceived there to be differences in the effectiveness of alcohol policies aimed at reducing alcohol-related harms within nightlife settings (e.g., drink and drive incidents; restrictions on alcohol sales and drunk and disorderly behaviours). Participants believed that despite the Brazilian government's effort to apply stricter and more punitive laws, the gaps within the compliance of the law, related to the culture of impunity, needs to be addressed by an effective law enforcement approach as was suggested as happening in the UK (although there is still evidence of a "culture of intoxication" and related harms), and through developing and implementing a comprehensive alcohol policy to formulate effective policies that reduce harmful use of

alcohol. Though evidence-based knowledge provides a good grounding for implementation of effective policy and intervention (World Health Organization Regional Office for Europe, 2017, World Health Organization, 2018, Nemtsov et al., 2019), this knowledge is not yet widely implemented (Rekve et al., 2019), particularly in LMICs, such as Brazil. Brazilian research aimed at understanding alcohol use within the nightlife context and its related harms (in order to develop effective policies and interventions) is still scant and there is a lack of political (including financial support) and populational commitment at both local and national level to develop and accelerate the application and control of existing policies in Brazil. The following sections will present discussions of the results in relation to the literature and pre-existing theories as well as suggestions for policy, practice, and future research.

#### *5.5.1 Motivations for alcohol consumption*

University life is often characterised by excessive alcohol consumption amongst students, particularly within the UK (Heather et al., 2011, Morton and Tighe, 2011, de Visser et al., 2013, Davoren et al., 2015, Davoren et al., 2016a, Davoren et al., 2016b). There has been a lot of interest in the literature aimed at understanding students' attitudes, norms and perceptions as well as identifying the factors associated with problematic alcohol use in order to develop proper and effective interventions (Cooke et al., 2006, Van Hout and Connor, 2008, John and Alwyn, 2014, Dotson et al., 2015, Hagger et al., 2015). This study produced in-depth insights into the differences between Brazilian and UK student's drinking expectations within nightlife settings. British students were perceived to enjoy drinking alcohol and thought to drink whenever they like for no particular reason. Consistent with previous research (Martinic and Measham, 2008, Szmigin et al., 2008, Griffin et al., 2009, Craigs et al., 2012, Barton and Husk, 2014, Thurnell-Read et al., 2018), participants also suggested that the pursuit of achieving extreme drunkenness in the UK, either prior to going out (during pre-drinking) or during the night out, is a culturally embedded practice amongst students strongly associated with having fun. Furthermore, between men and women drinking to get drunk was perceived to be a normalised behaviour in the UK.

Changing students' drinking behaviour has been a great matter of concern (Longstaff et al., 2014). Despite the implications that problematic alcohol use can cause amongst students such as academic and social problems (Bewick et al., 2008a, Thombs et al., 2009, Atwell et al., 2011), violence and risky sexual behaviours (Wechsler et al., 2002, Jennison, 2004, Silva et al., 2006, Nunes et al., 2012, White and Hingson, 2013, Davoren et al., 2016b), students also often have positive expectations towards alcohol effects, including the feeling of entertainment and social belonging (Park, 2004, Demant and Jarvinen, 2011, de Visser et al., 2013, Grant et al., 2013, Monk and Heim, 2013, Christmas and Seymour, 2014, Schuckit et al., 2016). For instance, an international study conducted in Brazil, China, Italy, Nigeria, Russia, South Africa, and Scotland revealed that despite people's knowledge about the negative consequences of drinking excessively, they were still motivated to drink in order to "have fun", i.e. to be sociable, to meet new people, to feel good, and to enjoy the state of drunkenness (Martinic and Measham, 2008).

To investigate the broader contextual factors influencing students' drinking behaviours it is necessary to look beyond their attitudes, norms and perceptions, as they are usually associated with more positive expectancies than negative (Monk and Heim, 2013). The current findings suggest that whilst in Brazil passing the point of no return (i.e., getting extremely drunk) was thought to be a consequence of a good night out, within the UK, this was a priority for having a good night out. When developing alcohol prevention policy to encourage behavioural change (particularly amongst university students), it is important to understand the positive associations with alcohol use. Furthermore, there is evidence suggesting that students tend to react negatively to certain regulations regarding alcohol use as current policy approaches fail to acknowledge the social motivations associated with students' drinking (Foxcroft et al., 2015, Ladekjær Larsen et al., 2016, Brown and Murphy, 2018).

The current findings concerning students' pre-drinking behaviour corroborated previous studies in which a range of reasons for drinking before going out were identified (such as to socialize and to have fun) but most were related to the economic factor (Forsyth, 2010, Barton and Husk, 2012, Caudwell and Hagger, 2014, Foster and

Ferguson, 2014, Østergaard and Andrade, 2014, Ogeil et al., 2016). However, the main difference between the two countries in students' pre-drinking behaviour was mainly related to the need for British students to reach extreme drunkenness levels before going out. Consistent with previous research (Barton and Husk, 2012, Østergaard and Andrade, 2013, Barton and Husk, 2014, Atkinson and Sumnall, 2017, Thurnell-Read et al., 2018), saving money and getting drunk as part of the enjoyment of going out were perceived to be the main priorities for British students when pre-drinking. This differs greatly from the Brazilian pre-drinking practice as respondents believed drinking was to socialize and create excitement about going out, rather than to intentionally lose total control of yourself before going out. Apparently, for Brazilian students, the intention of losing control and getting extremely drunk was considered to be a risky attitude in British culture (Thurnell-Read et al., 2018), which supports the concept that students' drinking social norms and attitudes vary between cultures (Beccaria and Sande, 2003, Wicki et al., 2010, Gordon et al., 2012, Fjær et al., 2016, Savic et al., 2016, Fjær and Tutenges, 2017, Labhart et al., 2017, Aresi et al., 2018).

In the UK, literature suggests that drinking to get drunk is a socially acceptable behaviour (Measham and Brain, 2005, Measham, 2006, Griffin et al., 2009, Fry, 2011). Amongst young people, drinking usually involves friendship and pleasure, but more importantly, evidence suggests that binge drinking plays an important role in students' lives as a socially shared experience for peer acceptance and sense of belonging. This is thought to be part of their construction of identity (Lyons and Willott, 2008, Szmigin et al., 2008, Griffin et al., 2009, Measham and Østergaard, 2009, de Visser et al., 2013, Niland et al., 2013). According to participants, Brazilian students do get drunk, yet this is not the norm within their social life. In Brazil, drinking is often associated with external motives such as to celebrate an occasion, whereas in the UK it appears to be an ordinary behaviour. This highlights the importance of understanding the cultural and social factors across countries and how they can influence students' norms and expectations of alcohol consumption (Hauck-Filho et al., 2012, Castro et al., 2014, Canfield et al., 2017)

According to Brazilian students' views, the British "heavy" drinking culture was perceived to be associated with British students having a completely different personality and behaviour when they are sober (e.g., quiet, shy and calm) to when they are drunk (e.g., louder, sociable and talkative). This particular subject brought really interesting insights about differences in students' perceptions of the UK drinking culture when compared with Brazil. It was generally perceived that in the UK students do not know how to "open up" and socialize without alcohol, so for Brazilian participants views', they need to drink large amounts of alcohol to overcome this issue (de Visser et al., 2013).

In this study, Brazilian participants saw differences between their own and British students' perceived motivation for alcohol use. According to Brazilian students, getting drunk was suggested to be something not intentionally practiced amongst Brazilian students and often seen as consequence for losing control. However, they perceived that for British students, getting drunk was a common behaviour usually associated with having fun. In line with previous research (Plant and Miller, 2001, Green et al., 2007, Barry and Goodson, 2010, Atwell et al., 2011, Clark et al., 2012), this information reinforces the need for developing innovative and culturally compatible interventions based on university students' norms and attitudes towards drinking in order to promote healthier alcohol consumption within the nightlife setting, including during pre-drinking practice. Future studies should further investigate students' norms and attitudes, especially cultural influences towards alcohol use which affect their drinking behaviour within nightlife settings.

#### *5.5.2 Factors influencing drinking patterns*

Data suggests that young adults attending university in the UK drink more alcohol than their non-student peers (Davoren et al., 2016b) and that students' excessive drinking levels during university life have become normalised and acceptable (Gill, 2002). Findings from the current research revealed some interesting differences between Brazil and UK drinking culture on how alcohol is easily available for students within and outside university premises and how it can have a negative impact on their



drinking behaviours (Quigg et al., 2013). In the UK, unlike the Brazilian scenario, universities can have a bar on their premises that is usually the place where students go to socialise and drink alcohol. According to participants' perceptions, alcohol within these establishments is sold at affordable prices which was perceived to increase and encourage even more consumption amongst students (Stautz et al., 2016). This was considered a surprise by the Brazilian nationals as in Brazil alcohol is not allowed in any kind of social event inside university premises. Participants' viewed the high levels of alcohol consumption amongst UK students as being associated with the recreational student culture in the UK particularly regarding the variety of university alcohol-promoted social events (Gill, 2002, Riordan et al., 2015, Davoren et al., 2016a, Merrill and Carey, 2016, Fuller et al., 2018).

Interestingly, consistent with previous research (Canfield et al., 2017) living in the UK was perceived to be associated with greater risk of problematic alcohol use amongst Brazilians. This could be associated with a more permissive British culture in relation to alcohol use when compared with Brazil, and the consumption of alcohol within various social gatherings. Thus, unlike Brazil, in the UK alcohol is sold beyond pubs, bars, nightclubs or restaurants and across various entertainment venues including movies and theatres. As such, students are more exposed to alcohol in the UK than when in Brazil. It can be argued that amongst students, alcohol harms are influenced not only by alcohol access but also by individual characteristics, situational, social and locational characteristics of drinking contexts. Hence, new experiences such as living abroad at a different country with different characteristics (e.g., weather), having to integrate and adapt into a new social life were perceived to impact Brazilian students' alcohol use.

There are differences between Brazilian and UK students drinking, positive and negative outcomes and a variety of individual and social aspects linked to students drinking behaviours. Therefore, further evidence exploring students' drinking expectancies and motivations is required. In the current study, the social context appears to influence students' alcohol expectancies (Kuntsche et al., 2006b, Seaman and Ikegwonu, 2010) since British students were perceived to have more positive expectancies towards alcohol consumption (e.g., intentionally get drunk for fun) when

compared with Brazilian students. Brazilian and UK students' studies suggest that the university period increases problematic alcohol use amongst students (Gill, 2002, Brandão et al., 2011), however in Brazil there's a lack of research on students' drinking practices particularly within the nightlife context (e.g., pre-drinking) which limits to fully understand the Brazilian alcohol landscape that could influence students' drinking behaviours.

Data on the prevalence of pre-drinking in Brazil and in the UK is still limited, however the available evidence suggests that pre-drinkers tend to drink more than non-pre-drinkers and consequently, they tend to show higher levels of intoxication and increased risk of experiencing alcohol-related harms (Hughes et al., 2008a, Foster and Ferguson, 2014, Santos et al., 2015b). Internationally, including in the UK there is evidence highlighting the importance of investigating not only students' drinking rates but also the way in which students drink and the practices they engage in, including pre-drinking (Borsari et al., 2007b, Zamboanga et al., 2010, Haas et al., 2013, Quigg et al., 2013).

UK studies suggest that the context of alcohol use amongst British young adults' social life is market driven through the constant and large number of new alcoholic products and brands, alcohol advertisements which often associate drinking with fun and joy and cheap alcohol sales (e.g., two for one) to stimulate interest from young adults', including the women (Brain, 2000, Engineer et al., 2003, Measham, 2004b, Measham and Brain, 2005, Szmigin et al., 2008, Griffin et al., 2012, Bailey et al., 2015). Corroborating with previous UK studies (Barton and Husk, 2012, Atkinson and Sumnall, 2017) across students' narratives the importance of the wider context of drinking (e.g., easy alcohol accessibility and affordable prices) on students' drinking behaviour (including pre-drinking) was referred to. This was underpinned by the alcohol market which plays an important role in supporting the normalised and accepted "heavy" drinking culture amongst British students (Griffin et al., 2009, Seaman and Ikegwuonu, 2010).

Data on alcohol and prevention in student life is needed in order to know how to effectively intervene in students' alcohol consumption, including during nights out since it has become an important public health issue. However, the most important thing to do first is to understand students' norms, attitudes and perceptions towards alcohol consumption (Supski et al., 2017) and explore what kind of approaches are more likely to be well-accepted by the students (Snow et al., 2003, Yardley et al., 2015). Based on the findings from the current research, opposed to individual interventions, a multi-level tailored approach aimed at challenging problematic drinking at different levels, such as student drinking settings (e.g., pubs inside universities), supermarkets, off-licensed venues, bar, nightclubs and pubs in the local community, are needed to help change cultural norms on student drinking and reduce harm.

### 5.5.3 *The food context*

Participants were surprised at how UK students' drinking behaviours within nightlife culture differ from Brazilians as regards to some drinking establishments in England don't sell food, and how intoxication consequences as vomiting, hangovers, passing out or even missing work or university, were perceived to be main source of enjoyment and entertainment by the students. Moreover, these alcohol effects traditionally seen as negative have a positive impact on students' drinking behaviours, were perceived to encourage even more harmful use of alcohol (Mallett et al., 2008, Mallett et al., 2013).

The current findings suggest that within the UK context it appears that pleasure and intoxication are interconnected to the meaning of sociability (Measham, 2004b, Szmigin et al., 2008). More importantly it appears, unlike British students, Brazilian students tend to use practices of interest such as eating whilst drinking in an attempt to be less intoxicated, rather than maintaining a desired and acceptable level of drunkenness during nights out (Brain, 2000, Parker and Williams, 2003, Measham and Brain, 2005, Measham, 2006, Szmigin et al., 2008, Measham and Østergaard, 2009, Griffin et al., 2009, Fry, 2011).

According to participants' views, poor management of the drinking experience (i.e., drunkenness) and consequent experience of negative physical effects were perceived to be greater amongst British students when compared with Brazilians. An interesting difference between Brazil and UK in relation to students' nightlife-drinking patterns was regarding Brazilian' students' strategy of eating before drinking in order to "drink safely" and thus, reduce the chances of experiencing any kind of alcohol-related harms (e.g., blackouts and passing out) (Fry, 2010, Fry et al., 2014). It seems that Brazilian participants constructed themselves as responsible and controlled drinkers and that such strategy was perceived to be embedded within the Brazilian culture. According to participants' experiences and perceptions, British students were less favourable to eating before drinking which corroborate findings from a previous study conducted with UK university students (Hill et al., 2018) that showed that eating was considered a problem by the students as it makes alcohol consumption difficult since your stomach was full.

Unfortunately, little is known about how young people control their drinking. The few strategies found in the literature refers to: drinking water, taking care of peers and even pre-drinking practice as a way of controlling later consumption (Szmigin et al., 2008, Hackley et al., 2011, McCreanor et al., 2016). Regarding these findings, in order to understand how students' ways of drinking and the norms that could influence their drinking behaviours vary across cultures, further research would be interesting between the two nationalities.

#### *5.5.4 Alcohol and culture*

According to Babor et al., (2010) alcohol has different meanings across cultures, e.g., it can be consumed for relaxation, socialisation and even for intoxication, especially amongst young people. In addition, the authors suggest that in most cultures, alcohol is considered an ordinary commodity as it can be consumed daily as a food accompaniment. The UK has been considered a "dry" culture where unlike "wet" drinking culture, alcohol is not consumed in daily activities but when drinking does occur it is often excessive until intoxicated (Room and Mäkelä, 2000). However, the current

findings suggest a perceived integration of some characteristics of the “wet” culture within the “dry” UK drinking culture (Ally et al., 2016). For instance, amongst Brazilian participants, alcohol was perceived to be widely accessible and fully integrated into any UK daily and social activities amongst British students, including consuming alcohol with food during meals. Within this context, it seems that Brazil have a few aspects of “dry” cultures, in which alcohol is not typically considered part of everyday life but is rather associated with exceptional circumstances. However, to date there is no available research to draw firm conclusions.

The UK nightlife drinking culture is often characterised with high levels of alcohol consumption and also it is considered a tolerant place in relation to drunkenness acceptance since when going out British young adults usually seek to intentionally get drunk (Craigs et al., 2012, Østergaard and Andrade, 2013, Quigg et al., 2015a, Quigg et al., 2015b, Fjær et al., 2016, Thurnell-Read et al., 2018). In the current study, drinking behaviours within nightlife settings seems to differ between Brazil and UK. For instance, in Brazil alcohol consumption was perceived to be more moderate, with drinking episodes more likely to occur during the weekends at specific social events. By contrast, alcohol consumption in the UK was perceived to be heavier and with more frequent drinking episodes often associated with drinking to intoxication (Gmel et al., 2003, Kuntsche et al., 2015).

The current findings suggest that opposed to the UK scenario where drinking was perceived to be more frequent and British students were perceived to experience more alcohol effects (Hackley et al., 2011), Brazilian students were perceived to drink less and experience less drunkenness effects, such as vomiting and passing out when compared with British students. In Brazil, participants reported that getting drunk during pre-drinking (i.e., losing control) can often be reached unexpectedly, rather than intentionally as it is in the UK. Reflections on UK students’ attitudes within nightlife settings gave Brazilian participants an impression that British students are “less experienced” drinkers that are unable to avoid experiencing alcohol-related harms. In their views, Brazilian students are more concerned about the negative physical effects of alcohol intoxication (e.g., blackouts and vomiting), when compared with British

students, who tend to keep drinking until passing out (Griffin et al., 2009, Lyons et al., 2014, Fjær et al., 2016, Thurnell-Read et al., 2018).

The current findings suggested a perceived heavy drinking culture amongst British students, when compared with Brazil, characterised by extreme levels of alcohol consumption which was perceived to be deeply rooted within the culture. Such findings are significant as they help fill the gaps in understanding students' norms and attitudes towards alcohol consumption as well as how the social context of drinking differ between cultures.

While various studies provide evidence on intervention programmes targeted at changing student's drinking behaviours in order to decrease their alcohol consumption (Wechsler et al., 2002, Hingson, 2010, Toomey et al., 2013, Foxcroft et al., 2015) there still remain a number of gaps regarding their effectiveness (Scott-Sheldon et al., 2014). When developing health promotion campaigns, it is vital to consider and evaluate how students' motives influence their drinking behaviour, in particular across cultures, as norms can vary (Seaman and Ikegwuonu, 2010, Lewis et al., 2011).

It is argued that in order to develop effective measures aimed at reducing harms associated with students' drinking in the nightlife context, it is important to investigate and recognize the pleasure and social benefits associated with alcohol intoxication (Fry, 2011, Harrison et al., 2011). Unfortunately, in Brazil there's a paucity of both quantitative and particularly qualitative studies aimed at investigating the relationship between students' alcohol use and their nightlife drinking experiences and expectancies. This highlights the need for greater understanding of the nuances, practices and contexts of students' drinking during nights out (e.g., characteristics of the drinking settings and the structure of a night out) in order to effectively alter norms and consequently, change behaviour (Blue et al., 2016, Supski et al., 2017, Davies et al., 2018).

#### *5.5.5 Alcohol and gender*

Although gender differences in drinking behaviours can be found across many countries, mostly HIC (Kuntsche et al., 2004, Wilsnack et al., 2009), for LMICs like Brazil there is a paucity of evidence to support such trends. Internationally, women's alcohol consumption is converging with men's (Slade et al., 2016) including in the UK (Lyons and Willott, 2008, Bailey et al., 2015, Hunt et al., 2015).

The bulk of existing literature around factors associated with women's drinking behaviour focuses on the changes in gender roles and on how alcohol has become more available and affordable for young women, particularly within the nightlife environment (Measham, 2006, Plant, 2008, Szmigin et al., 2008, Griffin et al., 2012). Women's public drinking has also been associated with women's increasing rights and equality that is, women started drinking in public as an effort in breaking the "expected gendered" social norms on alcohol consumption, by challenging the dominance of the "traditional masculinity" that alcohol and public spaces (particularly places of leisure) represented (de Visser and McDonnell, 2012, Griffin et al., 2012, Willott and Lyons, 2012). Therefore, women are no longer discriminated within the nightlife context and drinking large amounts of alcohol and participating in the "culture of intoxication" seems to be part of young women's social lives (Griffin et al., 2012).

Interestingly, the current study suggests that there might be differences in drinking behaviours between men and women in Brazil, particularly during a night out. But more importantly, current results suggest that such differences could be explained by the social and cultural factors influencing drinking norms, attitudes and beliefs, i.e., it appears that Brazilian women are expected not to drink large amounts of alcohol and that their drunken image tends to be more negative, suggesting that drinking in Brazil seems to be conventionalised between genders (Pyne et al., 2002). Exploring the many factors, such as socio-cultural beliefs and norms, friendship and individual preferences associated with students' alcohol consumption is needed particularly in Brazil, where it appears that individual social norms about alcohol consumption can be determined and shaped by society's norms.

In summary, traditionally alcohol consumption and drinking to get drunk have been associated with masculinity and masculine behaviours and for women to get drunk it is viewed as a rejection of the traditional responsible and respectable femininities (de Visser and Smith, 2007, Lyons, 2009, Griffin et al., 2012, Willott and Lyons, 2012, Bailey et al., 2015). Amongst men, vomiting, passing out and fighting have been found to be “celebrated” as it is associated with domination and strength whilst for women they tend to be linked to risky sexual behaviours, such as being vulnerable and promiscuous (de Visser and McDonnell, 2012, Griffin et al., 2012, Willott and Lyons, 2012, Thurnell-Read, 2013, Lyons et al., 2014, Bailey et al., 2015, Nicholls, 2016a).

In the current study, according to participants’ views, British and Brazilian women were perceived to be at increased risk of experiencing risky sexual behaviours or physical violence, but mostly in Brazil (Hughes et al., 2008a, Santos et al., 2015a, Santos et al., 2015b). The current findings corroborate with previous research in which it is argued that across cultures, drinking expectations vary between genders i.e., men and women face different kinds of cultural expectations and social concerns related to alcohol use (Holloway et al., 2009, Babor et al., 2010, de Visser and McDonnell, 2012, Willott and Lyons, 2012). Additionally alcohol impacts women and men differently and usually women are perceived to be more vulnerable (Thurnell-Read, 2015, Atkinson and Sumnall, 2016).

Men and women drinking large amounts of alcohol can facilitate the occurrence of various risky behaviours (including pre-drinking practice) particularly amongst the male population (Hughes et al., 2008a, Santos et al., 2015b, Santos et al., 2015a). However, women’s drinking and its related harms has been a cause of concern since a narrowing of the gender gap has been suggested (Slade et al., 2016).

Within the UK scenario discourses on women’s increasing drinking levels are often associated as a result of changes in women’s social position and the liberalisation, feminisation and gentrification of city centre drinking spaces (Measham, 2008, Plant, 2008, Griffin et al., 2012). Unfortunately, despite international evidence including English studies suggesting that women are drinking more and that the amount they are



drinking is similar to that of men (Lyons and Willott, 2008, Bailey et al., 2015, Hunt et al., 2015), in Brazil little research has been undertaken on women's drinking practices and the current findings suggest that nightlife environments in Brazil are not only highly gendered but also sexualised. Participants' views suggested that during nights out in the UK women experience less unwanted sexual advances (e.g., forced kiss or grabbing the individual) than in Brazil, and the UK nightlife seems to be characterized as less threatening environments in terms of sexual risk (Griffin et al., 2012, Bailey et al., 2015). Based on the current findings, it can be argued that the Brazilian normative belief of alcohol consumption has been shaped by men's drinking experiences, and that women's drinking are perceived as more problematic than that of men (Thurnell-Read, 2015, Atkinson and Sumnall, 2016). Therefore, understanding how gender plays an important role in students' drinking behaviour within the nightlife context is highly important and needed, particularly in Brazil where nights out were perceived to be more hazardous environment in terms of gendered risk.

#### *5.5.6 Alcohol policy and practice*

Drink-driving in Brazil is one of the major public health issues (Macinko et al., 2015). Brazilian participants' perceived differences regarding the compliance of the law between the two countries, critically that the UK has stronger enforcement and more punitive sentences, but also a perceived effective ability to detect and prosecute those who do not follow the rules, which helps increase the perceived risk of apprehension. Participants believed that British students are more averse to the idea of being stopped by the police during sobriety checkpoints as they fear going to court and losing their driving licence. Consistent with previous research (Pechansky and Chandran, 2012, Sousa et al., 2013, Gjerde et al., 2014, Wagner and Sanchez, 2017, Sañudo et al., 2018) findings from the current study suggested Brazil as a more permissive and relaxed country in relation to law enforcement (e.g., sense of impunity for getting caught during policy sobriety breath test checkpoints) and sanctions of penalties (e.g., a corrupted system) when compared to other countries such as Europe and the US (de Cuffa and Bianchi, 2012, Gjerde et al., 2014, Xuan et al., 2015, Martin et al., 2016). In this study, there was a broader concern that in order to change the low sense of punishment (and

impunity) and ensure the compliance of the law within Brazil, both education and awareness campaigns, and stricter enforcement of legislation, were perceived to be needed. Supporting previous research findings (Scott-Parker et al., 2011, Campos et al., 2013) the current results suggest that in Brazil students in particular tend to find all the possible (and impossible) ways to avoid getting caught by “cheating the system” either through changing drivers when approaching a sobriety checkpoint, changing the routes or even texting warning messages to social groups about police roadside blocks.

Similarly, participants were generally less positive towards the effectiveness of age restriction for alcohol purchases in Brazil, when compared with the UK. Based on students’ views, the UK “Challenge 25<sup>37</sup>” scheme launched in 2005 (at that time it was “Challenge 21”) was considered an effective way of discouraging under age sales, as it involves anyone who is over 18 years old but looks under 25 to carry and present ID when purchasing alcohol. Due to the fact that Brazilian society and courts were perceived to be more tolerant towards problematic alcohol use (when compared with the UK’s perceived stricter policy and punitive system), and therefore, resulting in a low sense of punishment by the population, according to participants in Brazil, the current legislation that forbids selling alcohol for people under 18 years old (BRAZIL, 2015) was perceived to be not properly enforced, as alcohol can still be easily purchased without proof of ID. Effective responsible drinking initiatives developed to change drinking behaviours in Brazil are still scant and need to be investigated. Previous research indicates that it is hard to justify if the initiatives that had been made so far in Brazil<sup>38</sup>, have been undertaken based on a public health concern of reducing alcohol consumption or if they were mainly designed as a marketing strategy since the initiatives developed and implemented in Brazil seemed to pass ambiguous message suggestive for multiple interpretations (e.g., same message can discourage misuse or promote responsibility by consumers) (Smith et al., 2006, Pantani et al., 2012).

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<sup>37</sup> <http://www.wsta.co.uk/challenge-25>

<sup>38</sup> “Ask for the ID” (“Peça o RG”) campaign was launched in 2003 by the Brazilian brewery company named Americas' Beverage Company (AmBev) (“Companhia de Bebidas das Américas”) and basically involved awareness-raising campaigns to educate the public about the drinking age legislation and the importance of compliance of the law.

Discussions on alcohol sales to inebriated people brought interesting insights about students' perceived awareness on its effectiveness. Most the Brazilian participants expressed feelings of uncertainty about the necessity of implementing legislation in Brazil that prohibits alcohol sales to inebriated people, which corroborates with previous research suggesting the lack of support and acceptance by Brazilian nightlife patrons in prohibiting alcohol sales to inebriated people (Sanchez, 2017, Carlini and Sanchez, 2018). Based on participants' views, the Brazilian culture was perceived to be more tolerant and relaxed in terms of regulations on alcohol use. Whereas in the UK, where it is already illegal to sell alcohol to inebriated people (Her Majesty's Stationery Office, 2003), findings from the current research corroborate previous studies that suggest positive results from campaigns aimed at promoting responsible drinking within nightlife settings and increasing awareness of legislation on alcohol sales to inebriated people (Quigg et al., 2015a, Quigg et al., 2015b, Quigg et al., 2016, Quigg et al., 2018). According to participants' views, UK law enforcement was perceived to be stricter and much better accepted by the population. Further studies on Brazilian students' alcohol consumption within nightlife settings are needed in order to understand the cultural influence on their behaviours so effective policies and strategies can be implemented to address the problems associated with students' drinking behaviours within nightlife settings, including pre-drinking practice, and also for best practices for alcohol control put in place.

Additionally, participants suggested a clear cultural difference between the Brazil and UK nightlife environment in terms of tolerance towards anti-social behaviour. Internationally, several studies link intoxication to aggression (Wells and Graham, 2003, Homel et al., 2004, Graham et al., 2006a, Graham et al., 2006b) including within the UK nightlife settings (Hughes et al., 2011c). Participants felt that since getting drunk is more acceptable in the UK (when compared with Brazil) as part of the "British culture of intoxication" (Measham and Brain, 2005, Measham, 2006, Szmigin et al., 2008, Griffin et al., 2009), British students were considered "inexperienced" drinkers and perceived to lose control of their drinking more often and consequently, the risks of misbehaving in terms of rowdier situations such as talking loudly were perceived to be greater than in Brazil. However, according to Brazilian participants' views the UK nightlife

environments were still better managed in terms of preventing an escalating situation that results from anti-social behaviours than in Brazil. This could be related to the fact that the UK has been investing in developing strategies to prevent harm associated with drunkenness and its related violence within nightlife settings (Hughes et al., 2008a, Barton and Husk, 2012), including reducing anti-social behaviours associated with drunkenness (Bellis and Hughes, 2011).

Unlike Brazil, where there is no legislation on drunk and disorderly behaviour and there is a widespread disregard for any kind of legislation, in the UK it is considered an offence to be disruptive in public whilst under the influence of alcohol (Her Majesty's Stationery Office, 2003). This was generally considered significantly important for the participants in relation to feeling safe within nightlife setting. They believed that door supervisors in the UK are less tolerant of anti-social behaviours associated with drunkenness (particularly regarding violence, such as fights) (Boyd et al., 2018, Farrimond et al., 2018). Overall, British people were perceived to have an increased awareness and respect for the law, when compared with Brazil, where due to a relaxed culture on alcohol consumption (which makes it difficult for the government to put in place any kind of law), door supervisors are usually more permissive towards anti-social behaviours.

From this, participants had an impression that regulations in the UK are stricter and more effective than in Brazil. This suggests that Brazilian practitioners and policy-makers could learn from the UK in implementing more formal policies aimed at reducing drunkenness levels and its related harms in the nightlife context (yet despite such policies there is still evidence of a “culture of intoxication” and related harms in the UK). Therefore, in order to establish what lessons can be learned across different cultures for addressing alcohol use and drunkenness amongst students, further qualitative research aimed at exploring students’ ways of drinking alongside attitudes, beliefs and (mis)perceptions is required to better understand how factors influencing students drinking behaviours and its related harms may vary across cultures, particularly in LMIC countries such as Brazil where there is a lack of such evidence (Howard et al., 2007, Barry and Goodson, 2011, Moylett and Hughes, 2017, Bravo et al., 2018).

Despite participants' perceptions of increased enforcement regarding the Brazilian drinking and driving policy (e.g., the country has strict legislation which was first established in 2008 and penalties have grown tougher throughout the years), participants expressed scepticism regarding its effectiveness when compared with the UK. Participants generally agreed that regulations in Brazil are not implemented properly and are weakly enforced, allowing them to get away with things, particularly drink driving. More punitive and stricter laws were suggested because the Brazilian population, in particular students, have a low sense of punishment. These findings have several clear implications.

It is important to acknowledge that knowledge about individual's opinions towards perceptions of alcohol policy and its effectiveness do not necessarily mean that policies are effective. For instance, internationally there is evidence indicating the effectiveness of certain individual level measures to reduce alcohol-related harms, such as strategies focused on regulating price and restricting availability (e.g., hours of sales and density of alcohol outlets), when compared with other strategies such as providing information and education campaigns in order to stimulate public opinion, age restrictions and bans on alcohol advertising (Österberg, 2004, Babor et al., 2010, World Health Organization, 2010). It appears that in the UK, people tend to prefer policies that they perceive to impact other people and not themselves since previous findings suggest that the most effective policies mentioned (e.g., pricing policies and restricting availability) seems to be the least supported whereas those with less evidence of their effectiveness (e.g., education campaigns and policies aimed at reducing harms and enforcing laws) seem to be better supported (Cook et al., 2011, Li et al., 2017).

Investigating students' (mis) perceptions of alcohol use by understanding their priorities can help to drive the policy agenda by analysing not only the relationship, but more importantly the gaps between policy and wellbeing. For instance, according to participants' perceptions, within the nightlife context, policy practice in the UK such as drink-drive, age restrictions and prohibiting alcohol sales to drunk were perceived to be greater and stricter than in Brazil where it seems that alcohol policy are not well

executed. This indicates the importance of how alcohol policy need to be complementary with education campaigns (in order to increase public support), structural and security measures to address alcohol harms in a particular society.

In summary, there is a lack of clarity on how best to change behaviour regarding alcohol use amongst students during nights out. When considering which measures to use, it is important to consider the evidence of its effectiveness and cost. One way to decide this is investigating students' beliefs and attitudes towards such measures and their likelihood of being acceptable, since evidence suggests that governments are prone to be sensitive to public attitudes towards policy options (Diepeveen et al., 2013). For instance, the current findings suggest that the lack of public support on prohibiting alcohol sales to inebriated people in Brazil might influence political interest when choosing and implementing the appropriate alcohol-control strategies (Sanchez, 2017, Carlini and Sanchez, 2018). Therefore more Brazilian qualitative studies investigating population's perceptive on alcohol policies options are needed in order to provide key information for policy makers and local authorities to develop proper and adapted interventions aimed at reducing alcohol use and drunkenness during nights out according to national priorities and contexts (World Health Organization, 2010). In this sense, a few recommendations for policy and practice will be summarised at **Table 16**.

**Table 16: Suggested policy-relevant strategies and interventions - adapted from Babor et al. (2010)**

Policy or intervention	Effectiveness*	Implemented in the UK	Implemented in Brazil	Comments
Increasing price of alcohol	+++	Only in Scotland	No	The UK has been trying to address problems associated with harmful use of alcohol within the nightlife context by developing and implementing specific alcohol policies (Hughes et al., 2012, Quigg et al., 2014) and reducing alcohol affordability (by increasing taxes and prices) has been one of the UK's initiative. In Brazil unfortunately the alcohol market is not regulated, and it would be interesting implementing such strategy since according to participants' views the financial issue can influence students' drinking behaviours, particularly when considering pre-drinking practice, as students tend to look for cheap alcohol to buy. Effectiveness of such intervention would depend on government supervision and control of the total alcohol supply since regulating affordability might increase smuggling and illicit production.
Age restrictions	+++	Yes	Yes	Internationally, there is evidence suggesting how changes in alcohol access and availability can reduce population-level alcohol use and its harms (Österberg, 2004, Babor et al., 2010, World Health Organization, 2010). Within the UK nightlife context age restrictions (e.g., Challenge 25) were perceived to be stricter and constantly enforced when compared with the Brazilian scenario, where regulation on drinking age was perceived to not be properly executed and to not have enough enforcement. Therefore, it can be argued that in Brazil such measure could be adapted, but more importantly it would need effective awareness raising campaigns, bar staff training, and political (and populational) commitment in monitoring existing legislation. Also, age restrictions could be more effective with enforcement.

(continue)

Policy or intervention	Effectiveness*	Implemented in the UK	Implemented in Brazil	Comments
Restrictions on density of outlets	++	Yes	No	Evidence suggests that increased availability to alcohol is associated with alcohol-related harms (e.g., violence, hospital admissions and anti-social behaviours) (Babor et al., 2010, Holmes et al., 2014) including within the nightlife context (Maheswaran et al., 2016, Maheswaran et al., 2018). In the current study, participants felt that (even though licenses are restricted in the UK) there are lots of premises selling alcohol and such perception was associated with the perceived British students' increased levels of alcohol consumption. Unlike the UK scenario, where local authorities have the power to grant premises licenses to sell alcohol, in Brazil such measures do not exist, and alcohol can be sold freely anywhere. Hence, reflecting on participants' views on the perceived influence that increased availability of venues selling alcohol could have on students' drinking levels, an interesting approach to reduce alcohol availability and thus, reducing drunkenness and its harms in Brazil could be to formally regulate alcohol sales and restrict its availability in Brazil. Plus, effectiveness of implementing and monitoring such intervention would depend on effective awareness raising campaigns, political and populational mobilisation and commitment alongside bar owners and even media representatives training in order to effectively regulate the availability to alcohol.

(continue)



Policy or intervention	Effectiveness*	Implemented in the UK	Implemented in Brazil	Comments
Prohibiting alcohol sales for inebriated people	+	Yes	No	Based on participants' views, the Brazilian culture was perceived to be more relaxed in terms of regulations on alcohol use and evidence suggest lower public acceptance towards prohibiting sales for inebriated people. In the UK it is forbidden by law (Her Majesty's Stationery Office, 2003) to sell alcohol for inebriated people and evidence suggest positive results from campaigns and increased public's acceptance and awareness of its legislation (Quigg et al., 2018). Therefore, in order to adapt and implement such measure within the Brazilian context, first it would be important to develop awareness campaigns to stimulate and raise public's opinion, particularly bar/nightclub owners about the importance of addressing problems associated with students' drunkenness levels within nightlife settings (including pre-drinking), bar staff training and to formulate and implement proper legislation. Effectiveness of such measure would need to be backed by enforcement.

(continue)

Policy or intervention	Effectiveness*	Implemented in the UK	Implemented in Brazil	Comments
Training staff (e.g., door supervisors) to prevent and better manage anti-social behaviours	++	Yes	No	<p>Opposed to the Brazilian scenario where door staff were perceived to be more permissive towards anti-social behaviours, in the UK it is considered an offence to be disruptive in public whilst under the influence of alcohol (Her Majesty's Stationery Office, 2003). In this sense, in the UK it is mandatory for door supervisors to be trained and before they can work as a door supervisor they need to be registered with the Security Industry Authority (SIA), a UK statutory organisation responsible for regulating the private security industry. Since there is no current legislation aimed at preventing anti-social behaviours within the nightlife context in Brazil and because when going out in Brazil it is common practice that nightlife patrons must tab their expenses and pay only when exiting, it can be argued that in Brazil, bar owners might not consider training door staff as something important and necessary since door staff in Brazil might be mainly hired to prevent people leaving the venue without paying their tab. Internationally (including in the UK), there is evidence suggesting supportive results from multi-component programme's effectiveness in implementing change in behaviour within the nightlife context (Quigg et al., 2015a, Quigg et al., 2015b, Quigg et al., 2016, Quigg et al., 2018). The UK nightlife was perceived to be better and more appropriately managed (when compared with Brazil) in terms of preventing an escalating situation that results from the negative behaviour of anti-social intoxicated patrons. Therefore, when considering the Brazilian scenario, it would be interesting to develop awareness campaigns to stimulate public's opinion (particularly bar/nightclub owners), implement effective bar staff training as an attempt to prevent alcohol-related harms (such as violence which was perceived to be greater in Brazil than in the UK) and formulate proper legislation. In Brazil it appears that compliance would depend on perceived likelihood of enforcement.</p>

(continue)

Policy or intervention	Effectiveness*	Implemented in the UK	Implemented in Brazil	Comments
Zero tolerance law for drinking and driving	0/+	No	Yes	The lower the BAC legal limit for drinking and driving, the more effective the policy. Between Brazil and the UK there is a difference in the drinking and driving limit. Opposed to Brazil, where there is a zero tolerance law (BRAZIL, 2008), in England and Wales, the maximum legal BAC limit is 35 mcg of alcohol per 100 ml of breath; or 80 mg of alcohol per 100 ml of blood or 107 mg of alcohol per 100 ml of urine, whereas in Scotland the limit is 22 mcg of alcohol per 100 ml of breath, 50 mg of alcohol per 100 ml of blood or 67 mg per 100 ml of urine) (Her Majesty's Stationery Office, 2015b). When comparing with Brazilian drink-driving policy, the UK was perceived to have stricter enforcement. Brazilian students were perceived to have greater disrespect towards the law than British students. Though Brazil have zero tolerance for drink-driving, raising public's awareness and strengthening enforcement seems to still be needed for compliance.
Real threat of punishment	0/+	Yes	No	Likewise, the UK was perceived to have more tougher sanctions, but more importantly, it was perceived to effectively detect and prosecute. According to participants' views within the Brazilian nightlife settings students tend to always find a way to cheat the system, therefore it can be argued that if punishment is immediate, effectiveness could be increased. It is important strengthening enforcement and media publicity about the consequences of getting caught to guarantee constant compliance and effectiveness.

(continue)

Policy or intervention	Effectiveness*	Implemented in the UK	Implemented in Brazil	Comments
Legal restrictions on alcohol exposure (regulating alcohol advertising and other marketing)	++	No	Yes	In the UK young adults' social life is market driven through the spread of new alcoholic drinks and constant alcohol advertising associating drinking with pleasure (Measham, 2004b, Measham and Brain, 2005, Szmigin et al., 2008). According to participants' views, though Brazilian students recognized the possibility of getting drunk (but only in certain occasions), in the UK getting drunk was perceived to be the norm amongst British students' social nightlives. Moreover, alcohol advertising seemed to be an important factor influencing Brazilian students' drinking, particularly within nightlife settings (Atkinson et al., 2017a). Though alcohol advertising is regulated by law in Brazil (BRAZIL, 1996), it seems that it is not effectively restricted (Carlini, 2016). Likewise, though the content of alcohol advertising in the UK is restricted, alcohol promotions are still evident (Ross-Houle and Quigg, 2019). Effective measures aimed at changing students' drinking norms in Brazil are needed (such as banning alcohol promotions) since students' drinking tend to be associated with the socialising aspect which it is further linked with alcohol exposure. So, to effectively regulate alcohol market and thus, reducing drunkenness and its harms in Brazil could be a multi-level tailored approach aimed at challenging students' drinking at different levels (e.g., supermarkets, off-licensed venues, bars and nightclubs). It would be necessary awareness campaigns to stimulate public's opinion about the importance of banning alcohol promotions and exposure to help changing students' cultural norms on drinking. Effectiveness of implementing and monitoring such measure would depend on political and populational (e.g., bar and nightclub owners and even media representatives) engagement and commitment and it would need to be backed by enforcement.

(continue)

Policy or intervention	Effectiveness*	Implemented in the UK	Implemented in Brazil	Comments
Education campaigns	0	Yes	Yes	The current findings suggest that in Brazil in particular education campaigns are needed in order to raise public's awareness on alcohol consumption and its harms within the nightlife context, and consequently political interest in developing and implementing interventions would be increased. Brazilian students were perceived to have lower sense of punishment (and impunity) and greater disrespect towards regulations. From this, it can be argued that education campaigns may increase knowledge and change attitudes, particularly amongst student population, however they are the least effective in reducing drinking.

\*Adapted from Babor et al. (2010). Effectiveness refers to evidence for reducing alcohol consumption and/or alcohol harms (0 indicates a lack of effectiveness; 0/+indicates mixed evidence that suggests effectiveness depends upon strength of enforcement; + indicates evidence for limited effectiveness; ++ indicates evidence for moderate effectiveness; +++ indicates evidence for a high degree of effectiveness)

Overall, this study has highlighted clear perceived differences and some similarities between Brazil and UK students' drinking culture and policy effectiveness. Brazilian students' perceived norms and attitudes towards alcohol was one of the main factors that differed between the two countries, with emphasis on the perceived British students' ritual of getting extremely drunk, either during pre-drinking before going out or during a regular social night out as a way of entertainment rather than a consequence (Christmas and Seymour, 2014). Moreover, students' perceived effectiveness towards alcohol policy also differed between the two countries, with emphasis at Brazilian' permissiveness culture on alcohol consumption and lack of law enforcement.

Although the literature suggests some effective individual interventions aimed at reducing university students' alcohol consumption (Carey et al., 2007, McAlaney et al., 2011, Ray et al., 2014), little is known when considering pre-drinking practice. UK findings suggest that within the nightlife settings community based multi-component interventions are more effective to help changing drinking behaviours including pre-drinking (Quigg et al., 2015a, Quigg et al., 2016, Quigg et al., 2018), since such interventions try to address the wider context of nightlife drunkenness, such as raising awareness through community mobilisation, enforcement of alcohol legislation on sales to inebriated people and responsible beverage server training (Jones et al., 2010). For this reason, future research aimed at addressing drunkenness and its harm within the nightlife settings should further explore Brazilian and UK university students' drinking expectancies during a night out (including during pre-drinking) in order to better understand the differences between the two nationalities in relation to motivations for alcohol consumption, so effective approaches can be developed and implemented across cultures.

## 5.6 Strengths and limitations

While this research contributes to the literature on alcohol use amongst university students, the study has several limitations that need to be addressed. Firstly, it is important to acknowledge that the recruitment strategy and data collection chosen were opportunistic and pragmatic in nature, which resulted in a homogenous sample of

PhD students who were on average 27 years old or older, whose experiences may not reflect those of younger undergraduate university students, especially regarding drinking patterns. Consequently, there may be limitations to how drinking patterns differ between undergraduate students. Data were not meant to be representative but to gain deeper understanding of university students' drinking behaviours.

The rationale for investigating Brazilian students' nightlife drinking experiences living in the UK was three-fold. Firstly, when compared with the UK context, in Brazil there is a lack of evidence investigating university students' nightlife drinking behaviours (including pre-drinking) and its associated factors. Secondly, since the main researcher was living in the UK and funding was restrict (for example, to go back to Brazil and investigate UK students living there) the population had to be restricted to Brazilian students currently living in the UK. And thirdly, the literature suggests that in the UK, young people's nights out have been considered a risky drinking practice often associated with having fun (Measham and Brain, 2005, Ally et al., 2016) and that students' problematic drinking have been associated with both private (e.g., pre-drinking) and public settings (e.g., bars, pubs and nightclubs) (Fry, 2011, Foster and Ferguson, 2014, Ally et al., 2016).

To gain a more comprehensive picture of students' nightlife alcohol use and the possible influences in drinking behaviour, motivations to drink and related harms it may have been valuable to conduct focus groups amongst UK students living in Brazil. This would have helped identify the influences on alcohol conceptions during nights out, particularly how culture can influence students' drinking behaviours. However, funding was restricted, and it did not allow the main researcher to travel back to Brazil. Future studies should focus on this area. Although conducting focus groups amongst students from both nationalities would have been beneficial, the current findings fill a previously scarce field of literature and have identified several potential intervention points, particularly for the Brazilian scenario, which is still in its infancy in developing and implementing effective interventions aimed at addressing drunkenness within nightlife settings.

The focus groups methodology was chosen as Brazilian students living in the UK have first-hand knowledge of both nightlife cultures. Also, it was also important to explore Brazilian students' views on drinking culture within friendship groups, since previous research suggests that meanings related to alcohol consumption can vary across cultures and ages (Babor et al., 2010), particularly amongst students who tend to have shared meanings often associated with positive connotations such as socialising and having fun with friends (Szmigin et al., 2008, Seaman and Ikegwonu, 2010, Tutenges, 2012, de Visser et al., 2013, Niland et al., 2013). In the current study, two members of one focus groups knew each other as they were in the same university. Lyons and Willott (2008) suggest that within an existing group of friends, participants feel more comfortable in sharing their opinions and experiences, particularly regarding alcohol consumption, which seems to be embedded in students' social context. But more importantly, Duff (2008) and Fry (2011) argues that to develop relevant measures aimed at addressing alcohol-related problems amongst young people it is important to consider these shared positive connotations involved in students' drinking behaviours to ensure that prevention measures are relevant to students' daily social lives.

Internationally, including in the UK, there's a growing body of research on meaning-making around alcohol and drinking culture amongst young people (Room and Mäkelä, 2000, Griffin et al., 2012, Nicholls, 2012, Lyons et al., 2017), suggesting the importance of understanding the relationship between not only the intrapersonal and interpersonal aspects influencing drinking behaviours but also the wider influences such as environmental or ecological factors, like living in another country. Within the Brazilian scenario such data are still scant. Therefore, for the current research focus groups with Brazilian students living in the UK were organised in order to explore knowledge, beliefs and also their shared practices related to the alcohol consumption within the nightlife settings' context.

Brazilian students living in the UK had pre-conceived perceptions of a "heavier" student drinking culture in the UK, when compared with Brazil. This study focused on students' perceptions and self-reports, and some characteristics of students' nightlife drinking patterns could be beyond their experiences and awareness. However, students'



perspectives in this regard may be a key factor to inform the development of future and proper alcohol interventions by identifying initiatives for policy makers and developers.

This qualitative study was designed to gain new insights into the nuances, routines, and contexts of students' alcohol use during nights out, including pre-drinking behaviour and the current findings highlight the importance of drinking expectations and demonstrates the influence that widely held beliefs have on shaping ideology and influencing drinking behaviours. Reflecting on participants' perceptions of their drinking behaviour, it was possible to observe that the experience of living and doing a PhD abroad gave participants the feeling of becoming more responsible, with more commitments and obligations related to academic and personal life. Therefore, the postgraduates' drinking motives deeply influenced their behaviours and attitudes towards alcohol consumption.

Additionally, social desirability and recall bias are known as potential issues with social research, in particular when investigating alcohol consumption (Johnson and van De Vijver, 2003, Green and Thorogood, 2018). Thus, although the topic guide included questions around participants' drinking experiences within the Brazilian nightlife culture, these were discussed within the context of also asking what they thought of British student's drinking culture. Therefore, respondents may have sometimes appeared to under-report their alcohol consumption in order to present themselves in a positive light.

Selection bias in the results is also present as the sample was small and unequal, with females overrepresented, and also homogeneous which may have contributed to saturation of data at an earlier stage than if the sample had been more diverse.

Finally, because it is a cross-sectional study and the fact that drinking norms and patterns can vary between countries and regions within each country, transferability of the findings is limited. For instance, apart from one focus groups that was conducted amongst Brazilian students based in the South East of the UK, the rest of the sample were comprised of students living across the North of the country. There are differences

regarding adult recreational culture between UK regions since recent British research (Office for National Statistics, 2018a) revealed that binge drinking amongst individuals aged 16 – 24 years was more common in the North West region and least common in the South East. Consequently, geographical area may be a limitation since Brazilian students' views on British students drinking patterns cannot be generalised to all students across the UK. Hence, despite findings from the current study broadening understandings of students' attitudes and norms around alcohol consumption practices, it is suggested that further similar studies need to be undertaken with students from other regions.

Despite these limitations, this is the first study of its kind to investigate and compare Brazilian students' perceptions and experiences of alcohol use within the nightlife context between countries with different drinking culture and alcohol policy. The present study provides new information about alcohol use amongst university students that could be further explored in future work to aid in reducing the risks associated with students' problematic alcohol use within nightlife settings. Also, the study fills a previously scarce field of research in Brazil on alcohol use within nightlife settings and suggests further investigation on university students' norms and attitudes towards alcohol consumption in the nightlife context in order to inform and develop more efficient and culturally congruent alcohol policy.

## 5.7 Summary

This qualitative study is the first of its kind to investigate and compare Brazilian students' experiences, attitudes and perceived effectiveness of alcohol policy between two countries with varied cultural approaches to alcohol. In summary, the main findings evidenced in this study conducted with 25 Brazilian students currently living in the UK were that that perceived student attitudes towards alcohol and policy effectiveness may play a key role in students' drinking behaviours. Although one of the themes was similar between the two countries (e.g., pre-drinking was considered a common practice amongst university students), there was a clear disparity and difference between the two countries in relation to participants' perceptions on British students' drinking

culture and attitudes, which appears to be focused in high levels of alcohol consumption as a standardised and deeply rooted way of drinking. More importantly, this study also highlighted the need for and importance of law implementation and strict enforcement in Brazil in order to have a well-managed nightlife environment. These findings may have important implications for harm reduction interventions and policies development to different cultures. When developing interventions and strategies to reduce the risks associated with harmful drinking, it is important to acknowledge the normative social influence on alcohol consumption especially amongst university students. In this sense, findings from this study can be useful to inform policy and measures aimed in reducing the risks associated with alcohol consumption amongst students within nightlife settings.

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## CHAPTER 6: MIXED-METHOD SYNTHESIS OF FINDINGS AND DISCUSSION

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### 6.1 Introduction

This chapter presents the integrated analysis of the quantitative and qualitative results. It endeavours to explain the contribution to knowledge that can be extrapolated from triangulated results. As well as providing linkage between the two phases of this mixed methods research, the chapter also presents an overview of the aims and the research question followed by a description and discussion of the overall findings for both stages of this research along with recommendations for future studies and the strengths and limitations of the chosen approach. Finally, this chapter concludes by describing and discussing the implications of the findings in relation to informing policy and practice.

### 6.2 Triangulation of results

This PhD study sought to address an overarching public health problem – students’ risky alcohol consumption – by developing a comprehensive understanding of students’ drinking behaviours within the nightlife context.

Quantitative research is often characterised by a deductive approach aimed at outlining trends and relationships whilst qualitative research has an inductive approach characterised by open-ended questions that aim to provide a rich description of perceptions, beliefs and meanings from the respondents (Lincoln and Guba, 1985, Creswell, 2018). For the current research, using either quantitative or qualitative methods alone was considered inadequate to capture the complexities of the factors related to students’ drinking patterns. Therefore, a mixed method approach was utilised to collect, analyse and integrate the quantitative and qualitative data from participants in order to address the overall aim of the current study.

The authors O’Cathain et al., (2010) and Onwuegbuzie and Combs (2011) refer to this as sequentially mixed analysis, in which the quantitative analysis phase precedes the qualitative analysis and findings from the initial analysis informed the subsequent phase, i.e., the qualitative data helped to explain in more depth the quantitative results. This study has collected a large amount of data from the students’ online surveys, and it was supplemented with focus groups interviews from Brazilian’ students living in the UK to provide an overview of the differences between Brazilian and UK students’ drinking behaviours within nightlife context.

The aim of this mixed methods study was to investigate prevalence and attitudes towards alcohol consumption during a night out, including pre-drinking practice, and perceptions of alcohol policy towards drinking behaviour amongst university students in Brazil and the UK.

The analyses of the individual studies were conducted separately and the integration of all the findings was done in a final stage (Creswell and Clark, 2017). The purpose of mixing methods in the triangulation design from the current study was to explore different but complementary data to further understand the research problems (Greene et al., 1989, Creswell and Clark, 2017). The triangulation procedure from the current study was based on Farmer’s et al., (2006) protocol that allows presenting data from both studies on the same table and exploring any relationship there might be between the findings, such as agreement or disagreement. According to the authors, there are three types of triangulation:

- a) Multiple researchers participating and comparing results (multiple investigators);
- b) Multiple data collection strategies (methodological); and,
- c) Multiple sources of information (data source).

The current study focuses on methodological triangulation of data conducted by a single researcher using two different methods (quantitative and qualitative). Hence, Framer’s protocol, which was originally designed for multiple researchers doing

triangulation, has been adjusted for the current study. The steps used to connect findings from the quantitative and qualitative study are presented on **Table 17**. **Table 18** presents the convergence coding matrix.

**Table 17: Triangulation protocol. Adapted from Farmer et al., (2006).**

Step	Activity
1. Sorting	Findings related to the research questions from each study (Study 1 and Study 2) were explored to obtain the key themes that overlapped and those that only resulted in each individual study.
2. Convergence coding	After the key themes were identified, findings were explored for each of key emerging themes. When all the key themes were identified, these were grouped into “meta-themes” based on similarity (O’Cathain et al., 2010) and mapped out in a convergence coding matrix to explore the level of convergence in relation to the meaning and interpretation of a theme amongst the two studies, e.g., agreement (findings agree), partial agreement (findings are complementary, i.e., there’s agreement on one but not both studies), disagreement (findings contradict) or silence (findings are silence in one of the themes).
3. Convergence assessment	All themes compared across both studies were revised to provide a comprehensive assessment of the level of convergence.
4. Completeness assessment	Findings from both studies were integrated and then compared to create an overarching summary related to the research questions.

**Table 18: Data triangulation matrix**

Key themes	Presence in studies		Findings	Levels of convergence
	Study 1	Study 2		
Students' nightlife culture behaviours	X	X	<p><b>Study 1:</b> There were some significant results regarding the differences on Brazilian and UK student's nightlife structure, with emphasis on Brazilian students reporting going out earlier than UK students, and also going home later.</p> <p><b>Study 2:</b> For Brazilian' students, within the UK, a night out begins earlier when compared to Brazil.</p>	Dissonance
Drinking environments	-	X	<p><b>Study 2:</b> The UK culture life was perceived to encourage consumption amongst British students since alcohol is available at affordable prices and seems to be available in a lot of venues, including at university premises, university events and cinemas. Also, for Brazilian' students, within the UK apparently most of drinking environments does not sell food when compared to Brazil. Another interesting finding was regarding Brazilian' students' perceptions towards safety within nightlife settings. In the UK, nightlife settings were perceived to be safer when compared to Brazilian nightlife environments.</p>	Silence

(continue)

Key themes	Presence in studies		Findings	Levels of convergence
	Study 1	Study 2		
Drunkenness levels	X	X	<p><b>Study 1:</b> Findings suggest similarly high levels of perceived drunkenness amongst Brazilian and UK students, however in relation to quantity, Brazilian students reported to drink more alcohol during pre-drinking and over full night out, when compared with UK students.</p> <p><b>Study 2:</b> According to Brazilian' students' views, British students' drinking culture, including pre-drinking practice appears to be associated with higher levels of alcohol consumption, when compared with Brazil. Apparently, for Brazilian' students, the UK "heavier" drinking culture was perceived to be associated with the fact that British students' have different personality and behaviours when they are sober (e.g., quiet, shy and calm) to when they are drunk (e.g., louder, sociable and talkative).</p>	Dissonance

(continue)



Key themes	Presence in studies		Findings	Levels of convergence
	Study 1	Study 2		
Nightlife alcohol-related harms	X	X	<p><b>Study 1:</b> Pre-drinking was suggested to be a problem amongst students. Findings showed that within nightlife settings UK students are at more risk for experiencing alcohol-related harms (e.g., displeasing behaviours, blackouts, vomiting, problems with academic work, risky sexual behaviours and violence) than Brazilian students.</p> <p><b>Study 2:</b> Based on participants' views, British students appears to be at more risk of experiencing harms, especially experiencing drunkenness effects (e.g., blackouts, vomiting). For Brazilian students, apparently the UK nightlife settings were perceived to have more signs of intoxication (inebriated people passed out on the floor, vomiting marks, broken glass etc) when compared with Brazil. Participants were surprised with how intoxication consequences as vomiting, hangovers, passing out, broken glass, or even missing work or university, are considered a source of enjoyment and entertainment by the British students, i.e., based on Brazilian participants' views, British students tend to have more positive expectancies on getting drunk whilst Brazilian students' attitudes towards getting drunk were perceived to be more associated with negative consequences (e.g., they seemed to worry about alcohol effects).</p>	Agreement

(continue)

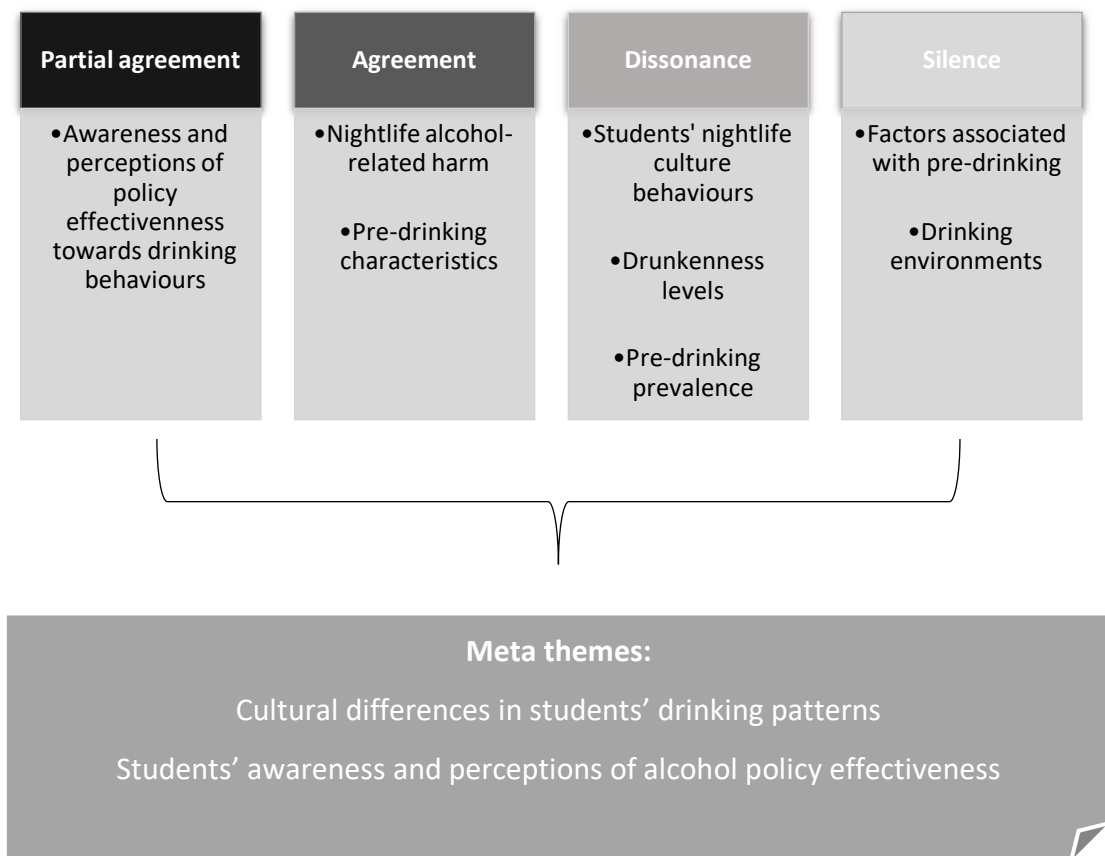
Key themes	Presence in studies		Findings	Levels of convergence
	Study 1	Study 2		
Pre-drinking prevalence	X	X	<p><b>Study 1:</b> Pre-drinking in England was more prevalent than in Brazil (BR: 44.0% UK: 82.8%).</p> <p><b>Study 2:</b> Pre-drinking was considered a common practice amongst university students.</p>	Dissonance
Pre-drinking characteristics	X	X	<p><b>Study 1:</b> The findings showed that saving money was the main motivation for Brazilian and UK students to pre-drinking. It was observed that a few Brazilian' students also reported pre-drink for socialising. Amongst UK students the second main reason was to get drunk. Brazilian and UK students' pre-drinking practice seemed to occur at indoor places, either at a friend's home or in their own home. Interestingly, pre-drinking outside (e.g. beaches, parks etc.) was found to be an exclusive choice of Brazilian students. Also, eating food whilst pre-drinking was found to be slightly higher amongst Brazilian students when compared with the UK.</p> <p><b>Study 2:</b> According to Brazilian students' views, overall motivation for Brazilian and UK students to pre-drink was perceived to be to save money, however, participants believed that British students are more interested in drinking to get drunk and Brazilian students are interested in socialising. Moreover, based on Brazilian' students' perceptions, British students' way of consuming alcohol without food during pre-drinking and during night out (e.g., most of the UK nightlife drinking environments don't sell food) was perceived to be associated with the higher levels of drunkenness in the UK when compared with Brazil. According to Brazilian students' views, in Brazil students were perceived to be more conscious about eating before drinking in order to avoid getting too drunk.</p>	Agreement

(continue)

Key themes	Presence in studies		Findings	Levels of convergence
	Study 1	Study 2		
Factors associated with pre-drinking	X	-	<b>Study 1:</b> Differences were significantly present regarding factors associated with pre-drinking behaviour between Brazilian and UK students. In Brazil male and single students who go out were more likely to pre-drink. This gender difference was not present in the UK sample, instead younger and undergraduate students were more like to pre-drink.	Silence
Awareness and perceptions of policy effectiveness towards drinking behaviours	X	X	<b>Study 1:</b> Brazilian and UK students' views of existing policy effectiveness (such as measures related to changes in alcohol prices; changes within nightlife settings; changes in serving service; and those aimed at strengthening law enforcement) would expect to shape their drinking behaviour within nightlife context on each country. <b>Study 2:</b> Based on Brazilian' participants' views on policy effectiveness (such as measures related to changes in serving service and some those aimed at strengthening law enforcement) unlike the UK, in Brazil there was a perceived strong relationship between high sense of impunity and low compliance of the law amongst Brazilian' students' population. According to participants' views, along with stricter and more punitive laws, guideline on alcohol consumption were expected to help address the gap within the compliance of the law in Brazil and consequently shape their behaviour in the Brazilian nightlife context.	Partial agreement

### 6.3 Synthesised results

The present study suggests cultural differences and similarities in relation to drinking patterns within nightlife settings between Brazil and UK university students. The thesis contained seven research questions which attempted to explore and describe why the two countries vary in their students' drinking culture and what the implications of this for policy implementation were. The triangulation process identified eight themes from the individual studies, of which six were present in both quantitative and qualitative phases. The key themes and meta-themes identified are shown on **Figure 53**.



**Figure 53: Identified key themes and meta-themes from the quantitative and qualitative studies**

One key theme had partial agreement across both studies suggesting that key finding was partially covered. Two key themes had full agreement across both studies. Three themes were coded as dissonant, suggesting that findings offered complementary information or contradicted across both studies. And two themes were coded as silent,

indicating that key theme was only present in one of the studies. Therefore, in the current study findings were either confirmed (fully or partially) or complemented across both quantitative and qualitative studies. However, there were some findings that were only present in only one of the studies. Themes that related to each other were merged into meta-themes and these are discussed in the following sections.

The quantitative and qualitative phase of the current study used two independent samples, which were recruited through different methods and at different times however, they drew from the same underlying population, university students. The comparison of demographic characteristics such as age and academic year showed some differences between the two samples. In the quantitative phase Brazilian' and UK university students age ranged in their early twenties (18 – 25 years old) and the majority were undergraduate students; whilst in the qualitative phase, the age of the Brazilian students living in the UK ranged in their late twenties and early thirties (26 – 35 years old) and the majority were postgraduate students. Despite these differences, the data that emerged from the qualitative data provided a deeper understanding of the social, environmental and cultural factors associated with Brazilian and UK university students' drinking patterns within the nightlife context; and it has allowed the researcher to make important linkages between harmful use of alcohol and policy implementation.

### *6.3.1 Cultural differences in students' drinking patterns*

The results were clear between the two studies that university life in Brazil and in the UK are characterised with risky drinking behaviours, including during pre-drinking practice and how social norms can influence students' drinking behaviours (Borsari and Carey, 2003, Neighbors et al., 2007a, Halim et al., 2012).

The survey results showed a significant difference in students' drinking patterns and this was supported by the focus groups interviews. This agrees with other results that have found harmful drinking as an important public health issue amongst university students in Brazil (Kerr-Corrêa et al., 2001, Stempliuk et al., 2005, National Drug Policy

Secretary, 2010, Baumgarten et al., 2012, Machado et al., 2015, Bedendo et al., 2017, Pinheiro et al., 2017) and in the UK (Morton and Tighe, 2011, Heather et al., 2011, de Visser et al., 2013, Davoren et al., 2015, Davoren et al., 2016a, Davoren et al., 2016b).

The study found no significant differences between Brazilian and UK students in relation to perceived drunkenness levels within nightlife settings. In addition, more UK students reported to pre-drink, yet during Brazilian pre-drinking practice significantly more alcohol was consumed. However, this was not supported by the focus groups interviews, where Brazilian students perceived higher levels of alcohol use among British students during pre-loading. While previous evidence show that harmful drinking amongst students is spread across other countries (Beccaria and Sande, 2003, Fjær and Tutenges, 2017), Brazilian students' perceptions were that this was more prevalent in the UK and mostly characterised by extreme levels of binge drinking and drunkenness, in particular during pre-drinking practice.

The conflict within this matter however, maybe be due to the fact that students' norms, attitudes and perceptions alongside with patterns of alcohol consumption vary across countries (Demant and Jarvinen, 2011, Gordon et al., 2012, de Visser et al., 2013, Grant et al., 2013, Monk and Heim, 2013, Christmas and Seymour, 2014). For instance, corroborating with previous research (Østergaard and Andrade, 2013, Quigg et al., 2015a, Quigg et al., 2015b, Fjær et al., 2016, Thurnell-Read et al., 2018), findings from the current qualitative interviews suggested that UK nightlife was seen as a more permissive environment for drinking. Moreover, British students were perceived to have higher positive expectancies and drunkenness acceptance towards alcohol (Barton and Husk, 2014, Lyons et al., 2014, Fjær et al., 2016, Thurnell-Read et al., 2018) when compared with Brazilian' students.

Pre-drinking practice seems to be part of Brazilian and UK students' nightlife culture. Corroborating previous research, the main reason found to save money (Barton and Husk, 2012, Caudwell and Hagger, 2014, Foster and Ferguson, 2014, Ogeil et al., 2016). Plus, significant differences between Brazilian and UK students regarding pre-drinking behaviour as a risk factor for alcohol-related harms were found, with higher

levels of drunkenness amongst UK students, which were considered to be more at risk for experiencing drunkenness effects and this was supported by the focus groups interviews.

Findings from the quantitative phase suggested that despite Brazilian students reporting drinking more than UK students during pre-drinking, UK students were more at risk of experiencing alcohol-related harms within nightlife settings when compared with Brazilian students. This conflict may be related to the differences on students' drinking motives. Overall, the current results highlight the need for a better understanding of cultural differences in students' drinking behaviours, in order to identify the individual and wider factors influencing student's decision to engage in harmful drinking (Kuntsche et al., 2015). Corroborating with previous research (Barton and Husk, 2012, Østergaard and Andrade, 2013, Barton and Husk, 2014, Atkinson and Sumnall, 2017, Thurnell-Read et al., 2018) findings from the qualitative study suggested that during pre-drinking practice British students were more likely to intentionally get drunk for fun rather than unexpectedly, which was considered to happen during Brazilian' pre-drinking events. Brazilian' motives for pre-drinking were associated with socialising without getting drunk. But more importantly, participants believed that British students have a positive views of getting drunk and experiencing alcohol effects such as vomiting or passing out it, and that this all perceived negative behaviours by Brazilian students tend to be often considered as a way of entertainment in the UK (Mallett et al., 2008, Mallett et al., 2013).

Drinking more alcohol and experiencing less alcohol intoxication might also be related to the differences in how alcohol is consumed across countries. The quantitative results showed that food consumption during pre-drinking was more prevalent in Brazil than in the UK. This could be another reason to explain the conflict of why UK students were more at risk of experiencing drunkenness effects (e.g., vomiting, blackouts) than Brazilian students. This was supported by the focus groups interviews, which highlighted cultural differences in relation to how the night-time economy and private parties differ between the two countries. Findings from the focus groups interviews pointed out an interesting observation about this topic. Most of the licensed drinking venues in the UK

and students' parties are exclusively for drinking, whereas in Brazil it is uncommon to have a venue or a party that don't provide food or snacks. This supports a previous study (Hill et al., 2018) indicating that British students have less positive expectation about eating before drinking, which is something that Brazilian students consider an important strategy to avoid (or seek to, anyway) experiencing negative consequences of alcohol intoxication (e.g., vomiting and passing out).

Furthermore, although there's no previous study on drinking typologies in Brazil, Brazilian drinking culture seems to have similar relationship with alcohol to that of Mediterranean countries ("wet" drinking culture society), i.e., alcohol consumption in Brazil appears to be associated with socialising and when people drink, they are perceived to experience less intoxication. Plus, rules against intoxication are less strict. However, in Brazil alcohol is not yet fully integrated within social daily activities, such as university, other social events (e.g., cinemas) and it is not common to drink during family meals. Interestingly, these traditional "wet" culture characteristics were perceived to be integrated within the British "dry" drinking culture, suggesting that a shift in drinking cultures might be happening (Ally et al., 2016).

### *6.3.2 Students' awareness and perceptions on alcohol policy effectiveness*

Findings from both studies suggested that students' attitudes might be influenced by their perception of the effectiveness of alcohol policy. An interesting finding, given the comparative approach of the research, was the dissonance across studies regarding Brazilian students' perceived effectiveness of alcohol policy towards their drinking behaviours. Although results from the survey showed that the majority of Brazilian and UK students' drinking behaviours would remain the same towards new and/or existing alcohol policies within each country, significantly more Brazilian students would consider changing their drinking behaviour when compared with UK students. These findings however were not fully supported by the focus groups interviews.



Findings from the qualitative study suggested interesting perceived differences between the two countries in relation to how Brazilian students' awareness and beliefs alongside with their perceived effectiveness towards alcohol policies differ from the UK. There was a stronger relationship between law enforcement and its effectiveness within the UK than in Brazil. Brazilian students' perceptions of lax enforcement predicted an increased sense of impunity, which produces a more "permissive environment" for harmful drinking that "encourage" less compliance with the law. This agrees with other Brazilian results that have found a similar association between the relationship of loopholes within existing legislation and its less intimidation amongst the population (Laranjeira et al., 2007).

In contrast to existing measures in the UK such as the "Alcohol Strategy" (Her Majesty's Stationery Office, 2012), strategies such as restrictions on alcohol sales for younger people (e.g., Challenge 25), licenses for drinking venues and laws to control its sales to inebriated people are still scant in Brazil. Instead, the few existing policies and interventions are mainly focused on reducing drinking and driving behaviour. For instance, in Brazil the legal age for buying and drinking alcohol is 18 years old. Brazilian students' perceptions of such restriction were that it is poorly implemented in Brazil, as most of the time within nightlife settings in particular, there is no control of alcohol sales to minors, so they can easily have access to it (Laranjeira et al., 2007, Sanchez et al., 2011). Whilst in the UK, Brazilian participants believed that existing measures to control underage drinking and alcohol sales (e.g., Challenge 25) are efficient because the UK has more controlling and punitive laws than Brazil, which encourages compliance with the law. This agrees with the report launched by the agency responsible for the implementation of "Challenge 25" measure<sup>39</sup>, which suggested positive results, such as increased levels of acceptance by the population and decreased levels of underage drinking. Cost-effective initiatives and measures to manage access to alcohol such as this are needed in Brazil in order to raise awareness on drinking age legislation and so reduce alcohol consumption and its related harm within this part of the population.

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<sup>39</sup> <http://www.wsta.co.uk/images/Committees/RASG/2015/HowtoadoptChallenge25.pdf>

An interesting conflict between the two studies was regarding UK regulations on alcohol sales to inebriated people. In the UK there is already legislation making it illegal to sell alcohol to inebriated people (Her Majesty's Stationery Office, 2003). In study 1 significantly more Brazilian students reported they would be likely to reduce their alcohol consumption if there was a ban on alcohol sales to inebriated people. This was not reflected in study 2, where Brazilian students' perceptions on its effectiveness were less favourable. The dissonance in this topic was found in that Brazilian students from a more liberal culture with less strict policies would be less tolerant in relation to prohibiting alcohol sales to inebriated people, which is supported by previous national research (Sanchez, 2017, Carlini and Sanchez, 2018). Within the UK the opposite seems to be the case, as the country has a stricter law enforcement and increased acceptance and awareness by the population (Quigg et al., 2015a, Quigg et al., 2016). Effective evidence-based approaches to reduce alcohol-related harm within Brazil are needed, however, the success of such approaches will depend not only on enacting proper laws and its enforcement but also on public acceptance by the population as Brazil has a permissive and lax drinking culture (Sanchez, 2017).

Another curious divergence across the two studies was regarding drunk and disorderly behaviour legislation, which is something already regulated by law within the UK (Her Majesty's Stationery Office, 2003) but not in Brazil. In study 1, significantly more Brazilian students reported they would be likely to change or reduce their alcohol consumption if drunk and disorderly people were penalised. This was not reflected in study 2, where Brazilian' students' perceptions on such strategy and its use and effectiveness were much less positive. The conflict within this topic was based on the fact that Brazilian students from a country whose criminal system was considered to be more flexible and less punitive than the UK, students would have a greater sense of impunity and disrespect with local authorities. Research on harmful use of alcohol and its related harms in Brazil are needed in order to support policymakers and local authorities in developing effective and stricter strategies aimed to address crime, anti-social behaviours and substance use.

Finally, another interesting conflict that emerged across two studies was regarding driving under the influence of alcohol. In study 1, Brazilian students were significantly more likely to change their drinking behaviours if the government applied higher BrAC levels. However, this was not reflected in study 2. Despite the drink and driving legislation in Brazil been already zero tolerance (BRAZIL, 2012), this legislation did not seem to intimidate or encourage change of behaviour since in study 2 findings suggested that there was a strong relationship between poorly law enforcement with a greater sense of the Brazilian students of not being effectively punished. This agrees with previous research conducted with nightlife patrons in Brazil which suggests that increased law enforcement and improved strategies to guarantee compliance with the law, e.g., more sobriety checkpoints, could decrease people's sense of impunity (Sanchez et al., 2015). Brazilian students' perceptions in relation to enforcement and guarantee of compliance with the drink and drive law within the UK was more positive than in Brazil, with more effective penalties and punishments been applied including going to court and effectively losing the driving license, which somehow increases British students' "fear of getting caught" and respect for the law.

#### 6.4 General discussion

This mixed methods research explored Brazilian and UK students' experiences and attitudes towards alcohol use within nightlife settings from a public health perspective. The conceptual framework used in the current research was designed from the socio-ecological model of health in order to have a wider understanding of the context in which alcohol is used by university students from a cross-cultural view. According to this framework health behaviour is influenced by many social and environmental factors outside the individual's control (Bronfenbrenner, 1994, Sallis et al., 2008).

The findings from both studies showed that Brazilian and UK students' drinking behaviours appears to be influenced by the interaction of many factors, including students' drinking norms and beliefs as well as their views towards alcohol policy effectiveness, which can create more permissive environments that encourage harmful

drinking, especially within nightlife settings. Furthermore, consistent with previous studies (Barton and Husk, 2014, Foster and Ferguson, 2014, McClatchley et al., 2014, Santos et al., 2015b, Thurnell-Read et al., 2018), pre-drinking amongst both nationalities is in general a public health concern. The pre-drinking practice was considered to be part of university students' drinking patterns within nightlife settings associated with excessive drinking, high levels of drunkenness and alcohol-related harms.

The results also showed that Brazilian and UK university students' drinking cultures are characterised by high levels of alcohol consumption. This agrees with previous research that found risky drinking behaviours amongst university students in Brazil (Brandão et al., 2011, Pedrosa et al., 2011, Bedendo et al., 2017) and in the UK (Davoren et al., 2016b, Davoren et al., 2018), highlighting the importance of tackling students' alcohol-related problems especially because students tend to have more positive than negative expectations towards the consequences caused by harmful drinking such as hangovers, vomiting or passing out (Demant and Jarvinen, 2011, de Visser et al., 2013, Grant et al., 2013, Monk and Heim, 2013, Christmas and Seymour, 2014).

There were national differences for alcohol drinking expectancies, with Brazilian students reporting more negative effects when compared with their perceived expectancies of the UK students. It was argued that British students have higher positive expectancies towards alcohol, e.g., getting drunk was often associated with entertainment. In this sense, such sample was more likely to engage in risky behaviours. These results corroborate previous research that found association of UK students' positive expectancies towards getting drunk (Kuntsche et al., 2004, Mäkelä et al., 2006, Calafat et al., 2011, Kuntsche et al., 2014).

Despite the proven harms that harmful drinking can cause university students (Atwell et al., 2011, Craigs et al., 2012, de Visser et al., 2013, Longstaff et al., 2014), our findings suggested that getting drunk has been traditionally accepted and considered a ritual by university students from Brazil (Bedendo et al., 2017, Brandão et al., 2011, Pedrosa et al., 2011), but more from the UK (Hebden et al., 2015, Thurnell-Read, 2015,

Fjær et al., 2016, Thurnell-Read et al., 2018). Moreover, the nightlife context within both countries was once again characterised by high levels of drunkenness amongst university students (Sanchez et al., 2015, Quigg et al., 2015a, Quigg et al., 2015b) and associated with a wide range of risky behaviours, including increased episodes of violence, alcohol intoxication (e.g., blackouts, vomiting, passing out), sexual risky behaviours and drunk driving (Hughes et al., 2008a, Bellis and Hughes, 2011, Hughes et al., 2012, Graham et al., 2013, Bellis et al., 2015, Sanchez et al., 2015, Wagner and Sanchez, 2017, Sanchez et al., 2018, Sañudo et al., 2018, Fung et al., 2018).

Regarding students' pre-drinking practice, corroborating previous research from Brazil (Santos et al., 2015b) and the UK (Bolier et al., 2011, Roberts, 2013, McClatchley et al., 2014, Østergaard and Skov, 2014), results also showed significant association between pre-drinking and increased physical risky behaviours, episodes of drunkenness effects (e.g., blackouts, vomiting) and sexual risky behaviours. Whilst specific alcohol policies target in addressing excessive alcohol consumption within nightlife settings have been already developed within the UK (Hughes et al., 2012, Quigg et al., 2018), in Brazil such measures are still scant, highlighting the significance of developing and implementing effective alcohol policies and interventions within these settings aimed to reduce these alcohol related-harm amongst this population.

Since our findings also suggested that students' drinking patterns within nightlife settings is a strong risk factor for experiencing alcohol-related harms, to prevent and reduce these harms amongst university students it is necessary to develop and implement effective evidence-based policies and interventions aimed in creating a safer and healthier environment. Nevertheless, the literature has described a wide range of effective evidence-based policies and interventions aimed in reducing alcohol problems, including measures to reduce alcohol affordability (e.g., taxation) and availability (e.g., age and alcohol sales to inebriated people restrictions), regulations on alcohol marketing and publicity as well as regulations to reduce drink and driving incidents (Anderson et al., 2009a, Babor et al., 2010). However, such practices have been mostly implemented in developed countries, including the UK (Holmes et al., 2014, Quigg et al., 2015a, Quigg et al., 2015b, Meier et al., 2016, Quigg et al., 2016, Wigg and Stafford,

2016, Boniface et al., 2017, Blackwell et al., 2018, Quigg et al., 2018), leaving a gap in developing countries such Brazil. Epidemiological research on alcohol consumption are needed to form the basis of policies aimed to decrease harmful drinking in the nightlife context by reducing alcohol intoxication, thereby decreasing violent episodes and other risk behaviours associated with these settings. However, great political and population willingness as well as appropriate law enforcement and targeted raising-awareness campaigns are needed to guarantee the success of the above policies, especially in more relaxed and permissive cultures like Brazil.

## 6.5 Implications for policy, practice and future research

This research identified important issues regarding the role of alcohol in university student life, particularly on students pre-drinking practice, and its implications for alcohol policy. Over the years pre-drinking has become more prominent and an important cultural activity specially amongst young adults. Whilst evidence exploring students' pre-drinking prevalence and motives already exists (Barton and Husk, 2012, LaBrie et al., 2012b, Barton and Husk, 2014, Caudwell and Hagger, 2014, Foster and Ferguson, 2014, Santos et al., 2015b) as well as its association with alcohol-related harms and implications for alcohol policy development (Hughes et al., 2008a, Wells et al., 2009, Barton and Husk, 2012, Miller et al., 2016), this research contributes to the literature by offering insight to understand the wider factors (e.g., student's norms, attitudes, cultural and policy factors) that may influence university students' alcohol consumption within nightlife settings, including pre-drinking.

Based on the literature review and considering the evidence produced by this research a possible focus for future research would centre on the need for comparable findings that can further develop cross-national comparisons on drinking patterns amongst university students. Little is known about the impact of interventions on students' pre-drinking practice. The results identified the need for multi-component interventions strategies aimed at increasing university students' awareness of alcohol-related problems and changing their individual attitudes and beliefs towards alcohol within nightlife settings, including pre-drinking behaviour, to address drunkenness

within nightlife settings, particularly in Brazil where such field is still scant. Further research should be aimed on ways to prevent pre-drinking,

There is little research on patterns of alcohol use amongst Brazilian university students within the nightlife context, particularly regarding pre-drinking practice and none focusing exclusively in students' drinking norms and attitudes towards alcohol consumption. The existing data are mostly amongst general population, where drinking patterns can differ from the younger population. For developing countries as Brazil, this type of data would help practitioners and policymakers to develop cost effective, evidence-based practice measures and interventions to reduce alcohol-related harms not only amongst general population but also especially amongst university students. Future research should further explore Brazilian' students' drinking patterns within the nightlife context, particularly pre-drinking practice.

Additionally, due to a lack of knowledge on epidemiological data on harmful use of alcohol amongst students within the nightlife context there is also little research which explores the public health implications of excessive drinking, or on harm reduction or health strategies. The current study using a quantitative approach as well as a qualitative has identified significant differences regarding Brazilian and UK students' drinking patterns as well as formulating discussions around appropriate and effectiveness alcohol policies for the Brazilian scenario. This is important for informing specific and effective cross-cultural alcohol policies and interventions within nightlife context. Finally, further research is needed to explore university students' interpretation of alcohol policies within the UK and in Brazil. In such approach, students' beliefs as well as their social norms should be considered, in order to develop public health information and effective interventions.

## 6.6 Strengths and limitations

This study is among the first of its kind to extensively explore Brazilian young adults' perceptions of drinking within nightlife settings. Through utilising survey method and focus groups a multiplicity of views was explored. However, whilst this study has

added to the existing literature on university students' harmful drinking and pre-drinking practice, this research has some limitations that need to be acknowledged, in addition to the limitations of each individual study as presented in Chapter 4 and 5.

Firstly, as noted in Chapter 3, instead of using one philosophical paradigm, the researcher adopted a pragmatic approach (Johnson et al., 2007, Creswell, 2018) to have more comprehensive knowledge and answer the broader research questions related to the complex issue of students' drinking patterns, combining questionnaires and interviews was the most appropriate choice to inform theory and practice.

Secondly, this research was exploratory and focused on Brazilian and UK university students' drinking patterns. Hence, generalisability would be limited because more cross-cultural studies in the same area and more representative samples from the both countries are needed. Future research could be carried out in more detail of each region of each country.

Nevertheless, this study is among the first of its kind to extensively explore Brazilian young adults' perceptions of drinking within nightlife settings. Through utilising survey method and focus groups a multiplicity of views was explored. This research programme allowed the researcher to have a more detailed picture of university students' drinking patterns within nightlife settings and to explore students' pre-drinking practice and their awareness and perceived effectiveness towards alcohol policy in the nightlife context. It provided valuable insights on students' drinking during nights out, and on how certain socio-cultural contexts shape drinking behaviour. These factors include self-perceptions of one's own and others' drinking behaviour, cultural and historical roots, gender, alcohol policies, and the easy availability and accessibility of alcoholic drinks. Further, from a cross-cultural comparison approach the quantitative findings indicated alcohol use within nightlife settings amongst Brazilian and UK university students as an important public health concern which were further contextualised by the qualitative findings. In this sense, both studies fulfilled their purpose of providing a more comprehensive understanding on students' nightlife



drinking contexts and their perceptions and meanings behind drinking behaviours during nights out.

Much of the published studies on students' perceptions of alcohol use within nightlife settings are quantitative research which can limit understanding complex social and cultural perceptions, leaving a gap on qualitative studies aimed at understanding students' experiences, perceptions and expectations of nightlife drinking culture. This mixed-method research was developed to explore differences in the prevalence of Brazilian and UK students' nightlife drinking experiences through quantitative procedure then qualitative measure was adopted to have an in-depth understanding of Brazilian students' perceptions of the nightlife drinking experience in the UK and the current findings have provided new insights into how Brazilian students conceptualise alcohol's use during nights out.

Little previous quantitative research has been done to address the issue of harmful drinking amongst Brazilian university students within nightlife settings. To knowledge, data on university students' drinking patterns within nightlife settings is still scant and triangulating the results with qualitative data has not been done in Brazil yet. More qualitative studies amongst students from both nationalities need to be conducted to bring more detail on perceived students' nightlife drinking culture in general, and more specifically on how socio-cultural factors can influence individuals' behaviour.

## 6.7 Conclusions

In summary, by drawing on the socio-ecological framework, this study suggests that students' alcohol use is a problem that needs to be considered as deeply rooted in a wider cultural context of drinking culture. Given the results from this mixed-methods research showed that students' alcohol consumption within nightlife settings, particularly during pre-drinking practice are a problem in Brazil and in the UK, important and effective measures need to be taken by the government and policy-makers in order to reduce harmful drinking and its related harms amongst university students. For

instance, the traditional picture of the UK student's heavy drinking culture needs to be addressed, which would involve working with higher education institutions and student unions to support more alcohol-free events and health-campaigns for harm reduction approaches to increase awareness about the serious problems associated with harmful use of alcohol, and so discouraging students' excessive drinking and promoting responsible drinking patterns.

Also, this thesis attempted to explore university students' perceived levels of alcohol policy effectiveness and its implications for the nightlife context in two different cultures and nationalities. The findings suggest significant differences in students' drinking norms and perceived effectiveness on alcohol policies that influence their decision in consuming high levels of alcohol within the nightlife context. More positive expectancies were suggested to be prevalent amongst UK university students, whose association for getting drunk was to have fun. Fear of negative consequences caused by harmful drinking was frequent amongst Brazilian' university students. From a public health concern, these were important results that add to the literature regarding students' drinking expectancies. Further investigation and attention to reduce students' risky drinking behaviours within nightlife settings are required.

The UK has a good background on epidemiological research focused on harmful drinking amongst university students within nightlife settings, as well as on alcohol policy and interventions. Whereas in Brazil, university students are a quite understudied population that has a permissive drinking culture. Cultural differences in alcohol consumption seem to be an important topic from a public health perspective since the students' attitudes towards alcohol can differ across cultures. This cross-cultural study not only provided new insight into the differences between the two countries in relation to students' drinking behaviours in the nightlife context but also it shed a light on their levels of awareness and perceived effectiveness on alcohol policy.

Although there has recently been a positive change in Brazil and in the UK in relation to alcohol policy implementation (e.g., stricter drink and drive regulation in Brazil and increased awareness of the UK legislation on alcohol sales for inebriated

people), law enforcement is essential to guarantee compliance with the law, particularly in Brazil where stricter legislation does not seem to intimidate the population. Moreover, within the UK nightlife settings, interventions need to be constantly monitored, evaluated and regulated in order to guarantee a healthier and safer environment for students.

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# Appendix A: Ethical approval letter (Study 1)

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Approved

Williams, Mandy



To: Ribeiro Santos, Mariana

Cc: Gee, Ivan; Quigg, Zara; Hughes, Karen; researchethics

29 April 2016 12:43

This message was sent with High importance.

Dear Mariana

With reference to your application for Ethical Approval:

**16/CPH/005 - Guedes Ribeiro Santos, Mariana (PGR). Alcohol use by nightlife patrons in the UK and Brazil: a comparative study. (Ivan Gee / Zara Quigg / Karen Hughes)**

The University Research Ethics Committee (UREC) has considered the above application and I am pleased to inform you that ethical approval has been granted and the study can now commence.

Approval is given on the understanding that:

- any adverse reactions/events which take place during the course of the project are reported to the Committee immediately;
- any unforeseen ethical issues arising during the course of the project will be reported to the Committee immediately;
- the LJMU logo is used for all documentation relating to participant recruitment and participation e.g. poster, information sheets, consent forms, questionnaires. The LJMU logo can be accessed at <http://www.ljmu.ac.uk/corporatecommunications/60486.htm>

Where any substantive amendments are proposed to the protocol or study procedures further ethical approval must be sought.

Applicants should note that where relevant appropriate gatekeeper / management permission must be obtained prior to the study commencing at the study site concerned.

For details on how to report adverse events or request ethical approval of major amendments please refer to the information provided at <http://www.ljmu.ac.uk/RGSO/93205.htm>

Please note that ethical approval is given for a period of five years from the date granted and therefore the expiry date for this project will be April 2021. An application for extension of approval must be submitted if the project continues after this date.



Mandy Williams, Research Support Officer  
(Research Ethics and Governance)  
Research and Innovation Services  
Kingsway House, Hatton Garden, Liverpool L3 2AJ  
t: 01519046467 e: [a.f.williams@ljmu.ac.uk](mailto:a.f.williams@ljmu.ac.uk)

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## Appendix B: Ethical approval letter (Study 2)

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### Approved - Ribeiro Santos (17/PHI/02 )

Williams, Mandy



To: [Ribeiro Santos, Mariana](#)  
Cc: [Research Ethics Proportionate Review; Gee, Ivan](#)  
Attachments: [ethics study 3 revised ver-1.pdf \(1 MB\)](#) [Open as Web Page]

09 November 2017 14:45

Dear Mariana

With reference to your application for Ethical approval

**17/PHI/002 - Mariana Guedes Ribeiro Santos, PGR - Alcohol use by nightlife patrons in the UK and Brazil: a comparative study (Ivan Gee)**

**UREC decision: Approved**

Liverpool John Moores University Research Ethics Committee (REC) has reviewed the above application by proportionate review and I am pleased to inform you that ethical approval has been granted and the study can commence.

Approval is given on the understanding that:

- any adverse reactions/events which take place during the course of the project are reported to the Committee immediately by emailing [researchethics@ljmu.ac.uk](mailto:researchethics@ljmu.ac.uk);
- any unforeseen ethical issues arising during the course of the project will be reported to the Committee immediately emailing [researchethics@ljmu.ac.uk](mailto:researchethics@ljmu.ac.uk);
- the LJMU logo is used for all documentation relating to participant recruitment and participation eg poster, information sheets, consent forms, questionnaires. The LJMU logo can be accessed at <http://www2.ljmu.ac.uk/corporatecommunications/60486.htm>

Where any substantive amendments are proposed to the protocol or study procedures further ethical approval must be sought (<https://www2.ljmu.ac.uk/RGSO/93205.htm>)

Applicants should note that where relevant appropriate gatekeeper / management permission must be obtained prior to the study commencing at the study site concerned.

Please note that ethical approval is given for a period of five years from the date granted and therefore the expiry date for this project will be November 2022. An application for extension of approval must be submitted if the project continues after this date.

Yours sincerely



Mandy Williams, Research Support Officer  
(Research Ethics and Governance)  
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## Appendix C: Gatekeeper information sheet (Study 1)

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### **GATEKEEPER INFORMATION SHEET (ENGLISH VERSION)**

Dear,

My name is Mariana Santos I am a PhD student at the Centre for Public Health at LJMU. I am currently undertaking a research study exploring drinking patterns among UK and Brazilians' students.

Alcohol abuse has been recognized as a major public health issue. In many parts of Europe, including the United Kingdom, much of the burden of alcohol on health and crime is related to risky alcohol consumption among young people, which usually occurs within nightlife environments. So, I am interested in students' expectations and perceptions of drinking culture, especially about pre-drinking and its implications for the recreational nightlife context.

As part of this research I need to recruit 375 students enrolled at your programme to participate to the online survey. I am contacting you to ask if you would be willing to help recruit these participants by sending the recruitment email for the students on my behalf. I have also attached a participant information sheet with further details about the research that I will be sending to all students as well. This study has received ethical approval from LJMU's Research Ethics Committee: Reference number 16/CPH/005.

I would really appreciate your help with this recruitment process. Please do not hesitate to contact me ([M.Guedes@2015.ljmu.ac.uk](mailto:M.Guedes@2015.ljmu.ac.uk)) or my supervisor Zara Quigg ([Z.A.Quigg@ljmu.ac.uk](mailto:Z.A.Quigg@ljmu.ac.uk)) with any other questions or concerns about the study.

Thank you in advance for your assistance with this research study.

Yours sincerely,

Mariana Santos

**(PORTUGUESE VERSION)**

Prezados,

Sou ex-aluna de mestrado da UNIFESP e agora curso doutorado no Reino Unido, na Liverpool John Moores University, através do programa Ciência sem Fronteiras, sob orientação da Professora Karen Hughes (LJMU) e parceria e co-orientação da Prof. Dra. Zila Sanchez, do Departamento de Medicina Preventiva da UNIFESP.

O motivo do meu contato refere-se a necessidade de divulgarmos o projeto aos alunos da UNIFESP. O objetivo da pesquisa é explorar e comparar os padrões de consumo de bebida alcoólica no contexto da vida noturna, entre os estudantes universitários do Reino Unido e do Brasil através de uma pesquisa online. Estou dando continuidade ao meu projeto de mestrado, que foi orientado pela própria Prof. Zila Sanchez e financiado pela FAPESP.

Para esse meu projeto de doutorado, precisamos recrutar 375 estudantes (graduação e pós-graduação) matriculados na UNIFESP para participar da pesquisa anônima online, através da ferramenta chamada Bristol online surveys (link: <https://ljmu.onlinesurveys.ac.uk/adroes-de-consumo-de-bebida-alcoolica-entre-os-os-baladeiros>). O questionário consta de questões fechadas sobre taxa de prevalência e tipos de padrão de consumo de álcool entre os estudantes; informações e fatores associados à prática do “esquentar” entre os estudantes universitários além de questões sobre percepções e níveis de conhecimento dos estudantes universitários brasileiros com relação a existência das políticas públicas do álcool no contexto da vida noturna (aprovado pelo Comitê de Ética em Pesquisa da UNIFESP sob parecer número 1.845.314 – CAAE 61290216.3.0000.5505).

Portanto, gostaria de solicitar ajuda dos centros e diretórios acadêmicos na divulgação do projeto. Eu realmente aprecio a sua ajuda nessa etapa para que os alunos tenham conhecimento e interesse em participar. Por favor, não hesite em contatar-me ([M.guedes@2015.ljmu.ac.uk](mailto:M.guedes@2015.ljmu.ac.uk)) ou minha co-orientadora Zila Sanchez ([zila.sanchez@unifesp.br](mailto:zila.sanchez@unifesp.br)) com quaisquer outras perguntas ou preocupações sobre o estudo.

Atenciosamente,

Mariana Santos



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## Appendix D: Recruitment e-mail (Study 1)

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### **RECRUITMENT EMAIL (ENGLISH VERSION)**

Would you be willing to complete a short online survey?

I am a PhD researcher at Liverpool John Moores University researching patterns of alcohol use by nightlife patrons in the UK and Brazil.

You are eligible to take part in the survey if you:

- are 18 years old or over, and
- enrolled at LJMU.

If you would like to take part, you can access the survey by selecting yes after the participant information sheet on this link:

<https://ljmu.onlinesurveys.ac.uk/alcohol-use-by-nightlife-patrons-in-the-uk-and-brazil>

This study has received ethical approval from LJMU's Research Ethics Committee Ref: REC 16/CPH/005. Any enquiries you may have concerning this project should be directed to me, Mariana, at the address: [M.Guedes@2015.ljmu.ac.uk](mailto:M.Guedes@2015.ljmu.ac.uk).

Thank you for your attention and assistance.

**E-MAIL DE RECRUTAMENTO (PORTUGUESE VERSION)**

Prezado aluno,

Você estaria disposto a completar um rápido questionário on-line?

Sou ex-aluna da UNIFESP e atualmente faço Doutorado em Saúde Pública pela Liverpool John Moores University (LJMU) no Reino Unido.

A UNIFESP junto com a LJMU estão recrutando alunos de graduação e pós-graduação, maiores de 18 anos, para responder a uma pesquisa on-line anônima sobre padrões de consumo de bebida alcoólica nas baladas entre estudantes universitários.

Para participar basta clicar no link: (super rápido e fácil)

<https://ljamu.onlinesurveys.ac.uk/adroes-de-consumo-de-bebida-alcoolica-entre-os-os-baladeiros>

Estudo aprovado pelo Comitê de Ética em Pesquisa da UNIFESP: parecer número 1.845.314 – CAAE 61290216.3.0000.5505

Quaisquer dúvidas que você possa ter a respeito deste projeto entre em contato comigo no endereço indicado - [M.Guedes@2015.ljamu.ac.uk](mailto:M.Guedes@2015.ljamu.ac.uk).

Obrigado pela sua atenção e assistência.

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## Appendix E: Participant information sheet (Study 1)

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### **PARTICIPANT INFORMATION SHEET (ENGLISH VERSION)**

#### **Alcohol use by nightlife patrons in the UK and Brazil: a comparative study**

Mariana Guedes Ribeiro Santos - Public Health Institute LJMU

This project has been approved by the ethics panel of Liverpool John Moores University, and to take part in this study, you must be a student enrolled at LJMU and be over the age of 18. You are being invited to take part in a research study. Before you decide it is important that you understand why the research is being done and what it involves. Please take time to read the following information. Ask us if there is anything that is not clear or if you would like more information. Take time to decide if you want to take part or not.

#### **1. What is the purpose of the study?**

This study is part of a wider PhD programme of research. The purpose of this study is to investigate and compare nightlife drinking behaviours in UK and Brazil. I am interested in students' expectations and perceptions of drinking culture, especially about pre-drinking and its implications.

#### **2. Do I have to take part?**

No. It is up to you to decide whether to take part of it or not. Participation is voluntary. Through completing the survey, you will be notified that you are giving informed consent. You are still free to withdraw at any time and without giving a reason. A decision to withdraw will not affect your rights/any future treatment/service you receive.

#### **3. What will happen to me if I take part?**

If you do decide to take part of this research, you will be answering a short online questionnaire developed and conducted with the help of Bristol Online Survey tool, where you will be asked about alcohol consumption, pre-drinking phenomenon, and alcohol policy and awareness. It will take only a few minutes to complete it. All your responses will remain confidential, stored securely and anonymised during data interpretation. The findings will be used to inform and develop effective alcohol policy. Research will also be shared through relevant conferences and within a peer-review journal. At the end of the questionnaire you will be asked whether you would mind being contacted about participating in a follow-up study which

would involve taking part in a focus group with other Brazilian students current living in the UK. Participation in the focus group is optional.

**4. Are there any risks / benefits involved?**

There are no risks envisaged but if you feel uncomfortable answering some questions then you are permitted to omit them. Whilst there are no direct benefits for taking part in the research, the information you provide will contribute to a better understanding of alcohol consumption in nightlife settings, particular the pre-drinking event, which influences some risk behaviours, and help us to develop and implement efficient prevention programs. If there is a problem, you can contact the researcher at the address below.

**5. Will my taking part in the study be kept confidential?**

Yes, all the information collected about you during the research will be kept strictly confidential. Your responses will be anonymised and stored securely.

**This study has received ethical approval from LJMU's Research Ethics Committee: REC 16/CPH/005**

**Contact Details of Researcher:** Mariana Guedes Ribeiro Santos [M.Guedes@2015.ljmu.ac.uk](mailto:M.Guedes@2015.ljmu.ac.uk)

**Contact Details of Academic Supervisor:** Zara Quigg – [Z.A.Quigg@ljmu.ac.uk](mailto:Z.A.Quigg@ljmu.ac.uk)

Thank you for taking the time to consider this study.

If you would like information on where to get support for alcohol or substance misuse, then please visit sites such as:

<http://www.liverpoolalcoholservice.nhs.uk/aboutus/>

[www.addaction.org.uk](http://www.addaction.org.uk)

[www.alcoholconcern.org.uk](http://www.alcoholconcern.org.uk)

## **TERMO DE CONSENTIMENTO LIVRE E ESCLARECIDO (TCLE) – PORTUGUESE VERSION**

### **Padrões De Consumo De Bebida Alcoólica Entre Os Baladeiros Universitários Do Reino Unido E Do Brasil: Um Estudo Comparativo**

Esse estudo recebeu aprovação pelo Comitê de Ética em Pesquisa da UNIFESP sob parecer número 1.845.314 – CAAE 61290216.3.0000.5505.

#### **1) Qual é o objetivo do estudo?**

Este estudo faz parte de um programa de Pesquisa de Doutorado com objetivo de investigar e comparar padrões de comportamentos de beber no contexto da vida noturna no Reino Unido e no Brasil, focando numa melhor compreensão sobre as expectativas e percepções da “cultura do beber” entre os estudantes, especialmente sobre o fenômeno do esquentar pré-balada e as suas implicações.

#### **2) Eu sou obrigado (a) a participar?**

Não. Cabe a você decidir se quer ou não participar. A participação é voluntária. Completando o questionário online você será notificado de que você estará dando o consentimento informado. Você é livre para desistir a qualquer momento e sem dar uma razão. A desistência não afetará os seus direitos ou qualquer tratamento futuro/serviço que você receba.

#### **3) O que vai acontecer comigo se eu participar?**

Se você decidir fazer para participar desta pesquisa, você estará respondendo a um questionário on-line desenvolvido e realizado com a ajuda da ferramenta de pesquisa on-line chamado Bristol Online, onde você será questionado sobre o consumo de álcool, fenômeno de esquentar pré-balada e política de álcool. Demorará apenas alguns minutos para completá-lo (8-10 min). Todas as suas respostas permanecerão confidenciais, armazenados de forma segura e anonimizados durante a interpretação dos dados. Os resultados desta pesquisa serão utilizados para informar e desenvolver uma política de álcool eficaz, assim como também serão publicados e compartilhados através de conferências e congressos relevantes ao assunto.

#### **4) Existem quaisquer riscos/benefícios envolvidos?**

Não há riscos previstos, mas sabemos que compartilhar informações pessoais e confidenciais pode causar algum desconforto. Caso isso venha acontecer você tem permissão para omiti-las. Apesar de não existirem benefícios diretos por participar na pesquisa, as informações fornecidas irão contribuir para uma melhor compreensão do consumo de álcool no contexto da vida noturna (baladas), em especial sobre

o fenômeno do esquentar pré-balada, que influencia alguns comportamentos de risco, e ajudará a desenvolver e implementar programas de prevenção eficientes. Se houver qualquer problema, você pode entrar em contato com o pesquisador, no endereço abaixo.

**5) A minha participação no estudo serão mantidas confidenciais?**

Sim, todas as informações fornecidas por você durante a pesquisa serão mantidas estritamente confidenciais. Suas respostas serão anonimizados e armazenados de forma segura.

Dados para contato do pesquisador: Mariana Guedes Ribeiro Santos ([M.Guedes@2015.ljmu.ac.uk](mailto:M.Guedes@2015.ljmu.ac.uk))

Dados para contato da co-orientadora de doutorado: Zila Sanchez ([zila.sanchez@unifesp.br](mailto:zila.sanchez@unifesp.br))

Se você tiver alguma consideração ou dúvida sobre a ética da pesquisa, entre em contato com o Comitê de Ética em Pesquisa (CEP) da Unifesp através do endereço:

Rua Botucatu 572, 1º andar, cj 14

Telefone (11) 5571-1062

FAX 5539-7162

[cepunifesp@unifesp.br](mailto:cepunifesp@unifesp.br)

Obrigada pela atenção.

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## Appendix F: Questionnaires (Study 1)

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### Survey (ENGLISH VERSION)

I have read the information sheet provided and I am happy to participate. I understand that by completing this questionnaire I am consenting to be part of the research study and for my data to be used as described

**1) What is your age?**

- a) 18-21
- b) 22-25
- c) 26-29
- d) 30-33
- e) 34+

**2) How would you describe your gender?**

- a) Female
- b) Male
- c) Transgender
- d) Other
- e) Prefer not to say

**3) What's your marital status?**

- a) Single
- b) Dating
- c) A long-term relationship

**4) How would you describe your national identity?**

- a) I am a UK citizen studying in the UK
- b) I am an international student from within the EU studying in the UK
- c) I am an international student from outside the EU studying in the UK

**5) Choose one option that best describes your ethnic group or background:**

- a) White
- b) Asian / Asian British
- c) Black / African / Caribbean / Black British
- d) Mixed
- e) Other

**6) Which academic year are you in?**

- a) 1<sup>st</sup> year Undergraduate
- b) 2<sup>nd</sup> year Undergraduate
- c) 3<sup>rd</sup> year Undergraduate
- d) 4<sup>th</sup> year Undergraduate
- e) Post graduate: masters
- f) Post graduate research

**7) Do you currently live in Liverpool?**

- a) Yes
- b) No
- c) Other: \_\_\_\_\_

**8) How often do you drink alcohol?**

- a) Never
- b) Monthly or less

- c) 2 to 3 times a month
- d) Once a week
- e) 2-4 days a week
- f) 5 or more times a week

If selected Never - end of the survey!

**We would now like to know about your alcohol consumption at university. Remember that this survey is confidential!**

**9) During the academic year, on what nights do you typically drink out?**

- Monday
- Tuesday
- Wednesday
- Thursday
- Friday
- Saturday
- Sunday

**10) How often do you participate in the following social events? (tick the one that best apply to you)**

	More than once a week	Once a week	Once or twice a month	Less than monthly	Never
Going to nightclubs					
Going to pubs / bars					
House parties					
Dinner Parties					
Theatre					
Concerts (live bands)					
Sports events					

**11) Thinking about a typical week whilst at university, please tell us about your dinking behaviour (what would you normally do?):**

\* going out = participating in social events

\* pre-drink = drink before going out

	I would normally go out* and NOT drink	I would normally go out* and drink	I would normally stay home and NOT drink	I would normally stay home and drink	I would normally stay home, pre-drink and then go out and NOT DRINK	I would normally stay home, pre-drink and then go out and DRINK MORE
Monday						
Tuesday						
Wednesday						
Thursday						
Friday						
Saturday						
Sunday						

**12) On a scale of 1 to 10, with 1 completely sober and 10 completely drunk: in your typical drinking environment:**

	1	2	3	4	5	6	7	8	9	10
What do you think is the typical level of drunkenness that people reach at a night out (nightclubs/bar/pubs)?										
What do you think is the typical level of drunkenness that people reach at house parties?										

**13) Regarding pre-drinking/pre-loading (drinking before going out) phenomenon:**



	Yes	No
Would you normally pre-drink before going to a night out (nightclubs/bars/pubs)?		
Would you normally pre-drink before going to a house party?		

If No, go to Q20

**If Yes, where would you normally pre-drink?**

	Own home	Friend's home	Outside environment (park, street, beach)	Other
Before going to a night out (nightclubs/bars/pubs)				
Before going to a house party				

If Other, please specify: \_\_\_\_\_





**14) Generally, what motives do you have for pre-drinking (tick as many as apply):**

- No motive
- Part of going out
- To socialize with your friends
- To save money
- To not go out sober
- To lose control
- To deliberately get drunk
- To increase my confidence
- Relaxation (to feel less stressed)
- To feel like part of a group
- To have a good time
- To increase your mood
- To reduce your anxiety
- Other: \_\_\_\_\_

i. Now, what is your MAIN reason for pre-drinking? (tick only one)

- a) Part of going out
- b) To socialize with your friends
- c) To save money
- d) To not go out sober
- e) To lose control
- f) To deliberately get drunk
- g) To increase my confidence
- h) Relaxation (to feel less stressed)
- i) To feel like part of a group
- j) To have a good time
- k) To increase your mood
- l) To reduce your anxiety
- m) Other: \_\_\_\_\_

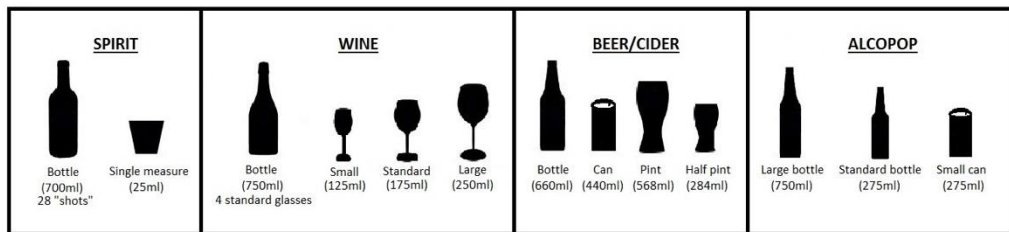
**15) Before going to a night out (nightclubs/bars/pubs), how many of these drinks do you normally have during pre-drinking?**

SPIRIT	WINE	BEER/CIDER	ALCOPOP
			
Bottle (700ml) 28 "shots" Single measure (25ml)	Bottle (750ml) 4 standard glasses Small (125ml) Standard (175ml) Large (250ml)	Bottle (660ml) Can (440ml) Pint (568ml) Half pint (284ml)	Large bottle (750ml) Standard bottle (275ml) Small can (275ml)

	0	1	2	3	4	5	6	7	8	9	10	11+
Bottle of spirit												
1 single measure of spirit												
1 double measure of spirit												
Bottle of wine												
Small glass of wine												
Standard glass of wine												
Large glass of wine												
Bottle of beer/cider												
Can of beer/cider												
Pint of regular beer/cider												
Half pint of regular beer/cider												
Large bottle of alcopop												
Standard bottle of alcopop												
Can of alcopop												
Other												

If Other, please specify: \_\_\_\_\_

**16) Before going to a house party, how many of these drinks do you normally have during pre-drinking?**



	0	1	2	3	4	5	6	7	8	9	10	11+
Bottle of spirit												
1 single measure of spirit												
1 double measure of spirit												
Bottle of wine												
Small glass of wine												
Standard glass of wine												
Large glass of wine												
Bottle of beer/cider												
Can of beer/cider												
Pint of regular beer/cider												
Half pint of regular beer/cider												
Large bottle of alcopop												
Standard bottle of alcopop												
Can of alcopop												
Other												

If Other, please specify: \_\_\_\_\_

**17) On a scale of 1 to 10, with 1 completely sober and 10 completely drunk:**

	1	2	3	4	5	6	7	8	9	10
How drunk do you usually get during pre-drinking before going to a night out (nightclubs/bars/pubs)?										
How drunk do you usually get during pre-drinking before going to a house party?										

**18) Would you consume any food:**

	Yes (snacks)	Yes (a big meal)	No
During pre-drinking before going to a night out (nightclubs/bars/pubs)?			
During pre-drinking before going to a house party?			














19) What time would you start drinking:

	Before 4 pm	Between 4 - 5:59 pm	Between 6 - 7:59 pm	Between 8 - 9:59 pm	Between 10 - 11:59 pm	12 pm or later	N/A
During pre-drinking before going to a night out (nightclubs/bars/pubs)							
During pre-drinking before going to a house party							

20) What time would you typically go out to?

	Before 7 pm	Between 7 – 8:59 pm	Between 9 – 10:59 pm	Between 11 – 12:59 am	Between 1 – 2:59 am	Between 3 – 4:59 am	N/A
A night out (nightclubs/bars/pubs)							
A house party							














21) During a night out (inside nightclubs/bars/pubs), how many of these drinks would you expect to consume:

<b>SPIRIT</b>	<b>WINE</b>	<b>BEER/CIDER</b>	<b>ALCOPOP</b>
 Bottle (700ml) 28 "shots"  Single measure (25ml)	 Bottle (750ml) 4 standard glasses  Small (125ml)  Standard (175ml)  Large (250ml)	 Bottle (660ml)  Can (440ml)  Pint (568ml)  Half pint (284ml)	 Large bottle (750ml)  Standard bottle (275ml)  Small can (275ml)

	0	1	2	3	4	5	6	7	8	9	10	11+
Bottle of spirit												
1 single measure of spirit												
1 double measure of spirit												
Bottle of wine												
Small glass of wine												
Standard glass of wine												
Large glass of wine												
Bottle of beer/cider												
Can of beer/cider												
Pint of regular beer/cider												
Half pint of regular beer/cider												
Large bottle of alcopop												
Standard bottle of alcopop												
Can of alcopop												
Other												

If Other, please specify: \_\_\_\_\_

22) At a house party, how many of these drinks would you expect to consume:

<b>SPIRIT</b>	<b>WINE</b>	<b>BEER/CIDER</b>	<b>ALCOPOP</b>
 Bottle (700ml) 28 "shots"  Single measure (25ml)	 Bottle (750ml) 4 standard glasses  Small (125ml)  Standard (175ml)  Large (250ml)	 Bottle (660ml)  Can (440ml)  Pint (568ml)  Half pint (284ml)	 Large bottle (750ml)  Standard bottle (275ml)  Small can (275ml)

	0	1	2	3	4	5	6	7	8	9	10	11+
Bottle of spirit												
1 single measure of spirit												
1 double measure of spirit												
Bottle of wine												
Small glass of wine												
Standard glass of wine												
Large glass of wine												
Bottle of beer/cider												
Can of beer/cider												
Pint of regular beer/cider												
Half pint of regular beer/cider												
Large bottle of alcopop												
Standard bottle of alcopop												
Can of alcopop												
Other												

If Other, please specify: \_\_\_\_\_

**23) On a scale of 1 to 10, with 1 completely sober and 10 completely drunk:**

	1	2	3	4	5	6	7	8	9	10
How drunk are you at the end of a night out (nightclubs/bars/pubs)?										
How drunk are you at the end of a house party?										

**24) How much of money would you spend on alcohol:**

	0	1-10€	11-20€	20-30€	30-40€	40-50€	50€ or more
At a night out (nightclubs/bars/pubs)?							
At a house party?							

**25) What time do you usually end:**

	Between 11 pm – 12:59 am	Between 1 – 2:59 am	Between 3 – 4:59 am	Between 5 – 6:59 am	7 am or later	N/A
Your night out (going to nightclubs/bars/pubs)?						
Your night out after going to a house party?						

**26) What do you typically like to do afterwards:**

	Go to another party	Carry on drinking alcohol	Go straight home and don't consume alcohol	Get some food	Other
Your night out (going to nightclubs/bars/pubs)					
Leaving a house party					

Now we would like to know about your general nightlife behaviour. Remember that this survey is confidential!

**27) When going out, do you usually:**

- Use public transportation
- Take a cab
- Drive
- Walk
- Take a lift with friends

**28) At the end of your night out, do you usually:**

- Use public transportation

- b) Take a cab
- c) Drive
- d) Walk
- e) Take a lift with friends

**29) In the following scenarios, how do you think your alcohol consumption would be affected:**

**\* on-licensed premises: pub/bar/nightclub/hotel/restaurant/coffee place**

**\* off-licensed premises: convenience stores/supermarkets**

	MY PRE-DRINKING HABIT WOULD:			MY OVERALL ALCOHOL AMOUNT WOULD:		
	Decrease	Increase	Be the same	Decrease	Increase	Be the same
If alcohol price in on-licensed* premises increased						
If alcohol price in off-licensed* premises increased						
If alcohol sales in off-licensed* premises be restricted to designated time						
If alcohol sales in off-licensed* premises be restricted to designated areas						
If bars/pubs/nightclubs closed by 2am						
If bars/pubs/nightclubs were prohibited to offer alcohol discounts (e.g., 2 for 1)						
If bars/pubs/nightclubs staff did not serve alcohol for drunk people						
If bars/pubs/nightclubs increase their bouncers' numbers for "supervision"						
If bars/pubs/nightclubs offer cheaper soft drinks options						
Active enforcement of ban on sales to drunk people in on* and off-licensed* premises						
If theatres or concerts decides to give free entrance for people that are not drinking						
If drunken and disorderly people in public places were penalised						
If local authorities create alcohol-free public spaces						
If alcohol product label were more legible with its product's nutritional and alcohol content						
If all alcohol promotions and advertising were prohibited						
If authorities apply higher drink driving limits to prevent alcohol-related accidents						
If random breath test were conducted at bars/pubs/nightclubs entrance						

**30) In the last 12 months, have you suffered any of these events after:**

	Going to a night out (nightclubs/bars/pubs)	Going to a house party	N/A
Any kind of physical violence (fights, assaults)?			
Any kind of sexual harassment?			
Any kind of alcohol-related effects (blackouts, vomiting, passed out, coma)?			
Fallen asleep somewhere inappropriate			
Woke up feeling embarrassed about things you had done			
Were refused entry to a nightclub/pub being too drunk			
Felt you had spoiled someone's night out			
Had unprotected sex			
Regretted a decision to engage in sexual activity			
Failed to attend at university because of drinking			
Missed exams because of drinking			
Missed work because of drinking			

## QUESTIONÁRIO (PORTUGUESE VERSION)

Eu li o folheto de informações fornecidas e estou feliz em participar.

Eu entendo que através do preenchimento deste questionário estou consentindo a fazer parte do estudo de pesquisa e autorizando que meus dados sejam usados como descrito anteriormente.

**1) Como você foi selecionado para participar dessa pesquisa?**

- a) Convite dos professores
- b) Convite de outros estudantes
- c) Divulgação on-line no portal da UNIFESP
- d) Divulgação on-line nas mídias sociais
- e) E-mail de recrutamento
- f) Outros \_\_\_\_\_

**2) Idade:**

- a) 18-21
- b) 22-25
- c) 26-29
- d) 30-33
- e) 34+

**3) Gênero:**

- a) Feminino
- b) Masculino
- c) Transgênero
- d) Outro
- e) Prefiro não responder

**4) Estado civil:**

- a) Solteiro (a)
- b) Em um relacionamento
- c) Casado (a)

**5) Escolha uma opção que melhor descreve o seu grupo étnico:**

- a) Branco
- b) Asiático
- c) Negro
- d) Pardo
- e) Outro

**6) Qual ano você se encontra na Universidade?**

- a) 1º ano de graduação
- b) 2º ano de graduação
- c) 3º ano de graduação
- d) 4º ano de graduação
- e) 5º ano de graduação
- f) 6º ano de graduação
- g) Pós-graduação: mestrado
- h) Pós-graduação: doutorado
- i) Pós-graduação: pós-doutorado

**7) Você mora atualmente em São Paulo?**

- a) Sim
- b) Não
- c) Outro \_\_\_\_\_

**8) Com que frequência você ingere bebida alcoólica?**

- a) Nunca

- b) Uma vez por mês ou menos
- c) 2 a 3 vezes por mês
- d) Uma vez por semana
- e) 2-4 dias por semana
- f) 5 ou mais vezes por semana

Se selecionado Nunca, fim da pesquisa (página final de agradecimento).

**Gostaríamos de saber agora sobre o seu consumo de álcool durante a universidade. Lembre-se que esta pesquisa é confidencial.**

**9) Durante o ano letivo na Universidade, quais noites da semana você geralmente bebe (marque todos que se aplicam):**

- 2ª feira
- 3ª feira
- 4ª feira
- 5ª feira
- 6ª feira
- Sábado
- Domingo

**10) Com que frequência você participa de eventos sociais (assinale a frequência que melhor se aplica):**

	Mais de uma vez por semana	Uma vez por semana	Uma ou duas vezes por mês	Menos do que um mês	Nunca
Baladas					
Bares ou pubs					
Festas particulares (house parties)					
Jantares festivos					
Teatro					
Concertos de bandas ao vivo					
Eventos esportivos					

**11) Pensando em uma semana típica durante a Universidade, informe o seu padrão de bebida alcoólica (o que você normalmente faz):**

**\*Sair = participar de quaisquer eventos sociais**

**\*Esquenta= beber antes de sair**

	Normalmente saio* e não bebo	Normalmente saio* e bebo	Normalmente fico em casa e não bebo	Normalmente fico em casa e bebo	Normalmente fico em casa, faço esquenta*, saio e não bebo mais	Normalmente fico em casa, faço esquenta*, saio e bebo
2ª feira						
3ª feira						
4ª feira						
5ª feira						
6ª feira						
Sábado						
Domingo						

**12) Em uma escala de 1 a 10, sendo 1 completamente sóbrio e 10 completamente bêbado, qual o nível de embriaguez que você acha que as pessoas alcançam:**

	1	2	3	4	5	6	7	8	9	10
Nas baladas/bares/pubs										
Em festas particulares (house parties)										

**13) Sobre a prática do esquenta (beber antes de sair), normalmente você:**

	Sim	Não
Faz esquenta antes de ir para baladas/bares/pubs?		
Faz esquenta antes de ir a uma festa particular (house party)?		

Se selecionado Não, ir para Q20.

Se selecionado Sim, onde você normalmente faz esquentar?

	Própria casa	Casa de amigos	Fora de casa (parque, rua, praia..)	Outros
Antes de ir para baladas/bares/pubs?				
Antes de ir a uma festa particular (house party)?				

**14) Geralmente, quais os seus principais motivos para fazer esquentar (assinalar tantos quantos se aplicarem):**

- Faz parte da rotina de sair à noite
- Para socializar com seus amigos
- Para economizar dinheiro
- Para não sair sóbrio
- Para “perder o controle”
- Para ficar intencionalmente bêbado
- Para aumentar a minha confiança
- Para relaxar (se sentir menos estressado)
- Para me sentir como parte de um grupo
- Para me divertir
- Para melhorar meu humor
- Para reduzir a minha ansiedade
- Outros \_\_\_\_\_

Agora, qual é o seu motivo PRINCIPAL para praticar esquentar? (Assinalar somente um)

- a) Faz parte da rotina de sair à noite
- b) Para socializar com seus amigos
- c) Para economizar dinheiro
- d) Para não sair sóbrio
- e) Para “perder o controle”
- f) Para ficar intencionalmente bêbado
- g) Para aumentar a minha confiança
- h) Para relaxar (se sentir menos estressado)
- i) Para me sentir como parte de um grupo
- j) Para me divertir
- k) Para melhorar meu humor
- l) Para reduzir a minha ansiedade
- m) Outros \_\_\_\_\_

**15) Durante o esquentar antes de ir para baladas/bares/pubs, informe quantas dessas bebidas você normalmente ingere:**



	0	1	2	3	4	5	6	7	8	9	10	11+
Garrafa de destilado (1L)												
Garrafa de destilado (750ml)												
1 dose padrão de destilado (40ml)												
Garrafa de vinho (750ml)												
Taça de vinho (150ml)												
Garrafa de cerveja (600ml)												
Long neck (355ml)												
Lata de cerveja (350ml)												
Caneca de chopp (300ml)												
Garrafa padrão de bebidas tipo "ice" (275ml)												
Outros												



Se selecionado Outros, por favor especifique:

**16) Durante o esquentamento antes de ir para uma festa particular (house party), informe quantas dessas bebidas você normalmente ingere:**



	0	1	2	3	4	5	6	7	8	9	10	11+
Garrafa de destilado (1L)												
Garrafa de destilado (750ml)												
1 dose padrão de destilado (40ml)												
Garrafa de vinho (750ml)												
Taça de vinho (150ml)												
Garrafa de cerveja (600ml)												
Long neck (355ml)												
Lata de cerveja (350ml)												
Caneca de chopp (300ml)												
Garrafa padrão de bebidas tipo "ice" (275ml)												
Outros												

Se selecionado Outros, por favor especifique:

**17) Em uma escala de 1 a 10, sendo 1 completamente sóbrio e 10 completamente bêbado, quão alcoolizado você fica no esquentamento:**

	1	2	3	4	5	6	7	8	9	10
Antes de sair para baladas/bares/pubs										
Antes de ir para festas particulares (house parties)										

**18) Você ingere algum tipo de alimento durante o esquentamento:**

	Sim, aperitivos	Sim, refeição	Não
Antes de ir para baladas/bares/pubs			
Antes de ir para festas particulares (house parties)			

**19) Que horas que você geralmente começa a beber no esquentamento:**

	Antes das 16h	Entre 16h - 17h59	Entre 18h - 19h59	Entre 20h - 21h59	Entre 22h - 23h59	0h ou mais tarde	N/A
Antes de ir para baladas/bares/pubs							
Antes de ir para festas particulares (house parties)							

**20) Que horas você geralmente sai à noite?**

	Antes das 19h	Entre 19h - 20h59	Entre 21h - 22h59	Entre 23h - 0h59	Entre 1h - 2h59	Entre 3h - 4h59	N/A
Para baladas/bares/pubs							
Para festas particulares (house parties)							

**21) Quando você sai para baladas/bares/pubs, quantas dessas bebidas você espera ingerir:**



	0	1	2	3	4	5	6	7	8	9	10	11+
Garrafa de destilado (1L)												
Garrafa de destilado (750ml)												
1 dose padrão de destilado (40ml)												
Garrafa de vinho (750ml)												
Taça de vinho (150ml)												
Garrafa de cerveja (600ml)												
Long neck (355ml)												
Lata de cerveja (350ml)												
Caneca de chopp (300ml)												
Garrafa padrão de bebidas tipo "ice" (275ml)												
Outros												

Se selecionado Outros, por favor especifique:

**22) Quando você sai para festas particulares (house parties), quantas dessas bebidas você espera ingerir:**



	0	1	2	3	4	5	6	7	8	9	10	11+
Garrafa de destilado (1L)												
Garrafa de destilado (750ml)												
1 dose padrão de destilado (40ml)												
Garrafa de vinho (750ml)												
Taça de vinho (150ml)												
Garrafa de cerveja (600ml)												
Long neck (355ml)												
Lata de cerveja (350ml)												
Caneca de chopp (300ml)												
Garrafa padrão de bebidas tipo "ice" (275ml)												
Outros												

Se selecionado Outros, por favor especifique:

**23) Em uma escala de 1 a 10 sendo 1 completamente sóbrio e 10 completamente bêbado, quão alcoolizado você costuma ficar no final da noite:**

	1	2	3	4	5	6	7	8	9	10
Quando sai das baladas/bares/pubs										
Quando sai de festas particulares (house parties)										

**24) Quanto você costuma gastar em bebida alcoólica:**

	0	R\$ 1 – R\$ 10	R\$ 11 – R\$ 20	R\$ 20 – R\$ 30	R\$ 30 – R\$ 40	R\$ 40 – R\$ 50	R\$ 50 ou mais
Nas baladas/bares/pubs							
Em festas particulares (house parties)							

**25) Que horas sua noite termina:**

	Entre 23h - 0h59	Entre 1h - 2h59	Entre 3h - 4h59	Entre 5h - 6h59	7h ou +
Após sair das baladas/bares/pubs					
Após sair de uma festa particular (house party)					

**26) No final da noite, o que você geralmente faz após:**

	Vou para outra festa	Continuo bebendo	Vou direto para casa e paro de beber	Saio para comer	Outros
Após sair das baladas/bares/pubs					
Após sair de uma festa particular (house party)					

Gostaríamos de saber agora sobre o seu comportamento geral no contexto da vida noturna. Lembre-se que esta pesquisa é confidencial.

**27) Quando você vai para balada/bares/pubs/festas, você geralmente:**

- Utiliza o transporte público
- Pega um táxi
- Dirige
- Vai caminhando
- Pega carona com amigos

**28) Após sair das baladas/bares/pubs/festas, no final da noite, você geralmente**

- Utiliza o transporte público
- Pega um taxi
- Dirige
- Vai caminhando
- Pega carona com amigos

**29) Nos seguintes cenários, como você acha que o seu consumo de bebida alcoólica seria afetado:**

	Minha prática de ESQUENTA iria			Meu CONSUMO GERAL iria		
	Diminuir	Aumentar	Permanecer igual	Diminuir	Aumentar	Permanecer igual
Se o preço da bebida nos mercados clandestinos aumentasse						
Se o preço da bebida em locais autorizados para venda (mercados, restaurantes, bares, baladas, hotéis) aumentasse						
Se a venda de bebida nos mercados clandestinos, fosse restrita a horários específicos						
Se a venda de bebida nos mercados clandestinos fosse restrita a áreas específicas na cidade						
Se bares/baladas fechassem às 2 da manhã						
Se bares/baladas fossem proibidos de oferecer promoção/descontos em bebidas (por exemplo, 2 por 1)						
Se bares/baladas fossem proibidos de vender bebida para pessoas já alcoolizadas						
Se bares/baladas oferecessem opções de bebidas não alcólicas mais baratas						
Se bares/baladas reforçassem o número de seguranças nos locais para evitar problemas						
Se fosse totalmente proibida a venda de bebida para pessoas já alcoolizadas, em restaurantes, bares, mercados, baladas etc.						
Se teatros ou casa de shows oferecessem entrada gratuita para pessoas que não estivessem bebendo						
Se pessoas alcoolizadas e desordenadas nos espaços públicos (ruas) fossem penalizadas pelas autoridades						
Se as autoridades criassem locais públicos onde fosse proibido o consumo de bebida alcoólica						

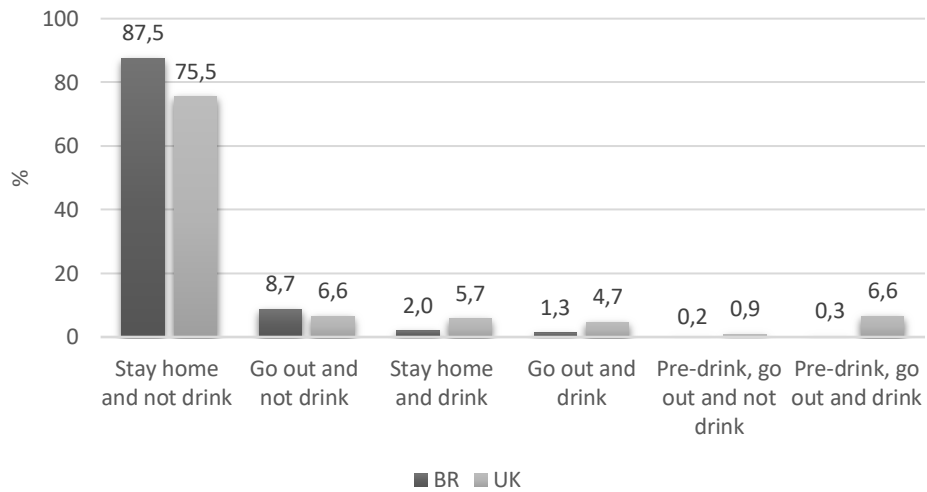
Se o rótulo da bebida alcoólica fosse mais claro com as informações nutricionais, calorias e taxa de álcool						
Se todas promoções e propagandas de bebida alcoólica fossem proibidas						
Se as autoridades aumentassem o limite de tolerância de álcool permitida no sangue						
Se testes aleatórios de bafômetro fossem realizados em bares e baladas						

**30) Nos últimos 12 meses, você sofreu algum desses eventos após:**

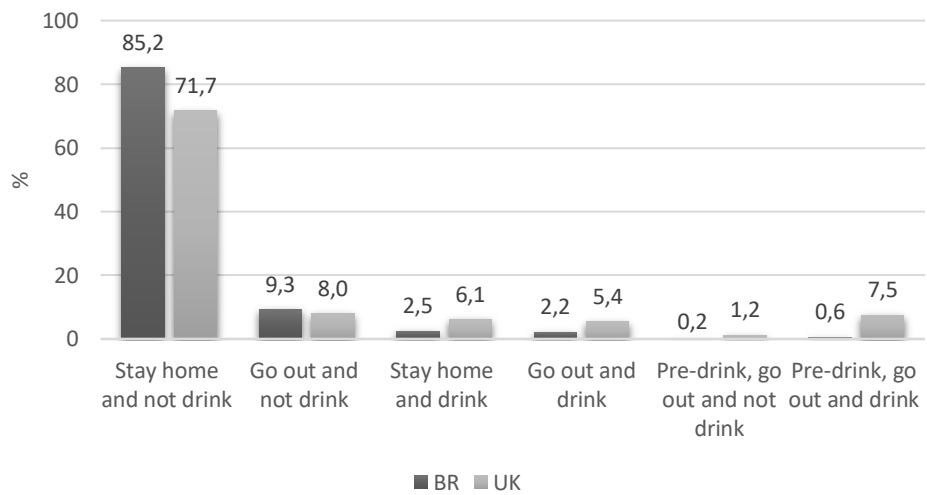
	Baladas/bares/pubs	Festa particular (house party)
Qualquer tipo de acidente de trânsito ou outros tipos de lesões sob a influência de álcool		
Qualquer tipo de violência física (brigas, assaltos)		
Qualquer tipo de assédio sexual		
Qualquer tipo de efeitos associados ao álcool (blackouts, vômitos, desmaios, coma)		
Dormiu em algum lugar inadequado		
Acordou sentindo-se envergonhado com coisas que você tinha feito		
Foi recusada a entrada a uma balada/bar/pub por estar muito bêbado		
Sentiu que tinha estragado a noite de alguém		
Praticou sexo desprotegido		
Lamentou de uma decisão de se envolver em atividade sexual		
Não compareceu na Universidade por causa de ter bebido demais		
Perdeu provas na Universidade por causa de ter bebido demais		
Faltou ao trabalho por causa de ter bebido demais		

Obrigada por participar da pesquisa!

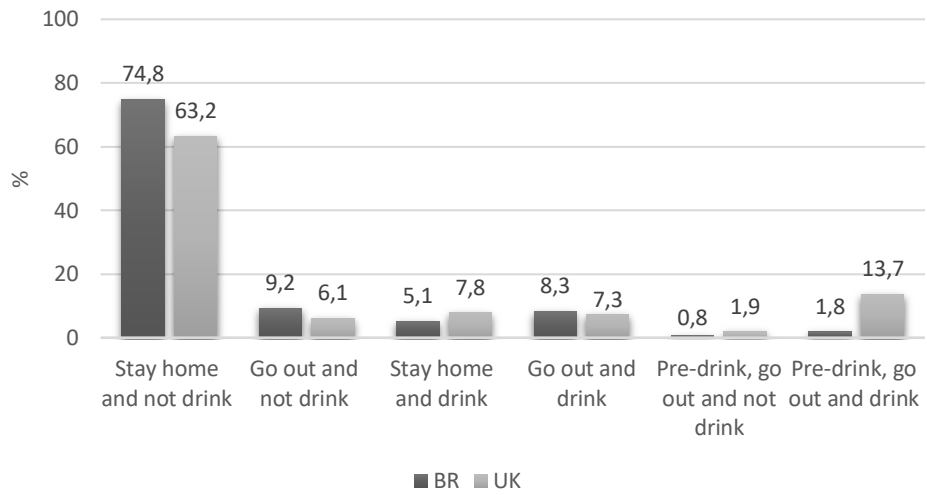
Appendix G: Student's weekly behaviours (individual graphs Study 1)



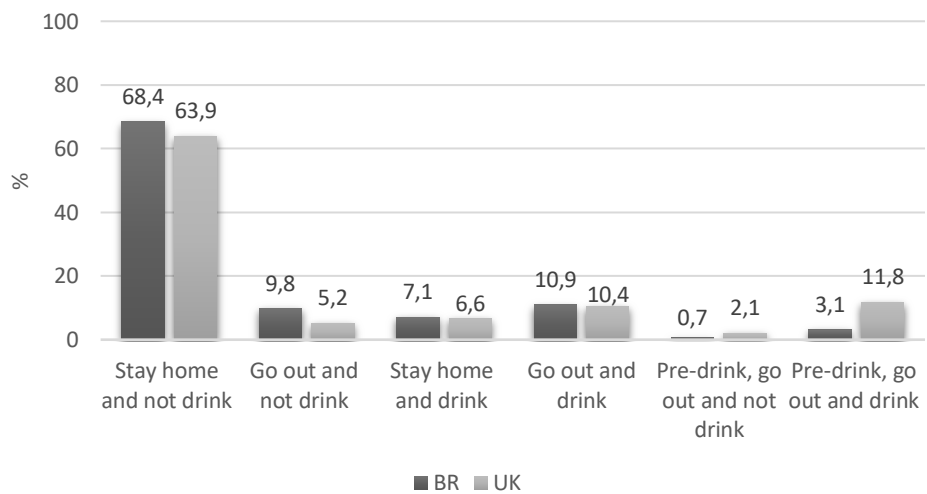
Appendix G.1: Brazilian and UK students' drinking behaviour on a typical Monday whilst at university ( $\chi^2 (5)=105.42, p<0.001$ )



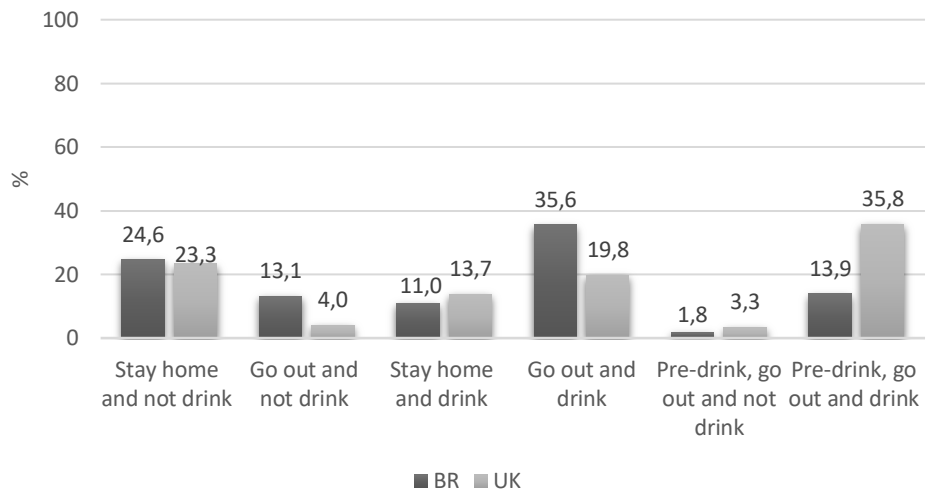
Appendix G.2: Brazilian and UK students' drinking behaviour on a typical Tuesday whilst at university ( $\chi^2 (5)=97.15, p<0.001$ )



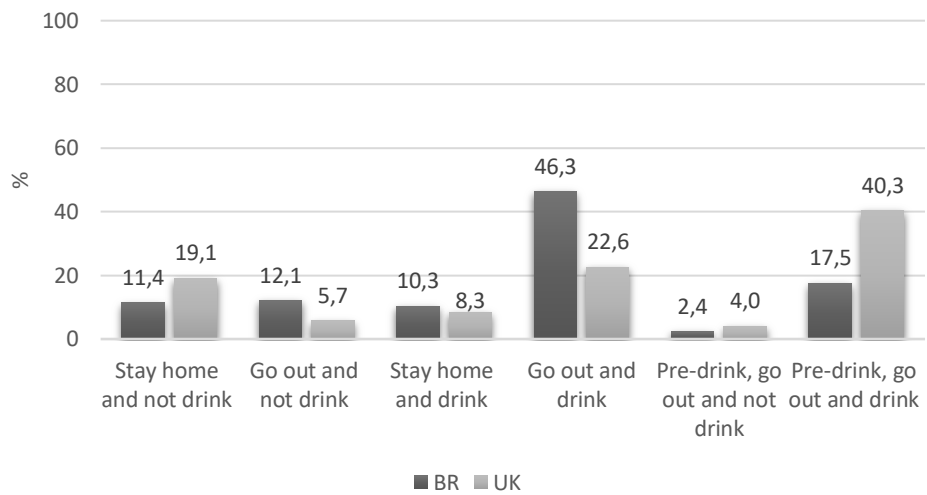
**Appendix G.3: Brazilian and UK students' drinking behaviour on a typical Wednesday whilst at university ( $\chi^2 (5)=104.61, p<0.001$ )**



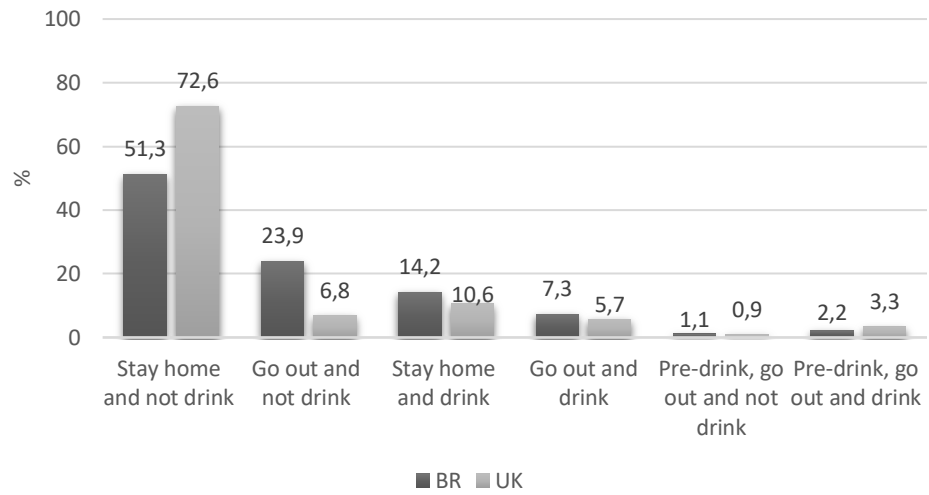
**Appendix G.4: Brazilian and UK students' drinking behaviour on a typical Thursday whilst at university ( $\chi^2 (5)=57.30, p<0.001$ )**



**Appendix G.5: Brazilian and UK students' drinking behaviour on a typical Friday whilst at university ( $\chi^2 (5)=128.91, p<0.001$ )**



**Appendix G.6: Brazilian and UK students' drinking behaviour on a typical Saturday whilst at university ( $\chi^2 (5)=142.18, p<0.001$ )**



**Appendix G.7: Brazilian and UK students' drinking behaviour on a typical Sunday whilst at university ( $\chi^2 (5)=77.52, p<0.001$ )**

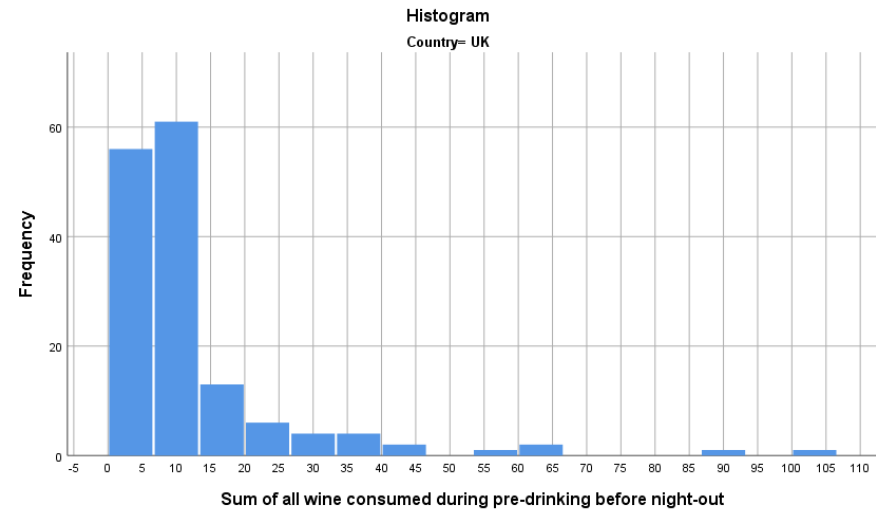
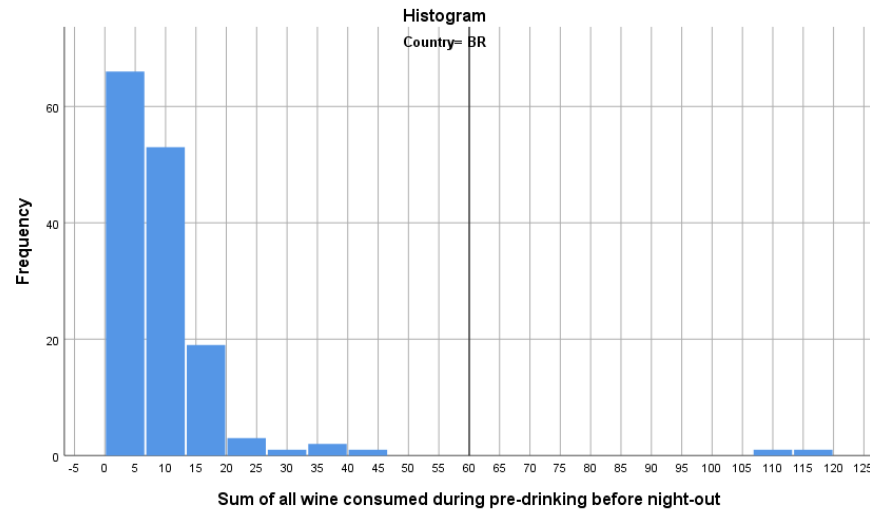


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## Appendix H: Histograms for distributions (Study 1)

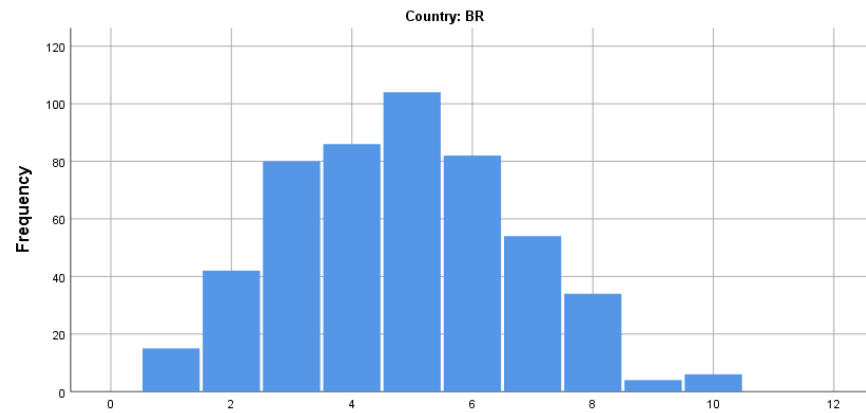
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**Appendix H.1: Students' wine consumption during pre-drinking before going to nightclubs, bars and pubs**



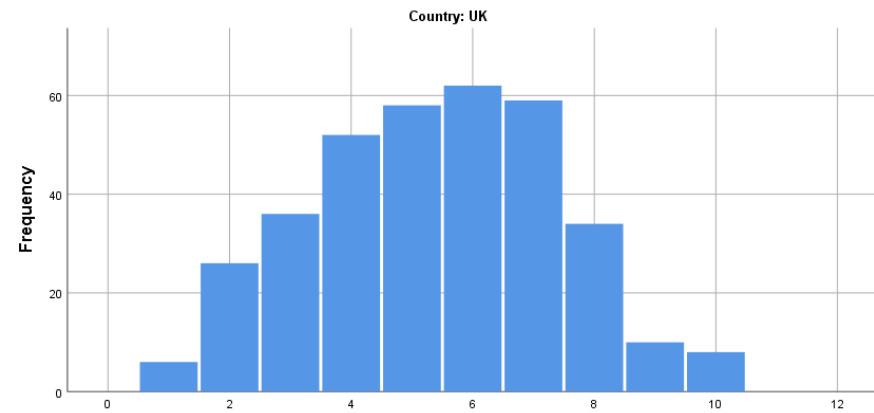
**Appendix H.2: Students' drunkenness levels during pre-drinking before going to nightclubs, bars and pubs**

On a scale of 1 to 10, with 1 completely sober and 10 completely drunk, how drunk do you usually get during pre-drinking before going to a night out (nightclubs/bars/pubs)?



On a scale of 1 to 10, with 1 completely sober and 10 completely drunk, how drunk do you usually get during pre-drinking before going to a night out (nightclubs/bars/pubs)?

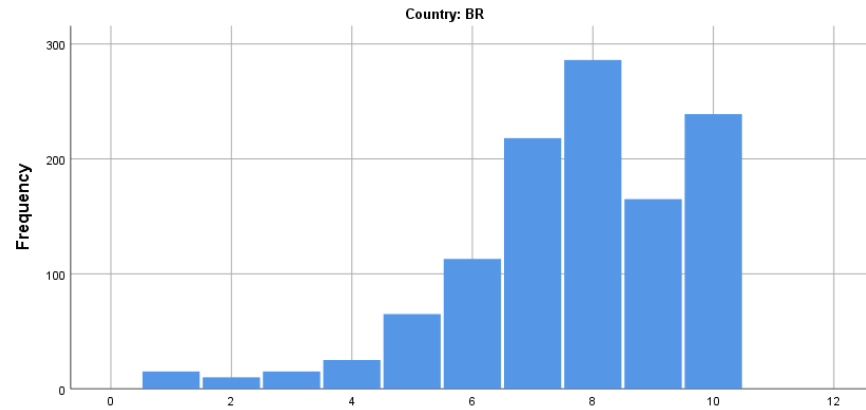
On a scale of 1 to 10, with 1 completely sober and 10 completely drunk, how drunk do you usually get during pre-drinking before going to a night out (nightclubs/bars/pubs)?



On a scale of 1 to 10, with 1 completely sober and 10 completely drunk, how drunk do you usually get during pre-drinking before going to a night out (nightclubs/bars/pubs)?

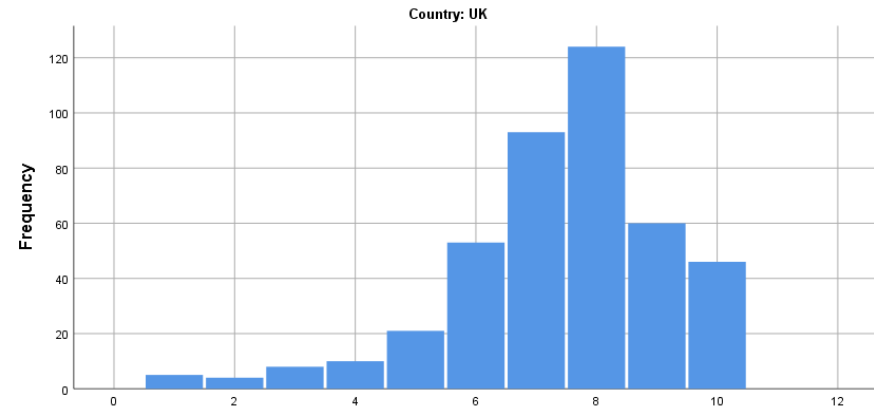
### Appendix H.3: Students' drunkenness levels at nightclubs, bars and pubs

On a scale of 1 to 10, with 1 completely sober and 10 completely drunk; what do you think is the typical level of drunkenness that people reach at a night out (nightclubs/bar/pubs)



On a scale of 1 to 10, with 1 completely sober and 10 completely drunk; what do you think is the typical level of drunkenness that people reach at a night out (nightclubs/bar/pubs)

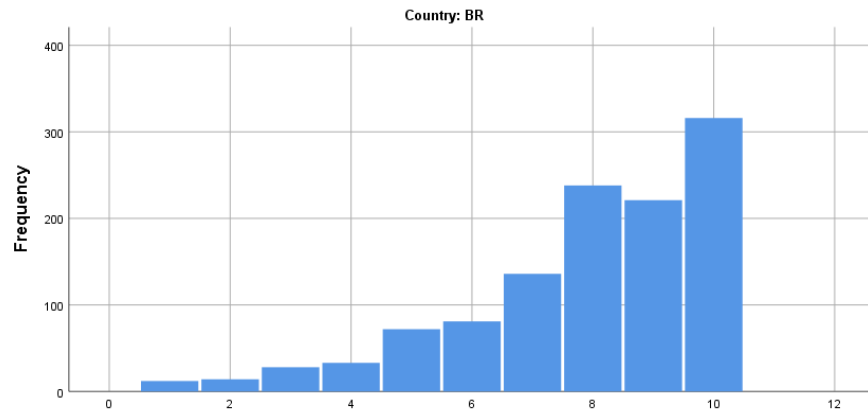
On a scale of 1 to 10, with 1 completely sober and 10 completely drunk; what do you think is the typical level of drunkenness that people reach at a night out (nightclubs/bar/pubs)



On a scale of 1 to 10, with 1 completely sober and 10 completely drunk; what do you think is the typical level of drunkenness that people reach at a night out (nightclubs/bar/pubs)

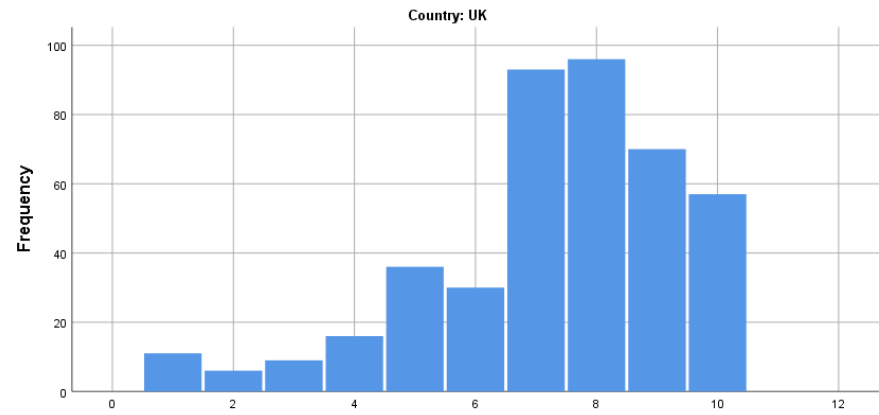
### Appendix H.4: Students' drunkenness levels at house parties

On a scale of 1 to 10, with 1 completely sober and 10 completely drunk; what do you think is the typical level of drunkenness that people reach at house parties



On a scale of 1 to 10, with 1 completely sober and 10 completely drunk; what do you think is the typical level of drunkenness that people reach at house parties

On a scale of 1 to 10, with 1 completely sober and 10 completely drunk; what do you think is the typical level of drunkenness that people reach at house parties



On a scale of 1 to 10, with 1 completely sober and 10 completely drunk; what do you think is the typical level of drunkenness that people reach at house parties

## Appendix I: Logistic regressions (Study 1)

**Appendix I.1: Students' pre-drinking behaviour as risk factor for alcohol-related harms: experienced any kind of road traffic accident**

	Nightlife settings											
	Nightclubs, bars and pubs						House parties					
	BRAZIL			UK			BRAZIL			UK		
	OR	CI 95%	p value	OR	CI 95%	p value	OR	CI 95%	p value	OR	CI 95%	p value
<b>Pre-drinking</b>												
Yes	3.65	1.66 – 7.99	<b>0.001</b>	*	*	*	2.31	0.85 – 6.27	0.101	*	*	*
No (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Age</b>												
18-21	0.47	0.17 – 1.32	0.155	*	*	*	1.08	0.28 – 4.11	0.907	*	*	*
22-25	0.72	0.30 – 1.71	0.460	*	*	*	0.59	0.16 – 2.13	0.422	*	*	*
26+ (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Gender</b>												
Male	1.24	0.61 – 2.51	0.537	0.68	0.19 – 2.43	0.558	1.04	0.40 – 2.71	0.924	*	*	*
Female (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Marital status</b>												
Single	0.78	0.38 – 1.61	0.512	1.43	0.43 – 4.80	0.555	1.44	0.51 – 4.04	0.484	*	*	*
On a relationship (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Ethnic group</b>												
White	0.97	0.45 – 2.09	0.956	0.43	0.08 – 2.23	0.316	1.18	0.41 – 3.35	0.750	*	*	*
Other (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Academic year</b>												
Undergraduate	0.63	0.24 – 1.64	0.347	1.90	0.16 – 21.53	0.603	0.28	0.07 – 1.04	0.058	*	*	*
Post-graduate (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Sum of all alcohol consumed</b>	1.00	0.99 – 1.00	0.283	1.02	1.01 – 1.04	<b>0.001</b>	1.00	0.99 – 1.00	0.137	1.01	0.97 – 1.07	0.445

Note: (\*) due to low numbers it was impossible to do meaningful calculations.

Appendix I.2: Students' pre-drinking behaviour as risk factor for alcohol-related harms: experienced any kind of physical violence

	Nightlife settings											
	Nightclubs, bars and pubs						House parties					
	BRAZIL			UK			BRAZIL			UK		
	OR	CI 95%	p value	OR	CI 95%	p value	OR	CI 95%	p value	OR	CI 95%	p value
<b>Pre-drinking</b>												
Yes	2.42	1.40 – 4.17	<b>0.001</b>	1.72	0.55 – 5.38	0.345	1.66	0.70 – 3.92	0.249	*	*	*
No (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Age</b>												
18-21	0.77	0.36 – 1.65	0.507	6.92	1.66 – 28.88	<b>0.008</b>	0.94	0.25 – 3.46	0.931	*	*	*
22-25	1.06	0.53 – 2.13	0.851	2.47	0.60 – 10.15	0.207	1.46	0.44 – 4.81	0.530	*	*	*
26+ (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Gender</b>												
Male	1.92	1.14 – 3.24	<b>0.014</b>	1.48	0.80 – 2.72	0.203	1.44	0.62 – 3.34	0.385	2.16	0.57 – 8.14	0.253
Female (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Marital status</b>												
Single	1.41	0.80 – 2.50	0.232	0.69	0.38 – 1.26	0.232	0.98	0.41 – 2.34	0.980	0.46	0.11 – 1.83	0.272
On a relationship (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Ethnic group</b>												
White	0.78	0.45 – 1.35	0.389	0.71	0.28 – 1.79	0.476	2.08	0.70 – 6.18	0.186	0.90	0.10 – 7.96	0.931
Other (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Academic year</b>												
Undergraduate	0.91	0.39 – 2.09	0.827	1.08	0.38 – 3.03	0.880	1.41	0.29 – 6.71	0.664	0.72	0.10 – 5.08	0.743
Post-graduate (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Sum of all alcohol consumed</b>	1.00	0.99 – 1.00	0.265	1.00	0.99 – 1.01	0.204	1.00	0.99 – 1.00	0.209	1.01	1.00 – 1.02	<b>0.033</b>

Note: (\*) due to low numbers it was impossible to do meaningful calculations.

Appendix I.3: Students' pre-drinking behaviour as risk factor for alcohol-related harms: experienced any kind of sexual harassment

	Nightlife settings											
	Nightclubs, bars and pubs						House parties					
	BRAZIL			UK			BRAZIL			UK		
	OR	CI 95%	p value	OR	CI 95%	p value	OR	CI 95%	p value	OR	CI 95%	p value
<b>Pre-drinking</b>												
Yes	1.38	0.98 – 1.93	0.060	1.84	0.74 – 4.54	0.186	1.29	0.75 – 2.22	0.345	0.53	0.05 – 4.91	0.578
No (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Age</b>												
18-21	1.59	0.93 – 2.71	0.085	1.66	0.61 – 4.50	0.316	3.00	1.16 – 7.73	<b>0.022</b>	*	*	*
22-25	1.49	0.89 – 2.51	0.128	1.62	0.61 – 4.27	0.325	1.91	0.76 – 4.84	0.168	*	*	*
26+ (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Gender</b>												
Male	0.07	0.04 – 0.13	<b>&lt;0.001</b>	0.14	0.06 – 0.30	<b>&lt;0.001</b>	0.11	0.04 – 0.28	<b>&lt;0.001</b>	0.80	0.18 – 3.51	0.777
Female (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Marital status</b>												
Single	1.57	1.10 – 2.23	<b>0.012</b>	1.03	0.61 – 1.73	0.894	1.13	0.64 – 1.98	0.657	0.60	0.14 – 2.52	0.485
On a relationship (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Ethnic group</b>												
White	0.76	0.53 – 1.10	0.148	1.78	0.64 – 4.96	0.266	1.08	0.60 – 1.96	0.784	0.31	0.05 – 1.73	0.182
Other (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Academic year</b>												
Undergraduate	1.28	0.66 – 2.48	0.456	2.22	0.99 – 4.97	0.051	0.70	0.26 – 1.91	0.499	1.71	0.26 – 11.20	0.575
Post-graduate (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Sum of all alcohol consumed</b>	1.00	0.99 – 1.00	0.647	0.99	0.098 – 1.01	0.927	1.00	1.00 – 1.00	0.080	1.01	1.00 – 1.02	<b>0.002</b>

Note: (\*) due to low numbers it was impossible to do meaningful calculations.

Appendix I.4: Students' pre-drinking behaviour as risk factor for alcohol-related harms: practiced unprotected sex

	Nightlife settings											
	Nightclubs, bars and pubs						House parties					
	BRAZIL			UK			BRAZIL			UK		
	OR	CI 95%	p value	OR	CI 95%	p value	OR	CI 95%	p value	OR	CI 95%	p value
<b>Pre-drinking</b>												
Yes	1.91	1.36 – 2.70	<0.001	2.29	0.82 – 6.34	0.110	1.77	1.22 – 2.56	<b>0.002</b>	1.47	0.30 – 7.14	0.631
No (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Age</b>												
18-21	0.79	0.48 – 1.30	0.363	3.49	1.21 – 10.04	<b>0.020</b>	0.91	0.53 – 1.55	0.736	4.21	0.69 – 25.44	0.117
22-25	0.93	0.59 – 1.48	0.776	1.16	0.41 – 3.28	0.767	1.16	0.70 – 1.91	0.551	2.46	0.46 – 13.03	0.289
26+ (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Gender</b>												
Male	1.32	0.94 – 1.86	0.105	1.02	0.59 – 1.77	0.924	1.38	0.96 – 2.00	0.078	1.41	0.60 – 3.30	0.421
Female (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Marital status</b>												
Single	1.02	0.72 – 1.46	0.879	1.21	0.71 – 2.03	0.473	0.87	0.60 – 1.27	0.492	0.70	0.30 – 1.64	0.423
On a relationship (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Ethnic group</b>												
White	0.79	0.55 – 1.14	0.218	1.66	0.63 – 4.33	0.299	0.90	0.61 – 1.34	0.627	1.47	0.32 – 6.73	0.617
Other (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Academic year</b>												
Undergraduate	1.06	0.60 – 1.86	0.838	0.82	0.34 – 1.95	0.659	1.43	0.74 – 2.76	0.277	0.54	0.16 – 1.88	0.340
Post-graduate (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Sum of all alcohol consumed</b>	1.00	1.00 – 1.00	<b>0.049</b>	1.01	1.00 – 1.01	<b>0.029</b>	1.00	1.00 – 1.00	<b>0.028</b>	1.01	1.00 – 1.02	<b>0.024</b>



Appendix I.5: Students' pre-drinking behaviour as risk factor for alcohol-related harms: regretted a decision to engage in sexual activity

	Nightlife settings											
	Nightclubs, bars and pubs						House parties					
	BRAZIL			UK			BRAZIL			UK		
	OR	CI 95%	p value	OR	CI 95%	p value	OR	CI 95%	p value	OR	CI 95%	p value
<b>Pre-drinking</b>												
Yes	3.01	1.93 – 4.69	<0.001	3.56	0.78 – 16.16	0.099	2.37	1.48 – 3.80	<0.001	1.18	0.24 – 5.72	0.838
No (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Age</b>												
18-21	0.55	0.30 – 1.02	0.059	4.89	1.14 – 20.88	0.032	0.82	0.42 – 1.57	0.551	3.58	0.54 – 23.60	0.184
22-25	0.92	0.53 – 1.59	0.774	1.48	0.35 – 6.16	0.586	1.11	0.60 – 2.03	0.732	0.36	0.05 – 2.25	0.276
26+ (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Gender</b>												
Male	0.80	0.52 – 1.22	0.305	0.93	0.48 – 1.80	0.837	1.28	0.82 – 2.02	0.270	0.58	0.21 – 1.56	0.282
Female (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Marital status</b>												
Single	1.86	1.16 – 2.97	0.010	1.10	0.59 – 2.06	0.754	1.26	0.77 – 2.05	0.345	5.04	1.59 – 15.94	0.006
On a relationship (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Ethnic group</b>												
White	0.57	0.37 – 0.88	0.012	0.74	0.28 – 1.95	0.545	0.56	0.36 – 0.89	0.015	0.35	0.11 – 1.10	0.074
Other (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Academic year</b>												
Undergraduate	0.78	0.41 – 1.50	0.471	0.71	0.23 – 2.11	0.540	1.14	0.52 – 2.50	0.732	0.20	0.03 – 1.05	0.059
Post-graduate (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Sum of all alcohol consumed</b>	1.00	0.99 – 1.00	0.737	1.00	0.99 – 1.01	0.759	1.00	0.99 – 1.00	0.583	0.99	0.96 – 1.01	0.402

Appendix I.6: Students' pre-drinking behaviour as risk factor for alcohol-related harms: experienced any kind of drunkenness effects

	Nightlife settings											
	Nightclubs, bars and pubs						House parties					
	BRAZIL			UK			BRAZIL			UK		
	OR	CI 95%	p value	OR	CI 95%	p value	OR	CI 95%	p value	OR	CI 95%	p value
<b>Pre-drinking</b>												
Yes	2.18	1.69 – 2.80	<0.001	3.86	1.98 – 7.52	<0.001	2.36	1.78 – 3.12	<0.001	4.70	1.35 – 16.35	0.015
No (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Age</b>												
18-21	1.77	1.22 – 2.58	0.003	3.35	1.61 – 6.97	0.001	1.75	1.16 – 2.65	0.007	2.46	0.92 – 6.57	0.072
22-25	1.67	1.17 – 2.39	0.005	1.67	0.85 – 3.27	0.132	1.43	0.96 – 2.12	0.076	1.36	0.53 – 3.48	0.518
26+ (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Gender</b>												
Male	0.82	0.64 – 1.06	0.139	0.98	0.62 – 1.55	0.955	1.33	1.00 – 1.77	0.044	1.09	0.64 – 1.85	0.733
Female (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Marital status</b>												
Single	0.97	0.75 – 1.26	0.858	1.30	0.84 – 2.01	0.226	0.99	0.74 – 1.33	0.990	0.95	0.56 – 1.60	0.864
On a relationship (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Ethnic group</b>												
White	0.94	0.71 – 1.23	0.666	1.35	0.68 – 2.69	0.381	0.98	0.72 – 1.33	0.928	1.25	0.53 – 2.96	0.606
Other (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Academic year</b>												
Undergraduate	0.67	0.44 – 1.03	0.069	0.68	0.36 – 1.27	0.231	1.19	0.73 – 1.94	0.479	0.91	0.41 – 1.99	0.814
Post-graduate (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Sum of all alcohol consumed</b>	1.00	0.99 – 1.00	0.922	1.01	1.00 – 1.02	0.038	1.00	1.00 – 1.00	0.096	1.00	0.99 – 1.00	0.761

Appendix I.7: Students' pre-drinking behaviour as risk factor for alcohol-related harms: fallen asleep somewhere inappropriate

	Nightlife settings											
	Nightclubs, bars and pubs						House parties					
	BRAZIL			UK			BRAZIL			UK		
	OR	CI 95%	p value	OR	CI 95%	p value	OR	CI 95%	p value	OR	CI 95%	p value
<b>Pre-drinking</b>												
Yes	2.30	1.58 – 3.33	<0.001	1.53	0.49 – 4.76	0.457	2.99	1.94 – 4.59	<0.001	5.45	0.69 – 43.06	0.107
No (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Age</b>												
18-21	1.18	0.69 – 2.00	0.536	7.66	1.58 – 37.00	0.011	1.64	0.90 – 2.96	0.102	1.47	0.40 – 5.42	0.560
22-25	0.98	0.58 – 1.66	0.965	5.11	1.08 – 24.20	0.039	1.00	0.54 – 1.84	0.986	1.56	0.44 – 5.41	0.484
26+ (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Gender</b>												
Male	1.53	1.07 – 2.19	0.020	1.56	0.84 – 2.90	0.159	2.08	1.39 – 3.12	<0.001	1.26	0.61 – 2.61	0.518
Female (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Marital status</b>												
Single	1.88	1.25 – 2.83	0.002	0.81	0.44 – 1.50	0.511	0.96	0.63 – 1.47	0.873	0.57	0.27 – 1.19	0.140
On a relationship (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Ethnic group</b>												
White	0.78	0.53 – 1.14	0.207	0.99	0.35 – 2.77	0.993	0.90	0.59 – 1.39	0.655	0.91	0.29 – 2.84	0.879
Other (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Academic year</b>												
Undergraduate	1.40	0.69 – 2.81	0.341	1.37	0.50 – 3.71	0.535	2.59	0.98 – 6.85	0.055	1.15	0.41 – 3.22	0.780
Post-graduate (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Sum of all alcohol consumed</b>	1.00	0.99 – 1.00	0.436	1.02	1.00 – 1.03	0.001	1.00	0.99 – 1.00	0.172	1.00	0.99 – 1.01	0.308

Appendix I.8: Students' pre-drinking behaviour as risk factor for alcohol-related harms: woken up embarrassed about things done the night before

	Nightlife settings											
	Nightclubs, bars and pubs						House parties					
	BRAZIL			UK			BRAZIL			UK		
	OR	CI 95%	p value	OR	CI 95%	p value	OR	CI 95%	p value	OR	CI 95%	p value
<b>Pre-drinking</b>												
Yes	1.84	1.42 – 2.39	<0.001	2.02	1.07 – 3.82	0.030	2.16	1.60 – 2.93	<0.001	2.16	0.75 – 6.17	0.150
No (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Age</b>												
18-21	1.38	0.94 – 2.03	0.099	2.71	1.32 – 5.58	0.006	1.79	1.14 – 2.80	0.011	1.79	0.68 – 4.73	0.238
22-25	1.20	0.83 – 1.74	0.323	1.62	0.83 – 3.17	0.156	1.33	0.86 – 2.06	0.195	0.90	0.34 – 2.36	0.838
26+ (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Gender</b>												
Male	0.87	0.67 – 1.14	0.335	1.09	0.70 – 1.70	0.698	1.29	0.95 – 1.75	0.095	1.82	1.07 – 3.11	0.027
Female (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Marital status</b>												
Single	1.18	0.90 – 1.54	0.231	1.47	0.97 – 2.25	0.068	1.10	0.80 – 1.51	0.522	1.16	0.67 – 1.99	0.579
On a relationship (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Ethnic group</b>												
White	0.90	0.68 – 1.20	0.504	1.15	0.58 – 2.25	0.681	0.93	0.67 – 1.28	0.676	0.83	0.36 – 1.89	0.664
Other (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Academic year</b>												
Undergraduate	1.07	0.68 – 1.69	0.750	1.05	0.57 – 1.94	0.852	1.12	0.65 – 1.92	0.669	1.32	0.56 – 3.08	0.519
Post-graduate (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Sum of all alcohol consumed</b>	1.00	0.99 – 1.00	0.682	1.00	0.99 – 1.01	0.633	1.00	0.99 – 1.00	0.231	1.00	0.99 – 1.00	0.943

Appendix I.9: Students' pre-drinking behaviour as risk factor for alcohol-related harms: were refused entry to a venue because of being too drunk

	Nightlife settings											
	Nightclubs, bars and pubs						House parties					
	BRAZIL			UK			BRAZIL			UK		
	OR	CI 95%	p value	OR	CI 95%	p value	OR	CI 95%	p value	OR	CI 95%	p value
<b>Pre-drinking</b>												
Yes	7.07	2.04 – 24.48	<b>0.002</b>	2.54	0.82 – 7.90	0.106	*	*	*	*	*	*
No (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Age</b>												
18-21	0.64	0.19 – 2.18	0.478	4.54	1.36 – 15.15	<b>0.014</b>	*	*	*	*	*	*
22-25	0.50	0.14 – 1.69	0.266	2.54	0.79 – 8.09	0.114	*	*	*	*	*	*
26+ (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Gender</b>												
Male	0.79	0.31 – 2.00	0.625	3.51	1.97 – 6.26	<b>&lt;0.001</b>	*	*	*	*	*	*
Female (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Marital status</b>												
Single	1.36	0.49 – 3.73	0.544	0.92	0.51 – 1.65	0.786	*	*	*	*	*	*
On a relationship (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Ethnic group</b>												
White	0.75	0.29 – 1.92	0.550	0.77	0.32 – 1.84	0.563	*	*	*	0.77	0.05 – 11.89	0.852
Other (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Academic year</b>												
Undergraduate	0.78	0.19 – 3.23	0.739	0.88	0.35 – 2.20	0.794	*	*	*	*	*	*
Post-graduate (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Sum of all alcohol consumed</b>	1.00	0.99 – 1.00	0.930	1.00	0.99 – 1.01	0.178	*	*	*	1.01	0.97 – 1.05	0.553

Note: (\*) due to low numbers it was impossible to do meaningful calculations.

Appendix I.10: Students' pre-drinking behaviour as risk factor for alcohol-related harms: spoiled someone else's night out for being too drunk

	Nightlife settings											
	Nightclubs, bars and pubs						House parties					
	BRAZIL			UK			BRAZIL			UK		
	OR	CI 95%	p value	OR	CI 95%	p value	OR	CI 95%	p value	OR	CI 95%	p value
<b>Pre-drinking</b>												
Yes	1.94	1.36 – 2.78	<0.001	1.57	0.64 – 3.86	0.324	1.66	1.06 – 2.61	0.026	0.94	0.10 – 8.26	0.960
No (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Age</b>												
18-21	1.08	0.63 – 1.84	0.762	4.14	1.39 – 12.34	0.011	1.92	0.93 – 3.97	0.076	*	*	*
22-25	1.14	0.69 – 1.88	0.595	2.09	0.75 – 5.85	0.158	1.89	0.94 – 3.79	0.072	*	*	*
26+ (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Gender</b>												
Male	0.92	0.64 – 1.32	0.666	0.94	0.53 – 1.64	0.831	1.41	0.91 – 2.20	0.123	1.71	0.64 – 4.51	0.277
Female (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Marital status</b>												
Single	1.03	0.71 – 1.49	0.852	0.84	0.49 – 1.44	0.540	1.00	0.63 – 1.60	0.971	0.83	0.31 – 2.21	0.720
On a relationship (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Ethnic group</b>												
White	1.12	0.75 – 1.67	0.554	0.75	0.33 – 1.71	0.505	1.10	0.67 – 1.80	0.688	*	*	*
Other (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Academic year</b>												
Undergraduate	0.87	0.48 – 1.57	0.659	0.79	0.34 – 1.82	0.584	1.05	0.46 – 2.38	0.898	*	*	*
Post-graduate (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Sum of all alcohol consumed</b>	1.00	0.99 – 1.00	0.886	1.00	0.99 – 1.01	0.310	1.00	0.99 – 1.00	0.619	1.00	0.98 – 1.01	0.747

Note: (\*) due to low numbers it was impossible to do meaningful calculations.

Appendix I.11: Students' pre-drinking behaviour as risk factor for alcohol-related harms: failed to attend at university because of drinking

	Nightlife settings											
	Nightclubs, bars and pubs						House parties					
	BRAZIL			UK			BRAZIL			UK		
	OR	CI 95%	p value	OR	CI 95%	p value	OR	CI 95%	p value	OR	CI 95%	p value
<b>Pre-drinking</b>												
Yes	2.91	2.05 – 4.14	<0.001	4.17	1.77 – 9.82	0.001	3.09	2.08 – 4.61	<0.001	1.29	0.40 – 4.11	0.666
No (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Age</b>												
18-21	0.59	0.36 – 0.97	0.039	2.29	1.03 – 5.10	0.042	1.29	0.73 – 2.27	0.372	2.08	0.60 – 7.24	0.247
22-25	1.01	0.65 – 1.58	0.943	1.69	0.76 – 3.76	0.192	1.37	0.80 – 2.33	0.249	2.54	0.75 – 8.57	0.132
26+ (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Gender</b>												
Male	1.49	1.06 – 2.08	0.020	0.98	0.61 – 1.56	0.934	1.68	1.16 – 2.44	0.006	1.93	1.04 – 3.61	0.037
Female (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Marital status</b>												
Single	1.20	0.84 – 1.72	0.305	1.26	0.80 – 1.98	0.300	1.26	0.84 – 1.88	0.253	0.81	0.43 – 1.53	0.528
On a relationship (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Ethnic group</b>												
White	0.95	0.66 – 1.38	0.817	1.08	0.51 – 2.24	0.838	1.19	0.78 – 1.80	0.402	1.49	0.48 – 4.56	0.481
Other (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Academic year</b>												
Undergraduate	1.04	0.60 – 1.81	0.866	2.91	1.48 – 5.71	0.002	0.89	0.46 – 1.69	0.724	1.98	0.75 – 5.21	0.165
Post-graduate (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Sum of all alcohol consumed</b>	1.00	0.99 – 1.00	0.572	1.01	1.00 – 1.01	0.048	1.00	1.00 – 1.00	0.091	1.00	0.99 – 1.01	0.286

Appendix I.12: Students' pre-drinking behaviour as risk factor for alcohol-related harms: missed exams because of drinking

	Nightlife settings											
	Nightclubs, bars and pubs						House parties					
	BRAZIL			UK			BRAZIL			UK		
	OR	CI 95%	p value	OR	CI 95%	p value	OR	CI 95%	p value	OR	CI 95%	p value
<b>Pre-drinking</b>												
Yes	1.99	0.85 – 4.68	0.111	*	*	*	9.26	2.08 – 41.24	<b>0.003</b>	*	*	*
No (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Age</b>												
18-21	1.03	0.33 – 3.23	0.953	*	*	*	0.74	0.18 – 2.95	0.677	*	*	*
22-25	0.64	0.20 – 2.06	0.463	*	*	*	0.80	0.23 – 2.82	0.739	*	*	*
26+ (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Gender</b>												
Male	1.30	0.56 – 2.99	0.533	2.97	0.45 – 19.26	0.253	2.50	0.90 – 6.94	0.077	1.22	0.08 – 18.36	0.884
Female (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Marital status</b>												
Single	0.77	0.32 – 1.82	0.560	0.39	0.05 – 2.96	0.364	0.63	0.23 – 1.70	0.373	0.72	0.04 – 11.19	0.820
On a relationship (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Ethnic group</b>												
White	0.56	0.24 – 1.29	0.175	0.47	0.04 – 5.55	0.550	1.43	0.46 – 4.48	0.533	*	*	*
Other (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Academic year</b>												
Undergraduate	0.90	0.23 – 3.54	0.884	0.43	0.03 – 4.80	0.496	0.62	0.14 – 2.62	0.521	*	*	*
Post-graduate (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Sum of all alcohol consumed</b>	<b>1.00</b>	<b>0.99 – 1.00</b>	<b>0.306</b>	<b>1.02</b>	<b>1.00 – 1.03</b>	<b>0.017</b>	<b>1.00</b>	<b>0.99 – 1.00</b>	<b>0.551</b>	<b>1.01</b>	<b>1.00 – 1.03</b>	<b>0.021</b>

Note: (\*) due to low numbers it was impossible to do meaningful calculations.



Appendix I.13: Students' pre-drinking behaviour as risk factor for alcohol-related harms: missed work because of drinking

	Nightlife settings											
	Nightclubs, bars and pubs						House parties					
	BRAZIL			UK			BRAZIL			UK		
	OR	CI 95%	p value	OR	CI 95%	p value	OR	CI 95%	p value	OR	CI 95%	p value
<b>Pre-drinking</b>												
Yes	2.38	1.29 – 4.41	<b>0.005</b>	7.26	0.90 – 58.11	0.061	2.38	1.08 – 5.24	<b>0.031</b>	3.97	0.47 – 33.14	0.203
No (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Age</b>												
18-21	0.19	0.08 – 0.460	<b>&lt;0.001</b>	1.46	0.37 – 5.77	0.587	0.16	0.05 – 0.45	<b>0.001</b>	0.43	0.10 – 1.73	0.236
22-25	0.47	0.24 – 0.93	<b>0.031</b>	1.12	0.31 – 4.02	0.858	0.31	0.13 – 0.73	<b>0.008</b>	0.76	0.20 – 2.90	0.691
26+ (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Gender</b>												
Male	1.36	0.75 – 2.46	0.301	0.90	0.40 – 2.03	0.814	0.74	0.34 – 1.60	0.451	0.66	0.25 – 1.70	0.392
Female (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Marital status</b>												
Single	1.17	0.63 – 2.17	0.615	1.62	0.74 – 3.55	0.222	1.11	0.50 – 2.42	0.791	1.37	0.56 – 3.31	0.485
On a relationship (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Ethnic group</b>												
White	0.70	0.38 – 1.29	0.256	1.16	0.32 – 4.19	0.818	0.77	0.35 – 1.67	0.511	2.99	0.38 – 23.30	0.295
Other (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Academic year</b>												
Undergraduate	1.10	0.47 – 2.56	0.817	0.54	0.18 – 1.64	0.281	2.34	0.65 – 8.44	0.191	1.75	0.51 – 5.95	0.366
Post-graduate (ref)	1.00	-	-	1.00	-	-	1.00	-	-	1.00	-	-
<b>Sum of all alcohol consumed</b>	1.00	0.99 – 1.00	0.253	1.01	1.00 – 1.03	<b>0.001</b>	1.00	0.99 – 1.00	0.339	1.00	0.99 – 1.01	0.167

**Focus groups advertisement (PORTUGUESE VERSION)**



**Estou precisando de sua ajuda estudante!**

Gostaria de ouvir suas experiências e opiniões com relação às **diferenças culturais do consumo de bebida alcoólica no contexto da vida noturna no Brasil e no Reino Unido.**

Se tiver interesse em participar, você será convidado a participar de um grupo focal com 4-5 estudantes brasileiros.

O lugar será combinado previamente e de forma que seja conveniente para todos.

Todos estudantes que participarem receberão £10 de reembolso para cobrir despesas com transporte e como um gesto de agradecimento pela participação.

Se você estiver interessado entre em contato comigo:

Mariana

[m.guedes@2015.ljmu.ac.uk](mailto:m.guedes@2015.ljmu.ac.uk)

07933345990



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## Appendix K: Participant information sheet (Study 2)

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### **PARTICIPANT INFORMATION SHEET (ENGLISH VERSION)**

#### **Alcohol use by nightlife patrons in the UK and Brazil: a comparative study**

Mariana Guedes Ribeiro Santos - Public Health Institute LjMU

This project has been approved by the ethics panel of Liverpool John Moores University. To take part in this study, you must be a Brazilian student living in the UK and be over the age of 18.

You are being invited to take part in a research study. Before you decide it is important that you understand why the research is being done and what it involves. Please take time to read the following information. Ask us if there is anything that is not clear or if you would like more information. Take time to decide if you want to take part or not.

#### **1. What is the purpose of the study?**

This study is part of a wider PhD programme of research. The purpose of this study is to investigate and compare nightlife drinking behaviours in UK and Brazil. I am interested in students' expectations and perceptions of drinking culture, especially about pre-drinking and its implications.

#### **2. Do I have to take part?**

No. It is up to you to decide whether to take part. Participation is voluntary. You are still free to withdraw at any time and without giving a reason. A decision to withdraw will not affect your rights.

#### **3. What will happen to me if I take part?**

If you do decide to take part of this research, you will be participating in focus groups interviews, where we will be discussing your perspectives on pre-drinking behaviour, alcohol use and nightlife settings both in UK and in Brazil. Discussions will last 60-90 minutes. With your permission, interviews will be recorded. All your responses will remain confidential, stored securely and anonymised during data interpretation. It is envisaged that the findings will be used to inform and develop effective alcohol policy in Brazil and the UK. Research will also be shared through relevant conferences and within a peer-review journal.

#### **4. Are there any risks / benefits involved?**

There are no risks envisaged but if you feel uncomfortable answering some questions then you are permitted to omit them. Whilst there are no direct benefits for taking part in the research, the information you provide will contribute to a better understanding of alcohol consumption in nightlife settings, particular the pre-drinking event, which influences some risk behaviours, and help us to inform the development and implementation of prevention programs. If there is a problem, you can contact the researcher at the address below.

**5. Will my taking part in the study be kept confidential?**

Yes, all the information collected about you during the research will be kept strictly confidential. Your responses will be anonymised and stored securely.

This study has received ethical approval from LJMU Research Ethics Committee: 17/PHI/002

Contact Details of Researcher: Mariana Guedes Ribeiro Santos [M.Guedes@2015.ljmu.ac.uk](mailto:M.Guedes@2015.ljmu.ac.uk)

Contact Details of Academic Supervisor: Zara Quigg – [Z.A.Quigg@ljmu.ac.uk](mailto:Z.A.Quigg@ljmu.ac.uk)

Thank you for taking the time to consider this study.

If you would like information on where to get support for alcohol or substance misuse, then please visit sites such as:

<http://www.liverpoolalcoholservice.nhs.uk/aboutus/>

[www.addaction.org.uk](http://www.addaction.org.uk)

[www.alcoholconcern.org.uk](http://www.alcoholconcern.org.uk)

## **FOLHETO DE INFORMAÇÕES PARA OS PARTICIPANTES (PORTUGUESE VERSION)**

### **Padrões de consumo de bebida alcoólica entre estudantes Brasileiros e do Reino Unido**

#### **1) Qual é o objetivo do estudo?**

Este estudo faz parte de um programa de Pesquisa de Doutorado. O objetivo deste estudo é investigar e comparar padrões de comportamentos de beber no contexto da vida noturna no Reino Unido e no Brasil. Estou interessada em entender melhor sobre as expectativas e percepções da “cultura do beber” entre os estudantes, especialmente sobre o fenômeno do esquentar pre-balada e as suas implicações.

#### **2) Eu sou obrigado (a) a participar?**

Não. Cabe a você decidir se quer ou não participar. A participação é voluntária. Você é livre para desistir a qualquer momento e sem dar uma razão. A desistência não afetará os seus direitos ou qualquer tratamento futuro/serviço que você recebe.

#### **3) O que vai acontecer comigo se eu participar?**

Se você decidir fazer para participar desta pesquisa, você estará participando de grupos de discussão (grupos focais) onde iremos discutir as diferenças nos padrões de consumo de bebida alcoólica, expectativas e perspectivas referentes à prática do “esquentar” no contexto da vida noturna tanto no Reino Unido quanto no Brasil. As discussões terão duração de 60-90 minutos e todas as suas respostas permanecerão confidenciais, armazenados de forma segura e anonimizados durante a interpretação dos dados. Os resultados desta pesquisa serão utilizados para informar e desenvolver uma política de álcool eficaz. Os resultados também serão publicados e compartilhados através de conferências e congressos relevantes ao assunto.

#### **4) Existem quaisquer riscos/benefícios envolvidos?**

Não há riscos previstos, mas sabemos que compartilhar informações pessoais e confidenciais pode causar algum desconforto. Apesar de não existirem benefícios diretos por participar na pesquisa, as informações fornecidas irão contribuir para uma melhor compreensão do consumo de álcool no contexto da vida noturna (baladas), em especial sobre o fenômeno do “esquentar” pre-balada, que influencia alguns comportamentos de risco, e nos ajudará a desenvolver e implementar programas de prevenção eficientes. Se houver qualquer problema, você pode entrar em contato com o pesquisador, no endereço abaixo

#### **5) A minha participação no estudo será mantida confidencial?**

Sim, todas as informações fornecidas por você durante a pesquisa serão mantidas estritamente confidenciais. Suas respostas serão anonimizados e armazenados de forma segura.

Este estudo recebeu aprovação do Comitê de Ética em Pesquisa da LJMU – 17/PHI/002

Dados para contato do pesquisador: Mariana Guedes Ribeiro Santos - [M.Guedes@2015.ljmu.ac.uk](mailto:M.Guedes@2015.ljmu.ac.uk)

Obrigada pela atenção.

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## Appendix L: Participant consent form (Study 2)

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### **PARTICIPANT CONSENT FORM (ENGLISH VERSION)**

#### **Title of the project: Alcohol use by nightlife patrons in the UK and Brazil: a comparative study**

Mariana Guedes Ribeiro Santos - Public Health Institute, Faculty of Education, Health and Community  
(LJMU)

- I confirm that I have read and understand the information provided for the above study. I have had the opportunity to consider the information, ask questions and have had these answered satisfactorily.
- I agree to participate in the focus group meeting carried out by Mariana Santos of Liverpool John Moores University, to aid with the research of "Alcohol use by nightlife patrons in the UK and Brazil: a comparative study"
- I am aware of the topics to be discussed in the focus group.
- I understand that my participation is voluntary and that I am free to withdraw at any time, without giving a reason and that this will not affect my legal rights.
- I understand that any personal information collected during the study will be anonymised and remain confidential.
- I am fully aware that data collected will be stored securely, safely and in accordance with Data Collection Act (1998).
- I agree to have the focus group recorded (video or dictaphone). I understand that parts of our conversation may be used verbatim in future publications or presentations but that such quotes will be anonymised.
- I am aware that I can make any reasonable changes to this consent form.

Name of Participant:

Date:

Signature:

Name of Researcher:

Date:

Signature:

**TERMO DE CONSENTIMENTO (PORTUGUESE VERSION)**

**Padrões de consumo de bebida alcoólica entre estudantes Brasileiros e do Reino Unido**

Mariana Guedes Ribeiro Santos - Public Health Institute, Faculty of Education, Health and Community  
(LJMU)

- Confirmando que leio e compreendo as informações fornecidas para o estudo acima.
- Concordo em participar da reunião do grupo focal realizada pela pesquisadora Mariana Santos da Liverpool John Moores University, para auxiliar na pesquisa de "Padrões de consumo de bebida alcoólica entre estudantes Brasileiros e do Reino Unido".
- Estou ciente dos tópicos a serem discutidos no grupo focal.
- Entendo que minha participação é voluntária e que eu sou livre para retirar em qualquer momento, sem dar uma razão e que isso não afetará meus direitos legais.
- Entendo que qualquer informação pessoal coletada durante o estudo será anonimizada e permanecerá confidencial.
- Eu aceito que o grupo de foco seja gravado. Eu entendo que partes de nossa conversa podem ser usadas textualmente em futuras publicações ou apresentações, mas que essas citações serão anonimizadas.
- Estou ciente de que posso fazer alterações razoáveis neste formulário de consentimento.

Nome do participante:

Data:

Assinatura:

Nome do pesquisador:

Data:

Assinatura: