

---

**An Examination of Students' Moderate Drinking  
in Two Different Drinking Cultures**

Implications for Alcohol Social Marketing

---

by

**KHAI TRIEU TRAN**

A thesis submitted for the degree of Doctor of Philosophy

Department of Marketing

Otago Business School

University of Otago, Dunedin, New Zealand

February 2020

# Thesis Abstract

---

Excessive alcohol consumption is a public health concern worldwide because of numerous negative consequences associated with it. As a discipline of behavioural change for social good, social marketing acquires knowledge on drinking behaviours and then creates solutions with the aim of benefiting individual drinkers and society. Literature shows that alcohol research has disproportionately focussed on studying heavy drinking. This practice results in the dominant avoidance approach of alcohol control, whereby interventions and policies have been developed and implemented to reduce or prevent heavy drinking. Given that alcohol problems persist to date, this thesis argues for an under-studied promotion approach (i.e., encouragement of drinking moderation) as a pragmatic and sensible approach, and a complement to current alcohol control efforts. Moreover, the thesis adopts a cultural comparison approach between a wet and dry drinking culture, which arguably provides important implications for alcohol social marketing to enhance understanding of moderate drinking.

The thesis has three main objectives which are addressed by three papers around the moderate drinking phenomenon amongst university students in two different drinking cultures. Given differences in drinking characteristics, New Zealand and Vietnam are chosen as representatives for wet and dry drinking cultures, respectively. In particular, Paper 1 aims to explore the *barriers* that prevent students from moderating their drinking by comparing attitudes towards moderation in New Zealand and Vietnam. Paper 2 aims to explore how students' perceptions of *facilitators* of moderate drinking vary between these two countries. In Paper 1 and 2, a qualitative survey involving a written vignette was conducted with a relatively large sample of undergraduates from New Zealand and Vietnam ( $n > 220$ ). The vignette was designed for eliciting students' perceptions on the factors impeding and/or stimulating moderate drinking from a third-person perspective. Since drinking characteristics of drinkers in a dry drinking culture offer a great opportunity for an in-depth investigation of moderate drinking phenomenon, and building on Paper 1 and 2, Paper 3 aims to quantitatively examine the *factors associated with students' intention* to drink moderately in Vietnam, using a quantitative survey on 660 Vietnamese students.

Findings from the three papers reveal that students perceive several barriers to, and facilitators of, moderate drinking. These factors are positioned at the intrapersonal level (e.g., controllability), interpersonal level (e.g., peer influence) and environmental level (e.g., alternatives), suggesting that an *ecological framework* is useful for understanding drinking behaviours and drinking cultures. Adopting such a holistic perspective of the ecological framework can help identify the most necessary targets to bring about the desired change.

The response variations between the countries under study provide novel insights into *cultural differences* in students' moderate drinking, with external factors being more important and influential in New Zealand, and internal influences being of more concern and prominence in Vietnam. It implies that students in a wet drinking culture like New Zealand do not take personal responsibility for their drinking and suggests that social marketing should move beyond individualistic approaches, and towards the disruption of drinking cultures/practices, in pursuit of a healthier drinking culture.

Moreover, there exist *gender differences* in how the factors affect moderate drinking intention amongst Vietnamese students. Females appear to moderate their drinking through both internal and external control mechanisms, while males tend to moderate their drinking mainly through internal control. Therefore, interventions should be tailored to different gender needs.

In conclusion, this thesis addresses the dearth of literature into young people's decision-making processes towards moderate drinking by demonstrating the value of an ecological theoretical perspective to examine factors influencing students' moderate drinking, and highlighting the cultural and gender differences with respect to this complex phenomenon. Based on the findings, this thesis helps to inform nonprofit and social marketing to develop interventions aimed at encouraging safe and sensible drinking cultures.

**Keywords:** alcohol, moderate drinking, barrier, facilitator, ecological framework, university students, drinking culture, social marketing, New Zealand, Vietnam.

In loving memory of my mom, Nhan Thi Truong (1960-2010).

# Acknowledgements

---

This PhD thesis is a product of a collective endeavour. For the last three years, while I devoted myself to this journey, many remarkable people have helped me in one way or another, and I would like to express my deepest appreciation for their contributions. I am deeply indebted to my supervisors (Kirsten and Maree), my family and relatives, my friends, my colleagues, and my flatmates. They provided critical sources of academic, social and instrumental support through which this thesis was accomplished. I gratefully acknowledge their specific efforts in a diagram on the next page.

All in all, my PhD experiences were challenging, but rewarding and enriching. They played an important role in my personal growth and development, and are part of my beautiful memories. I am very thankful for that.

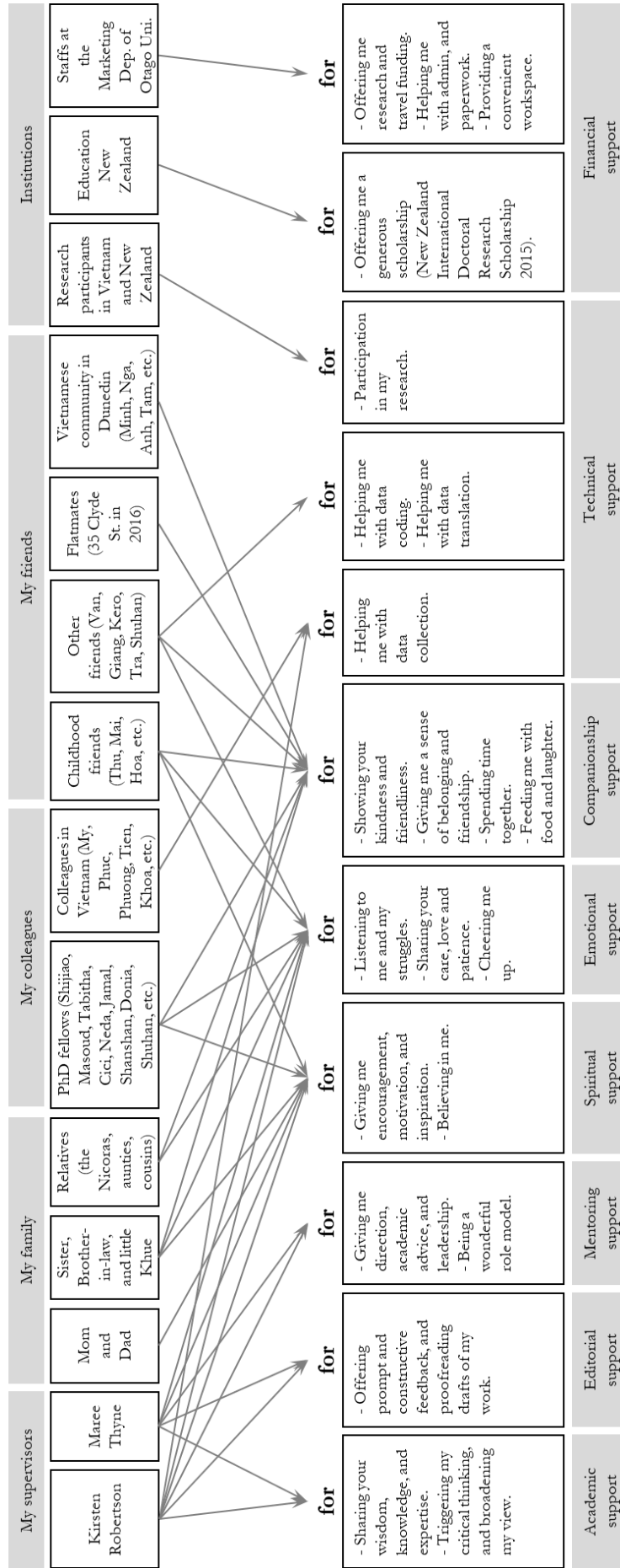
University of Otago

February 2020

Khai T. Tran

Figure I. Acknowledgements

Special thanks go to ...



## Outputs from the Thesis

Papers produced from this thesis have been presented at conferences, and published in social marketing journals, including the *Journal of Social Marketing*, the *Journal of Nonprofit and Public Sector Marketing* and *Social Marketing Quarterly*. In addition, one of the conference papers won the best paper award in the Social Marketing track at ANZMAC, 2018. In all papers, I was the primary author responsible for designing the research, collecting data, analysing data, and writing up the manuscripts. The co-authors in these papers are my supervisors whose contributions were those that would be expected from thesis supervisors (e.g., providing feedback and editorial input into the manuscripts). Additionally, the data collection in New Zealand in Study 1 (Chapter 2 and 3) was administered by the primary supervisor, Dr. Kirsten Robertson. However, I analysed and wrote up the data according to the research questions of this thesis.

Table I. Outputs from the Thesis

Chapter	Paper title	Authors	Journal/ Conference	Status
<b>Journal papers</b>				
2	Students' perceptions of barriers to moderate drinking: A comparison between a wet and a dry drinking culture	Tran, Robertson, and Thyne	Journal of Social Marketing (ABDC rank: B)	Published in Vol. 10, Iss. 1, pp. 105-124. Doi: 10.1108/JSOCM-09-2018-0102
3	Facilitators of students' moderate drinking in a wet versus dry drinking culture	Tran, Robertson, and Thyne	Journal of Nonprofit and Public Sector Marketing (ABDC rank: B)	Published. Doi: 10.1080/10495142.2019.1707742
4	Factors associated with students' intention to drink moderately: Implications for tackling alcohol problems	Tran, Robertson, and Thyne	Social Marketing Quarterly (ABDC rank: B)	Published in Vol. 25, Iss. 4, pp. 327-346. Doi: 10.1177/152450041-9883970
<b>Conference papers</b>				
2	Cultural differences in students' perceived barriers to low-risk drinking: A comparison between New Zealand and Vietnam	Tran, Robertson, and Thyne	International Social Marketing Conference, July 2018, Singapore, Singapore.	Presented at the conference. Published in the conference proceedings.
3	Facilitators of students' moderate drinking: A comparison between New Zealand and Vietnam	Tran, Robertson, and Thyne	European Social Marketing Conference, September 2018, Antwerp, Belgium.	Accepted to present at the conference.
4	Does reversing heavy drinking encourage moderate drinking?	Tran, Robertson, and Thyne	Australian and New Zealand Marketing Academy Conference (ANZMAC), December 2018, Adelaide, Australia.	Presented at the conference. Published in the conference proceedings. Awarded the Best Paper in Social Marketing Track.

# Contents

---

Thesis Abstract.....	ii
Acknowledgements.....	v
Outputs from the Thesis .....	vii
Contents .....	viii
List of Tables .....	xiii
List of Figures.....	xiv

<b>CHAPTER 1. GENERAL INTRODUCTION</b>	<b>1</b>
1.1. Social Marketing: Downstream, Midstream and Upstream Approach .....	2
1.2. Alcohol Problems and Alcohol Social Marketing .....	6
1.3. Theoretical Perspectives on Alcohol Consumption .....	8
1.3.1. Alcohol consumption as individual behaviours .....	8
1.3.2. Alcohol consumption as social practices .....	9
1.3.3. Alcohol consumption as resilience .....	10
1.3.4. Alcohol consumption from the ecological perspective .....	13
1.4. Drinking Cultures .....	14
1.4.1. Alcohol use across countries and the definition of drinking cultures .....	14
1.4.2. Country profile of a wet drinking culture (New Zealand).....	16
1.4.3. Country profile of a dry drinking culture (Vietnam).....	20
1.4.4. Student drinking subculture and its consequences.....	24
1.4.5. Cultures and behaviours .....	27
1.5. Justifications for the Research .....	28
1.5.1. Why should moderate drinking behaviour be considered for alcohol social marketing? .....	28
1.5.2. Why should an ecological approach be considered for understanding alcohol consumption? .....	29
1.5.3. Why should a cultural comparison of moderate drinking be considered? .....	30
1.5.4. Why should university students be a focus?.....	31



1.5.5. A notion of gender-specific drinking .....	32
1.6. Research Objectives and Research Questions.....	33
1.7. Methodology.....	34
1.7.1. Research paradigm .....	35
1.7.2. Research design .....	37
1.7.3. Research methods .....	38
1.8. Thesis Structure.....	41

**CHAPTER 2. STUDENTS' PERCEPTIONS OF BARRIERS TO MODERATE DRINKING** **43**

2.1. Abstract .....	44
2.2. Introduction.....	45
2.3. A Need to Focus on Moderate Drinking Behaviour .....	47
2.4. The Link between an Ecological Framework and Barriers to Drinking Moderation.....	48
2.5. Drinking Cultures: Wet versus Dry.....	50
2.6. Barriers to Students' Moderate Drinking in Different Drinking Cultures .....	51
2.7. Methods.....	52
2.7.1. Sample.....	53
2.7.2. Data analysis.....	54
2.8. Results.....	59
2.8.1. Students' alcohol consumption .....	59
2.8.2. Perceived barriers to moderate drinking between New Zealand and Vietnamese students.....	59
2.9. Discussion.....	61
2.10. Implications to Social Marketing.....	64
2.11. Limitations and Future Research Directions .....	66

**CHAPTER 3. STUDENTS' PERCEPTIONS OF FACILITATORS OF MODERATE DRINKING** **68**

3.1. Abstract .....	69
3.2. Introduction.....	70

3.3. Moving towards an Ecological View of Behavioural Change: Facilitators of Drinking Moderation .....	72
3.3.1. Individual factors.....	72
3.3.2. Social factors .....	74
3.3.3. Environmental factors .....	75
3.3.4. Research questions .....	76
3.4. Methods.....	76
3.4.1. Settings.....	76
3.4.2. Procedure.....	77
3.4.3. Sampling .....	78
3.4.4. Analysis .....	78
3.5. Results.....	82
3.6. Discussion.....	83
3.6.1. Important facilitators of moderate drinking.....	83
3.6.2. Cultural differences in perceptions of moderate drinking .....	85
3.7. Implications for Alcohol Control.....	88
3.8. Limitations and Future Research.....	90
3.9. Conclusion .....	90

<b>CHAPTER 4. STUDENTS' INTENTION TO DRINK MODERATELY IN VIETNAM</b> .....	<b>92</b>
4.1. Abstract .....	93
4.2. Introduction.....	94
4.3. Moderate Drinking and Factors Associated with It .....	96
4.4. Student Drinking in Vietnam.....	98
4.5. Method .....	99
4.5.1. Participants.....	99
4.5.2. Measures .....	100
4.6. Results.....	103
4.6.1. Measurement purification and validation .....	103
4.6.2. Regression for factors associated with drinking moderation on the total sample.....	104

4.6.3. Regression for factors associated with drinking moderation by genders .....	107
4.7. Discussion.....	109
4.7.1. Factors influencing moderate drinking intention .....	110
4.7.2. Gender differences in the effects of the factors .....	111
4.8. Implications for Alcohol Social Marketing Research and Interventions.....	112
4.9. Limitations and Directions for Future Research.....	113
4.10. Conclusion.....	114

**CHAPTER 5. GENERAL DISCUSSION AND CONCLUSION 116**

5.1. Summary of the Key Findings .....	117
5.1.1. Characteristics of student drinking in New Zealand and Vietnam.....	119
5.1.2. Barriers to and facilitators of moderate drinking at multiple levels.....	119
5.1.3. Cultural differences in perceptions of moderate drinking .....	120
5.1.4. Factors associated with moderate drinking in a dry drinking culture.....	121
5.2. Contributions to Alcohol Social Marketing Research .....	122
5.2.1. A focus on moderate drinking and a shift towards a promotion approach .....	123
5.2.2. The utility of an ecological framework to understand moderate drinking .....	125
5.2.3. Insights into the cultural differences in moderate drinking .....	128
5.2.4. The role of barriers to and facilitators of moderate drinking.....	130
5.3. Contributions to Alcohol Social Marketing Practices and Global Health Issues .....	132
5.3.1. Interventions to encourage drinking moderation and moderate drinking cultures .....	133
5.3.2. Culturally and gender-sensitive approach to alcohol interventions .....	134
5.3.3. Policy implications .....	135
5.3.4. Addressing global health inequality issue.....	136
5.4. Limitations and Future Research.....	137
5.5. Concluding Remarks .....	138

**REFERENCES ..... 140**

**APPENDICES..... 171**

Appendix 1. Inter-coder Reliability: The Cohen’s Kappa Statistic. .... 172

Appendix 2. The Questionnaire for Study 2 (Vietnamese)..... 173

Appendix 3. Data Examination for Study 2..... 184

Appendix 4. Descriptive statistics for Study 2. .... 194

Appendix 5. Measurement Assessment for Study 2..... 196

Appendix 6. CFA Model Fit Assessment for Study 2. .... 200

Appendix 7. Fornell-Larcker Criterion Tests for Study 2. .... 201

Appendix 8. Coding Sheet for the Content Analysis (Barriers Themes). .... 202

Appendix 9. Coding Sheet for the Content Analysis (Facilitators Themes)..... 204

## List of Tables

---

Table 1.1. Evolution of Social Marketing Definitions.....	2
Table 1.2. Characteristics of Wet versus Dry Drinking Cultures.....	15
Table 1.3. Some Statistics of New Zealand and Vietnam. ....	16
Table 1.4. Drinking Patterns and Alcohol Problems in New Zealand and Vietnam. ....	18
Table 1.5. A Summary of Research Methods in This Thesis. ....	40
Table 2.1. Intrapersonal Barrier Themes.....	56
Table 2.2. Interpersonal Barrier Themes.....	57
Table 2.3. Environmental Barrier Themes.....	58
Table 2.4. Perceptions of Barriers to Students' Moderate Drinking as a Function of Country.....	60
Table 3.1. Content Analysis of Facilitators of Moderate Drinking. ....	80
Table 3.2. Percent of Participants Stating Each Facilitator Theme by Country.....	82
Table 4.1. Operationalisation of Influences on Student Drinking Behaviours. ....	101
Table 4.2. Regression on Intention to Drink Moderately for Total Sample.....	106
Table 4.3. Regression on Intention to Drink Moderately for Female and Male Samples (Model 4).....	108
Table 5.1. A Summary of Key Findings of The Thesis.....	117
Table 5.2. The Parallel between the Identified Barriers and Facilitators. ....	132

## List of Figures

---

Figure 1.1. Total Per Capita Alcohol Consumption (in Litres of Pure Alcohol) and Prevalence of Drinkers in New Zealand and Vietnam.....	17
Figure 1.2. Recorded Alcohol Per Capita (15+ years) Consumption in New Zealand, 1961-2016.....	17
Figure 1.3. Share of Alcoholic Beverages by Recorded Alcohol Consumption in New Zealand and Vietnam. ....	18
Figure 1.4. Drinking Patterns by Age in New Zealand.....	19
Figure 1.5. Recorded Alcohol Per Capita (15+ years) Consumption in Vietnam, 1961-2016.....	21
Figure 1.6. Drinking Patterns by Age Groups in Vietnam.....	22
Figure 1.7. Daily Drinking Quantity (in Grams of Pure Alcohol) by Age Groups in Vietnam. ....	23
Figure 1.8. Research Design of This Thesis.....	37
Figure 1.9. Thesis Structure.....	41
Figure 4.1. The Four Tested Models.....	105
Figure 5.1. A Conceptual Model of Relevant Factors of Moderate Drinking Behaviour in Two Different Drinking Cultures.....	129

## CHAPTER 1

---

# GENERAL INTRODUCTION

---

This thesis extends knowledge in the discipline of social marketing, particularly in the area of alcohol control. Given that social marketing centres on positive behavioural change for social good, the thesis examines moderate drinking behaviour amongst university students in different drinking cultures to inform social marketing on how to encourage a sensible and responsible drinking culture. Thus, this first chapter provides an overview of social marketing and alcohol social marketing. The literature on alcohol consumption and drinking cultures is also reviewed to set the scene and offer justifications for the research. The chapter then outlines specific objectives and discusses the methodology to undertake the research. Finally, the thesis structure is described to guide readers through the remaining chapters of the thesis.

## 1.1. Social Marketing: Downstream, Midstream and Upstream Approach

Social marketing is a discipline of marketing which has been growing for nearly five decades. Since its inception, there have been many different definitions of social marketing proposed. Over time, the concept is becoming more clearly defined and more readily adopted. Despite some criticisms regarding paternalism, power imbalances between social marketers and target audience, unintended consequences, and other ethical dilemmas (Donovan & Henley, 2010), social marketing has been applied to various areas. For example, it is endorsed by the World Health Organisation and many governments to address public health issues (French & Gordon, 2015). Broadly, social marketing efforts have focused on five main areas, including: (1) improving public health (e.g., HIV/AIDS, tobacco use, heavy/binge drinking, obesity, fruit and vegetable intake); (2) preventing injuries (e.g., drink and driving, suicide, domestic violence, senior falls, drowning); (3) protecting the environment (e.g., waste reduction, air quality, water conservation, litter habitat protection); (4) contributing to communities (e.g., blood/organ donation, voting, volunteering, bullying); and (5) enhancing financial wellbeing (e.g., identity theft, establishing bank accounts, fraud) (Lee & Kotler, 2019; Truong, 2014). Table 1.1 presents an indicative list of social marketing definitions, reflecting the evolution of the social marketing concept over time, or different aspects of the concept.

Table 1.1. Evolution of Social Marketing Definitions.

Authors	Definitions of social marketing
1970s - 1980s	
Kotler and Zaltman (1971)	“The design, implementation and control of programs calculated to influence the acceptance of social ideas and involving considerations of product planning, pricing, communication, distribution and marketing research” (p. 5).
Lazer and Kelley (1973)	“Social marketing is concerned with the application of marketing knowledge, concepts, and techniques to enhance social as well as economic ends. It is also concerned with analysis of the social consequence of marketing policies, decisions and activities” (p. ix).
Kotler and Roberto (1989)	“A social change management technology involving the design, implementation and control of programs aimed at increasing the acceptability of a social idea or practice in one or more groups of target adopters” (p. 24).
1990s - 2000s	
Andreasen (1994)	“The adaptation of commercial marketing technologies to programs designed to influence the voluntary behaviour of target audiences to improve their personal welfare and that of society of which they are a part” (p. 110).
Andreasen (1995)	“The application of commercial marketing technologies to the analysis, planning, execution, and evaluation of programs designed to influence the voluntary behaviour of target audiences in order to improve their personal welfare and that of their society” (p. 7)



Kotler et al. (2002)	“The use of marketing principles and techniques to influence a target audience to voluntarily accept, reject, modify, or abandon a behaviour for the benefit of individuals, groups, or society as a whole” (p. 5)
Kotler and Lee (2008)	“A process that applies marketing principles and techniques to create, communicate, and deliver value in order to influence target audience behaviours that benefit society (public health, safety, the environment, and communities) as well as the target audience” (p. 7).
Dann (2010)	“The adaptation and adoption of commercial marketing activities, institutions and processes as a means to induce behavioural change in a targeted audience on a temporary or permanent basis to achieve a social goal” (p. 151).
2010s - Present	
Donovan and Henley (2010)	“The application of commercial marketing technologies to the analysis, planning, execution, and evaluation of programmes designed to influence the voluntary or <i>involuntary behaviour</i> of target audiences in order to improve the welfare of individuals and society” (p. 7).
UK National Social Marketing Centre (2011)	“An approach used to develop activities aimed at changing or maintaining people’s behaviour for the benefit of individuals and society as a whole” (p. 4).
UK National Social Marketing Centre (2006b)	“The systematic application of marketing <i>alongside other concepts</i> and techniques to achieve specific behavioural goals, for a social or public good” (p. 4).
Weinreich (2011)	“The use of commercial marketing principles and techniques to promote the adoption of a behaviour that will improve the health or well-being of the target audience or of society as a whole” (p. 4)
Lefebvre (2012)	“The application of marketing principles to shape <i>markets that are more effective, efficient, sustainable and just</i> in advancing people’s well-being and social welfare” (p. 120).
International Social Marketing Association (2013)	“Social marketing seeks to develop and integrate marketing concepts <i>with other approaches</i> to influence behaviours that benefit individuals and communities for the greater social good. Social marketing practice is guided by ethical principles. It seeks to integrate research, best practice, theory, audience and partnership insight, to inform the delivery of competition sensitive and segmented social change programmes that are effective, efficient, equitable and sustainable” (p. 3).
Hastings and Domegan (2014)	“Social marketing <i>critically</i> examines commercial marketing so as to learn from its successes and curb its excesses” (p. 14).
Saunders et al. (2015)	“The application of marketing principles to enable individual and collective ideas and actions in the pursuit of <i>effective, efficient, equitable, fair and sustained</i> social transformation” (p. 165).

Social marketing was first formally defined by Kotler and Zaltman (1971) based on the idea that the application of marketing for goods and services could be transferred to ideas or causes (American Marketing Association, 1985; Wiebe, 1951). In other words, social causes are viewed as “products” to be “marketed”. In this initial stage of development (1970s to 1980s), social marketing focuses on promoting the acceptability of social ideas through technical implementation (i.e., analysis, planning, implementation and control). It is often confused as a promotional or communication activity, so-called social advertising or social communication (Domegan, 2008). As a result, advertising campaigns for social causes proliferate in this stage, and too often, they are inadequate to motivate a new behaviour (Fox & Kotler, 1980).

To criticise the narrow view of social marketing from the informational approach and to eradicate the earlier confusion with the concept (as a promotional activity), in the 1990s, Andreasen (1994) modified the social marketing definition with a strong emphasis on the exchange process of *voluntary behavioural change*. As such, social marketing is considered as an agent to change individuals' behaviour for the better. Since its introduction, this view has been well-received and strongly influential in shaping the field today, resulting in the dominance of a downstream (individual-focused) social marketing approach to address social issues. Other definitions of social marketing arising during this time (1990s to 2000s) converged on this view. Broadly, Rothschild (1999) distinguished three ways/tools to manage behaviour within societies, namely education, marketing and law. Here, social marketing is unique in relation to education (i.e., messages to inform and persuade individuals) and law (i.e., coercion to undertake behaviour involuntarily). It functions as offering alternative choices or incentives to make the recommended behaviour more advantageous and attractive than the problem behaviour so that it invites voluntary exchanges (Rothschild, 1999). In this respect, social marketing is an interplay between behavioural science and marketing. Theories adopted in social marketing are therefore mostly characterised by applied behavioural models.

Within the downstream approach, behaviour change is at the core of social marketing. Behaviour change can be either: (1) accepting a new behaviour, (2) rejecting a potential undesirable behaviour, (3) modifying a current behaviour, (4) abandoning an old undesirable behaviour, (5) continuing a desired behaviour, or (6) switching a behaviour (Lee & Kotler, 2019). Behaviour change is regarded as the first and foremost criterion within the social marketing benchmark, which proposes criteria to distinguish social marketing from other relevant disciplines such as health promotion (Andreasen, 2002), as well as to improve the effectiveness of social marketing interventions (UK National Social Marketing Centre, 2006a). Moreover, social marketing requires an audience orientation, formative research, and considering segmentation, competition and exchange processes to develop mixed-methods interventions (Andreasen, 2002). The social marketing process is generally described as comprising six major steps. They include: (1) initial planning; (2) formative research; (3) strategy development; (4) program development and pretesting of material and nonmaterial interventions; (5) implementation; and (6) monitoring and evaluation (Grier & Bryant, 2005). In sum, the downstream social marketing approach attempts to achieve social good through individuals.

Recently, many scholars have criticised the downstream approach because it places responsibility for change solely on individuals and lacks recognition of support and encouragement from environments for behavioural change (Cherrier & Gurrieri, 2014; Hoek & Jones, 2011; Szmigin et al., 2011). Such ignorance limits social marketing to treating the symptoms (i.e., change specific behaviours), instead of addressing the underlying causes of the social problems (Wood, 2016b, 2019). Thus, critics have suggested a shift towards midstream and upstream approaches that focus more on socio-economic structures and systems to bring about social change. Specifically, upstream social marketing stresses that social marketers should pay more attention to upstream activities (such as advocacy and lobbying) and audiences (such as policymakers, media, communities, corporations, and school) to improve environments in which individuals are enabled to perform better/healthier behaviours (Gordon, 2013; Kennedy et al., 2018). For example, Donovan and Henley (2010) criticised the voluntariness element in the previous definitions of social marketing and added “involuntary” behaviour to their definition. In this sense, social marketing means targeting not only individuals to change their behaviours but also the social structures that facilitate individual changes. Researchers in the social marketing field suggest that social marketing also involves studying the social consequences of commercial marketing practices (Hastings & Domegan, 2014; Lazer & Kelley, 1973), indicating the influence of marketing environment on social change. This viewing has been conceptualised as critical social marketing (Gordon, 2011). There is also a call for viewing social marketing at a strategic level to address the pervasive influence of environments on social behaviour and its complexity (French & Blair-Stevens, 2006). Consequently, there emerges the concept of strategic social marketing which is defined as “the systemic, critical and reflexive application of social marketing principals to enhance social policy selection, objective setting, planning and operational delivery” (French & Gordon, 2015, p. 134).

At the same time, midstream social marketing often adopts service thinking from commercial marketing (Russell-Bennett et al., 2013). It encompasses co-creation, service delivery and relationship building to meet individuals’ needs (May & Previte, 2016; Wood, 2016a). This is also in line with suggestions to move from a transactional towards a relational paradigm in social marketing, where relationships with customers *and* other stakeholders should be emphasised (Hastings, 2003). With increasing recognition and proliferation of more upstream approaches in social marketing, Lee et al. (2011), Robinson-Maynard et al. (2013), and Truong and Hall (2013) extended the social

marketing benchmark criteria to include upstream and midstream considerations. By looking through the evolution of social marketing definitions, we have seen that the nature of social marketing has been continuously broadened from promoting the acceptability of social ideas, to encouraging behavioural change, and social change.

In line with the recent development in the field, a board of social marketing organisations (including the Australian Association of Social Marketing, the European Social Marketing Association and the International Social Marketing Association) has reached an international consensus on a definition of social marketing:

“Social marketing seeks to develop and integrate marketing concepts with other approaches to influence behaviours that benefit individuals and communities for the greater social good. Social marketing practice is guided by ethical principles. It seeks to integrate research, best practice, theory, audience and partnership insight, to inform the delivery of competition sensitive and segmented social change programmes that are effective, efficient, equitable and sustainable” (International Social Marketing Association, 2013, p. 3).

This definition is adopted for this thesis. In short, social marketing is a holistic approach to behaviour change.

## **1.2. Alcohol Problems and Alcohol Social Marketing**

Of several issues we are facing today, excessive alcohol consumption is a longstanding and obstinate problem in many countries and has severe impacts on public health, social security and financial burdens (WHO, 2018). In response, there have been government alcohol policies dealing with purchase age, physical availability (e.g., number of outlets, and earlier closing times), alcohol marketing, price (e.g., taxes, and alcohol price), and drink driving (e.g., blood/breath alcohol limit, and random breath testing) to control alcohol use (Hogan et al., 2014). Not surprisingly, alcohol problems have also received increasing attention from social marketing researchers and practitioners. A recent systematic review of social marketing interventions seeking to minimise alcohol harm published between 2000 and 2014 (Kubacki et al., 2015) identified 23 self-claimed social marketing interventions. In general, these interventions have been limited by an individual-oriented approach, country of origin, and funding body. Particularly, this

research shows that the majority of the interventions adopted a downstream approach, with the target audience mainly including university students, amongst others such as teenagers, young people and the homeless. Many interventions aimed to change individuals' behaviours such as alcohol consumption reduction, drink-driving reduction, and use of designated drivers, while other objectives to be addressed included changing attitudes, awareness, behavioural intentions and policy. Moreover, the evaluated alcohol social marketing interventions mainly originated from Western and developed countries (such as US, UK, Australia, New Zealand and Finland) and were sponsored by government bodies. The review also identified a small body of midstream interventions that targeted health professionals in medical centres and the general community. According to this review, the alcohol social marketing interventions largely resulted in positive outcomes, which resonates with findings from earlier reviews of alcohol social marketing interventions (Gordon et al., 2006; Stead et al., 2007). However, there were still cases where the interventions were found to result in some negative or no intervention effects, which suggests room for improvement in alcohol social marketing (Kubacki et al., 2015). For example, young people aged 13-25 in England perceived many alcohol campaigns to be patronising, paternalistic or preaching, which prevented them from engaging with the campaigns (de Visser et al., 2013).

Regarding formative research in alcohol social marketing, alcohol research in the field is dominated by research focussed on the excessive consumption of alcohol. Consequently, interventions rely on the abundance of findings from heavy-drinking oriented studies to reduce or prevent heavy drinking practices. For example, attempts to change social norms about heavy drinking or adjust misperceptions of others' drinking (Prestwich et al., 2016); challenges to positive alcohol expectancies (Labbe & Maisto, 2011); education to increase awareness of harms associated with heavy drinking (DeJong, 2002), as well as alcohol policy to limit alcohol accessibility (Martineau et al., 2013) have been undertaken. Although the value of these solutions in addressing alcohol problems cannot be taken for granted, some research shows their deficiency in changing drinking behaviour (e.g., Clapp et al., 2003; Robinson et al., 2014). Given that alcohol problems remain intractable to date, new approaches or fresh ideas in alcohol social marketing are needed to complement and/or support existing efforts to address these alcohol problems.

It is noted that, in the case of habituated and addictive behaviour such as alcohol drinking, many people do not possess adequate knowledge or ability to make logical choices

(Furtwängler & de Visser, 2017a); thus, according to Rothschild (1999), addressing alcohol problems requires more than downstream social marketing. A more holistic view of social marketing that takes into account the environmental and contextual factors, and system-wide change is essential in this case (Kennedy, 2016). Given the dominance of downstream alcohol social marketing, as illustrated aforementioned, it indicates a research gap that this thesis attempts to address.

### **1.3. Theoretical Perspectives on Alcohol Consumption**

Since behaviour change is at the heart of social marketing, understanding of alcohol consumption is of importance to alcohol-related social marketing. When reviewing the literature on alcohol consumption or drinking behaviours, there emerge three themes (i.e., alcohol consumption as *individual behaviours*, as *social practices* and as *resilience*) as discussed in the following sections.

#### **1.3.1. Alcohol consumption as individual behaviours**

Research on alcohol consumption is a well-established and mature field in social and psychological science. Historically, abundant alcohol research has been devoted to the exploration of the determinants of individuals' drinking behaviour, using mainly theories of behaviour change. This individual-oriented approach has resulted in the identification of a wide range of risk and protective factors for alcohol use and misuse. Broadly, drinking behaviour can be predicted/explained based on individuals' value, goals, subjective norms, perceived utilities, attitudes, capabilities, motivations and intentions (Meier et al., 2018). For example, researchers have consistently found the influence of drinking motives (Kuntsche et al., 2005), alcohol expectancies (Jones et al., 2001; Monk & Heim, 2013), and norms (Borsari & Carey, 2003; Monk & Heim, 2014; Neighbors et al., 2007). Recent alcohol research has increasingly accounted for social, structural and contextual determinants of alcohol consumption and/or heavy drinking. Examples are drinking contexts (Connor et al., 2014; O'Hare, 1997) or situations (Carey, 1993; Lau-Barraco et al., 2016), alcohol marketing and social network sites (Beullens & Vandenbosch, 2016; Griffiths & Casswell, 2010). In these studies, individual behaviours are the focus. Accordingly, drinking behaviours can be changed in a desirable manner if determinants of behaviour can be identified accurately and modified correspondingly. The focus on

individuals' drinking behaviour of this research stream closely links to the dominant downstream social marketing approach.

### **1.3.2. Alcohol consumption as social practices**

Another alcohol research stream views alcohol consumption as social practices (Meier et al., 2018). According to this view, drinking alcohol is undertaken by individuals but constructed and regulated by social and cultural forces; and individuals are recruited into, and are carriers of the practices, rather than the actors responsible for their behaviours or choices (Supski et al., 2017). Therefore, this research stream critiques the dominant view of alcohol consumption as individual behaviour discussed in the preceding section. Specifically, this dominant view results in victim blaming and assigning responsibility for addressing alcohol problems solely on individuals, which is ethically questionable (Szmigin et al., 2011). Adopting the social practice view, some researchers focus their work on investigating drinking practices rather than on the drinking behaviours (Supski et al., 2017). Studies have highlighted the meaning of drinking as a symbolic and cultural practice. It is not usual for young people to drink alcohol only for functional reasons (e.g., taste or quality of alcohol). Instead, social and relational aspects are central to young people's drinking (Szmigin et al., 2011). More specifically, drinking is a means to gain social inclusion, belonging and togetherness (de Visser et al., 2013), an expression of masculinity (de Visser & Smith, 2007), or a centrality within university social life (Supski et al., 2017). This social practice perspective is also applied to developing typologies of drinking practices to operationalise drinking culture in Britain (Ally et al., 2016) and Finland (Mustonen et al., 2014). Results from these works challenged the characterisation of excessive drinking culture in these traditional markets (e.g., Britain, Finland) due to the high prevalence of moderate drinking occasions found. In line with the social practice perspective, some studies examine the social processes and relational dynamics that organise and reinforce excessive drinking phenomenon using social theories. For example, the social capital theory has been used to demonstrate that alcohol consumption is a way of capital accumulation within young female groups, and social capital facilitates or restricts their drinking depending on group norms (Godwin et al., 2016). Grounded theory-based research also results in the conclusion that binge drinking is a social and cultural phenomenon, which demonstrates the importance of social and cultural contexts of drinking patterns (Van Wersch & Walker, 2009). In general, this theme of alcohol

consumption research aligns well with the tenets of midstream and upstream social marketing.

### **1.3.3. Alcohol consumption as resilience**

While the previous two themes largely view alcohol consumption from an epidemiological or disease-prevention perspective (i.e., how to avoid/reduce heavy drinking), there has been a variant of alcohol consumption research that considers alcohol moderation or abstinence. The emergence of this research stream takes a promotion approach, i.e., how to promote healthier drinking (relative to heavy drinking). Before discussing alcohol research in this stream, a distinction between moderate drinking and heavy drinking as behavioural alternatives should be noted to legitimatise this research stream.

#### **1.3.3.1. Heavy drinking versus moderate drinking as behavioural alternatives**

Heavy drinking and moderate drinking seem to be semantically opposite. However, there is literature from various disciplines supporting the notion that seemingly/semantically opposite behaviours are not necessarily logical opposites, and may indeed be complementary to each other. In social psychology, performing a behaviour, or affirmation of a construct is not considered as the conceptual opposite of not performing a behaviour, or the negation of a construct. Instead, they are considered as behavioural alternatives, which are psychologically distinct (Jaccard, 1981). Evidence for the conceptual distinction between behavioural alternatives has been found when examining eating meat, engaging in vigorous physical activity, breastfeeding (Richetin et al., 2011), resource consumption (Richetin et al., 2012), and smoking behaviour (Middlestadt et al., 2014). For example, within the Reasoned Action Approach, Middlestadt et al. (2014) found that taking measures not to smoke cigarettes was significantly predicted by the perceived norm, which failed to predict not continuing to smoke. Moreover, perceived control was more important than attitude to predict intention to smoke, whereas attitude was more important than perceived control with respect to the intention to take measures not to smoke. Thus, a comprehensive understanding of a behaviour requires a thorough consideration of factors underlying possible behavioural alternatives.

In neuroscience, researchers posit a distinction between intentional actions and inhibition of actions due to their involvement in different brain areas (Brass & Haggard, 2007). Similarly, Gray (1990) discovered two different motivational systems in human's neural



system, namely the behavioural inhibition and the behavioural activation system; in which the former links to the inhibition of behaviour, and the latter links to the activation of behaviour.

In consumer research, reasons/attitudes for and against a behaviour have been argued not to be logical opposites; in that attitudes for a behaviour are distinct from attitudes against the behaviour because they link to different rather than opposite sets of reasons (Chatzidakis et al., 2016; Chatzidakis & Lee, 2013). For example, in the context of charitable giving, Chatzidakis et al. (2016) found that attitude for giving was explained by reasons such as moral values, donors' efficacy to make a difference and charities' efficiency/effectiveness, whereas reasons explaining attitude against giving emphasised more on denial of donor responsibility and alternative ways of helping.

More relevant to our research, alcohol literature offers evidence that motives/reasons for drinking and not drinking are qualitatively different. On the one hand, drinking motives have been universally identified as: to obtain positive social rewards (social motives), to enhance positive affect (enhancement motive), to avoid social rejection (conformity motives), and to reduce negative affect (coping motives) (Cooper, 1994; Kuntsche et al., 2005). On the other hand, people limit or abstain from drinking for reasons/motives such as: self-control, indifference towards alcohol, personal values, dispositional risk, fear of negative consequences, peer disapproval, family and religious constraints (Epler et al., 2009; Greenfield et al., 1989; Huang et al., 2011; Slicker, 1997; Stritzke & Butt, 2001).

One general theme arising from the above literature is that opposing behaviours should not automatically be considered as logical opposites. Applying this logic to the domain of drinking behaviours, we could expect that heavy drinking and moderate drinking, although representing two levels of the alcohol consumption continuum, are two separate and independent behaviours. Moderate drinking (as a consumption reduction) and heavy drinking (as a consumption increase) are constructed as two distinct consumption entities by Fry (2014).

### **1.3.3.2. Research on moderate drinking and abstaining**

While investigations into heavy drinking have dominated the alcohol consumption literature, little attention has been paid to moderate drinking and abstaining. Generally, research focusing on the latter views these forms of alcohol consumption as a resilience

given that most research in the field is undertaken in Western and developed countries where drinking and drinking to excess are the norm. According to Graber et al. (2016), “resilience is a multi-dimensional process whereby young people show positive adaptation in the face of risk or adversity. It incorporates domain-specific and generalised interactive protective mechanisms at the individual level (...) and the level of social and cultural context” (p. 80-81). As such, resilience is recognised “not as an individual characteristic, but rather a product of the environment in which a person learns to cope with adversity” (Wood, 2019, p. 81). Other alcohol researchers following this approach name it as “positive deviance” (Tucker & Harris, 2016), “positive behaviour” (Buyucek et al., 2019), “anti-consumption” (Piacentini & Banister, 2009), or “consumer resistance” (Fry, 2011).

To date, understanding of moderate drinking behaviour comes from two research bodies. The first body includes studies examining determinants of moderate drinking behaviour using theories of behaviours at the individual and social level (e.g., Fry et al., 2014; Previte et al., 2015a; Previte et al., 2015b). Findings from this body show that important factors associated with moderate drinking include self-efficacy/perceived behavioural control (Buyucek et al., 2019; Fry et al., 2014; Previte et al., 2015b; Tucker & Harris, 2016), attitudes towards moderate drinking, positive emotions (Previte et al., 2015b), alcohol expectancies (Buyucek et al., 2019), desire to moderate drinking (Fry et al., 2014), personal commitment (Tucker & Harris, 2016), and capacity and motivation (Furtwängler & de Visser, 2017a). At the social level, group norms were found to be the strongest predictor of intentions to moderate drinking (Previte et al., 2015a), reflecting adaptive/positive social influences.

The second body comprises of qualitative studies examining personal/subjective experiences of moderate drinkers and abstainers in cultures of intoxication. These studies highlight how moderate drinkers and abstainers respond to other drinkers when socialising, and how they successfully practice moderate drinking in various social situations, especially within drinking cultures. As such, they offer valuable lessons to develop interventions for addressing alcohol problems. In general, these studies indicate strategies commonly adopted by moderate drinkers or abstainers to maintain their drinking status. Some examples are: confronting with pressure (polite refusal, coming out as non-drinkers) (Conroy & de Visser, 2014); avoiding the pressure (distancing from drinking occasions) (Bartram et al., 2017a); integrating into the intoxicated culture (making legitimate excuses, faking/passing as a drinker) (Nairn et al., 2006);

reconstructing identities (challenging non-drinker stereotypes, derogating intoxicated behaviour, constituting alternative subject positions) (Fry, 2010; Nairn et al., 2006); and replacing drinking with other activities (Bartram et al., 2017b; Nairn et al., 2006). Moreover, from the narratives of moderate drinkers and abstainers in previous research, alcohol moderation and abstinence can be considered a proactive and positive choice (Graber et al., 2016; Herring et al., 2014), involving pride, determination, and authenticity (Conroy & de Visser, 2015). Findings from these studies also point towards a stigma of non-drinkers and moderate drinkers within drinking cultures (Bartram et al., 2017a; Conroy & de Visser, 2014).

It is noted that this emerging research seems to focus exclusively on non-drinkers' experiences (e.g., Conroy & de Visser, 2013; Conroy & de Visser, 2014; Nairn et al., 2006), or does not separate experiences of moderate drinkers from those of non-drinkers, conflating the two behaviours (moderate drinking and abstaining) as a whole (e.g., Bartram et al., 2017b; Graber et al., 2016; Herring et al., 2014). It is argued that although alcohol abstinence and moderation have something in common (e.g., distancing individuals from heavy alcohol use, or reflecting a resistance, deviance or resilience to the culture of intoxication), the nature and psychological process of the two behaviours might be different. Indeed, Fry (2011) found that alcohol anti-consumption embraced a range of resistance possibilities (aversion, abandonment, avoidance and integration), suggesting that not all practices of alcohol resistance are the same. More specifically, de Visser et al. (2014) offered evidence that non-/former-, low-risk, and hazardous drinkers are distinct groups in terms of their personality characteristics and beliefs, as such, they should be treated differently. It is also suggested that compared to non-drinkers, moderate drinkers have distinct mental mind-set (e.g., intention to drink moderately versus buffer against peer pressure) (Conroy & de Visser, 2014) and are exposed to unique challenges (e.g., dancing between engagement and disengagement with a behaviour, and balancing competing desires) (Graber et al., 2016). Therefore, the two subjects demand different and independent research inquiries.

#### **1.3.4. Alcohol consumption from the ecological perspective**

The above three themes of alcohol consumption research indicate that alcohol consumption and drinking behaviours (either heavy or moderate drinking) are influenced by a wide range of interrelated factors at various levels, aligning with an ecological framework of health behaviours. The ecological framework refers to an investigation of

interrelations between human behaviour and the surroundings (McLeroy et al., 1988; Sallis et al., 2008). Adopting this framework in the context of alcohol use, Sudhinaraset et al. (2016) propose that “individuals are nested within their microsystem (their home, work, and school environments), which is nested itself within the larger community” and “macro-level factors [...] may influence family and peer network attitudes and norms, which ultimately affect individual attitudes and behaviors” (p. 36). In social marketing research, the ecological framework has also been increasingly proposed (Brennan et al., 2016) and applied (Carins & Rundle-Thiele, 2014; Thompson et al., 2017) to address wicked problems. Therefore, this framework offers a potentially useful lens for understanding moderate drinking behaviour.

## **1.4. Drinking Cultures**

Alcohol consumption occurs within and is inevitably influenced by cultural contexts. Thus, drinking cultures offer important contexts for understanding drinking behaviours. It can be seen that the majority of alcohol research is oriented at the individual level, and undertaken in Western and industrialised countries commonly characterised by heavy drinking cultures such as the US, UK, Australia and New Zealand. The disproportion of individual-oriented research in a similar cultural context indicates that the influence of drinking cultures or comparisons of drinking behaviours between drinking cultures is under-researched. It is argued that improved understandings of drinking behaviours in different drinking cultures can extend knowledge in the field and offer lessons for countries or drinking cultures to learn from each other in tackling a global health issue – alcohol problems.

### **1.4.1. Alcohol use across countries and the definition of drinking cultures**

Research and statistics show that alcohol use varies substantially across countries and/or regions (Kuntsche et al., 2015). According to the WHO (2018), alcohol consumption is highest in high-income countries, or North America and Europe regions. The differences in alcohol consumption and drinking patterns across countries suggest the existence of different drinking cultures at a macro level and its potential influence on the drinking behaviour of individuals within the cultures (Savic et al., 2016).

Within alcohol research literature, discussion on drinking culture has focussed much on national drinking cultures, with the nation or society as a whole being the cultural entity of concern and the emphasis being on drinking patterns and intoxication (Savic et al., 2016). In this regard, there have traditionally been many drinking typologies proposed to categorise and compare drinking cultures. For example, there exists a distinction between northern European cultures (featuring less frequent drinking, but excessive drinking on particular occasions), and southern European cultures (featuring frequent drinking of moderate amounts of alcohol often accompanying meals and wine) (Kuntsche et al., 2015). Amongst the available drinking typologies, the wet/dry drinking cultures may be the most widely-used to examine cross-cultural differences in drinking. Although the distinction between wet and dry drinking cultures is losing its efficacy to reflect sophisticated and nuanced diversity in drinking behaviour due to contemporary changes in alcohol consumption on the global scale (Gordon et al., 2012), the metaphors of “wet” and “dry” are argued to be useful to differentiate drinking cultures in the most simple and general/broad manner, as well as to capture the core meaning of heavy and moderate drinking, respectively. For the purpose of this research, wet drinking cultures refer to societies that have heavy drinking traditions. By contrast, dry drinking cultures are defined as societies that have moderate drinking traditions. Specific differences in the characteristics of wet and dry cultures defined in this thesis are presented in Table 1.2. At a macro/societal level, statistics and research show that wet drinking cultures are more common in Western and developed countries (WHO, 2018), countries with more gender equality (Rahav et al., 2006), or cultures characterised by individualism/independent self-construal (Arli et al., 2016; Zhang & Shrum, 2009).

Table 1.2. Characteristics of Wet versus Dry Drinking Cultures.

Characteristics	Wet culture	Dry culture
Alcohol consumption	High (Above the world average)	Low (Below or at the world average)
Drinking frequency	Higher	Lower
Heavy episodic drinking	Higher prevalence	Lower prevalence
Abstinence	Low prevalence	High prevalence
Preferences of alcoholic beverages	Higher alcohol content (e.g., spirits, wine)	Lower alcohol content (e.g., beer)
Practices of moonshining	Low	High
Alcohol harms	More chronic harms (e.g., liver cirrhosis)	More acute harms (e.g., accidents)
Examples	New Zealand	Vietnam

Source: Adapted from Room and Mitchell (1972)

The current research compares two different drinking cultures, namely New Zealand (as a representative for wet cultures) and Vietnam (as a representative for dry cultures). While the conceptualisation of wet and dry drinking cultures is helpful to consider cultural differences in alcohol consumption at a broad level, it does not afford to offer a detailed and nuanced picture of drinking behaviours and changes in alcohol consumption over time (Perrino, 2017). For example, it does not provide information on the level and prevalence of drinking, or describe alcohol use by different groups and in different time periods within the cultures. Therefore, the following sections provide overviews of drinking profiles of the two countries, New Zealand and Vietnam. It should be noted that these two countries of interest also differ by traditional values (e.g., western/eastern, or individualism/collectivism) and socioeconomic development level.

#### 1.4.2. Country profile of a wet drinking culture (New Zealand)

Table 1.3 presents some socioeconomic statistics for comparing country profiles of New Zealand and Vietnam. With a relatively small population of nearly 5 million inhabitants and a high concentration of urban population (86.5%), New Zealand is a developed country in the Western Pacific region of the WHO. It is characterised by a high-income economy (with a national per capita income of more than \$40,000 PPP [Purchasing power parity]), a high-quality education, and a low gender inequality. Culturally, New Zealand is a typical Western country with a high individualism value (79 over 100), and arguably, New Zealand has many features associated with a wet drinking culture.

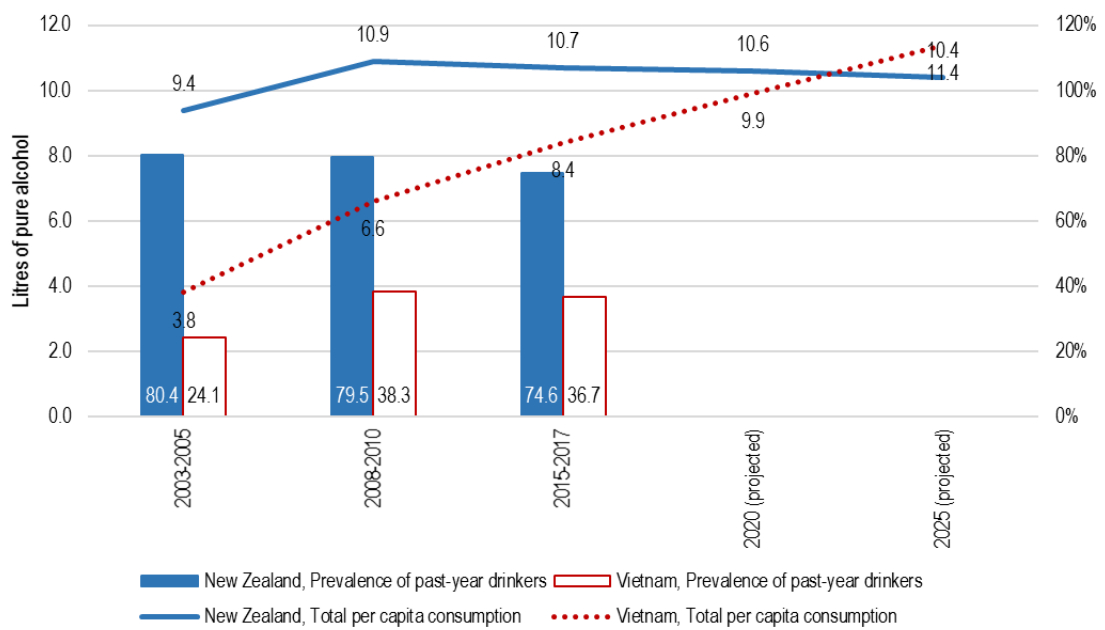
Table 1.3. Some Statistics of New Zealand and Vietnam.

Factor	Unit	Year	New Zealand	Vietnam	Source
Population	Inhabitant	2017	4,793,900	95,540,800	World Bank (n.d.)
Population in urban areas	%	2017	86.5	35.2	UNDP (n.d.)
Education index	0-1 scale	2017	0.917	0.626	UNDP (n.d.)
Gender inequality index	0-1 scale	2017	0.136	0.304	UNDP (n.d.)
GDP per capita PPP	Current International \$	2017	40,747.60	6,790.20	World Bank (n.d.)
Cultural traits: Individualism	0-100 scale		79	20	Hofstede (n.d)

Drinking patterns in New Zealand confirm its wet drinking culture. In the WHO database (see Figure 1.1 and Figure 1.2), New Zealand consistently records a high prevalence of drinkers (75%) and a high per capita alcohol consumption amongst people aged 15 or more (more than 10 litres of pure alcohol per annum) over the years. The prevalence of

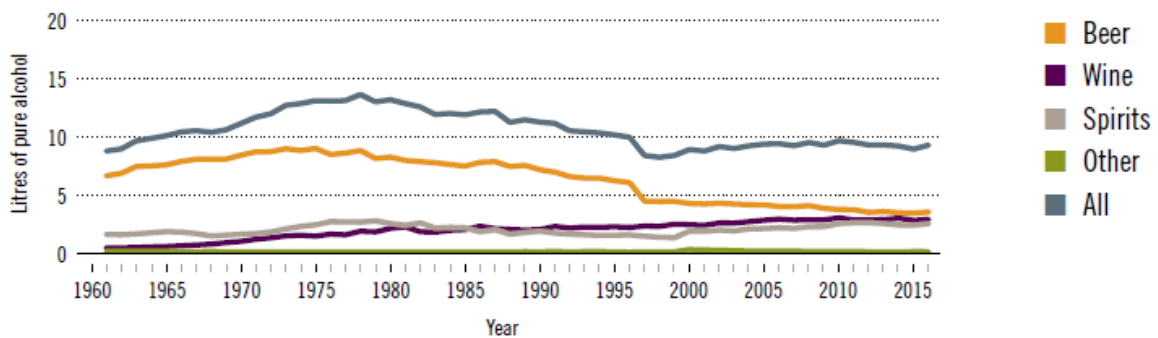
past-month heavy episodic drinking (i.e., consuming 6 drinks or more per occasion) in New Zealand is also high at 35.2%, and it reaches 42.9% in the drinker population. Regarding preference of alcohol beverages, New Zealanders consume a variety of beverages with high alcohol content (such as wine 33.4% and spirits 28.9%) and those with low alcohol content (such as beer 37.4%) (see Figure 1.3).

Figure 1.1. Total Per Capita Alcohol Consumption (in Litres of Pure Alcohol) and Prevalence of Drinkers in New Zealand and Vietnam.



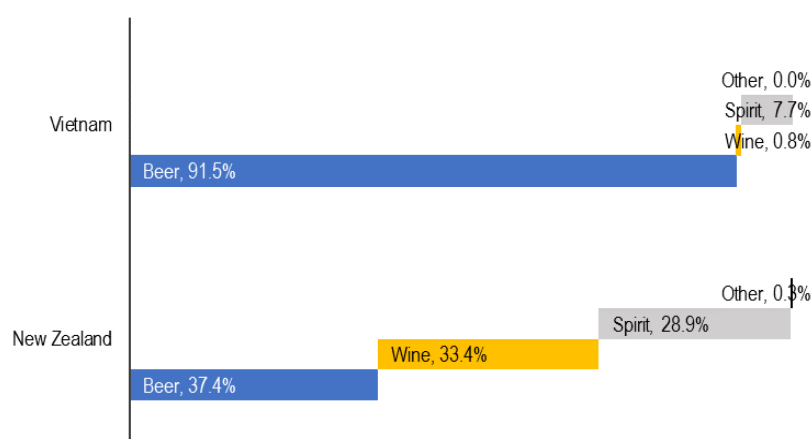
Source: WHO (2011, 2014, 2018)

Figure 1.2. Recorded Alcohol Per Capita (15+ years) Consumption in New Zealand, 1961-2016.



Source: WHO (2018)

Figure 1.3. Share of Alcoholic Beverages by Recorded Alcohol Consumption in New Zealand and Vietnam.



Source: WHO (2018)

Table 1.4. Drinking Patterns and Alcohol Problems in New Zealand and Vietnam.

	Unit	New Zealand			Vietnam		
		Total	Male	Female	Total	Male	Female
Total per capita consumption (15+ years)	litres of pure alcohol	10.7	17.2	4.6	8.4	14.5	2.5
Total per capita consumption amongst drinkers (15+ years)	litres of pure alcohol	13.7	19.4	6.9	21.1	26.9	9.6
Drinkers past 12 months	%	74.6	85.1	64.8	36.7	50.0	23.9
Abstainers past 12 months	%	25.4	14.9	35.2	63.3	50.0	76.1
Heavy episodic drinking past 30 days	%	35.2	53.1	18.3	14.4	24.6	4.4
Heavy episodic drinking past 30 days amongst drinkers	%	42.9	58.0	24.4	39.3	50.2	17.7
Alcohol dependence	%	1.3	1.9	0.9	2.9	5.9	0.1
Alcohol-attributable fractions of Liver cirrhosis	%		74.5	61.2		70.0	39.2
Alcohol-attributable fractions of Road traffic injuries	%		46.6	28.2		32.4	19.6
Alcohol-attributable fractions of Cancer	%		6.6	3.1		4.7	2.0

Source: Global Information System on Alcohol and Health (GISAH) data 2015-2017 (WHO, n.d.)

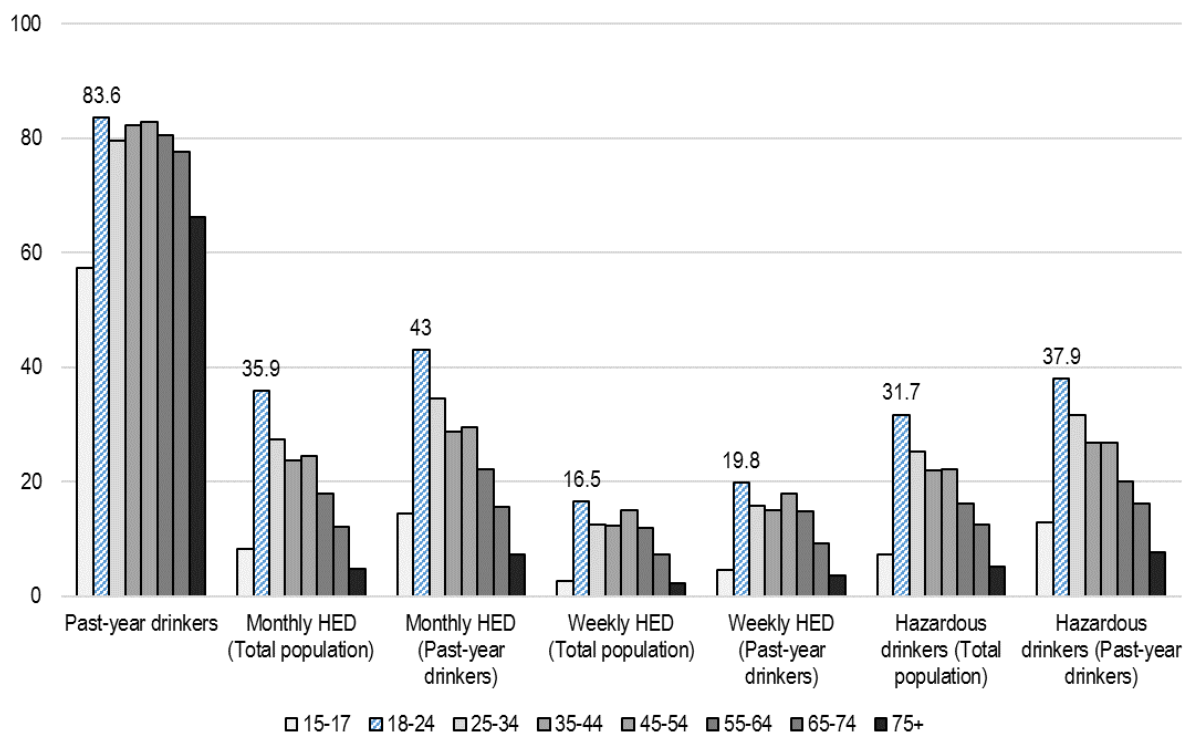
There are also gender gaps in alcohol consumption in the country (see Table 1.4). Particularly, the ratio between males and females is 1.3 for the prevalence of past-year drinkers, 3.7 for the total per capita alcohol consumption, and 2.9 for the prevalence of past-month heavy episodic drinking. As a result, New Zealand men are subject to a higher



prevalence of alcohol-related harms. For example, 74.5% of liver cirrhosis, 46.6% of road traffic injuries, and 6.6% of cancer amongst men can be attributable to alcohol, while the attributable alcohol fractions of these problems amongst women are 61.2%, 28.2%, and 3.1%, respectively (see Table 1.4). Alcohol dependence is also a problem for 1.9% of men, compared to 0.9% of women (see Table 1.4).

Statistics on alcohol consumption by age offer some implications for research on young people or student drinking. The most recent New Zealand Health Survey conducted by New Zealand Ministry of Health (2019a) reveals that the age group of 18-24 registers the highest number in many alcohol indicators such as past-year drinkers, prevalence of frequent heavy episodic drinking and prevalence of hazardous drinkers compared to other age groups (15-17, 25-34, 35-44, 45-54, 55-64, 65-74 and 75+) (see Figure 1.4). It suggests that young people aged 18-24 are particularly the most at-risk group with regards to alcohol problems in New Zealand.

Figure 1.4. Drinking Patterns by Age in New Zealand.



Note: HED = Heavy episodic drinking

Source: New Zealand Ministry of Health (2019a)

Given harms associated with wet drinking cultures, New Zealand government has written the National Drug Policy 2015-2020 (New Zealand Ministry of Health, 2015) to guide, influence and support decision-making by local services, communities and non-government organisations. The goals of the policy are to minimise alcohol and other drug-related harm and promote and protect health and wellbeing. Moreover, based on the key results of the New Zealand Health Survey, New Zealand Ministry of Health (2019b) has outlined a number of current approaches employed to prevent and reduce hazardous drinking as follows:

- strengthening regulations regarding the availability of alcohol (e.g., trading hours, licensing, promotion and supply of alcohol through the Sale and Supply of Alcohol Act 2012);
- strengthening regulations regarding drink driving (e.g., reducing the maximum driving blood alcohol limit);
- supporting community actions for resilience building (e.g., Community Action Youth and Drugs);
- providing and expanding services such as primary care and specialist services, school-based health services, and self-help services (e.g., the Alcohol Drug Helpline website);
- running national social marketing campaigns to raise awareness about alcohol harms (e.g., “Say Yeah, Nah” campaign) (Health Promotion Agency, n.d.).

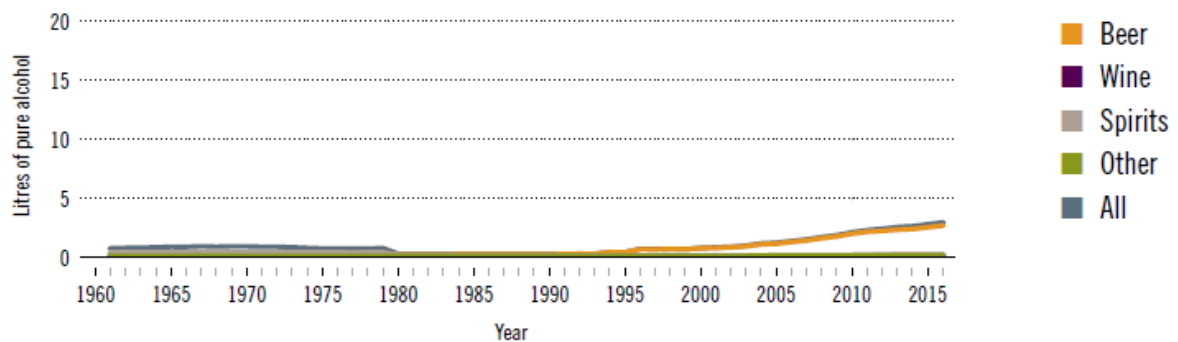
Compared to the global strategy to reduce the harmful use of alcohol suggested by WHO (2010), New Zealand seems to pay less effort on reducing demand through taxation and pricing strategies and regulating the marketing of alcoholic beverages.

### **1.4.3. Country profile of a dry drinking culture (Vietnam)**

In contrast to New Zealand, Vietnam is a developing country in the Western Pacific region of the WHO. Table 1.3 shows that Vietnam has a large population of more than 95 million inhabitants, of which 35.2% stay in urban areas. With a per capita income of \$6790 PPP, Vietnam is regarded as a low-middle income country. Compared to New Zealand, Vietnam is also less advanced in education, and gender equality. The country has a low individualism value (20 over 100), which is typical of an Eastern culture. At the macro level, these socioeconomic characteristics of Vietnam are likely to link to a dry drinking culture.

Based on the WHO statistics (see Figure 1.1 and Figure 1.5), it can be seen that Vietnam is traditionally a dry drinking culture. In this country, the proportion of abstainers has consistently remained relatively high (more than 60%) over the years. Regarding alcohol consumption, per capita alcohol consumption of Vietnamese was below or at the world average (about 6 litres of pure alcohol per annum) before 2010. However, it has been increasing rapidly during the past three decades (from 3.8L during 2003-2005, to 6.6L during 2008-2010 and 8.4L during 2015-2017), and is projected to surge to 9.9L in 2020 and 11.4L in 2025 (WHO, 2014, 2018). Therefore, there is potential that Vietnam will catch up with or even exceed the consumption level of some wet drinking cultures in the future. Beer, a low alcohol content beverage, is one of the most preferred alcoholic beverages amongst Vietnamese consumers, making up 91.5% of recorded alcohol consumption and followed by spirits (7.7%) and wine (0.8%) (see Figure 1.3). Another data source (Luu & Nguyen, 2018) indicates that homemade spirit is also the preferred alcohol with a prevalence of use of 78.4%, which resonates with the high unrecorded alcohol consumption in Vietnam.

Figure 1.5. Recorded Alcohol Per Capita (15+ years) Consumption in Vietnam, 1961-2016.

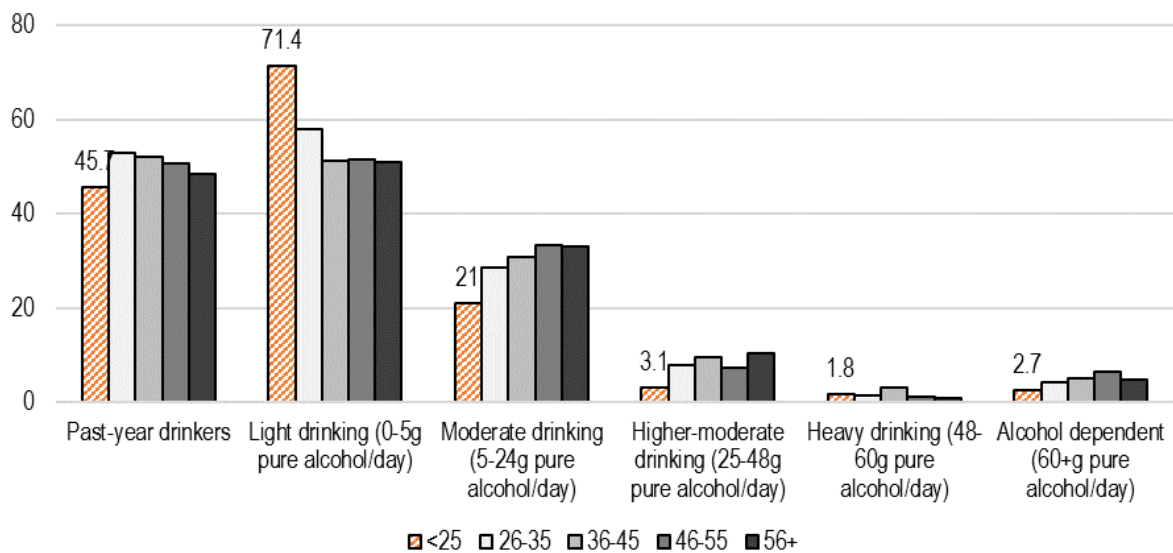


Source: WHO (2018)

The gender gaps in alcohol consumption in Vietnam are larger than those in New Zealand (see Table 1.4). Particularly, Vietnamese men are 2.1 times higher to be past-year drinkers, 5.8 times higher in the total per capita alcohol consumption, and 5.6 times higher in past-month heavy episodic drinking than Vietnamese women. Therefore, the alcohol attributable fractions of liver cirrhosis, road traffic injuries, and cancer, and the prevalence of alcohol dependence amongst men (70%, 32.4%, 4.7%, and 5.9% respectively) are higher than amongst women (39.2%, 19.6%, 2%, and 0.1% respectively). In general, these alcohol-related harms in Vietnam are less prevalent than in New Zealand.

Alcohol consumption in Vietnam has not received much attention from research. However, there is a recent national survey on alcohol consumption in Vietnam (SURA) conducted by the Institute for Population and Social Studies (IPSS) of the National Economic University, with technical and financial support from the International Alliance for Responsible Drinking (IARD) in 2015 (Luu & Nguyen, 2018). Findings from this SURA survey show that Vietnamese drinkers consume an average of 14.7g and a median of 3.7g of pure alcohol in a day, indicating the proliferation of light and moderate drinking in Vietnam. Particularly, the prevalence of light and moderate drinkers in Vietnam are 54.4% and 30.7%, respectively.

Figure 1.6. Drinking Patterns by Age Groups in Vietnam.

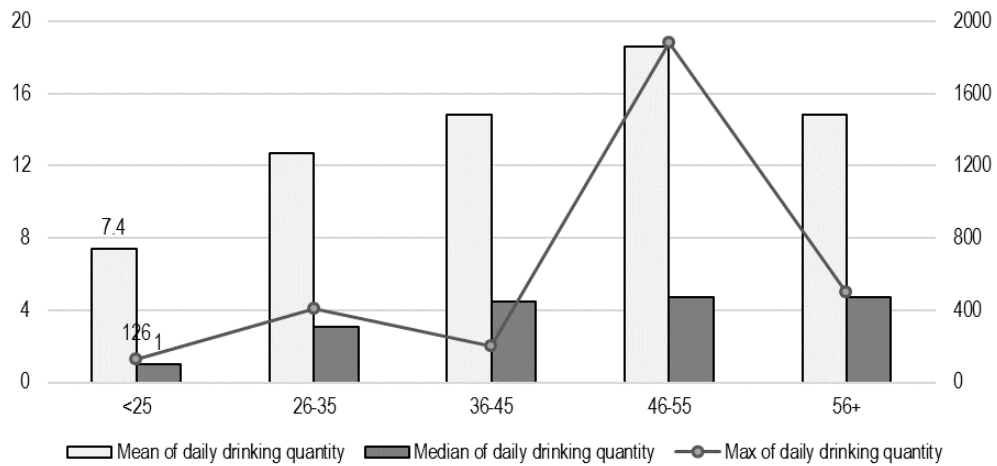


Source: Luu and Nguyen (2018)

Also from this SURA survey (Luu & Nguyen, 2018), there appears a general relationship between age groups and drinking patterns in Vietnam, such that when the age increases, the prevalence of light drinking decreases and the prevalence of moderate and heavy drinking increases (see Figure 1.6). Similarly, the average drinking quantity in a day also increases by ages (see Figure 1.7). Particularly, the prevalence of drinkers is lowest in the age group of under 25. When drinking, most people aged 25 years or younger engage in light drinking (71.4%). On average, they consume 7.4g of pure alcohol in a day. Moreover, the proportion of drinkers has a positive relationship with education level and income level. The occupations with the highest proportion of drinkers are labour workers (e.g., motorbike taxi, street vendors) and office workers (70%). These characteristics imply that

young people, including university students, are not the most at-risk group with regards to alcohol problems in Vietnam. In fact, people between 36 and 55 years of age are the heaviest alcohol consumption group.

Figure 1.7. Daily Drinking Quantity (in Grams of Pure Alcohol) by Age Groups in Vietnam.



Source: Luu and Nguyen (2018)

Regarding alcohol policies, the Vietnamese government is in the process of drafting the national alcohol policy. In general, alcohol policies and interventions in Vietnam are less strict and comprehensive compared to New Zealand. According to a Vietnamese Ministry of Health’s (2018) report, the current alcohol policies and regulations focus on restricting the supply side (i.e., production and sales of alcohol products), rather than on reducing demand and preventing alcohol harms. Most regulations (e.g., licensing and advertising restrictions) are applied to spirits only, especially strong spirits (with alcohol strength 15% or more); whereas beer, the most consumed alcoholic beverage in this country, is rather liberally marketed. The report also offers comments on other aspects of legislations to prevent alcohol harms in Vietnam. Although the government impose a special tax on alcoholic products (65%), the retail prices of these products are still affordable to many buyers, even to the low socio-economic groups. Education and raising awareness of alcohol harms are not well promoted, except for the promotion and ban of not drink driving to ensure traffic safety. Moreover, alcohol control in Vietnam has drawbacks or inadequacy in the following areas: alcohol availability/accessibility and demand control (e.g., health warning, alcohol display, alcohol sponsorship, places, time and density); financial support; community engagement; services and treatment; and punishment to the violations (Vietnamese Ministry of Health, 2018).

#### 1.4.4. Student drinking subculture and its consequences

To capture the multifacetedness of the concept and cultural entities at both macro and micro level, Savic et al. (2016) defined drinking cultures as follows:

“Drinking cultures are generally described in terms of the norms around patterns, practices, use-values, settings and occasions in relation to alcohol and alcohol problems that operate and are enforced (to varying degrees) in a society (macro-level) or *in a subgroup within society (micro-level)*. Drinking culture also refers to the modes of social control that are employed to enforce norms and practices” (p. 280).

Accordingly, as with the general culture concept, drinking cultures can be understood as containing drinking subcultures. One way to consider drinking subcultures is to look at the differences in alcohol use by generations or populations within societies (e.g., ethnic groups). This thesis focuses on an important population within drinking cultures, namely university students, and thus, student drinking culture.

When it comes to alcohol, young people, particularly university students, generally constitute an important subject/population for alcohol policies and interventions to address alcohol problems. It can be explained by their development characteristics. Adolescence and early adulthood are the prime time for people to start drinking. Often times, this life stage is when individuals become independent and move away from family control. They mostly experience identity exploration, instability, self-focus, feeling in-between and biased optimism, which may have implications for alcohol use and misuse (Arnett, 2005). It is argued that experiences with drinking in early years crucially determine long-term outcomes in later life (Muli & Lagan, 2017). Hence, research attention directed towards this population has important implications for achieving long-term benefits in alcohol control. The ecological framework of human development also acknowledges changes when human beings develop from birth through to adulthood, and the ongoing impact of historic events on them, reflecting the chronosystem of the human behaviour ecology (Bronfenbrenner, 1986). In other words, the influences of individual behaviours should change over time. Therefore, drinking subcultures of students may either coincide with drinking cultures of the general population, or be incongruent with the general drinking culture to reflect the unique development characteristic from generation to generation (Järvinen & Room, 2007). This thesis chose to focus on a critical time period over the life course of individuals’ drinking behaviours – emerging adulthood, particularly

university student time. To give an overview of student drinking, the next sections describe general characteristics of alcohol consumption and its consequences amongst this population.

#### **1.4.4.1. Characteristics of student drinking**

Previous studies have shown the high prevalence of drinking and heavy drinking practice in university settings in many countries, especially those in developed countries or in North America, Europe, and Australia (Dantzer et al., 2006; Karam et al., 2007; Wicki et al., 2010). For example, the majority of college students in the US drink alcohol (79%) and have been drunk (65%), and student drinkers tend to drink heavily on each occasion (33% having heavy episodic drinking at least once in the past two weeks) (Schulenberg et al., 2018). In these contexts, university students have also been shown to drink more in quantity, and drink more harmfully than their non-student peers (Dawson et al., 2004; Gill, 2002; Kypri et al., 2005a; White & Hingson, 2014). However, little research attention is paid to alcohol consumption amongst university students in low, middle-income and emerging economy countries (Dantzer et al., 2006). With an international focus, a review of student alcohol consumption by Karam et al. (2007) shows that the prevalence of hazardous drinking in Australasia, Europe and South America seems to be similar to that in North America, but a lower prevalence in Africa and Asia. In general, evidence converges that tertiary students are a high-risk population with respect to drinking problems that warrant concerns for public health (Karam et al., 2007; Kypri et al., 2009).

#### **1.4.4.2. Consequences of heavy drinking amongst university students**

Using aggregated data from four waves of the Harvard School of Public Health College Alcohol Study (1993-2001), Weitzman and Nelson (2004) identified the consumption-harm relationship in university drinking in the US, such that drinking-related harms increased as student's alcohol consumption increased. Given the high prevalence, negative consequences associated with heavy drinking are elevated in university students in many countries (Karam et al., 2007). Research to date has shown a lot of negative consequences associated with students' risky drinking. Generally, these negative outcomes range from harms to student drinkers themselves (i.e., first-hand effects), to harms to others (i.e., second-hand effects).

Research evidence shows that excessive drinking might lead to significant next-day impairment in students' physical function (sleep, refreshed, tiredness, physical illness), cognitive function (concentration problems, workload management), and emotional function (stress) while low-risk drinking does not (Polak & Conner, 2012). Such function impairments could result in adverse and intermediate consequences to students' academic and non-academic lives.

With respect to academic problems, students have reported their deficit in study concentration/attention, class attendance, and assignment completion, and eventually their erosion in learning performance or grades due to alcohol drinking (Hallett et al., 2014). The risky alcohol consumption also goes along with students' probability of academic attrition and early dropout from university (Jennison, 2004). Regarding non-academic problems of hazardous drinking, university students in many countries suffer from serious health risks, such as drink-driving and other substance use (Karam et al., 2007). Hangovers, blackouts, emotional outbursts, vomiting, arguments and drink-driving were most frequently reported amongst Australian students (Hallett et al., 2014). Binge drinking is regarded as the leading contributor of injury and death amongst university students (Hingson et al., 2009; Wicki et al., 2010). In the long term, binge drinking patterns during the collegiate years potentially connect to alcohol dependence and abuse (Jennison, 2004; Karam et al., 2007), and less occupational prospects (Jennison, 2004), regardless of gender.

In addition to the first-hand effects of risky drinking, Wechsler et al. (1994) list numerous harms that a person experiences in relation to other's drinking. They include being insulted or humiliated; serious argument or quarrel/verbal abuse; being pushed, hit, or assaulted; property damage; having to take care of a drunken student; studying/sleep interruption; unwanted sex; being the victim of sexual assault or date rape. In university settings, previous research supported that students, both drinkers and non-drinkers, reported these second-hand effects resulting from other students' binge drinking (Wechsler et al., 1996; Wechsler et al., 1995). Testing on a fraternity male student sample, Trockel et al. (2008) measured the perceived second-hand consequences as a four-dimension construct of (1) noise disruptive of sleep and study, (2) violence, (3) sexual assault, and (4) property damage. Later, some other problems were added, such as driving after drinking and intimidation of international students (Mikhailovich et al., 2011). Students' binge drinking also has negative impacts on neighbour residents who live near



universities or campuses. The residents reported experiencing the noise and disturbances, vandalism, drunkenness, vomiting and urination from drunken students (Wechsler et al., 2002).

#### **1.4.5. Cultures and behaviours**

Culture has been studied in many ways across various disciplines, and there is a debate around the meanings of culture. Culture, on the one hand, is defined as the shared ideas amongst members of a society that shape one's behaviours or structure one's perception of the world (Hillier, 2006). On the other hand, culture is also shaped by behaviours, and cultural patterns can be observable in the realm of social action (Hillier, 2006). As such, it can be seen as the aggregation and collective of individual behaviours. According to Adler et al. (1989), "culture influences people's values, attitudes, and behaviours, which in turn collectively define their culture" (p. 299). Simply put, while we are actors in our culture and affect it, we are shaped by our culture (Hillier, 2006). The circular nature of culture makes it difficult to separate the culture from the elements that define it (such as behaviours, values, and attitudes).

Similarly, in terms of drinking cultures, while the wet/dry culture is characterised by the collective pattern of drinking behaviour of members within a social group, drinking behaviour of each member is also influenced by the drinking culture in which that member locates. People in different cultures perceive things through different frames that reflect their world views and concept of social order (Hillier, 2006). These frameworks can influence the allocation of personal responsibility to drinking. For example, in many wet cultures, self-controlling alcohol use can be hard for individuals because drinking is strongly regulated by strong social norms of heavy drinking. In this case, the wet drinking culture may restrain personal responsibility for drinking (Szmigin et al., 2011). To change individual's behaviours, it is a prerequisite to change the culture. However, in other cultures where norms about drinking are more relaxed, drinking behaviours can be more controlled by individuals. When people continually change their drinking patterns, collectively, it becomes a new shared practice and reshapes the drinking culture, and the cycle begins (Adler & Gundersen, 2008). Therefore, it is also difficult to separate drinking cultures from drinking behaviours.

Despite the circular nature of culture, in this thesis, I particularly looked at how drinking cultures influence drinking behaviours to align with the ecological framework. According

to the framework, individual behaviours are the outcome of interactions between multiple layers of influence. Here, the drinking culture, or cultural contingencies of reinforcement, can be considered as a key causal variable for health-related behaviour (Hovell et al., 2002).

## **1.5. Justifications for the Research**

Departing from dominant research, as well as aligning with recent emerging research in the field of alcohol social marketing, this thesis focuses on understanding moderate drinking amongst university students from an ecological perspective in different drinking cultures. The following sections summarise the key and relevant points in alcohol social marketing literature.

### **1.5.1. Why should moderate drinking behaviour be considered for alcohol social marketing?**

Alcohol is a paradoxical product which contains both harms and benefits to those consuming it depending on the dose/intake. On the one hand, heavy alcohol consumption is strongly associated with negative health consequences (both physical and mental) such as cancer, diabetes, infectious diseases, neuropsychiatric diseases, cardiovascular disease, liver and pancreas disease, and injuries (Rehm, 2011). Excessive alcohol use is also connected to social harms to drinkers and to others (e.g., drink driving, violence, sexual assault, unemployment and criminal convictions), resulting in other social, legal, and monetary costs (Rehm, 2011). On the other hand, moderate alcohol consumption is associated with some psychological benefits such as: subjective health/well-being, stress and depression reduction, mood enhancement, enhanced sociability and social integration, improved long-term cognitive functioning and work performance (Peele & Brodsky, 2000). Despite current debates in the medical field, moderate drinking is shown to potentially provide cardiovascular benefits to drinkers (Klatsky, 1999; Ronksley et al., 2011; Thompson, 2013).

Of interest to social marketing, it is vital to understand and change drinking behaviours to tackle alcohol problems. The current knowledge of alcohol consumption has centred on heavy drinking behaviour. Consequently, several alcohol interventions are informed by an avoidance approach (i.e., how to reduce heavy drinking behaviour). Given that the

alcohol problems are still persisting today, it indicates a need to look for new and fresh ideas to support and complement the current efforts in tackling the alcohol problems.

It is argued that moderate drinking and heavy drinking, albeit reflecting a continuum of alcohol consumption from a low to a high level, are *not* logically opposite drinking behaviours. In other words, they are two distinct consumption entities which may be influenced by different processes. Given limited attention paid to moderate drinking, this thesis advocates the adoption of the resilience approach in alcohol consumption research. Particularly, it advocates that expanding knowledge on moderate drinking (in relation to heavy drinking), and taking a promotion approach (i.e., how to encourage moderate drinking behaviour) in alcohol social marketing can offer new opportunities and complementary ways for addressing alcohol problems. Similar arguments and approach have been made in other behavioural domains such as body image (moving from reducing body dissatisfaction/disordered eating towards promoting positive body image) (Sundgot-Borgen et al., 2018).

### **1.5.2. Why should an ecological approach be considered for understanding alcohol consumption?**

Current alcohol research is criticised for relying too much on behavioural models at the individual level, and disregarding the social nature of drinking. Also, conventional alcohol social marketing campaigns predominantly focus on individual responsibility, and as such, they may be dismissed as irrelevant. Moreover, factors influencing drinking behaviours have been examined relatively independently and fragmentally in previous research, making it hard to evaluate the relative importance of the factors collectively to identify the most necessary targets for interventions. Therefore, a broader and more holistic perspective to understand alcohol consumption is needed.

In response to this criticism in alcohol social marketing, this thesis advocates the adoption of the ecological framework to examine drinking behaviours, particularly moderate drinking, taking into account the influence of social and broader environments on the behaviour. Aligning with the move towards more upstream social marketing, the ecological framework of health behaviours is argued to be an appropriate theoretical lens to integrate different views and approaches to social marketing (Wood, 2016b). It is useful to inform where and when interventions should be targeted. The ecological model has

been increasingly applied in social marketing in various domains such as obesity, nutrition, and physical activity (Wood, 2016b).

The ecological perspective is also an appropriate and useful theoretical lens for viewing moderate drinking as a form of resilience within drinking cultures since this comprehensive perspective underlines the concept of resilience in social marketing (Wood, 2019). For example, de Visser et al. (2015) argue that the resilience framework “highlights the importance of developing not only individual capacities, but also broader protective mechanisms including micro- and macrosocial support for non- or moderate drinking” (p. 351).

### **1.5.3. Why should a cultural comparison of moderate drinking be considered?**

Broadly, research shows that behaviour is underpinned by a wide range of variables which differ across cultures. Within the ecological framework, culture is also one of the broadest and pervasive factors influencing behaviours. The alcohol literature has also shown some factors that have risk and protective effects on moderate drinking. However, empirical evidence of these influences is usually bounded within one country/university setting. In fact, alcohol social marketing research is predominantly conducted in wet drinking cultures such as the US, UK, and Australia (Kubacki et al., 2015). This research practice may limit our understandings of the inevitable influence of culture on moderate drinking.

A focus on alcohol resilience in wet drinking cultures may also inhibit the exploration of other possible mechanisms of moderate drinking, which may be salient in dry drinking cultures. It is argued that insights from dry cultures or comparisons between dry and wet cultures may be able to reveal protective factors for moderate drinking, which are in place in dry cultures but be hidden in wet cultures. Moreover, moderate drinkers or people from moderate-drinking cultures can be argued to be “experts” in moderate drinking who may offer valuable insights to inform effective interventions that encourage a safer and healthier drinking environment (de Visser et al., 2015). Furthermore, most social marketing efforts to address alcohol problems to date have been undertaken in the US (International Alliance for Responsible Drinking, 2017). Therefore, the extent to which alcohol social marketing can be transferred across cultures is still questionable. For these reasons, this thesis advocates a cross-cultural comparison approach between a wet and dry drinking culture to enhance understanding of moderate drinking and to offer lessons for alcohol social marketing.

New Zealand and Vietnam were chosen as representatives for wet and dry drinking cultures in this thesis. It should be noted that these two specific countries differ not only in their drinking characteristics but also their cultural traits/orientations (western versus eastern culture, or individualism versus collectivism) and socioeconomic development (rich versus poor country). This selection of research contexts seems reasonable, given previous research showing that wet drinking cultures tend to link to higher socioeconomic status, higher income and independence/individualism values. Furthermore, these two countries locate in a strategic region (i.e., Western Pacific region) in which WHO (2018) calls for concerted actions to reverse, or at least stabilise, the high level and increasing trends in alcohol consumption. As such, a comparison of drinking cultures between these two countries can contribute to addressing the WHO's target of a 10% reduction in the harmful use of alcohol worldwide by 2025 (WHO, 2018).

#### **1.5.4. Why should university students be a focus?**

University students are an important subject of alcohol interventions and policies due to their development characteristics and prevalence of alcohol use and alcohol problems within this population. In fact, the majority of alcohol social marketing studies also focus on this special population (Kubacki et al., 2015). From a macro perspective, tertiary students are considered as the future labour workforce, entrepreneurs or policymakers who can determine a country's development (Orme & Coghill, 2014). Therefore, a higher education contaminated by intoxication might hinder the prosperity of the country. At a micro level, individuals' current health behaviours seed future health outcomes. Heavy drinking patterns during young adulthood profoundly influence young adults' long term well-being, and also that of the next generation (Muli & Lagan, 2017). Biologically, adolescents and emerging adults are subject to the vulnerability of engaging in addictive behaviours (such as alcohol drinking) due to the imbalance between the impulsive and reflective system in their brains (Merrill & Carey, 2016). As a result of their neurocognitive development, young people or students often opt for short-term rewards (i.e., social benefits of drinking) over long-term goals (i.e., preventing health consequences of drinking), thus increasing the risk of engaging in risky behaviours (such as heavy drinking). Given that many university students drink heavily and experience numerous negative consequences, they deserve attention within alcohol research. As argued by Kilmer et al. (2014), university students are "no longer simply readily accessible research participants" but rather have become "the focus of research" (p. 28).

### 1.5.5. A notion of gender-specific drinking

Throughout the world, males are more likely to drink, drink more frequently, consume more alcohol, and have more alcohol-related problems than females (Wilsnack et al., 2005). Likewise, abstinence from alcohol is much more common amongst females than males (Wilsnack et al., 2005, 2009; Erol & Karpyak, 2015). It creates a universal gender gap in drinking (Holmila & Raitasalo, 2005). Furthermore, research suggests that factors influencing alcohol use and binge drinking behaviour are different for males and females. For example, males' drinking tends to be more influenced by positive alcohol expectancies and experiences, whereas females are more influenced by peer influences and negative emotions (Dir et al., 2017; Erol & Karpyak, 2015). Significant differences in the predictive patterns of drinking have also been found between men and women (Zimmermann & Sieverding, 2010). Therefore, understanding of alcohol consumption needs to take gender into consideration.

Recently, there is a notion that the gender gap in alcohol consumption is lessening, or there is a convergence in drinking patterns between males and females, since female drinking is now rising, and females initiate alcohol use earlier than ever before (Erol & Karpyak, 2015). It points to females as an important target for alcohol interventions and prevention. An international study of gender, culture, and alcohol use (GENACIS) finds that groups of women at increased risk for hazardous drinking include those with fewer social roles, and more highly educated women in lower-income countries (Wilsnack, 2012). Again, it indicates a need to emphasise gender-specific drinking in alcohol social marketing to create gender-informed interventions, especially drinking amongst female students.

Research has pointed out several reasons for the gender gap in drinking. Biologically, men and women differ in their absorption (e.g., volumes of body water) and metabolism of alcohol (Holmila & Raitasalo, 2005), thus effects from alcohol can be experienced differently between the genders. Due to their unique characteristics of neurobiological development (e.g., rates of neurobiological change, sensation seeking, inhibitory control, and stress reactivity), males and females also differ in their vulnerability to the negative consequences from drinking (Dir et al., 2017). Moreover, gender differences in drinking are culturally based, reflecting cultural expectations or changes on social conditions and gender roles (Wilsnack et al., 2005). As evidence, the size of the gender differences in drinking varies greatly across countries (WHO, 2018). For example, it seems that the

differences are more pronounced in Eastern countries compared to Western ones (Erol & Karpyak, 2015); or women in developed countries drink more than women in developing countries (Rehm et al. 2009). Research shows that alcohol use reflects gender role expectations (Wilsnack et al., 2005), which differ between societies (French et al., 2014). Hence, countries with the largest differences in gender roles are found to have the largest differences between men's and women's drinking (Wilsnack et al., 2000). In many countries, drinking behaviour is demonstrated as a symbol of masculinity, and a taboo/stigma for women (Wilsnack et al., 2005). It is possible that women in countries where the gender empowerment is low (such as Vietnam) are more susceptible to traditional expectations of their behaviour, thus limiting their drinking (French et al., 2014). The convergence in male and female drinking, as noted above, may coincide with the improvement in gender equality and empowerment (Bloomfield, Gmel, & Wilsnack, 2006; Gordon et al., 2012), as well as the economic development and the influence of global alcohol industry (Caetano & Laranjeira, 2006). As such, social and cultural factors should be considered for understanding gender differences in alcohol use.

Given that gender differences in drinking are socially and culturally bound, findings regarding gender-specific drinking in one culture should not be directly applied, or assumed to be same, in another culture. However, a study on gender differences in moderate drinking in a dry culture, such as Study 2 in this thesis, can be interpreted in the sense that experiences and information from a dry culture offer lessons for wet cultures to learn about how males and females moderate their drinking in a moderate drinking environment.

## **1.6. Research Objectives and Research Questions**

The overarching objective of this thesis is to expand our understanding of moderate drinking amongst university students from an ecological perspective in different drinking cultures. In particular, the thesis has three sub-objectives.

*Research objective 1 (RO1)* is to examine barriers to moderate drinking amongst university students in different drinking cultures. The following research questions were developed to address this sub-objective.

RQ1.1. What are students' perceptions of the barriers to moderate drinking?

- RQ1.2. Can the barriers be understood at multiple levels of influence, in line with an ecological framework?
- RQ1.3. What are the similarities and differences in students' perceptions of barriers to moderate drinking between a wet (New Zealand) and a dry (Vietnam) drinking culture?

*Research objective 2 (RO2)* is to examine facilitators of moderate drinking amongst university students in different drinking cultures. The following research questions were developed to address this sub-objective.

- RQ2.1. What are students' perceptions of the facilitators of moderate drinking?
- RQ2.2. Can the facilitators be understood in line with an ecological framework? If so, what is the relative salience of the facilitators at each level?
- RQ2.3. How do these perceived facilitators vary between a wet (New Zealand) and a dry (Vietnam) drinking culture?

*Research objective 3 (RO3)* is to examine factors associated with moderate drinking amongst university students within a dry drinking culture context. The following research questions were developed to address this sub-objective.

- RQ3.1. What factors at various (i.e., individual, social, and environmental) levels are associated with moderate drinking amongst Vietnamese students?
- RQ3.2. How do the factors associated with moderate drinking differ between male and female students in Vietnam?

The subsequent chapters in this thesis purposefully address these objectives and research questions. Particularly, each of the three objectives is addressed in three separate academic papers submitted for publications as outlined in the section "Outputs from the thesis" (p. vii).

## **1.7. Methodology**

This section introduces the research philosophy which guides the research design and research methods employed to address the research objectives.



### 1.7.1. Research paradigm

In social science, research paradigms are “systems of beliefs and practices that influence how researchers select both the questions they study and methods that they use to study them” (Morgan, 2007, p. 49). Paradigms are mainly characterised by their ontology (i.e., beliefs about the nature of reality/world), epistemology (i.e., beliefs about the nature of knowledge), and methodology (i.e., beliefs about how to gain the knowledge or the process of research) (Lincoln et al., 2011). This thesis adopted a research paradigm of pragmatism which embraces both positivist and constructivist worldview. Historically, there has been a clear distinction between positivism and constructivism in the research paradigm. The positivism philosophically assumes that there is a single real world, and knowledge about the world is objective and independent to researchers. Research within positivism thus generally uses quantitative methods or deductive approach to examine universal causal laws or hypotheses to explain phenomena under study. In contrast, constructivism believes in multiple realities which are constructed by humans, and as such knowledge about the world is subjective and dependent on researchers. Research adopting this viewpoint generally use qualitative methods or inductive approaches to explore phenomena interpretively and descriptively.

Although there has been discussion against the combination of these two dominated research paradigms due to their divergent underlying assumptions (Greene, 2007), pragmatism is considered as a bridge between the two, and is supported by many methodologists (Creswell, 2015; Creswell & Clark, 2018; Greene, 2007; Teddlie & Tashakkori, 2009). Particularly, it assumes that there is both a single real world (e.g., natural or physical world) and multiple constructed realities (e.g., social or psychological world). Knowledge can be objective or subjective as long as it is relevant and useful for fulfilling research objectives or addressing research questions at different research stages. The pragmatic paradigm is thus pluralistic and oriented towards “what works” and real-world practice (Creswell & Clark, 2018). Research in this paradigm follows a process of working back and forth between quantitative/deductive and qualitative/inductive approach.

Underpinned by a pragmatism research paradigm, this thesis employed a mixed method approach to address the research objectives or questions. Mixed methods research refers to “the type of research in which a researcher or team of researchers combines elements of qualitative and quantitative research approaches (e.g., use of qualitative and quantitative

viewpoints, data collection, analysis, inference techniques) for the broad purposes of breadth and depth of understanding and corroboration” (Johnson et al., 2007, p. 123). Similarly, Creswell and Clark (2007) define mixed methods as follows:

“Mixed methods research is a research design with philosophical assumptions as well as methods of inquiry. As a methodology, it involves philosophical assumptions that guide the direction of the collection and analysis of data and the mixture of qualitative and quantitative data in a single study or series of studies. Its central premise is that the use of quantitative and qualitative approaches in combination provides a better understanding of research problems than either approach alone” (p. 5).

Thanks to its flexibility and practicality, the mixed methods research has been increasingly adopted to solve practical research problems (Carins et al., 2016). This methodology is particularly appropriate to explore and understand complex behavioural issues such as drinking alcohol across multiple cultures. In social marketing, Grier and Bryant (2005) also argued for using mixed methodologies since the overreliance on any single method (e.g., focus group) can be problematic (e.g., misleading or missing important insights).

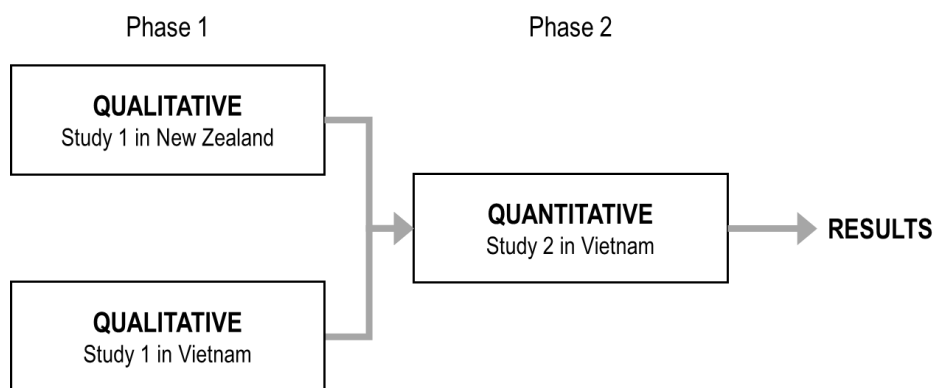
Since this thesis aims to explore determinants of, and cultural differences in moderate student drinking, a mix of both qualitative and quantitative methods provide the best tool to address the research objectives. The qualitative part is particularly useful for research in the exploratory stage (Creswell, 2014). It is also useful for making cross-cultural comparisons as it can account for the subjective views or perspectives of people from different cultural backgrounds (New Zealand vs. Vietnam, wet vs. dry drinking culture, developed vs. developing country), thus enhancing the contextualisation of information. Moreover, drinking behaviour in general, and moderate drinking in particular, is a socially and culturally constructed concept (Room, 2013; Social Issues Research Centre, 1998). Hence, an exploration of this phenomenon should deal with the subjectivity, which is a strength of qualitative methods. On the other hand, the quantitative part can be effective to assess the magnitude of cultural differences or similarities, and to evaluate the relative importance of the explored factors associated with moderate drinking. Another rationale that supports the adoption of a mixed methods approach in this thesis is that it allows having one method build on another. Given that moderate drinking is an understudied phenomenon, findings from an exploratory qualitative phase can help to inform the

development of the quantitative instrument by identifying relevant and important factors to study.

### 1.7.2. Research design

The focus of this thesis is to examine barriers to, and facilitators of, moderate drinking amongst university students in different drinking cultures. In this case, factors (barriers and facilitators) are not known, instruments are inadequate or unavailable, and there is not a well-established theory/model to guide the research. Therefore, this thesis employed a sequential exploratory design of mixed methods research which integrates two sources of data by connecting them (Creswell & Clark, 2018) (see Figure 1.8).

Figure 1.8. Research Design of This Thesis.



Particularly, the research was divided into two studies conducted in two separate phases. The first phase involved a qualitative study (Study 1), which explored students' perceptions of barriers to and facilitators of moderate drinking in two different drinking cultures. This was done by collecting qualitative data from a qualitative survey. Study 1 addresses RO1 (RQ1.1, RQ1.2, and RQ1.3) and RO2 (RQ2.1, RQ2.2, and RQ2.3) of the thesis. Inductive findings from the first study/phase were then used as inputs (i.e., selection of factors, and instrument development) to the deductive goals of the second study/phase (i.e., examining the relationships between factors at multiple levels of influence and student's intention to drink moderately). Study 2 utilised a quantitative survey to collect quantitative data for addressing RO3 (RQ3.1 and RQ3.2) of the thesis.

### 1.7.3. Research methods

This thesis used the survey method to collect both qualitative and quantitative data in the two phases. The survey involves “asking direct questions of respondents using closed-ended or open-ended formats or a combination of both” (Basil, 2017, p. 252). In social marketing research, surveys can be used to understand existing knowledge, attitudes, beliefs and behaviour amongst a population (Basil, 2017). Surveys are also appropriate for searching for patterns of activity within groups (e.g., ethnicities, and cultures) (Denscombe, 2010), thus suiting the purpose of this thesis for making comparisons between different drinking cultures. Although a survey, as a self-report method, may be subject to responding bias (e.g., memory recall, or socially desirable responding), it has been shown to have reasonable levels of reliability and validity when assessing alcohol use (Del Boca & Darkes, 2003).

While traditional qualitative inquiries usually use focus groups or in-depth interviews, the use of a survey in the qualitative phase of this thesis was supported by the following advantages. First, the qualitative survey includes open-ended questions seeking detailed narrative from respondents. It helps to reach a larger sample at a relatively low cost. The collected data is then large enough to enable quantitative analysis on qualitative data to enhance the generalisability of findings, and at the same time, maintaining the subjectivity of participants’ responses. Second, compared to the conventional qualitative methods (i.e., focus groups and interviews), the use of a survey can help reduce the bias of group pressure and social desirability (Basil, 2017) because interpersonal interactions between research participants are less likely to occur. Thus it is non-invasive and acceptable to respondents in alcohol research (Del Boca & Darkes, 2003). Third, the use of a qualitative survey also contributes to diversifying the methods used in social marketing formative research which is dominated by focus group and interview research (Carins et al., 2016; Lefebvre, 2013).

To ascertain students’ thoughts on the barriers to and facilitators of moderate drinking, as well as to enable a cultural comparison of moderate drinking in New Zealand and Vietnam, a standardised vignette was designed to be included in the qualitative survey. Specifically, the vignette in this thesis was first developed by an experienced alcohol researcher (Dr. Kirsten Robertson). It was based on research by Conroy, Sparks and de Visser (2015), who used a similar process to examine the efficacy of a non-drinking mental simulation intervention for reducing student alcohol consumption. The vignette was

further refined and developed as part of an assessment with over 100 third-year marketing students taking Societal Issues in Marketing at the University of Otago, New Zealand.

Given the ambiguous nature of the moderate drinking concept (Dufour, 1999; Green et al., 2007), and in line with research into drinker prototypes (Teunissen et al., 2017; van Lettow et al., 2013a, 2013b), moderate drinking was not defined in concrete terms, or referred to explicitly in the vignette to prevent the mismatch between the researcher and participants' vision of the behaviour. Therefore, interpretation of the behaviour and its associated barriers and facilitators was left open to participants. In doing so, participants might imagine different barriers and facilitators that would apply depending on how they self-defined as either a moderate or heavy drinker. However, such variation was expected to enhance the comparison between the wet and dry culture, and indicate a cultural meaning of moderate drinking.

In the quantitative phase, a quantitative survey was designed. Since most scales adopted in Study 2 were developed in English, the survey was first designed in English, and then translated into Vietnamese. The Vietnamese survey was back-translated into English to ensure the meaning equivalence. The survey was pilot tested in both languages on a sample of English and non-English speaking students ( $n = 15$ ). It was also reviewed by a consumer behaviour expert in the medical and pharmaceutical marketing field in Vietnam. As a result, minor changes in terms of linguistics and question order were made to improve the survey's readability and comprehensiveness. The final version of the survey can be found in Appendix 2.

Research sampling, research instruments, data collection and analytical techniques for each study are discussed in detail in the subsequent chapters (Chapter 2, 3, and 4). In this section, a summary of these method characteristics is presented in Table 1.5. Please note that further analyses pertaining to the studies can be found in the Appendices. Particularly, Appendix 1 shows reliability statistics of the inter-coding in Study 1. For Study 2, Appendix 3 presents data on missing values, outliers and data normality. Other appendices exhibit statistics to describe the variables (Appendix 4), assess the measurement models (Appendix 5) and model fits (Appendix 6), and the Fornell-Lacker tests of discriminant validity (Appendix 7) for the constructs in Study 2.

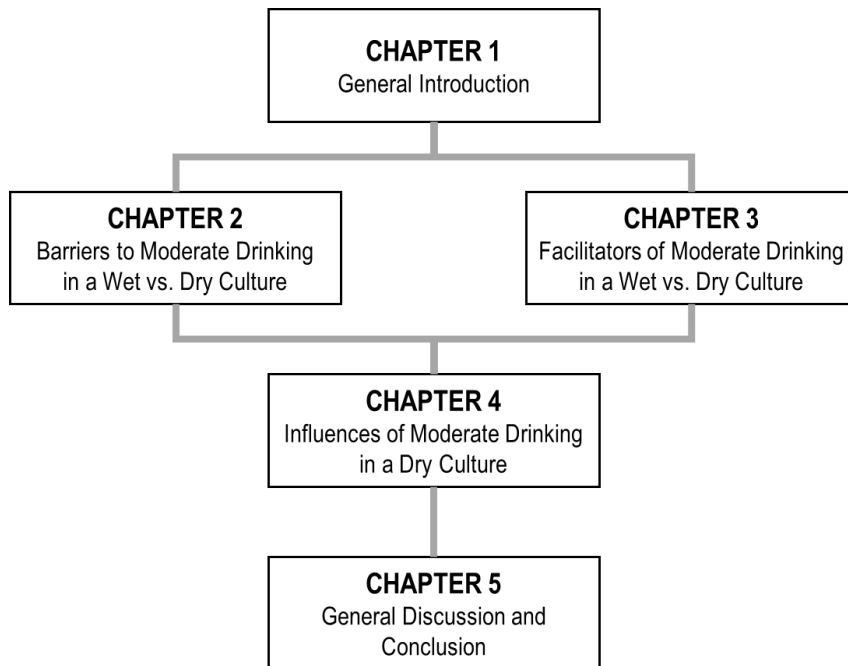
Table 1.5. A Summary of Research Methods in This Thesis.

	<b>Study 1 (New Zealand)</b>	<b>Study 1 (Vietnam)</b>	<b>Study 2 (Vietnam)</b>
<b>Sampling</b>			
City	Dunedin	Danang	Danang and Can Tho
University	1 (University of Otago)	2 (University of Danang, and Da Nang University of Architecture )	2 (University of Danang, and University of Can Tho)
Majors	Various majors across disciplines	Various majors in Business and Economics, Science and Technology, Education, and Architecture	Various majors in Business and Economics, and Science and Technology
Sample characteristics	Undergraduate students 18 years old or older Current drinker (past month)	Undergraduate students 18 years old or older Current drinker (past month)	Undergraduate students 18 years old or older Current drinker (past year)
Sample size	n = 237 Valid n (for RO1) = 226 Valid n (for RO2) = 227	n = 379 Valid n (for RO1) = 277 Valid n (for RO2) = 278	n = 908 Valid n (for RO3) = 660
Sampling technique	Non-probability sampling (convenient sampling)	Non-probability sampling (convenient sampling)	Non-probability sampling (convenient sampling)
<b>Instruments</b>			
Survey type	Qualitative survey Cross-sectional		Quantitative survey Cross-sectional
Question type	Open-ended questions situated in a vignette		Close-ended questions adapted from existing or self-developed scales/items
Format	Paper-and-pen questionnaire		Paper-and-pen questionnaire
Language	English	Vietnamese	Vietnamese
<b>Data collection</b>			
Data collector	Peers	The author	The author
Collection mode	Self-administered	Self-administered	Self-administered
Collection site	Convenient places	In classrooms	In classrooms
Time	2015	2016	2017
Incentives	No	No	Entry into a lucky draw
<b>Analysis</b>			
Techniques	Qualitative content analysis Chi square analysis		Exploratory factor analysis Confirmatory factor analysis Regression analysis
Reliability/Validity	Inter-coding Inter-coder reliability analysis		Reliability analysis (Cronbach alpha, Composite reliability) Validity analysis (Convergent, Discriminant)
Softwares	Nvivo SPSS		SPSS Amos

## 1.8. Thesis Structure

This thesis includes five chapters and follows a hybrid format, as outlined in Figure 1.9. The three middle chapters were written in the form of academic papers ready for submitting to social marketing related journals.

Figure 1.9. Thesis Structure.



Chapter 2 presents the research process and findings from a qualitative study to explore the barriers that prevent students from moderating their drinking by comparing attitudes towards moderation in a wet (New Zealand) and dry (Vietnam) drinking culture. This chapter addresses RO1 (RQ1.1, RQ1.2, and RQ1.3) of the thesis. This paper has been accepted for publication in the *Journal of Social Marketing*.

Chapter 3 presents the research process and findings from a qualitative study to explore how students' perceptions of facilitators of moderate drinking vary between a wet (New Zealand) and dry (Vietnam) drinking culture. This chapter addresses RO2 (RQ2.1, RQ2.2, and RQ2.3) of the thesis. It has been accepted for publication in the *Journal of Nonprofit and Public Sector Marketing*.

Chapter 4 presents the research process and findings from a quantitative study to examine influencers of students' intention to drink moderately in a dry drinking culture (Vietnam), and the gender differences in how the factors affect moderate drinking intention. This

chapter addresses RO3 (RQ3.1 and RQ3.2) of the thesis. It has been accepted for publication in the *Social Marketing Quarterly*.

Chapter 5 summarises the findings and integrates discussions and implications from the three preceding chapters to show general contributions of this thesis to alcohol social marketing research and practice. This chapter also presents limitations of the research project as a whole and offers directions for future research.

It is noted that there is some repetition in the content of the chapters because of the paper-based thesis structure. For example, the methods sections in Chapter 2 and 3 are overlapping because they are drawn from the same study (Study 1). Moreover, due to different requirements and styles of the target journals, there is some inconsistency in the writing between the chapters. Furthermore, the pronoun “we” was used in the three middle chapters due to supervisors being included as co-authors. However, on all papers, I was the lead author who led the research process.



## CHAPTER 2

---

# STUDENTS' PERCEPTIONS OF BARRIERS TO MODERATE DRINKING

---

This chapter is based on the paper: “Tran, K. T., Robertson, K., & Thyne, M. (2020). Students’ perceptions of barriers to moderate drinking: A comparison between a wet and a dry drinking culture. *Journal of Social Marketing*, 10(1), 105-124. Doi: 10.1108/JSOCM-09-2018-0102.”

## 2.1. Abstract

This study explores the barriers that prevent students from moderating their drinking by comparing attitudes towards moderation in a wet (New Zealand) and dry (Vietnam) drinking culture; and examines whether these barriers can be understood by applying an ecological framework. A qualitative survey involving a written vignette was conducted with a sample of 226 and 277 undergraduates from New Zealand and Vietnam, respectively. Data were analysed using qualitative content analysis. The analysis reveals students perceive several barriers to moderate drinking at the intrapersonal level (e.g., positive attitude towards drinking), interpersonal level (e.g., peer pressure) and environmental level (e.g., socialising activities), suggesting that an ecological framework is useful for understanding drinking cultures. The response variations between the two countries provide novel insights into cultural differences in students' perceptions, with external factors being more important and influential in the wet culture, and internal influences being of more concern in the dry culture. Findings highlight that students in the wet drinking culture do not take personal responsibility for their drinking and suggest that social marketing should move beyond individualistic approaches, and towards the disruption of drinking cultures/practices, in pursuit of a healthier drinking culture. This study provides novel insights into the barriers and facilitators of moderating drinking. Further, the findings demonstrate the value of a holistic ecological framework for understanding student drinking cultures. The comparison between two diverse cultures revealed how insights from one culture can help to understand deep-seated practices and meanings in another.

## 2.2. Introduction

In many countries, the prevalence of heavy episodic drinking is highest in late adolescence and early adulthood, and is of particular concern in university populations, where the culture of heavy drinking is a significant public health concern (Hingson et al., 2017; Kuntsche et al., 2017). Heavy alcohol consumption amongst university students surpasses that of non-students in the same age group, making university students “a high-risk subgroup of the highest risk age group in the population” (Kypri et al., 2009, p. 308). Serious harms in terms of health, finance, social, and mortality are linked to heavy episodic drinking (WHO, 2014). With a view to diminishing these heavy drinking problems, the present study aims to identify the barriers that prevent students from moderating their drinking by comparing attitudes towards moderation in a heavy drinking (wet) versus a moderate drinking (dry) culture. The comparison will help to inform social marketing aimed at encouraging drinking moderation. The study contributes to current alcohol consumption literature by: (1) providing a holistic examination of the barriers to student drinking moderation; (2) examining the usefulness of an ecological framework for understanding these barriers; (3) focusing on moderate, rather than heavy drinking; and (4) by comparing barriers between a wet and a dry drinking culture to help illuminate culturally-engrained practices that might prevent drinking moderation.

Drinking behaviour is suggested to be embedded within a network of interrelated influences at multiple levels (Brennan et al., 2016); a notion that resonates with the principles of the ecological framework in behavioural sciences and public health (Sallis et al., 2008). Previous empirical alcohol literature that utilises the ecological framework has typically taken a positivist approach to understand alcohol consumption and/or heavy drinking behaviour within one country/cultural context (e.g., Ennett et al., 2008; Gruenewald et al., 2014; Vantamay, 2009; Williams Jr et al., 2008). Extending these efforts, this study adopts an interpretivist approach to examine moderate drinking behaviour across two different drinking cultures. It is argued that the interpretivist approach can bring richer insight into the correlates of alcohol drinking, by which influences on drinking behaviours are not pre-determined by researchers, but rather revealed by respondents. Therefore, it can address criticisms of quantitative and epidemiological studies that offer “little or no insight into the social contexts and cultural roles of drinking” (Social Issues Research Centre, 1998, p. 9). Moreover, by taking a holistic, ecological approach, this study addresses calls for research to provide a broader and

culturally appropriate view of drinking behaviours (Measham, 2006). Previous alcohol research has identified an extensive list of influences on student drinking behaviour, but findings are fragmented, mostly oriented at the individual level and inconsistent between countries. Such variations between countries can be attributed to a broader influencer – culture – since culture is widely acknowledged to influence alcohol use and misuse (Castro et al., 2014). Thus we compare a wet and dry culture in the current study, as discussed later in the paper.

In this study, we focus on moderate drinking, a behaviour that is often overlooked amongst student samples, given the dominance of research on heavy drinking behaviour (Previte et al., 2015a). Although there is debate about the health benefits of moderate drinking, it is widely agreed that reducing consumption reduces risk (Weitzman & Nelson, 2004). Thus, transitioning students from heavy, to moderate drinking patterns, offers one potential avenue for reducing the consequences associated with heavy consumption. Unfortunately, moderate drinking is deemed uncommon or even unacceptable within university cultures of intoxication (Robertson & Tustin, 2018). Hence, it is important to understand inhibitors of moderate drinking behaviour from the students' perspective to better inform the development of interventions for targeting problematic student drinking cultures.

Moreover, we look at students attitudes towards moderation cross-culturally by examining two diverse countries. The comparison between a wet and dry drinking country arguably provides important implications for public policy and social marketing. First, wet cultures can learn from the experiences of dry cultures to mitigate their alcohol issues or to adjust their unhealthy drinking culture (Gordon et al., 2012; Hogan et al., 2014). By comparing two countries with different drinking patterns and cultures, the study can identify protective/risk factors that might otherwise have been masked through an investigation solely in a wet drinking culture, as commonly practised in alcohol research. Second, through globalisation and westernisation, the binge drinking phenomenon from English-speaking and Nordic countries has spread and migrated to many parts of the world where there was traditionally a more moderate drinking culture (Gordon et al., 2012). Policy makers in dry drinking countries (including Vietnam) are concerned about the rise of binge drinking problems (Lincoln, 2016), and it is arguably useful to identify the factors which might threaten their moderate drinking tradition. Although research typically focusses on binge drinking cultures, for instance, English-speaking and Nordic countries,

one exception is the work by Hogan et al. (2014) who compared perceptions associated with binge drinking between students from heavy drinking countries to moderate drinking countries. However, the analysis by country was manipulated by recruiting international students from one university, rather than sampling participants in their country of origin. Extending the work by Hogan and his colleagues (2014), the present study will explore attitudes and perceptions towards moderate drinking in two countries with divergent drinking cultures, in this case, New Zealand (as a wet culture) and Vietnam (as a dry culture).

### **2.3. A Need to Focus on Moderate Drinking Behaviour**

Current knowledge about drinking behaviours are dominated by research examining heavy/binge drinking behaviour (Fry et al., 2014; Godwin et al., 2016). Interventions are typically developed based on these insights with a view to reduce or stop heavy drinking practice (Kubacki et al., 2015). Examples are campaigns to correct norms around drinking. Despite earlier reviews suggesting social norms' interventions may reduce alcohol use (e.g., Moreira et al., 2009), more recent research has not found any substantive benefit (Foxcroft et al., 2015). Some social norms' interventions can actually have adverse effects by increasing alcohol use (Wechsler et al., 2003). From a public policy perspective, many governments have implemented various policies to control alcohol supply and demand, and reduce alcohol harms (Hogan et al., 2014). Again, these policies generally adopt an avoidance approach to alcohol consumption, emphasising education and restriction of alcohol accessibility and availability. Research shows that these restrictions usually can be circumvented (Hogan et al., 2014), or have counter-effects in cases such as alcohol labelling (Jones & Gregory, 2009). In this situation, a different approach to 'heavy drinking avoidance' may bring fresh perspectives and suggest further interventions to address alcohol problems.

Rather than focusing on heavy drinking, an emerging stream of research has explored reasons, experiences and responses of non-drinkers within cultures of intoxication (Conroy & de Visser, 2014). Although drinking abstinence is medically desirable to completely eradicate drinking problems, it seems to be an unrealistic expectation in youth cultures where alcohol plays significant social roles (Järvinen & Room, 2007). A more pragmatic approach could be to encourage moderate drinking, which might balance the

tension between social benefits and negative consequences of excessive drinking. Moderate drinking has not been consensually defined in previous research since it can vary widely by individual or socio-cultural context (Dufour, 1999; Green et al., 2007). Some consider moderate drinking qualitatively as drinking in moderation (e.g., “reasonable”, “sensible”) (Gunzerath et al., 2004); others describe moderate drinking in terms of quantity and frequency of alcohol intake (e.g., no more than two/one drinks a day or 14/7 drinks a week) (Dufour, 1999; Gunzerath et al., 2004) or blood alcohol concentration (e.g., less than 0.055 gram percent) (moderatedrinking.com, n.d.); and still others define moderate drinking in relation to harms (e.g., “nonintoxicating”, “safe”, “low-risk”) (Green et al., 2007; Gunzerath et al., 2004). Given that moderate drinking can vary widely between individuals, the present study refers to moderate drinking qualitatively to mean drinking in moderation to reduce negative alcohol harms.

Literature indicates that moderate drinking is a complex phenomenon, involving a range of related practices such as monitoring drinks, alternating drinks, and pacing drinking (Fry et al., 2014). Social marketing research adopting the moderate drinking approach has resulted in viewing the behaviour as a distinct consumption entity to heavy drinking, and as a social interaction between individuals within a broader market system (Fry, 2014; Godwin et al., 2016). These studies suggest that social marketers should think beyond individual-oriented interventions which are a prevailing approach in current alcohol social marketing (Fry, 2014; Fry et al., 2017; Godwin et al., 2016). Despite such potential to bring fresh ideas to combat drinking problems, research attention to moderate drinking still remains limited in the social marketing literature (Fry et al., 2014). It is therefore essential to broaden and deepen knowledge in this area to capture a fuller understanding of alcohol consumption, and to enable better alcohol interventions.

## **2.4. The Link between an Ecological Framework and Barriers to Drinking Moderation**

Although not previously employed in alcohol research, the ecological framework has been increasingly proposed and applied in social marketing research (e.g., Carins & Rundle-Thiele, 2014; Thompson et al., 2017). The framework refers to the investigation of interrelations between human behaviour and surroundings (Sallis et al., 2008). It relies on two premises. First, the influences of specific health behaviours occur at multiple levels,

ranging from intrapersonal to interpersonal, and includes other external factors such as organisation, community and public policy. Second, the ecological perspective postulates interactions or reciprocal causations between individual level and environmental factors. The advantage of the ecological framework, over other models and theories, is that it offers a holistic view of behaviour, explaining individual antecedents while taking social and other environments into account. In the following section, we discuss past research on student drinking behaviour across cultures and explore how the findings might fit under three levels of the ecological perspective, namely, the *intrapersonal* level, *interpersonal* level, and *community* level (Rimer & Glanz, 2005).

The *intrapersonal* level represents individual characteristics such as knowledge, attitudes, beliefs, motivation, and skills that influence behaviour (Rimer & Glanz, 2005). As for drinking motives, a cross-cultural study in 10 countries in America and Europe by Mackinnon et al. (2017) claims that in general, students mainly use alcohol for positively reinforcing motives (social and enhancement), but this tendency is more prominent for those from individualistic countries compared to collectivistic countries. A handful of studies focus on differences in perceptions of alcohol expectancies and drinking refusal self-efficacy between students from different ethnic groups. In an Australian university setting, Caucasian students placed higher importance on positive expectancies (confidence, sexual interest, and tension reduction) compared to Asian students; Asian students, on the other hand, were more likely to report cognitive enhancement, negative consequences and more drinking refusal self-efficacy under social pressure (Oei & Jardim, 2007). While both alcohol expectancies and self-efficacy were powerful in predicting alcohol consumption for Caucasians, only self-efficacy played a significant role in influencing alcohol consumption for the Asian students (Oei & Jardim, 2007).

The *interpersonal* level emphasises the influence of the social environment on behaviour. Interpersonal processes and groups in this environment influence individuals' feelings and behaviour, and provide them with social identity, support systems, and role definition (Rimer & Glanz, 2005). Peers, in particular, play a pivotal role in shaping students' drinking behaviour through perceived norms, group identification and active pressures (Borsari & Carey, 2001). A review of the alcohol norms literature (Monk & Heim, 2014) showed that peer norms of drinking were generally misperceived or overestimated by students in developed countries such as America, Britain, and Australia. In contrast, students in Latin America (e.g., Brazil and Peru) generally underestimated, or correctly

perceived their peer alcohol consumption. Similarly, Asian students were found to perceive less peer approval of drinking than White students in a U.S. study (Nguyen & Neighbors, 2013).

The *community* level embraces various broad level influencers such as organisation, community, and public policy, which may limit or encourage recommended behaviours (Rimer & Glanz, 2005). Living environments are an example of a community level influence on university student drinking including residential halls, shared house/room or high student density areas; or university activity involvement, e.g., fraternities/sororities, athletics, parties and drinking games (Ham & Hope, 2003). Other contextual factors affecting students' binge drinking such as drinking situations or locations (Connor et al., 2014) can also be categorised within the community level since they are generated from surrounding environments and are out of individuals' intimate social circles and control. The influence of some factors at this macro level (e.g., price promotions, drinking venue, and place of residence) on students' drinking was shown to vary across countries (e.g., Australia, Wales and Germany) (Raciti et al., 2013).

## **2.5. Drinking Cultures: Wet versus Dry**

Drinking culture is a complex concept. Comprehensively, it refers to “norms around patterns, practices, use-values, settings and occasions in relation to alcohol and alcohol problems that operate and are enforced (to varying degrees) in a society or in a subgroup within society” (Savic et al., 2016, p. 280). A simple and widely-used approach to understand drinking cultures is the wet-dry typology of the cultural position of drinking (Room & Mitchell, 1972). Adopting this view, the distinction between a wet and a dry drinking culture largely depends on the general alcohol consumption/drinking patterns within societies (Rahav et al., 2006). According to Room and Mitchell (1972), wet cultures refer to societies which have weak temperance tradition, high volume of consumption, low proportion of abstainers, frequent heavy drinking and non-involvement in moonshining practice. In contrast, dry cultures refer to societies which feature a strong temperance tradition, low volume of consumption, high proportion of abstainers, infrequent heavy drinking and presence of moonshining. WHO's statistics can be used to regard countries as wet (high alcohol consumption) or dry (low alcohol consumption), similar to the Hogan *et al.*'s (2014) classification of heavy and moderate drinking countries.



Accordingly, examples of wet cultures include Australia, Canada, Denmark, Ireland, Finland, Germany, Hungary, New Zealand, Sweden, United Kingdom and United States; whereas France, Hong Kong, Italy, Japan, Malaysia, Norway, Philippines, Singapore, Spain, South Africa, Taiwan, and Thailand are examples of dry cultures (Hogan et al., 2014).

Research has identified some societal correlates of the wet/dry drinking culture. Wet cultures tend to have smaller gender differences in alcohol consumption, which is associated with more gender equality (Rahav et al., 2006). 'Drier' cultures are associated with more informal social control to reduce drinking (Holmila et al., 2009). There also seems to be a connection between the general alcohol consumption of a country and its cultural traits. Empirical research has evidenced that countries with wet cultures (high alcohol consumption) associate with independence, individualism or self-oriented values; while those with dry cultures (lower alcohol consumption) link to interdependence, collectivism or other-oriented values (Zhang & Shrum, 2009).

## **2.6. Barriers to Students' Moderate Drinking in Different Drinking Cultures**

This study focuses on factors impeding students' moderate drinking, which include structural and social barriers beyond an individual's control, as well as psychological barriers existing within the individual. Researchers argue that removing all types of barriers is necessary to change behaviour (Wymer, 2011). Within the limited number of studies examining cultural differences in barriers to students' moderate drinking, researchers typically compare different ethnic groups within a single country, or within one university setting. While this approach can offer some insights into cultural influences on drinking behaviour, the differences observed might be biased due to the acculturation effect (Nguyen & Neighbors, 2013; Oei & Jardim, 2007). To eliminate the possibility of this bias, examining students' perceptions of drinking in their naturalistic country settings might be more fruitful. Additionally, cross-cultural studies in this area have mainly focused on specific internal influences such as beliefs and attitudes, or peer norms. There is a need to take a holistic approach, encompassing multiple levels of influences on students' drinking behaviour across countries (Hogan et al., 2014). Hence, to extend current understanding of cultural influences on drinking moderation, this study addressed the following research questions:

- RQ1.1. What are students' perceptions of the barriers to moderate drinking?
- RQ1.2. Can the barriers be understood at multiple levels of influence, in line with an ecological framework?
- RQ1.3. What are the similarities and differences in students' perceptions of barriers to moderate drinking between a wet (New Zealand) and dry (Vietnam) drinking culture?

Addressing these questions can help to inform social marketing interventions aimed at encouraging moderate drinking.

## 2.7. Methods

Participants were asked to complete an open-ended, pen-and-paper questionnaire collecting: demographics (age, gender, and ethnicity), personal alcohol consumption using the AUDIT-C instrument (Bush et al., 1998), and a vignette designed to ascertain student's thoughts on the barriers to practising moderate drinking from a third-person perspective.

The AUDIT-C (Alcohol Use Disorders Identification Test-Concise) is a brief version of the AUDIT tool developed by the World Health Organization for assessing problem drinking and identifying persons who are hazardous drinkers or have active alcohol use disorders (Bush et al., 1998). The AUDIT-C includes three questions relating to drinking frequency ("How often do you have a drink containing alcohol?"), drinking quantity ("How many drinks containing alcohol do you have on a typical day when you are drinking?"), and frequency of binge drinking ("How often do you have 6 or more drinks on one occasion?"). Each question has five answer choices valued from 0 to 4 points, making up an overall AUDIT-C score on a scale of 0 to 12. It is advised by the New Zealand Ministry of Health (2010) that a total score of 0 to 3 means low-risk drinking, 4 to 5 as moderate-risk drinking, and more than 5 as high-risk drinking.

Vignettes have been successfully adopted in drug use research (de Macedo et al., 2015). This technique is argued to be adequately able to compare reactions (such as attitudes, norms, evaluations, and actions) to stimuli across cultures (Soydan, 1996). The use of a third person scenario to elicit students' perceptions was to reduce social desirability responding bias, because it can avoid participants talking about their own experiences on

a potentially sensitive topic, and encourages their responses even when they lack experience with heavy drinking (de Macedo et al., 2015; Wason et al., 2002). A gender-neutral name ('Alex' in New Zealand and 'Khanh' in Vietnam) was used for the protagonist in the vignette to lessen the effects of gender bias in alcohol consumption. The vignette read as follow:

“It’s Sunday and your friend Alex/Khanh says “I’m never drinking again”. Alex/Khanh often says this and sometimes wishes he/she had drunk less the night before, however, Alex/Khanh never actually changes his/her drinking behaviour. List factors below that you think prevent Alex/Khanh from changing his/her drinking behaviour.”

The questionnaire was the same for both samples but in their native language. In New Zealand, 50 undergraduate students enrolled in a third-year marketing course at one university recruited their peers/friends as participants to take part at a location convenient to them. In Vietnam, a postgraduate student collected data in students’ classrooms at two universities. Despite differing methods for administering the survey, the use of the vignette helped to ensure similar data collection processes in the two countries (Soydan, 1996; Wason et al., 2002). This study was approved by the ethics committee at the University of Otago, New Zealand, and all of the participants gave their written and informed consent. Participation in the study took approximately 20 to 45 minutes.

### **2.7.1. Sample**

This study was conducted in New Zealand and Vietnam. WHO’s statistics (2014) suggest that New Zealand is characterised by a wetter drinking culture than Vietnam, with New Zealand having significantly higher per-capita alcohol consumption, drinker rate, past-month heavy episodic drinking rate, consumption of high alcohol content beverages, and in addition, less difference between male and female consumption. When it comes to the university drinking culture, research has consistently indicated that New Zealand students’ risky drinking is prevalent and at a concerning level (Connor et al., 2014; Kypri et al., 2009). The normalisation of drinking to get drunk in this student population is also evidenced in prior research (McEwan et al., 2011). Consequently, a wide array of personal, social, sexual, and antisocial problems are reported by New Zealand students (Connor et al., 2014; Kypri et al., 2009). In Vietnam, data suggests that moderate and responsible drinking is a common practice, and alcohol consumption is not problematic amongst

many young people (Vietnam Ministry of Health, 2004). On average, Vietnamese students consume 2-3 standard drinks per occasion; however, the practice of heavy drinking is increasing (Diep et al., 2016b). It is noted that there is a considerable difference in student alcohol use by gender in Vietnam. For example, drinking volume and binge frequency by males are approximately five times higher than that of females (Diep et al., 2016a). As can be seen, student drinking patterns are different between New Zealand and Vietnam, reflecting their national drinking cultures (wet versus dry). The two countries also differ by their cultural values (individualism/independence in New Zealand versus collectivism/interdependence in Vietnam), consistent with the typical link observed between national drinking patterns and cultural characteristics in previous research. Given that the current study aims to compare a wet and a dry culture to inform social marketing initiatives aimed at encouraging moderation, New Zealand and Vietnam are appropriate contexts for the purpose of this research.

The sample included 226 and 277 respondents from New Zealand and Vietnam, respectively, who had consumed alcohol in the previous month. Demographic data revealed New Zealand respondents were slightly younger than Vietnamese students (New Zealand: Age range = 18-26, M = 21.4, SD = 1.3 years; Vietnam: Age range = 21-33, M = 21.8, SD = 1.2 years). There were slightly more male participants in the Vietnam sample (Vietnam: 51%; New Zealand: 44%). The majority of respondents in New Zealand were New Zealand European (84%), Maori (2%) or had mixed ethnicities (8%), while 99% of Vietnamese participants identified as Kinh. It is noted that Vietnam is a multi-ethnic country with 54 ethnic groups, of which people identifying as Kinh account for the majority of the country's population (85%) (Open Development Vietnam, 2019).

### **2.7.2. Data analysis**

This study was conducted using qualitative content analysis. Specifically, an inductive coding approach was used for each country. Following which, an overall coding guide was established, and data from both countries was coded using the same coding scheme. An inductive approach is useful when knowledge of the phenomenon under study is fragmented (Elo & Kyngäs, 2008) and is suitable for examining differences in different groups or societies (Weber, 1990). Transcriptions in Vietnamese were translated into English by the first author, in consultation with a Vietnamese English lecturer. Transcriptions were then imported to Nvivo 11. Following the process by Elo and Kyngäs (2008), transcriptions were read several times to make sense of the data. Then, an open

coding process was employed, systematically attaching codes to the data and subsequently grouping codes with related meanings into themes. Each piece of information was only coded into one code, and themes were checked in comparison to other observations not in the same group, so that they were mutually exclusive and exhaustive. Here, one piece of information, also called a meaning unit, refers to the smallest text segment that is comprehensible or can stand by itself (Lincoln & Guba, 1985). Hence, it can be a paragraph, a sentence, a phrase, or even a word, as long as it contains one idea about the research topic at hand (Tesch, 1990). In total, there were 74 codes employed. Finally, a general description of barriers to student's moderate drinking was formulated through the abstraction process. To ensure coding reliability, the first author coded the transcripts and wrote the theme description; the second author audited the coding and description; and 25% of the transcripts were randomly selected and coded by another independent coder (average inter-coder percent agreement = 96.2%; average Cohen's kappa = 0.84, indicating strong agreement) (see Appendix 8 for the coding sheet).

Twenty-five themes emerged from the data. Reviewing these themes, there was a natural fit between themes in our data and the three main levels of the ecological framework. Thus, the themes were further grouped into three categories, namely "Intrapersonal barriers" (which refers to internal factors intrinsic to individuals), "Interpersonal barriers" (which refers to social factors arising from the social environment), and "Environmental barriers" (which refers to contextual factors generated from surrounding environments). The themes and categories were analysed in terms of the number of participants mentioning them. Dummy variables were created for each theme and category using SPSS. Their values represented the presence (1) or absence (0) of the themes or categories for each participant. Relative frequencies (percentage) of the themes and categories were calculated separately for each country. To capture salient themes, only themes whose relative frequencies exceeded 5% within one or other country were examined, which left 18 themes for analysis. A description of these themes can be seen in Table 2.1, Table 2.2, and Table 2.3. Chi-square analyses were conducted to examine whether there were significant differences in the salience of themes mentioned by students between the two countries ( $p < 0.05$ ).

Table 2.1. Intrapersonal Barrier Themes

Theme	Description	Examples
Positive attitude towards drinking	Students like alcohol and enjoy drinking as well as the effects it brings. Drinking is considered a main source of fun in students' lives.	"Like beers"; "The thrill of drinking"; "Can't have fun without drinking".
Low self-control	Students lack of self-control, determination or willpower to change their behaviour. Students find it difficult to restrict drinking or refuse others' drinking invitations.	"When drinking, he got carried away and could not control [himself]"; "When you start drinking it's usually harder to stop".
Habit	Heavy drinking becomes a routine. It is what students normally do for entertaining or relaxing.	"I guess there is also a pattern, they've gotten used to it and I guess the more you do something the more you're able to cope with the horrible feelings the next day, it doesn't feel so bad because you've done it so often".
Low negative expectancy	Students tend to ignore or forget the bad consequences of a hangover. Negative experiences of heavy drinking are thought to wear-off quickly or be outweighed.	"You always feel bad on Sunday, but by the next week you realise your behaviour wasn't as bad as you thought".
Amotivation	Students do not have the motivation or the desire to change their behaviour. Any promises to drink less/stop drinking are considered banter or a joke or a result of the temporary effects of the hangover since students do not actually mean it.	"Didn't have strong motivation to change"; "They don't actually mean it when they say they will never drink again. They are just feeling negative because they have a hangover. It is also a common way of "joking" about how much they drunk the night before".
Addiction	The addictive nature of alcohol makes students addicted to alcohol and unable to change their behaviour.	"It is probably that Khanh was addicted to alcohol"; "Alcohol dependency".
Feelings	Students engage in drinking when experiencing negative mood/emotion, stress/pressure, or to avoid social anxiety.	"He's sad so he needs beer to release the sorrow"; "Drinking gives Alex confidence - confidence to dance and confidence to hit on girls that he would never do sober".
Boredom	Students get bored and have nothing else to do.	"The fact that the weekends are kind of boring otherwise"; "Don't know what to do, so he drinks alone or with his friends".

Table 2.2. Interpersonal Barrier Themes

Theme	Description	Examples
Social pressure	Social pressure includes peer pressure and others' pressure.	
Peer pressure	The term "peer pressure" or related expressions are used to indicate the direct influence of friends on students' drinking behaviour.  Specifically, friends exert a direct influence by: encouraging, inviting or enticing students; ridiculing them; provoking, challenging, or forcing them to drink.	"I think it would be a lot to do with mates putting pressure on him"; "Pressure from friends".  "Alex's friends force her to drink and tell her she has to move out if she doesn't, making her feel insecure and meaning she excessively drinks".
Others' pressure	Similar to peer pressure, but friends/peers not being mentioned.	"Feels pressured to drink"; "Being invited by many others"; "Other people forced Khanh to drink at the drinking venue".
Social norms	Social norm includes peer norm and others' norm.	
Peer norm	Through observing friends drinking and drunkenness, drinking is normalised since it is accepted and expected by friends. The terms "peer norm" or "peer influence" are used to reflect the impact of the norms. Friend groups are considered the main factor inhibiting moderate drinking.	"If Alex sees each of their friends indulging in similar behaviour, it is often difficult to behave differently".
Others' norm	Similar to peer norm, but friends/peers not being mentioned.	"Everyone else gets back on the piss"; "Binge drinking is socially accepted".
Fear of missing out (FOMO)	Students want to fit in their social groups, not to be left out and avoid the feeling of being socially excluded by others. In this way, they seek their peer's acceptance and approval.	"He thinks he is less likely to be accepted socially if he didn't drink. He is worried he will be left out/not invited places".
Identity	Heavy drinking is a means of self-expression and self-image management, contributing positively to students' personal identity, and their student identity. If reducing drinking, students can risk losing face or suffer from stereotype threats. This linked to students' self-esteem and ego.	"To express as a strong man who can drink alcohol"; "Alex's image as a student"; "He doesn't want to be seen as a nerd or git"; "His personal ego doesn't allow him to lose to his friends".

Table 2.3. Environmental Barrier Themes

Theme	Description	Examples
Negative circumstances	Students cannot restrict heavy drinking due to negative life occurrences such as family conflict, relationship breakdown, study failure, or unemployment.	"Being unemployed. Breakup, unhappy family".
Socialising activities	Drinking is regarded as a main source of socialising with friends. Students drink to be social and enhance their relationships in these social occasions.	"It's such a social thing as well. You can go out and have a good time with your friends or you can stay at home and have a few and watch Girlfriends guide to divorce. I mean which is more fun out of those two?"
Events	Various personal and public events involve drinking and stimulate students to drink. They range from personal parties, celebrations, and occasions (such as wedding, engagement, birthday, and anniversary), to public events and occasions (such as holiday, festival and new year).	"Drinking is inevitable at parties"; "People usually have to drink on festivals, holidays and important events. For example, New year".
Drinking culture	The term "drinking culture" or related expressions are used to indicate the influence of culture on students' drinking behaviour. Such cultural influence can be at a national level, city level, university level, or student level.	"Lifestyle of Dunedin, drinking culture amongst students and friends means that there is always something happening on a Saturday night".
Living environment	The unhealthy or pro-drinking surroundings, as well as the presence of alcohol outlets and other social settings, encourage students drinking.	"The environment Alex lives in may not allow him to change or want to change".
Working environment	Work expectations/demands and the pressure to socialise at work make people drink regardless of their wants.	"Had to drink for work"; "Work's characteristics that require socialising".



## 2.8. Results

### 2.8.1. Students' alcohol consumption

New Zealand students were characterised by frequent drinking (2 to 3 times a week), in large quantities (> 6 standard drinks on one occasion), and frequent binge drinking (weekly). In contrast, Vietnamese students generally drank less often (monthly or less), consumed less alcohol per episode (< 5 standard drinks), and engaged in binge drinking less than once a month. Concordantly, the AUDIT-C score for New Zealand students was significantly higher than that for Vietnam students (New Zealand:  $M_{\text{AUDIT-C}} = 8.09$ ,  $SD = 2.12$ ; Vietnam:  $M_{\text{AUDIT-C}} = 2.75$ ,  $SD = 1.80$ ;  $t(495) = 30.34$ ,  $p < 0.001$ ). Using the gender-specific AUDIT-C cut-off points suggested by Barry et al. (2015), 89% of New Zealand students and 19% of Vietnamese students were identified as hazardous drinkers, with stricter criteria (7 for male/5 for female) being applied for New Zealand, and less strict criteria (5 for male/4 for female) for Vietnam due to the difference in drinking patterns between the two countries (WHO, 2014). Consistent with previous research, heavy drinking appeared to be a common practice in the New Zealand university setting (Kypri et al., 2009; McEwan et al., 2011), but was not normative in Vietnam (Diep et al., 2016b). The findings confirmed substantial differences in drinking practices between the two countries, with New Zealand students drinking in a more harmful way than their Vietnamese counterparts.

### 2.8.2. Perceived barriers to moderate drinking between New Zealand and Vietnamese students

Table 2.4 presents the absolute and relative frequencies for three categories and 18 barriers across New Zealand and Vietnam. There were different patterns in the salience of the barrier categories in the two countries. In New Zealand, interpersonal factors were mentioned the most (90%), followed by intrapersonal (78%) and then environmental factors (46%). In Vietnam, the order was intrapersonal factors (81%), interpersonal factors (75%), and environmental factors (51%). Only interpersonal factors showed significantly higher relevance in New Zealand ( $p < 0.001$ ).

Table 2.4. Perceptions of Barriers to Students' Moderate Drinking as a Function of Country.

Level	Barriers	Total (n = 503)		New Zealand (n = 226)		Vietnam (n = 277)		Chi-square (df = 1)	p
		n	%	n	%	n	%		
	<b>Category</b>								
I	Intrapersonal barriers	401	79.7	176	77.9	225	81.2	0.86	0.352 ns
S	Interpersonal barriers	411	81.7	203	89.8	208	75.1	18.08	0.000 ***
E	Environmental barriers	244	48.5	103	45.6	141	50.9	1.41	0.234 ns
	<b>Theme</b>								
S	Social pressure	305	60.6	135	59.7	170	61.4	0.14	0.708 ns
	Peer pressure	279	55.5	120	53.1	159	57.4	0.93	0.334 ns
	Others' pressure	32	6.4	16	7.1	16	5.8	0.35	0.551 ns
I	Positive attitude to drinking	130	25.8	76	33.6	54	19.5	12.97	0.000 ***
S	Social norms	121	24.1	81	35.8	40	14.4	31.20	0.000 ***
	Peer norm	88	17.5	53	23.5	35	12.6	10.09	0.001 **
	Others' norm	36	7.2	31	13.7	5	1.8	26.58	0.000 ***
I	Low self-control	116	23.1	32	14.2	84	30.3	18.33	0.000 ***
I	Feelings	113	22.5	33	14.6	80	28.9	14.57	0.000 ***
E	Socialising activities	99	19.7	40	17.7	59	21.3	1.02	0.312 ns
E	Events	91	18.1	32	14.2	59	21.3	4.28	0.039 *
S	Fear of missing out	82	16.3	81	35.8	1	0.4	114.82	0.000 ***
I	Addiction	78	15.5	20	8.8	58	20.9	13.88	0.000 ***
S	Identity	75	14.9	29	12.8	46	16.6	1.40	0.237 ns
I	Habit	72	14.3	23	10.2	49	17.7	5.73	0.017 *
E	Drinking culture	41	8.2	32	14.2	9	3.2	19.79	0.000 ***
I	Low negative expectancy	38	7.6	34	15	4	1.4	32.96	0.000 ***
I	Amotivation	38	7.6	25	11.1	13	4.7	7.23	0.007 **
E	Working environment	34	6.8	0	0.0	34	12.3	29.75	0.000 ***
E	Living environment	28	5.6	21	9.3	7	2.5	10.84	0.001 **
E	Negative circumstances	27	5.4	3	1.3	24	8.7	13.19	0.000 ***
I	Boredom	20	4.0	17	7.5	3	1.1	13.52	0.000 ***

Notes: \*\*\* p < 0.001; \*\* p < 0.01; \* p < 0.05; ns: p ≥ 0.05. I = Intrapersonal/individual level; S = Interpersonal/social level; E = Environmental level.

The salience of barriers also differed at the theme level. In descending order, New Zealand students attributed barriers to moderate drinking to: *social pressure*, *social norms*, *fear of missing out (FOMO)*, and *positive attitude to drinking* as the top barriers. The top barriers mentioned by Vietnamese students included: *social pressure*, *low self-control*, *feelings*, *socialising activities/events*, and *addiction*. Barriers mentioned by Vietnamese students that were absent or rarely mentioned by New Zealand students included: *working environment* and *negative circumstances*. Barriers mentioned by New Zealand students that were absent or rarely mentioned in Vietnam included: *FOMO*, *boredom*, *low negative expectancy*, *living environment*, *drinking culture*, and *amotivation*. It is noted that there was a difference in the content specificity of the theme *social pressure* in students' responses in the two countries. While

Vietnamese students perceived pressures to drink through detailed, specific and overt actions (e.g., “Friend’s invitations, or sayings to challenge, provoke, ridicule Khanh if they did not drink”; “Other people forced Khanh to drink at the drinking venue”), their New Zealand counterparts mentioned the pressures in general terms (e.g., “Pressure from friends”; “Just the social pressure to drink”). Within the *social pressure* and *social norms*, pressure and norms from peers/friends dominated the themes in both countries.

Chi-square analyses showed that there were statistically significant differences in the frequency of barriers endorsed by the two samples. Compared to students in Vietnam, New Zealand students were significantly more likely to mention: *positive attitude to drinking, low negative expectancy, amotivation, boredom, social norm, FOMO, drinking culture* and *living environment* ( $p < 0.01$ ). In contrast, New Zealand students were significantly less likely than Vietnamese students to mention: *low self-control, feelings, addiction, habit, negative circumstances, events*, and *working environment* ( $p < 0.05$ ). *Social pressure, identity*, and *socialising activities* were not significantly different in the participants’ responses between the two countries ( $p > 0.05$ ).

## 2.9. Discussion

The current study provides unique insights into Vietnam and New Zealand students’ perceptions of drinking behaviour. In general, New Zealand students conceptualised the barriers to moderate drinking as more general and broad external factors (e.g., *drinking culture, living environment, social norms*, and *FOMO*), while Vietnamese students perceived the barriers in a more specific and personal manner (e.g., *feelings, habit, self-control*, and *addiction*). We propose that barriers to moderate drinking are more external to individuals in wet cultures, yet more internal to individuals in dry cultures. The less acknowledgment of personal barriers from New Zealand students’ narratives suggests that New Zealand students do not take as much personal responsibility for their drinking behaviour as Vietnamese students do. It is likely that the normalisation of heavy drinking (wet culture) in New Zealand has resulted in students holding less dispositional attributions for their failure to moderate their drinking. In turn, a lack of personal responsibility might result in students being more likely to succumb to social and environmental influences that ultimately feed into problematic drinking patterns. Alternatively, when being viewed as a normalised practice, heavy drinking may not be considered as a serious problem by New

Zealand students (e.g., only 8.8% referred to alcohol addiction, and 15% ignored or depreciated negative alcohol expectancies) and thus students may have less motivation to drink in moderation (as evidenced by 11.1% mentioning amotivation). On the contrary, the dry drinking culture in Vietnam possibly explains why Vietnamese students imposed more responsibilities on themselves and their personal settings to adhere to the socially oriented norm of moderate drinking. Thus, by examining two different countries, we identified the factors that might be protective in Vietnam and were less apparent in New Zealand, highlighting potential avenues for intervention, as discussed later in the paper.

At the intrapersonal level, the difference in drinking cultures between New Zealand and Vietnamese students may explain why the former was inclined to mention *positive attitude to drinking* or *low negative expectancy*, factors that are associated with heavy drinking (Monk & Heim, 2013); whereas the latter expressed more concern for *self-control* and less *positive attitudes*, factors which have been found to be associated with less harmful drinking (Chen & Feeley, 2015). In line with past research on within-country cultural differences in student drinking (Nguyen & Neighbors, 2013; Oei & Jardim, 2007), this study found the influence of *self-control* to be more prominent in dry cultures, and *social norms* (as discussed later) to be more influential in wet cultures. Findings regarding *feelings* (and *negative circumstances* as discussed later) can be linked to prior research on coping motives (i.e., drinking to reduce negative emotions), which have been found to be the strongest predictor of heavy drinking and drinking problems in Vietnam (Diep et al., 2016a). In wet drinking cultures such as North America, this drinking motive is less powerful than enhancement motives (i.e., drinking to enhance positive mood or well-being) in influencing heavy drinking (Kuntsche et al., 2005). This finding further exemplifies the influence of internal factors on drinking behaviour in a dry culture, and the importance of drinking hedonism in a wet culture.

At the interpersonal level, *social pressure* was the most prevalent barrier identified across the three levels of influence, above *social norms* which has commonly been found to be amongst the best predictors of student drinking in past research (Neighbors et al., 2007). This finding suggests that social pressure within drinking cultures is paramount to address when trying to change drinking behaviour. Moreover, direct and active influences from others are distinguished from, and perceived as more influential, than indirect and responsive influences (i.e., norms) in the current study. The term “peer/social pressure” has been typically used interchangeably with terms related to the concept of “peer/social

norms” in alcohol research (Santor et al., 2000). Regardless of terminology, attempts should be made to clarify these two different kinds of social influence. As current alcohol consumption literature has disproportionately focused on examining indirect social norms (Borsari & Carey, 2001, 2003), the overt, active and direct influence should receive more attention in future research.

It is noted that *social norms* are more influential in New Zealand than Vietnam. Also, in comparison to Vietnam, the disproportionate perception of the influence of *FOMO* in New Zealand is interesting. Living in a wet culture with a high level of individualism, students in New Zealand may find it more difficult to belong to groups or connect to others, thus having a higher chance of experiencing *FOMO* and being susceptible to the influence of social norms. On the contrary, the interactions and interdependence to each other (collectivism) usually characteristic of a dry society may explain the low salience and lesser impact of *FOMO* and *social norms* in Vietnam. This finding is discussed further in the implications section.

Perceptions of *identity* and *socialising activities* were similarly important in the two countries. This is likely a result of universal developmental changes in the transition from adolescence to adulthood, which involves identity exploration, negotiation and the establishment of interpersonal relationships (Schulenberg & Maggs, 2002). Previous research has consistently highlighted the dominance of social motives (i.e., drinking to obtain social rewards in social settings) in promoting students drinking across different cultures (Mackinnon et al., 2017), which may further explain the common influence of *identity*, and *socialising activities*. It reflects common functions of any student drinking culture (wet or dry), which are to socialise and manage self-image and identity.

At the environmental level, one unexpected finding was the emergence of the *working environment* barrier. While Vietnamese students did not perceive the university environment as a barrier to moderate drinking, they perceived that entering the professional working environment would be a barrier. Potential life change, particularly work/career after graduation, has been identified as preventing students from establishing heavy drinking habits in western contexts (Colby et al., 2009), it was however thought to promote drinking by students in Vietnam. The endorsement of the *working environment* suggests that Vietnamese students see heavy drinking not as an important part of their student life, but potentially a necessity of work. Vietnamese students also perceived more barriers from negative circumstances and events. Drawing on these findings, we suggest

that distinct functions of drinking which are specific to dry cultures are: to cope with negative incidences, to celebrate events, or for professional advancement (Gordon et al., 2012; Savic et al., 2016).

## **2.10. Implications to Social Marketing**

As argued earlier, there is a need for social marketers, practitioners and policymakers to consider the moderate drinking approach in addressing alcohol problems. The shift towards moderate drinking has brought forward the idea of consumption as social interactions, and challenged the individualistic approach of behavioural change that is prevailing in alcohol research (Fry, 2014). This study adds evidence to this conversation, and further deepens and extends it to broader levels (e.g., environmental and cultural influences). Specifically, we posit that moderate drinking might be an effective solution for heavy drinking problems if barriers to this healthier drinking behaviour are acknowledged and removed. The present study offers a detailed description of young consumer's perceptions of the various barriers to moderate drinking. These barriers go beyond individual characteristics and personal choice, and vary between cultures. Theoretically, our work contributes evidence to understanding the value of the moderate drinking approach by illuminating the (1) perceptions of barriers to moderate drinking; (2) utility of the ecological framework; and (3) comparison between a wet and a dry drinking culture.

This study offers a holistic examination of the barriers to student drinking moderation. The analysis reveals that students perceive several barriers to moderate alcohol consumption, from those internal to the individual, to external factors in the social or broader environments. It suggests that barriers to behavioural changes are multi-faceted. Accordingly, social marketers should adopt a multifaceted approach to promote drinking moderation.

The findings exemplify the usefulness of an ecological framework for furthering understanding on alcohol consumption practices (Brennan et al., 2016; Fry et al., 2017). The three barrier categories identified from the content analysis resemble the three levels of influence on behaviour in the ecological framework. Therefore, social marketers are

encouraged to consider interventions from an ecological perspective. Beyond individual factors, problematic drinking needs to be addressed at the social and environmental level.

The comparison between a wet and a dry drinking culture provides useful insights for interventions aimed at moderating drinking. In accordance with Szmigin et al. (2011) and Robertson and Tustin (2018), the cross-cultural findings suggest that students in wet cultures lack personal responsibility or agency for their drinking; as such individual intervention approaches are of limited efficacy in promoting healthy drinking. Approaches targeted at the social and environmental level might be more promising in this case (Weitzman & Nelson, 2004). Recent research, grounded within practice theory, argues that social practices (rather than individual behaviours) need to be disrupted or reconfigured to bring about positive changes (Spotswood et al., 2017). Therefore, it is necessary to develop alternative cultures to disrupt drinking cultures. Given our finding that students are more susceptible to hedonistic and social influences within wet drinking cultures and environments, possible options include: restricting alcohol at events and living/working environments; dissociating drinking with social and fun attributes; and promoting other practices, in which alcohol is not or less involved, to have similar or superior qualities of sociability and pleasure. Leveraging these alternative practices can also help reduce social influences, diverge norms, and offer more options for students to build and maintain their identity.

Moreover, some strategic recommendations can be drawn from insights in this study to inform future alcohol-related social marketing practice. When setting social marketing objectives, social marketers should consider encouraging moderate drinking behaviour as a viable option, alongside eliminating barriers to the behaviour. Given the cultural differences in students' perceptions found in this study, social marketers should consider using cultural factors in their segmentation approach. As such, the subsequent design and implementation of social marketing solutions should be tailored to different cultural segments of drinkers. For instance, although targeting individual responsibility in a wet culture is unlikely to be effective, this individual approach may be more effective in dry cultures similar to Vietnam, because students in these cultures may perceive more internal and personal barriers to moderate drinking. For instance, based on the novel insights of the unique influencers in each country, preventive intervention for New Zealand should focus on changing the drinking culture, lifestyle, living and social environments, and addressing students' boredom, and positive attitude towards heavy drinking. Meanwhile,

interventions enhancing self-control, regulating emotions, and managing habits and personal situations should be implemented in Vietnam.

## **2.11. Limitations and Future Research Directions**

The present study has some limitations that warrant future research attention. First, it did not address the extent to which the barriers exert influence on drinking behaviour. The use of relative frequencies to reflect the importance of each factor is not a solid measure, albeit acceptable. Future research could utilise quantitative scales to determine the influence magnitude of each identified factor. Qualitative findings from this study might also be useful for designing a scale that measures perceived barriers to moderate drinking behaviour. Although the findings supported the view of multi-level influences on students' moderate drinking behaviour, it did not offer evidence for the interactions between influencers within the ecological framework. Future research could look at how barriers at different levels interact with each other in driving students' drinking behaviour in different cultural contexts. A finding from this study indicates that heavy drinking problems may be more prominent amongst working people in Vietnam. Therefore, future research should focus on this at-risk subpopulation in contexts similar to Vietnam.

It is acknowledged that the substantial difference in participants' drinking behaviour in the two country samples impacted the findings. However, this difference was what enabled the discovery of unique cross-cultural differences in student's perceptions of moderate drinking. Of note, the present study did not compare perceptions of abstainers between the two cultures and we call for future research to do so. A difference in data collection between the two countries is also acknowledged, however, the use of the vignette should have helped to avoid any potential response bias.

Although our use of a large sample size might have improved the sensitivity and generalisability of the findings, the employment of the qualitative content analysis method in this study limits reliability and validity. Further research applying quantitative methods could help mitigate the subjectivity of data interpretation. Furthermore, cultural differences in students' perceptions were reported aggregately at a national level. This basic design is useful in revealing differences between cultures; however, it is difficult to explain the causes of these differences. Future research can extend the current findings



by looking at differences in students' perceptions based on their cultural orientations or cultural values.

In conclusion, the current study highlights factors underlying the differences in drinking patterns across cultures to explore the understudied area of moderate drinking behaviour. Notably, the findings suggest that students in a wet culture lack personal responsibility for their drinking. Thus it is recommended that social marketers move beyond the individualistic approach, and towards the disruption of drinking cultures/practices in pursuit of a healthy drinking lifestyle. Equally importantly, moderate drinking interventions need to be culturally adapted to account for cultural differences of target groups.

## CHAPTER 3

---

# STUDENTS' PERCEPTIONS OF FACILITATORS OF MODERATE DRINKING

---

This chapter is based on the paper: “Tran, K. T., Robertson, K., & Thyne, M. (2019). Facilitators of students’ moderate drinking in a wet versus dry drinking culture. *Journal of Nonprofit and Public Sector Marketing*. Doi: 10.1080/10495142.2019.1707742”

### 3.1. Abstract

Compared to drinking abstinence, the encouragement of moderating drinking is a pragmatic and sensible approach to addressing excessive alcohol consumption. This study explores how students' perceptions of facilitators of moderate drinking vary between a wet (New Zealand) and dry drinking country (Vietnam). A qualitative survey was conducted with 227 and 278 respondents from New Zealand and Vietnam, respectively. Aligning with the behavioural ecological framework, the content analysis reveals that students perceive several factors to encourage moderate drinking at the individual (e.g., *controllability* and *coping skills*), social (e.g., *peer influences*), and environmental level (e.g., *alternatives to drinking*). The response variations between the two countries provided novel insights into cultural differences in students' perceptions, with internal factors exerting stronger influence in the dry culture and external influences being more prominent in the wet culture. The findings offer recommendations to inform nonprofit and social marketing in the areas of alcohol control.

## 3.2. Introduction

The transitional period from high school (or late adolescence) to university (or young adulthood) is often associated with an increase in alcohol use and abuse (Arnett, 2005). This is particularly true in countries which have a reputation for heavy alcohol consumption (or wet drinking cultures). Research in these contexts shows that the prevalence of heavy drinking is highest amongst university students (Kypri et al., 2009). While alcohol consumption in the general population is decreasing, youth drinking cultures, particularly student drinking cultures, remain a serious problem (Hutton, 2016). Indeed, alcohol-related consequences (e.g., negative impacts on health, academic failure, unintended sex, property damage, violence, and crimes) remain prevalent in this subpopulation (White & Hingson, 2014). Hence, this study focuses exclusively on university student drinking.

Although drinking abstinence is a “medically desirable behaviour” (Graber et al., 2016, p. 80) and can remove the negative consequences associated with heavy drinking, wide-scale abstinence is an unrealistic expectation in youth cultures where alcohol plays significant social roles (Järvinen & Room, 2007). The harm reduction approach (Marlatt & Witkiewitz, 2002) suggests that drinking in moderation is a more pragmatic and sensible approach than advocating alcohol abstinence. Interventions and policies aimed at encouraging moderate drinking might be a valuable complement to the dominant approach of heavy drinking avoidance. Moreover, despite current debates in medical and public health research, many researchers argue that moderate drinking can offer health and psychological benefits to drinkers (Peele & Brodsky, 2000). However, the moderate drinking behaviour amongst university students, and its determinants remain understudied in alcohol consumption literature (Tucker & Harris, 2016). Thus, the present study aims to address the dearth of knowledge on moderate drinking and in doing so, inform nonprofit and social marketing practice and theory in the area of alcohol control. This resonates with and begins to address calls for more research into young people’s decision-making processes towards moderate drinking (Fry et al., 2014).

Existing literature has uncovered barriers to moderate drinking behaviour, e.g., peer pressure and positive attitudes towards drinking (Tran et al., 2019). Nevertheless, social marketing research indicates that identification of barriers and removal of barriers are alone insufficient, albeit necessary, in changing or promoting behaviour (Polonsky et al.,

2015). In many instances, the absence or removal of barriers is conceived as “hygiene” factors because they serve as preventatives, i.e., allowing the behaviour to be considered, but not executed (Herzberg, 1964). For a behaviour to be undertaken, it also needs to be facilitated or motivated. It is therefore vital to understand what facilitates moderate drinking behaviour to encourage this more positive drinking lifestyle. Prior studies have identified facilitators of moderate drinking, using the Theory of Planned Behaviour (e.g., Cooke et al., 2007; Lettow et al., 2015; Previte et al., 2015b), the Model of Goal-Directed Behaviour (e.g., Fry et al., 2014), or the Social Influence Theory (e.g., Previte et al., 2015a). However, these studies are limited in that they focus on specific internal or social factors predetermined by the theories of use, thus hindering the discovery of other possible facilitators. Extending previous research, we take a holistic, qualitative approach of a behavioural ecological framework, considering multiple levels of influence on behaviour simultaneously, to explore facilitators of students’ moderate drinking.

Regarding research contexts, current knowledge on student drinking is disproportionately based in the Nordic and English-speaking countries such as North America, UK, and Australia. In general, these countries feature a wet drinking culture (i.e., societies which have weak temperance tradition, high volume of consumption, low proportion of abstainers, and frequent heavy drinking) and high prevalence of alcohol problems. In contrast, countries with a dry drinking culture, where low alcohol consumption and a moderate drinking tradition are typically observed, have received little research attention. It is argued that a comparison approach between wet and dry drinking cultures can offer novel insights to curb heavy drinking problems (Hogan et al., 2014). For instance, a greater understanding of students’ experiences in a dry culture might suggest new ways to support moderating drinking in wet cultures. The current study addresses this by comparing students’ perceptions of moderate drinking facilitators between two countries with different drinking cultures, namely Vietnam as a dry country, and New Zealand as a wet country. This cultural comparison approach also responds to research calls for a broader and culturally appropriate view of drinking behaviours (Measham, 2006), and global perspectives in public policy and marketing (Kopp & Kim, 2018) since culture has been known to be an important and prominent influence of alcohol use and misuse (Castro et al., 2014).

In summary, the current study aims to explore what factors enable moderate drinking amongst university students and how these factors might vary between a wet and a dry

drinking culture from a holistic lens of the ecological framework. The contribution of this research to alcohol-related nonprofit and social marketing is two-fold: (1) providing a holistic examination of the facilitators of drinking moderation that may identify underrepresented facilitators in previous research; and (2) offering novel insights into cultural differences in perceptions of moderate drinking. These improved understandings of student drinking are helpful to inform better development and implementation of strategies that foster healthier drinking practices amongst young people.

### **3.3. Moving towards an Ecological View of Behavioural Change: Facilitators of Drinking Moderation**

There has been criticism of the reductionistic/individualistic approach for tackling complex societal problems, in that it focuses mainly on individuals and results in top-down strategies, which are ineffective or insufficient to change behaviour (McHugh & Domegan, 2013). Concurrently, there have been calls for moving towards a broader and holistic approach, which integrates multiple levels of influences on individual behaviour (downstream, midstream and upstream) to address social problems (Fry et al., 2017). This thinking in social marketing has led to the development of an ecological framework on behavioural change, capturing not only the individual influences but other stakeholders and processes across the ecosystem of society (Brennan et al., 2016; Collins et al., 2010). The ecological framework posits that behaviours are influenced by an array of factors at multiple levels. In general, these levels of influence can be arranged into three categories: individual/intrapersonal level, social/interpersonal level, and environmental/community level. Moreover, factors at these levels interact with each other to influence behaviour. The following section presents a review of the literature on factors contributing to students' moderate drinking and alcohol consumption reduction. Since there has been no research applying the ecological framework to this behavioural domain, we discuss how the findings in separate studies might converge to the three influence levels of the framework.

#### **3.3.1. Individual factors**

People with higher motivations to limit drinking tend to have more moderate alcohol use. Taking a positive deviance perspective of students who limit their alcohol consumption,

Tucker and Harris (2016) show that the more students commit to responsible drinking, the less alcohol they consume. Within the Model of Goal-directed Behaviour, Fry et al. (2014) argue that desire to drink moderately is the strongest predictor of young people's moderate drinking intentions.

Alcohol expectancy research has recognised the opposite effect of positive and negative expectancies (i.e., beliefs about the beneficial and detrimental effects of drinking, respectively) on drinking behaviour (Monk & Heim, 2013). Of particular interest to moderate drinking, negative alcohol expectancies have consistently been found to reduce drinking (Jones et al., 2001; Monk & Heim, 2013), and to be a reason for limiting drinking (Colby et al., 2009). In fact, McNally and Palfai (2001) point out that negative and not positive expectancies significantly predict readiness to change current drinking patterns amongst student binge drinkers. Steinman (2003) also reveals that perceived risk of heavy drinking can distinguish students who had stopped drinking heavily from those who did not do so, suggesting that shifting and highlighting negative alcohol expectancies may facilitate moderate drinking. Indeed a positive attitude towards moderate drinking has been found to be associated with an increase in intention to moderate drinking (Cooke et al., 2007; Gagnon et al., 2012; Previte et al., 2015b).

Another factor shaping moderate drinking is self-efficacy or controllability – the belief that someone can control, limit or resist alcohol consumption up to their desire (Oei & Morawska, 2004). Self-efficacy has been found to be negatively associated with drinking (Tucker & Harris, 2016), and positively associated with non-binge intention (Gagnon et al., 2012) and moderate drinking intention (Fry et al., 2014; Lettow et al., 2015; Previte et al., 2015b). Huhtanen and Raitasalo (2012) explore three ways of regulating one's drinking, including self-control, social control, and external control, with social and external control of drinking associated with heavy alcohol use, whilst self-control is linked to moderate drinking.

Furthermore, students adopt individual strategies to control their drinking (Furtwängler & de Visser, 2017b). Protective behavioural strategies (PBS) are self-regulatory strategies to reduce alcohol consumption and alcohol-related harms (Ehret et al., 2013; Martens et al., 2011). Specific strategies can range from preparatory planning before drinking, to safety measures during drinking (e.g., setting limits, pacing, diluting or alternating of drinking), and care-taking after drinking (e.g., social supports) (Howard et al., 2007). PBS use has also been found to interact with self-efficacy to influence drinking outcomes, such

that PBS use reduces alcohol consumption and consequences for those with low self-efficacy (Ehret et al., 2013).

### 3.3.2. Social factors

Within social environments, peer groups seem to be either a good or bad influencer of student drinking. Considerable past research has underlined the negative role of friendship groups on behaviour, demonstrating how friends encourage drinking to excess through modelling heavy drinking or drunkenness, creating heavy-drinking norms, and pressuring their peers to drink or drink more (Borsari & Carey, 2001; Kuntsche et al., 2017). At the same time, another body of literature has shown the opposite effect of peers with regards to alcohol abstinence and moderation. For instance, Conroy and de Visser (2014) illustrate the paramount importance of genuine and supportive friendships to non-drinkers, with closer and dependable friends understanding and respecting their choice of not drinking. Graber et al. (2016) similarly suggest that peers can exert adaptive influences on moderate- and non-drinkers by enabling belonging, security, and freedom of choice. Within the Social Influence Theory, Previte et al. (2015a) identify the sole influence of group norms on moderate drinking desire and intentions. That is, the more a person and his/her friend group share agreement on goals of drinking moderation, the more likely they want and intend, to do it. Students in previous research also perceive that drinking is limited when having non-drinking peers or partners around (Colby et al., 2009). However, the influence of subjective norm is relatively weak or inconsistent in the case of moderate drinking. While some research indicates an insignificant relationship between perceived norm and intention to moderate drinking (Cooke et al., 2007; Gagnon et al., 2012; Previte et al., 2015a), others show a positive association between them (Fry et al., 2014; Previte et al., 2015b).

Another influential agent within the social environment is family. Parents (and siblings) can offer a protective mechanism against students' heavy drinking through positive role models (Herring et al., 2014), reprimand (Suaalii-Sauni et al., 2012), parenting practices (Abar, 2012), and moderating negative peer influences (Abar & Turrise, 2008). Observing negative consequences of parents drinking (e.g., family conflicts) can explain why some young people choose to be a non- or light drinker, possibly because of their rising negative expectancies (Herring et al., 2014; Piacentini & Banister, 2009). In the general population, heavy drinkers receive pressures to drink less mainly from family members, rather than friends (Astudillo et al., 2013; Room et al., 2016).



In some studies, moderate drinking or abstaining is related to identity and social image. Some young people drink moderately or do not drink to maintain their reputation (de Visser et al., 2013), be different or to not follow the crowd (Herring et al., 2014). However, the role of social identity in encouraging moderate drinking is mixed. On the one hand, students tend to drink less when alcohol consumption signals an unwanted social identity, e.g., associations with avoidance/out groups (Berger & Rand, 2008). Alternatively, some studies have found that out-group members (e.g., abstainers) can have positive effects on healthy drinking behaviour in the condition that out-groups are favoured by in-group members, e.g., when drinkers have more interactions with and positive views towards abstainers (Gallage et al., 2018). On the other hand, a study by Previte et al. (2015a) shows that social identity is not related to moderate drinking desire and intention.

### **3.3.3. Environmental factors**

Regarding structural factors, governments implement various policies and measures to restrict alcohol consumption and facilitate moderate drinking, such as pricing/taxation adjustment, distribution change, education and warning labels (Hogan et al., 2014). Higher education institutions also employ different approaches and initiatives to encourage a sensible drinking culture amongst their students, such as promotional materials, alcohol-free areas/policy, and partnerships with other organisations (Orme & Coghill, 2014). However, the efficacy of these interventions is unclear. Beyond these, other situational factors can limit students' alcohol use, including: situations promoting moderate drinking (e.g., small drinking group, weekdays, and low-key socializing), responsibility (e.g., academic, working, and athletic obligations), and when students mature out from university lifestyle (Colby et al., 2009). Similarly, research on reasons for non-drinking or limiting drinking has illustrated that circumstances involving personal responsibility and obligation (e.g., studying, working, worshipping, and family caring) lessen consumers' resources (e.g., time, money, and attention) to engage in heavy drinking, thus leaving students with the choice of moderate drinking or abstaining (Epler et al., 2009; Huang et al., 2011). These circumstances are also used as a distraction strategy or enabler to support temporary abstinence and/or consumption reduction (Pennay et al., 2018). At the cultural level, cultural values such as traditional/collectivism tend to contribute to drinking in moderation and abstinence (Suaali-Sauni et al., 2012; Tang et al., 2013). Research also recognises the protective effects of religion on student drinking (Piacentini & Banister,

2009; Suaali-Sauni et al., 2012). Religious involvement even has a stronger effect than social support in reducing drinking frequency (Thompson, 2017).

### **3.3.4. Research questions**

Aligning with current ecological thinking in social marketing, we argue that factors at various levels of influence should be investigated together, rather than in isolation, to better tackle complex social problems. The literature indicates that there is inadequate knowledge on the moderate drinking phenomenon from a holistic perspective that encompasses multiple levels of influences, and little is known about the inevitable and pervasive influence of culture on moderate drinking. Therefore, this study was carried out to answer the following questions:

- RQ2.1. What are students' perceptions of the facilitators of moderate drinking?
- RQ2.2. Can the facilitators be understood in line with an ecological framework? If so, what is the relative salience of the facilitators at each level?
- RQ2.3. How do these perceived facilitators vary between a wet and a dry drinking culture?

## **3.4. Methods**

### **3.4.1. Settings**

This study was conducted at three universities, one in New Zealand and two in Vietnam. Research has consistently indicated that New Zealand students tend to engage in risky drinking and experience a wide range of serious harms (Connor et al., 2014; Kypri et al., 2009). Drinking to get drunk (i.e., culture of intoxication) is also normative amongst tertiary students in New Zealand (Kypri et al., 2005b; McEwan et al., 2011), and is described positively by the students as a way to enhance pleasure, social image and sociability (Hutton, 2016). In Vietnam, on the other hand, moderate drinking is commonplace and heavy alcohol consumption is not problematic amongst many young people (Vietnam Ministry of Health, 2004), with Vietnamese students, on average, consuming 2-3 standard drinks on each occasion (Diep et al., 2016b), compared to an average of 7.1 drinks for New Zealand students (Kypri et al., 2010). Given such variance in student drinking patterns, a comparison between New Zealand and Vietnam can be

considered as a contrast between a wet and dry drinking culture. As such, they provide appropriate contexts for this research.

### 3.4.2. Procedure

Qualitative research methods were used to elicit university students' perceived facilitators to moderate drinking. Specifically, a vignette was designed to ascertain students' thoughts on the facilitators of practising moderate drinking. The vignette read as follow:

“It’s Sunday and your friend Alex/Khanh says “I’m never drinking again”. Alex/Khanh often says this and sometimes wishes he/she had drunk less the night before, however, Alex/Khanh never actually changes his/her drinking behaviour. List factors below that could help Alex/Khanh to change his/her drinking behaviour.”

Since moderate drinking is perceived and determined subjectively by individuals (Green et al., 2007), in the present study, it was defined qualitatively to mean drinking in moderation to reduce negative alcohol harms. A general open-ended question was used to ensure that the participants were not primed to think in any particular way. In doing so, we hoped to discover as many facilitators as possible which spanned across different levels of influence within the ecological framework. In the vignette, the use of neutral names (Alex in New Zealand, and Khanh in Vietnam) was to reduce the gender bias, and the use of a third-person scenario was to reduce social desirability. Participants completed a pen-and-paper survey that included questions on demographics (age, gender, and ethnicity), personal alcohol consumption using the AUDIT-C instrument (Bush et al., 1998), and the vignette described above. The questions were the same for both samples but translated into their native language.

In New Zealand, undergraduates enrolled in a third-year marketing course recruited their peers to take part individually, at a convenient location. In Vietnam, a Vietnamese postgraduate student recruited undergraduate students in their classrooms with permission from the lecturers in charge. Vietnamese participants were also instructed not to consult other students' opinions. Despite differing methods for administering the survey, the standardised vignette helped to ensure a similar data collection process in the two countries. Ethical approval of this study was obtained from the ethics committee at

the University of Otago, New Zealand, and all of the participants gave their written and informed consent.

### 3.4.3. Sampling

This was a cross-sectional study amongst 227 respondents from New Zealand and 278 from Vietnam. A purposive sampling method was employed to produce the most relevant and useful data. Selected participants were 18 years or older, undergraduate students and current drinkers (drinking in the previous month). In New Zealand, the respondents' age range was 18-26 years ( $M = 21.4$ ,  $SD = 1.3$  years), 44% were males, and 83% identified as New Zealand European, 2% as Maori and 16% as other ethnicities. In Vietnam, the age of respondents ranged from 21-33 years ( $M = 21.8$ ,  $SD = 1.2$  years), 51% were males, and 99% identified as Kinh, and 1% as other.

Regarding alcohol consumption, most New Zealand students in this study reported frequent drinking (twice a week or more, 54%), heavy drinking (>6 standard drinks, 74%) on each drinking occasion, and weekly heavy episodic drinking (71%). On the other hand, most Vietnamese students drank once a month or less (75%), consumed less than five standard drinks per episode (81%), and engaged in heavy episodic drinking less than monthly (86%). The reported alcohol consumptions resulted in a significant difference in scores of hazardous drinking (AUDIT-C) between the two countries ( $M_{\text{New Zealand}} = 8.1$ ,  $SD_{\text{New Zealand}} = 2.1$ ;  $M_{\text{Vietnam}} = 2.8$ ,  $SD_{\text{Vietnam}} = 1.8$ ;  $t = 29.825$ ,  $df = 496$ ,  $p < 0.001$ ), with New Zealand characterised by heavy alcohol consumption and Vietnam by moderate drinking.

### 3.4.4. Analysis

An inductive qualitative content analysis using Nvivo 11 software was used to code the New Zealand and Vietnamese data separately. Following the process suggested by Elo and Kyngäs (2008), the first author read the interview transcriptions several times to familiarise himself with the data. Then, the first author applied open coding by freely attaching codes to the data and subsequently grouping codes with similar or related meanings into themes. In this process, pieces of information in participants' answers served as units of analysis. It means that a single answer could be coded into several codes, but each piece of information in the answer was coded only into one code. Here, a piece of information refers to the smallest text segment that is comprehensible by itself (Lincoln

& Guba, 1985). Hence, it can be a paragraph, a sentence, a phrase, or even a word, as long as it contains one idea about the research inquiry (Tesch, 1990). In total, there were 102 codes employed. Themes were also checked in comparison to other observations not in the same group to ensure they were exhaustive and mutually exclusive. Finally, a general description of moderate drinking facilitators was formulated through the abstraction process. To enhance coding reliability and reduce researcher bias, the resultant coding and description were audited by the second author. Any disagreement between the two authors was resolved through discussion, and then modifications on coding and the coding scheme were made. This refinement process was iterative until a consensus was reached. (see Appendix 9 for the coding sheet). Additionally, 25% of the transcripts were randomly selected and coded by another independent coder whose expertise was not in alcohol research. Inter-coder agreement percentage and Cohen's kappa were calculated for each theme. On average, inter-coder percent agreement across the frequently mentioned themes (i.e., 15 themes were examined in this study) was 96.1%, and an average Cohen's  $\kappa$  of 0.817 was achieved, indicating a substantial agreement between the coders. It suggests that the remaining transcripts can be feasibly and reliably coded by single coders (Burla et al., 2008).

In total, twenty-four themes emerged from the data. We recognised a natural fit between these themes and the three influence levels of the ecological framework. Hence, the themes were grouped into three categories corresponding to the three levels (i.e., individual, social and environmental level). The themes and categories were analysed in terms of the number of participants endorsing them. Only themes whose relative frequencies (percent of participants stating a theme) exceeded 5% within one or other country were examined. A description of the themes and their exemplars are presented in Table 3.1. To examine whether there were significant differences in the salience of themes across cultures, Chi-square analyses were conducted for each theme as a function of country.

Table 3.1. Content Analysis of Facilitators of Moderate Drinking.

Category/Theme	Description	Exemplars
<b>INDIVIDUAL LEVEL</b>		
Negative expectancies	From experiences, observations and/or learning, one needs to perceive that alcohol consumption carries risks and results in negative consequences to themselves and others.	<p>“Talk to him, share with him about alcohol’s harms: e.g., waste of money and time, harm to himself, community and society”;</p> <p>“If he became unwell from alcohol (alcohol poisoning) might scare him”;</p> <p>“If he/she was shown the internal effect of drinking excessively”.</p>
Self-determination	One needs to have determination and will-power to reduce their alcohol consumption.	<p>“If Khanh wants to change his habit, Khanh has to be very determined. Without determination, it’s very hard to get rid of the drinking habit”;</p> <p>“Finding the will to drink less”.</p>
Controllability	One needs to control or discipline their drinking habit to be sober, moderate drinkers or responsible drinkers.	<p>“Control his behaviour when drinking, drink in moderation”;</p> <p>“Establish new drinking habit – not drink too much, only drink a little”.</p>
Coping behavioural skills	One needs to possess behavioural skills to cope with drinking pressures or invitations by using a variety of methods/tips for refusing to drink and/or reduce alcohol consumption in terms of quantity, frequency, and alcohol strength.	<p>“Ignore friends’ challenging words”;</p> <p>“Make health excuses (being on the medication or in the treatment)”;</p> <p>“Still go out but drink non-alcoholic drinks”;</p> <p>“Count his drinks, work out his limit”;</p> <p>“Only buy a smaller amount of alcoholic beverages and bring less to the parties”.</p>
Cognitive skills	One needs to be equipped with cognitive skills related to thinking, reasoning, reflecting, and awareness that help reduce drinking.	<p>“Influence on his thinking/awareness to help him understand and quit drinking by himself”;</p> <p>“Take a good hard look at herself, and see what or why she can’t seem to change her ways”;</p> <p>“Kind of adopt a new perception that it’s not cool to always be so drunk - change his/her mindset about it”.</p>
<b>SOCIAL LEVEL</b>		
Peer norm	<p>Friends’ drinking characteristics are suggested to influence one’s drinking, whereby closer relationships with ‘good’ friends (who have positive/healthier drinking behaviour), and/or reduced interactions with ‘bad’ friends (who have heavy drinking habits) can help restrict drinking.</p> <p>In some responses, respondents use the general term “friends”/“peer groups” which may capture the impact of such norms.</p>	<p>“If his friends changed their behaviour then he might as well”;</p> <p>“Do not interact with friends who often invite you to go for drinks”;</p> <p>“Change friend groups”;</p> <p>“Make friends with ones who don’t drink alcohol frequently, which helps Khanh restrict his drinking”.</p>
Peer support	One could drink less with support from their friends or girl/boyfriend in the form of behavioural support (e.g., offering approval/encouragement, advice, preventing/prohibiting, looking after and not putting pressure), and/or emotional support (e.g., warmth, caring and empathy).	<p>“His friends could support his decision and encourage him to stop drink”;</p> <p>“Girlfriend stops/prevents”;</p> <p>“Find friends to share with when being sad”;</p> <p>“Not being questioned by his friends when he does mention that he’s not drinking/drinking as much”.</p>

Family support	One could drink less with support from family in terms of behavioural support (e.g., prohibition, education, advice), and/or emotional support (e.g., caring).	"The control of family, relatives [...] is helpful for Khanh's alcohol drinking restriction"; "Concerned family".
Social support	Respondents suggest general actions to support one's drinking less, without friends and family being mentioned. One could also drink less with support from others outside their family and friend circles (e.g., school, teachers, and surrounding people) in the form of restriction (e.g., advice and punishment) or lowering pressures to drink.	"Dissuade Khanh when seeing him drinking excessively"; "Telling Alex when "enough is enough"; "Do not invite Khanh to drink". "Support from school/work etc."
<b>ENVIRONMENTAL LEVEL</b>		
Alternatives to drinking	One could drink less by involving themselves in alternative activities to drinking and a healthier lifestyle (e.g., non-drinking hobbies, and extracurricular activities), usually for their leisure/enjoyment.	"Other fun ways to be social without drinking"; "Finding healthy hobbies such as sports, reading books, etc."; "Participate in extracurricular activities at school, ward (community), etc."
Circumstances	One could drink less when they face circumstances related to their current responsibilities/obligations that cost their time, ability and commitment.  One could drink less in tight financial situations. One could drink less under difficult health conditions.	"Work Sunday morning"; "Going to church on Sundays"; "Spend more time on study. Do not have much free time which spoils him and gives him the opportunity to go drinking". "Not having enough money". "Health conditions don't allow him".
Socialising avoidance	One needs to avoid pro-alcohol events/parties and situations filled with drinking pressure/temptation.	"Absenting him/herself from social gatherings with alcohol"; "Getting out of the peer pressure situation or event".
Living environment change	A positive change in living environment (e.g., city, flat, university, and bar) could help one to drink less.	"Live far away from areas which are surrounded by many drinking venues"; "Remove him/herself from environments which promote extra drinking".
Macro environment	Public policies in alcohol control, anti-drinking communications, education and interventions could help one to drink less.	"Anti-drinking TV adverts"; "Liquor bans"; "If alcohol prices went up radically"; "Limit alcohol supply (sale)".
Professional services	One could drink less with help from counselling or professional services for preventing or altering their drinking problems. Specific measures such as therapy, rehab or medicine are suggested to be workable for modifying ones' drinking behaviour.	"Seek help through counselling sessions"; "Go to an alcohol rehabilitation course".

### 3.5. Results

Table 3.2 presents the frequencies and percent of participants mentioning the themes and categories by each country, as well as the results of Chi-square analyses for each theme and category. In Vietnam, facilitators at the individual level were most frequently mentioned (69%), followed by the environmental level (51%), and then social level (39%). However, facilitators at the individual, social and environmental level were mentioned fairly equally by New Zealand students (60%, 61%, and 68%, respectively). In comparison, perceptions of individual facilitators were significantly more salient in Vietnam ( $p < 0.05$ ); in contrast, students in New Zealand reported significantly more perceived facilitators of moderate drinking at the social and environmental level ( $p < 0.001$ ).

Table 3.2. Percent of Participants Stating Each Facilitator Theme by Country.

Level	Facilitators	Total (n = 505)		New Zealand (n = 227)		Vietnam (n = 278)		Chi square (df = 1)	p
		n	%	n	%	n	%		
	<b>Category</b>								
I	Individual-level facilitators	328	65.0	136	59.9	192	69.1	4.60	0.032 *
S	Social-level facilitators	247	48.9	138	60.8	109	39.2	23.30	0.000 ***
E	Environmental-level facilitators	295	58.4	154	67.8	141	50.7	15.08	0.000 ***
	<b>Theme</b>								
E	Alternatives to drinking	134	26.5	70	30.8	64	23.0	3.92	0.048 *
I	Coping behavioural skills	133	26.3	69	30.4	64	23.0	3.50	0.061 †
S	Peer support	119	23.6	62	27.3	57	20.5	3.22	0.073 †
I	Negative expectancies	116	23.0	34	15.0	82	29.5	14.89	0.000 ***
S	Peer norm	107	21.2	79	34.8	28	10.1	45.77	0.000 ***
E	Circumstances	93	18.4	49	21.6	44	15.8	2.76	0.097 †
I	Controllability	85	16.8	42	18.5	43	15.5	0.82	0.365 ns
E	Socialising avoidance	65	12.9	22	9.7	43	15.5	3.72	0.054 †
I	Self-determination	56	11.1	9	4.0	47	16.9	21.23	0.000 ***
S	Family support	40	7.9	8	3.5	32	11.5	10.93	0.001 **
E	Professional services	39	7.7	32	14.1	7	2.5	23.51	0.000 ***
S	Social support	39	7.7	12	5.3	27	9.7	3.44	0.064 †
I	Cognitive skills	34	6.7	16	7.0	18	6.5	0.07	0.798 ns
E	Macro environment	27	5.3	19	8.4	8	2.9	7.45	0.006 **
E	Living environment change	23	4.6	21	9.3	2	0.7	20.93	0.000 ***

Notes: \*\*\*  $p < 0.001$ ; \*\*  $p < 0.01$ ; \*  $p < 0.05$ ; †  $p < 0.1$ ; ns  $p \geq 0.1$ . I = Intrapersonal/individual level; S = Interpersonal/social level; E = Environmental level.

It is noted that the salience of facilitators also differed at the theme level. Within the individual level, the general pattern was that factors reflecting moderate drinking ability (e.g., *controllability*, *coping behavioural skills*, and *cognitive skills*) were relatively similar in both



countries ( $p > 0.05$ ). The difference between the two countries at this level occurred concerning motivation-related facilitators. Particularly, Vietnamese students were significantly more likely to mention *negative expectancies* and *self-determination* ( $p < 0.001$ ).

At the social level, New Zealand students were more likely to mention the protective effect of *peer norm* ( $p < 0.001$ ), and *peer support* ( $p < 0.1$ ), whereas Vietnamese students were more likely to mention the effect of *family support* ( $p < 0.001$ ), and *social support* ( $p < 0.1$ ). At the environmental level, the role of structural factors (e.g., *living environment*, *macro environment* and *professional services*) in supporting moderate drinking was almost unrecognised in Vietnam, paralleled with a significantly higher prevalence of these themes in New Zealand ( $p < 0.01$ ). New Zealand students were also more likely than Vietnamese students to mention *alternatives to drinking* ( $p < 0.05$ ) and *circumstances* ( $p < 0.1$ ). However, *socialising avoidance* was slightly more salient in Vietnam ( $p < 0.1$ ).

## 3.6. Discussion

The current study addresses the call to extend knowledge on moderate drinking behaviour (Previte et al., 2015a) by exploring students' perceived facilitators of moderate drinking. In doing so, the study also redresses the imbalance of current scholarly conversations on alcohol consumption, which disproportionately focus on heavy drinking and the related harms amongst young people (Herring et al., 2014). In the following, we discuss the findings in light of their contributions to the student drinking literature as claimed in the introduction.

### 3.6.1. Important facilitators of moderate drinking

By taking a holistic view to study student drinking from the moderate drinking approach, this study identified various facilitators of moderate drinking at multiple levels. In this respect, our contributions pertain to: (1) exploring underexamined facilitators such as *alternatives to drinking* and *circumstances*; (2) shedding further light on the protective effects of peer groups that support moderate student drinking (aside from their risk effects that increase heavy drinking); and (3) elaborating on the relative importance of the facilitators.

Regarding drinking alternatives, studies on alcohol anti-consumption report that light drinkers and abstainers actively participate in activities and hobbies that do not involve

alcohol or focus on alcohol consumption (Herring et al., 2014). Researchers have also recommended that alternative activities be included in alcohol interventions (Davies et al., 2018; Robertson & Tustin, 2018). Despite the possibility that alternative-based strategies may offer benefits for facilitating moderate drinking, its influence on drinking behaviour has received little empirical investigation in the literature. Aligning with recent work in social marketing competition (Schuster, 2015), the theme “Alternatives” in this study suggests that behavioural alternatives can serve as complementary, rather than combative competition which supports behaviour, in this case, moderate drinking. Relatedly, circumstances that encourage moderate drinking correspond to a form of indirect competition in social marketing (i.e., other behaviours conducive to consumers’ goals that differ from those motivating the target behaviour) (Schuster, 2015). Contents of the theme “Circumstances” further suggest that the indirect competition seems to be reactive and situational, compared to the active nature of direct competition (“Alternatives”). The emergence of the theme “Alternatives” also supports the need to look at student drinking as a social practice rather than an individual behaviour (Supski et al., 2017). Future research should investigate what types of alternatives are credible and responsive to students, or how to make the alternatives more attractive and favourable than drinking activities, to develop effective alternative-based interventions (Davies et al., 2018).

In line with the few studies on the experiences of moderate- and non-drinkers (Conroy & de Visser, 2014; Graber et al., 2016), this study highlighted the positive role of peer influences for moderate drinking behaviour, and further emphasised that peers may exert stronger influences than family and others to encourage drinking moderation. Specifically, friends were perceived as a main source of pressure to drink less, a means of getting emotional support (peer support/direct influence), and a great example for modelling moderate drinking behaviour (peer norm/indirect influence). Prior studies in general populations suggest that pressures to drink less from friends are less likely than ones from family since such pressures may be interpreted as peer criticism that threatens peer friendship (Astudillo et al., 2013; Room et al., 2016). However, in this study, students’ perceptions of influences from friends were more salient than family influences in encouraging moderate drinking. These findings have implications for student drinkers in peer selection. Drinker prototype research found that people tend to prefer those who have similar drinking patterns to themselves, suggesting that heavy drinkers tend to socialise within heavy drinking groups which makes it difficult to change their drinking

behaviour (Young et al., 2016). In the study by Lettow et al. (2015), perceived similarity to the abstainer prototype was found to increase intention to drink sensibly and decrease alcohol consumption amongst young adults. Therefore, students should be shown the advantages of moderate-drinking social networks, so that their decisions to associate with moderate-drinking friends and to moderate their drinking are more accessible and easily accepted.

Moreover, the study offered an evaluation on the relative salience/importance of various facilitators for moderate drinking (in terms of the frequencies that were mentioned) that previous research has not provided. The findings indicated that the top important facilitators for moderating student drinking included: *alternatives* and *circumstances* (at the environmental level); *peer support* and *peer norm* (at the social level); and *coping skills* and *negative expectancies* (at the individual level). In line with Polonsky et al.'s (2015) argument in the domain of blood donation, our findings also suggest that reversing some barriers to moderate drinking (e.g., positive attitude towards drinking, amotivation, feelings, fear of missing out, social image, drinking culture, as indicated in the study by Tran et al., 2019) is not sufficient to promote the behaviour. However, a positive change in other barriers such as low negative expectancies, low self-control, peer norm, socialising activities, and living environment (Tran et al., 2019) can actually stimulate moderate drinking.

### **3.6.2. Cultural differences in perceptions of moderate drinking**

Our study reveals how different factors moderate student drinking in dissimilar drinking cultures. Particularly, the findings indicate that external factors (at the social and environmental level) play a more significant role to facilitate moderate drinking in New Zealand, whereas internal facilitators such as negative expectancies and self-determination exert more influence in Vietnam. It seems that students in a wet drinking culture like New Zealand tend to employ social and external control and situational reasons (e.g., school work, and driving) to limit their drinking. In contrast, Vietnamese students, who live in a dry culture, tend to employ self-control and internal reasons (e.g., personal values, and alcohol beliefs) to reduce alcohol use. As such, this cross-cultural finding extends past research on individuals' ways of limiting alcohol consumption (Huang et al., 2011; Huhtanen & Raitasalo, 2012), to the cultural level, with social and external control of drinking associated with wet cultures, and self-control linked to dry cultures.

Regarding individual facilitators, the significantly higher salience of negative expectancies in the Vietnamese sample indicates that negative expectancies are more likely to drive moderate drinking in dry cultures (Vietnam) than wet cultures (New Zealand). In fact, negative expectancies were the most mentioned facilitator across the themes in Vietnam. There has been evidence that negative expectancies are more influential to the drinking behaviour of students originating from dry cultures (such as Asians) as compared to those from wet cultures (Caucasians) within an Australian university setting (Oei & Jardim, 2007). Hence, this study corroborates Oei and Jardim's (2007) finding at a cultural level, rather than subgroups (Asian and Caucasian students) within a culture. We also recognised the significantly higher prominence of self-determination in Vietnam, which may imply higher motivations to exercise moderate drinking in dry cultures.

Regarding social facilitators, it appears that indirect peer influence (*peer norm*) is more influential to student drinking in wet cultures, while direct peer influence (*peer support*) is more influential in dry cultures. Prior research shows that peer influence to drink less is less prevalent in countries characterised by a wet culture, yet when occurring, it was associated with heavy episodic drinking occasions (Astudillo et al., 2013). Hence, the heavy drinking characteristics of New Zealand students in this study (89% were hazardous drinkers) may explain why peer influence to foster moderate drinking was perceived more prominently in this student sample.

In terms of family support, research has shown that influences from family (e.g., parents) diminish after their children reach adolescence or attend university (Sancho et al., 2011). However, the extent to which family exerts influence on student drinking can differ between cultures. Our finding on cross-cultural family influence is consistent with Hogan et al. (2014) to show that family/parents exert a greater positive influence, which makes students drink less in dry cultures than in wet cultures. It is possible that students are more likely to receive less parental supervision or ignore parental communication/education about drinking, and that parents are more likely to model heavy drinking which is normative in wet cultures (Hogan et al., 2014). Therefore, the positive influence of family on student drinking tends to be attenuated in such contexts. Alternatively, this variation may be attributable to the difference in values between the two cultures. Countries with dry cultures tend to have higher traditional values such as collectivism/interdependence (Zhang & Shrum, 2009) or familismo (i.e., respect, attachment, and loyalty to family), which have been shown to generate protective effects against heavy drinking (Strunin et

al., 2015; Suaalii-Sauni et al., 2012). In contrast, students in wet cultures tend to have a high level of individualism, which may overcast the protective effects from family to address students' need of being independent and self-governing (Frederiksen et al., 2012).

Regarding environmental facilitators, our findings indicate that having more alternative activities to drinking tends to be more influential in wet cultures (New Zealand) to encourage moderate student drinking. Considering competition in social marketing, Schuster (2015) suggests that direct competition of a target behaviour is more salient when consumers decide to adopt the behaviour, rather than in the behavioural maintenance stage. Since moderate drinking is uncommon in wet cultures, New Zealand students are likely to be in the earlier stages of moderate drinking adoption. Therefore, they might perceive the direct competition of drinking activities more readily, and placed higher importance on the alternatives for controlling drinking. Students in dry cultures like Vietnam, on the other hand, may be in the maintenance stage of moderating drinking, thus paying less attention to the alternatives. Besides, drinking/heavy drinking is perceived as the chief means of pleasure and socializing in wet cultures (Hogan et al., 2014), thus students here may find limited options for satisfying their recreational and social needs, which possibly makes alternatives to drinking more essential to counter resistance to change (Davies et al., 2018).

The cultural difference also exists within structural environments. Particularly, the prevalence of professional support, living environment change, and the macro environment were significantly higher in New Zealand than Vietnam. The variations might be attributable to country development. Although Vietnamese government has introduced national alcohol policy and many strategies to reduce alcohol misuse, formal alcohol control in Vietnam is characterised by loose enforcement and lack of supporting infrastructure (Tam et al., 2012). The diffusion of professional services is still at the infancy stage, and capacity and resources for alcohol research and intervention development are limited in this country (Lincoln, 2016). This finding contributes evidence to the health inequality issue to address health problems in countries with different levels of socioeconomic development (Schmidt et al., 2010).

Taken together, the identification of these cultural differences suggests a lack of personal responsibility and motivation to moderate drinking amongst students in wet cultures since they rely more on external factors to control their drinking. Indeed, motivations to moderate drinking have been shown at a low level amongst students in many wet

countries (Furtwängler & de Visser, 2017a) since this drinking practice requires students to step out of their social reality and experience (Supski et al., 2017). As such, interventions taking a broader environmental approach to address drinking problems may be more effective than those using an individualistic approach in such cultures.

### **3.7. Implications for Alcohol Control**

Findings from the present study offer useful implications for nonprofit organisations and government agencies to develop more effective interventions for promoting moderate drinking. Theoretically, we demonstrate the usefulness and applicability of the holistic ecological framework to examine moderate drinking. Although we did not prime participants to think of facilitators according to the framework, the findings echoed the three main levels of influence on behaviour, ranging from factors internal to individuals (e.g., negative expectancies and coping skills) to external factors at social and broader environmental levels (e.g., peer support and alternatives). It implies that individuals and their drinking behaviours are embedded within the interpersonal networks and the wider environment. Therefore, it is necessary to consider moderate student drinking in particular, and drinking problems in general, from the lens of the ecological framework.

Practically, the findings of multilevel facilitators of moderate drinking suggest that alcohol interventions should be multi-faceted, focusing not only on internal factors and removing barriers but also accounting for external factors and enhancing facilitators of moderate drinking. It might help to explain why current alcohol interventions often fail to change drinking behaviour given that they tend to take an individualistic approach, and ignore social and environmental influences to address problems (Szmigin et al., 2011). Given insights gained from this study, special attention should be paid to creating opportunity (e.g., diversifying entertainment/socialising options available to students), leveraging the positive influences from peers/friends, building skills and ability to control one's drinking, and reinforcing beliefs regarding negative consequences of drinking. They are also important since a negative change in these factors (e.g., peer influence, controllability, negative expectancies) can inhibit moderate drinking (Tran et al., 2019). Moreover, the findings can be served as useful customer inputs for developing positioning or value propositions of programs aimed at promoting moderate drinking. For example,

campaigns can position moderate drinking around positive socialising activities, a way to reduce alcohol harms, an easy and doable task, and a practice supported by good peers.

Alcohol interventions also need to be tailored to the cultural contexts of implementation since our findings confirm the differences in students' perceptions concerning moderate drinking across two varying cultures. The findings suggest that interventions to encourage moderate drinking in wet cultures should focus more on the social and environmental influences, and to a lesser extent, ability to moderate drinking; whereas ability and motivation element should be focused in these interventions in dry cultures. Specifically, the most effective approaches to encourage moderate drinking in wet cultures include: developing a positive *norm* and *support* around moderate drinking in students' social networks, creating more non-alcohol leisure *activities* for students, and building their *skills* to control or resist drinking pressures. For dry cultures, the best choices are: improving *controllability* in drinking, and raising *awareness of the negative consequences* of drinking.

Although students in both countries appreciated the importance of alternatives to drinking, responses from Vietnamese students offered more concrete ideas of how to achieve pleasure and sociability in healthier ways (apart from sports and exercises), which might be useful for New Zealand students to control their drinking. Examples are participating in university social clubs, community/volunteer activities, walking, eating, watching movies, going to coffee shops or game/entertainment centres. Further research is required to appraise the efficacy of these alternatives. Parents and siblings in wet cultures should be encouraged to act as a protective agent for moderate drinking by offering alcohol education, advice and support to students, as more commonly seen in the case of dry cultures. The ideas recommended above need to be tested on their cultural relevance or compatibility for successful implementation.

The above implications are also useful for dry cultures like Vietnam to maintain their current moderate drinking practice, and/or prevent the heavy drinking tendency that is occurring as a result of globalisation, liberalisation, and economic growth (Lincoln, 2016; Tam et al., 2012). Furthermore, there is a notion that the macro environment and infrastructures for alcohol control are not well-established in Vietnam. Thus, the Vietnamese government is recommended to develop new public services and/or improve their current alcohol policy for addressing potential drinking problems, either by its own or with international assistance and co-operation.

### **3.8. Limitations and Future Research**

Regarding methodological limitations, as with most qualitative research, participants in this study were not randomly sampled, thus preventing the generalisation of findings to other student samples. A difference in data collection modes in the two examined countries (an unacquainted postgraduate student versus students' peers) is acknowledged to create potential response bias. Thus, future research is encouraged to use parallel or identical modes for collecting data in different countries. The use of an open-ended survey to elicit students' perceptions may reduce the depth of resulting knowledge; however, this limitation was compensated by a relatively large sample size, hence enhancing the breadth of knowledge, and improving the sensitivity and generalisability of the findings. Despite the efforts to ensure the trustworthiness of findings (e.g., using a standardised vignette from a third-person perspective, coding auditing, and inter-coding with an independent coder), problems of reliability and validity inherent in qualitative research methods should still remain to some extent in this study. Further research applying quantitative methods can help mitigate the subjectivity of data interpretation.

This study supports the use of the ecological framework as a comprehensive tool for examining students' moderate drinking behaviour. It should be acknowledged that while the findings successfully identified multiple levels of influence on the behaviour, the interactions between levels were not deliberately examined. Future research illuminating how various factors at different levels of influence interact with each other in influencing the behaviour would be very useful. Moreover, cross-cultural findings from this study can be a useful starting point for investigating how and why various interventions have a differential impact across cultures, or for identifying social marketing messages/remedies that would be responsive and effective in each culture.

### **3.9. Conclusion**

The work in this study is meaningful for informing future alcohol interventions, in that it shifts the focus from avoiding a negative behaviour (heavy drinking) to approaching a more positive behaviour (moderate drinking), thereby offering fresh and fruitful ideas to address drinking problems. This study extends previous research by identifying a wide



range of facilitators of moderate drinking using a holistic qualitative approach. Consequently, it advocates the use of the comprehensive ecological framework to understand and develop solutions for tackling complex social issues. Given the multiple levels of influence, the findings signalled the most important and effective elements of moderate drinking behaviour for nonprofit and social marketers to concentrate their efforts and resources on (e.g., *alternatives*, *positive peer influence*, *coping skills*, and *negative expectancies*). The study also extends the student drinking literature by revealing cultural differences in students' perceptions of moderate drinking between a wet and a dry drinking culture, highlighting the importance of cultural factors. Particularly, external environments exert more influence on student drinking in the wet, and internal motivation is more influential in the dry. Nonprofit organisations and government agencies working for alcohol control, therefore, should have cultural sensitivities in developing their alcohol interventions.

## CHAPTER 4

---

# STUDENTS' INTENTION TO DRINK MODERATELY IN VIETNAM

---

This chapter is based on the paper: “Tran, K. T., Robertson, K., & Thyne, M. (2019). Factors associated with intention to moderate drinking among student drinkers. *Social Marketing Quarterly*, 25(4), 327-346. Doi: 10.1177/1524500419883970”

## 4.1. Abstract

This study addresses the dearth of literature into moderate drinking by demonstrating the value of an ecological approach to examine the influencers of students' intention to drink moderately. In doing so, the study supports a promotion (i.e., how to encourage moderation in drinking) over an avoidance (i.e., how to reduce heavy drinking) approach as a new opportunity for addressing alcohol problems through social marketing. A quantitative survey is conducted within a sample of university students ( $n = 660$ ) in a non-Western and developing country (Vietnam), where moderate drinking is commonplace. Variables were selected based on a previous qualitative stage of the study (e.g., alcohol expectancies, attitude, perceived control, habit, peer pressure, peer support, peer norm, fear of missing out, drinking situations, cultural norm, alternatives to drinking, and living environment). They were measured by adapting established scales or items from heavy drinking literature. Findings suggest that there exist multiple levels of influence on students' intention to drink moderately beyond individual factors, which makes moderate drinking a complex phenomenon. There also exist gender differences in how the factors affect moderate drinking intention. Females appear to moderate their drinking through both internal and external control mechanisms, while males tend to moderate their drinking mainly through internal control. These findings can be used to develop interventions aimed at fostering safe and sensible drinking cultures. By taking a comprehensive approach, the most necessary targets are identified to bring about the desired change. It is also suggested that the interventions should be tailored to different gender needs.

## 4.2. Introduction

Alcohol is a paradoxical product. On the one hand, alcohol consumption, especially intoxication, results in adverse consequences in terms of health, security and social cost (Rehm et al., 2009; WHO, 2018). On the other hand, drinking alcohol is depicted as pleasurable and a social lubrication, thus bringing about positive experiences (Supski et al., 2017; Szmigin et al., 2011). Research also recognises the psychological benefits of alcohol if consumed moderately (Peele & Brodsky, 2000). Due to this two-fold nature of alcohol, two options are intuitively sensible to balance alcohol harms with potential benefits, namely reducing heavy drinking and/or encouraging drinking moderation.

In alcohol social marketing, investigations around heavy drinking have dominated the field; only a few studies have focussed on moderate drinking (Buyucek et al., 2019). It is argued that focusing only on heavy drinking and its avoidance to address alcohol problems neglects the possible positive role of moderate drinking (Fry et al., 2014), and may stigmatise the target audience for alcohol social marketing programs (Buyucek et al., 2019). It may blind us to consider the encouragement of moderating drinking as a legitimate approach to tackle alcohol problems. Moreover, literature from various disciplines suggests that opposing behaviours should not automatically be considered as logical opposites (Middlestadt et al., 2014; Richetin et al., 2011). Therefore, heavy drinking and moderate drinking may be two separate and independent entities driven by different sets of reasons and determinants. Indeed, alcohol research offers evidence that motives/reasons for drinking and limiting drinking are qualitatively different. On the one hand, drinking motives have been universally identified as: to obtain positive social rewards (social motives), to enhance positive affect (enhancement motives), to avoid social rejection (conformity motives), and to reduce negative affect (coping motives) (Cooper, 1994; Kuntsche et al., 2005). On the other hand, people limit or abstain from drinking for reasons/motives such as: self-control, indifference towards alcohol, personal values, dispositional risk, fear of negative consequences, peer disapproval, and family and religious constraints (Epler et al., 2009; Stritzke & Butt, 2001). Thus, what we know about heavy drinking should not be directly transferred to moderate drinking; and targeting influences of heavy drinking does not necessarily encourage drinking moderation. It is important to expand knowledge on heavy, *as well as* moderate drinking, to address alcohol problems (Fry et al., 2014).

Worldwide, alcohol consumption and drinking problems are prevalent in young people. The WHO's (2018) statistics show that drinkers aged 15-24 years often drink heavily, with the prevalence of heavy episodic drinking in this age group higher than in the total population (around 45-55%), and peaking in young adulthood. In many countries, university students constitute a "high-risk subgroup of the highest risk age group in the population" (Kypri et al., 2009, p. 308). Enrolling in universities is a crucial developmental period; in this life stage, students experience identity explorations, instability, self-focus, feeling in-between, and optimism (Arnett, 2005). They also face fewer responsibilities/obligations and adult roles (Reckdenwald et al., 2016), all of which accelerate risky behaviours such as heavy drinking. As a result, they are an important target for alcohol policies and interventions. A wealth of alcohol research has focused on this important population; however, little has been done with this population in a non-Western and developing country (Diep et al., 2016b).

The present study is part of a larger research project investigating students' perceptions of moderate drinking in different drinking cultures (Tran et al., 2019). In line with the majority of previous social marketing research, this study adopts an individual-centred, downstream approach (Truong, 2014) to examine determinants of drinking in moderation. However, alcohol drinking is typically a social activity which involves social contexts and interactions with others (Supski et al., 2017). Researchers have argued that drinking behaviours are embedded in the interrelation of micro, meso, exo and macro systems surrounding it, as suggested by the behavioural ecological framework (Brennan et al., 2016). Therefore, we also incorporate social and environmental factors perceived by students (such as drinking culture, drinking contexts, and direct peer pressure) into the selection of determinants of moderate drinking in this study.

In summary, the objective of this study is to examine factors associated with intention to drink moderately at various (i.e., individual, social and environmental) levels amongst university students in a non-Western and developing country. Since research has consistently shown that there exist significant gender differences in alcohol consumption and related harms (Rahav et al., 2006; WHO, 2018), this study also aims to examine how the influences of moderate drinking intention differ by gender. This study contributes to social marketing literature in three ways. First, this study extends the focus of alcohol social marketing from problematic behaviour (heavy drinking) to positive/desired behaviour (moderate drinking) (Buyucek et al., 2019), which may offer new opportunities

and fresh ideas for addressing alcohol problems. Second, it addresses calls to apply innovative theoretical models that go beyond social-psychological models to promote behaviour change effectively, and to offer implications for holistic social marketing strategies (Deshpande, 2014). This is done through the application of the ecological framework of health behaviour in this study, considering multiple levels of influence on moderate drinking. Third, it extends established knowledge about alcohol consumption to a non-Western and non-industrialised context (Deshpande, 2014), from which lessons may be learnt to address alcohol problems, given that the traditional contexts of alcohol research are the Western cultures or developed countries (e.g., the US, UK, Australia, and New Zealand) where heavy drinking is usually normalised (Hogan et al., 2014).

### **4.3. Moderate Drinking and Factors Associated with It**

Moderate drinking has not been consistently defined because it can vary and be subjectively perceived by individuals and across contexts (Green et al., 2007). Research on experiences of those resisting the dominant norm of excessive drinking shows that alcohol anti-consumption embraces a range of resistance practices (e.g., confronting, avoiding, integrating, and reconstructing) (Bartram et al., 2017b; Fry, 2010, 2011), suggesting that moderate drinking comprises various practices of alcohol resistance. In this study, we refer to moderate drinking as a self-imposed drinking behaviour, involving limiting alcohol intake to the extent that reduces harms. In line with previous research (Previte et al., 2015a), the limit of moderate drinking was defined as 5 standard drinks for males and 4 standard drinks for females on a single drinking occasion, with 1 standard drink containing 10 grams of pure alcohol.

Literature shows that moderate drinking research mainly relies on behavioural models at the individual level (such as the theory of planned behaviour) to examine specific factors influencing moderate drinking amongst youths. At this level, self-efficacy/perceived behavioural control consistently emerged as one of the strongest influences of moderate drinking intention (Fry et al., 2014; Murgraff et al., 2003; Previte et al., 2015b) and moderate drinking practices (Buyucek et al., 2019; Tucker & Harris, 2016). Other individual factors such as attitudes towards moderate drinking, positive emotions (Previte et al., 2015b), personal commitment (Tucker & Harris, 2016), and desire to moderate drinking (Fry et al., 2014) were also found to influence intention to drink moderately.

Research adopting alcohol expectancy theory showed that positive expectancies were negatively associated with moderate drinking practices (Buyucek et al., 2019), while negative emotional expectancies significantly predicted readiness to change to drinking moderation (McNally & Palfai, 2001).

However, other research criticised these models for being too focused on the individual and thus neglecting inevitable influences from surrounding environments (Brewer & Rimer, 2008). Hence, some authors have adopted theories at the social level, illustrating social influences on moderate drinking behaviour. For example, based on the social identity theory, Fry (2010) suggested that moderate drinkers maintained a collective identity against the dominant norm of intoxication. From the lens of social capital theory, Godwin et al. (2016) found that alcohol consumption was a way of capital accumulation within young female groups, as such social capital could facilitate moderate drinking when the group norms were to drink moderately. The group norm was also found to be the only predictor of intentions to moderate drinking within the social influence theory (Previte et al., 2015a).

More broadly, a qualitative investigation on cultural factors by Suaalii-Sauni et al. (2012) found three key communities of influence that supported abstinence or moderate drinking amongst Pacific youth in New Zealand, namely: family, peers and church. This study also concluded that both personal (e.g., personal responsibility) and environmental (e.g., social and structural) factors are protective for responsible drinking practices. Therefore, it lends support for the behavioural ecological framework to examine drinking behaviours (Brennan et al., 2016). Further evidence for the influence of the environment was provided by Sharma et al. (2018) who found behavioural confidence (or self-efficacy) and changes in the physical environment were associated with the initiation of responsible drinking or abstinence amongst heavy-drinking students. In summary, the current knowledge on moderate drinking indicates that this is a complex phenomenon, involving a wide range of influencing factors at multiple levels as postulated by the ecological framework (Brennan et al., 2016).

#### 4.4. Student Drinking in Vietnam

Vietnam provides a reasonable context to examine moderate drinking. The WHO's (2014) statistics show that per capita alcohol consumption in Vietnam is below or at the world average, and the abstainer rate is relatively high (about 60%). According to the Vietnam Ministry of Health (2004, 2010), student drinking is prevalent, but students are not the highest at-risk group in terms of alcohol consumption in this country. Alcohol consumption amongst Vietnamese students is also recorded at a moderate level in prior research, e.g., consuming an average of 2-3 standard drinks per occasion (Diep et al., 2016b), and engaging in binge drinking less than monthly (Diep et al., 2016a). Moreover, research shows that Vietnamese students drink mainly for social motives (Diep et al., 2016a; Diep et al., 2016b). Given that social motives are generally linked to moderate alcohol use (Kuntsche et al., 2005), it is probable that Vietnamese students are frequently exposed to and/or involved in moderate drinking. It is important to note that there is substantial gender discrepancy in students' alcohol use in Vietnam, with males consuming more alcohol, engaging in heavy episodic drinking and experiencing alcohol problems about five times higher, and reporting significantly higher drinking motives than female counterparts (Diep et al., 2016a; Diep et al., 2016b).

Despite current drinking figures, Vietnamese student drinking is potentially at risk of a heavy-drinking culture. In recent years, alcohol consumption and prevalence of drinkers and heavy episodic drinking in Vietnam have increased rapidly and are projected to catch up with the consumption level of other heavy-drinking countries in the future (WHO, 2018). This upward trend in alcohol consumption and heavy drinking may result from a "perfect storm" in many developing countries (Caetano & Laranjeira, 2006), or the confluence of socio-economic factors (e.g., rapid economic development, market liberalisation, urbanisation, globalisation and young population age structure), which leads to increased alcohol demand and supply and "contamination" by heavy-drinking cultures. Moreover, public health infrastructure is not well-established in this developing country, with the development of alcohol control policies and measures at the infancy and lenient enforcement (Tam et al., 2012). It has implications for public health and alcohol social marketing, that is, efforts should be made to encourage Vietnamese students to maintain moderate drinking practices. Therefore, this study is conducted to address the following research questions:



- RQ3.1. What factors at various (i.e., individual, social and environmental) levels are associated with moderate drinking amongst Vietnamese students?
- RQ3.2. How do the factors associated with moderate drinking differ between male and female students in Vietnam?

In addressing these RQs, implications can be drawn for social marketing strategies promoting safer and healthier drinking cultures.

## 4.5. Method

This study employed a quantitative survey research method. A self-administered paper-based questionnaire was designed and distributed to university students in their classrooms at two public universities in Vietnam using a convenience sampling method. To encourage participation, students who completed the survey were offered an opportunity to enter a draw to win shopping vouchers. The research was ethically approved by the University of Otago, New Zealand, and all of the participants gave their written and informed consent.

### 4.5.1. Participants

In total, 908 students participated in the survey. The exclusion of incomplete and ineligible cases (e.g., non-drinkers and international students) resulted in 660 valid questionnaires. The following is a summary of the main demographics of respondents: a large number were 20 years old (47.7%,  $Mean_{Age} = 20.33$ ,  $SD = 0.956$ ), female (57%), Kinh ethnic group (96.5%), had no religious affiliation (78.2%), had part-time jobs (50.2%), and lived off campus with flatmates (45.9%) or with their parents/guardians (27.7%). The students were mostly in their second year (46.8%) or third year (49.4%) with majors in business and economics (67.0%). Regarding drinking characteristics, 46.3% of the students started drinking underage, while 32.4% of the students started drinking at the legal drinking age of 18. The respondents mostly drank alcohol on a monthly basis or less (76.7%) and consumed a small quantity of alcohol on each occasion (65.2% drank 1-2 drinks, and 19.4% drank 3-4 drinks). 33.6% of the students in the sample reported that they never had more than 5 (for males) or 4 (for females) drinks per occasion, and 55.2% did it less than monthly. There was a gender gap in alcohol consumption, with male students reporting a significantly higher consumption index (AUDIT-C) than females

[Mean(SD)<sub>Male</sub> = 3.31(1.95); Mean(SD)<sub>Female</sub> = 2.11(1.26);  $t(df) = 8.942(434.3)$ ,  $p < 0.001$ ]. These figures were comparable to findings from previous surveys on Vietnamese university students (e.g., Diep et al., 2013; Diep et al., 2016a), indicating that drinking amongst Vietnamese students was characterised by a moderate drinking culture.

#### 4.5.2. Measures

As mentioned above, this study is part of a larger project on students' moderate drinking. The previous stage of the project involved qualitative research to explore barriers to and facilitators of students' moderate drinking (Tran et al., 2019). Its findings identified a wide range of factors influencing students' moderate drinking at multiple levels. The most salient factors included: alcohol expectancies, attitude, perceived control, habit, peer pressure, peer support, peer (descriptive and injunctive) norm, fear of missing out (FOMO), drinking situations, cultural (descriptive and injunctive) norm, alternatives to drinking, and living environment. Most of the factors have been examined in relation to heavy drinking in prior research. These factors were chosen as determinants of moderate drinking in this study. Table 4.1 presents brief descriptions and measures of the factors, and examples of the items used.

The selected factors for this study were measured by adapting scales or items established and/or validated in previous research, except that the *drinking alternatives* scale was self-generated. Regarding the outcome construct, moderate drinking was measured in terms of *intention to drink moderately*, following Previte et al. (2015a). Each scale included multiple items. All items were scored on 5-point Likert-type scales with suitable anchors, and they were coded so that higher scores reflected higher evaluations of respondents towards the variables.

*Social desirability bias (SDB)* was included as a control variable since responses to drinking-related issues are potentially subject to social desirability responding. *Past alcohol consumption* and demographic characteristics (e.g., gender, study major, study year, city, religion, ethnicity, age, and age of drinking onset) were also measured to serve as control variables for the analysis.

Table 4.1. Operationalisation of Influences on Student Drinking Behaviours.

Level/Factor	Description	Measure	Example items
<b>Individual/ Intrapersonal</b>			
Alcohol expectancies	Beliefs about the likely effects resulting from drinking.	15 items, adapted from Ham et al. (2005). Specific alcohol expectancies include: (1) <i>Sociability</i> ; (2) <i>Tension reduction</i> ; (3) <i>Courage</i> ; (4) <i>Sexuality</i> ; (5) <i>Cognitive and behavioural impairment</i> ; (6) <i>Risk and aggression</i> ; and (7) <i>Self-perception</i> .	"I would act more sociable"; "I would feel calm"; "I would feel courageous"; "I would be a better lover"; "I would be clumsy"; "I would take risks"; "I would feel moody".
Attitude towards heavy drinking	Subjective evaluations of heavy drinking.	3 items, adapted from Norman et al. (2007), and Previte et al. (2015b).	For me, having more than 5 drinks (for male) or 4 drinks (for female) on the same occasion would be enjoyable/unenjoyable
Perceived control	Beliefs that an individual is capable of, or have control over, their drinking.	6 items, adapted from Gabbiadini et al. (2017), and Previte et al. (2015b).	"I am confident that I could refuse a drink if I wanted to".
Habit	Automaticity of heavy drinking.	3 items, adapted from Gardner et al. (2012).	"Drinking more than 5 drinks (if being male) or more than 4 drinks (if being female) on each drinking occasion is something I do without thinking".
<b>Social/ Interpersonal</b>			
Peer pressure	The direct and overt/coercive influence from friends to drink or drink more.	1 item to measure <i>frequency</i> of peer pressure, adapted from Astudillo et al. (2013) 1 item to measure <i>strength</i> of peer pressure, adapted from Clasen and Brown (1985). 2 items to measure <i>subjective experiences</i> of peer pressure, adapted from Santor et al. (2000).	"How strong is the pressure from your friends to drink alcohol?"; "I feel pressured to get drunk at parties/social gatherings"
Peer support	The direct and overt/coercive influence from friends to not drink or reduce drinking	1 item to measure <i>frequency</i> of peer support, adapted from Astudillo et al. (2013) 1 item to measure <i>strength</i> of peer support, adapted from Clasen and Brown (1985).	"How often have any of your friends attempted to influence your drinking so that you would drink less or cut down on drinking?"
Peer descriptive norm	Individual's perceptions of how prevalent their friends drink.	3 items to estimate the AUDIT-C score (i.e., drinking frequency, typical drinking quantity and binge drinking frequency) of friends, adapted from Bush et al. (1998)	"In the last year, how often did your friend have a drink containing alcohol?"
Peer injunctive norm	Individual's perceptions of how acceptable heavy drinking is to their friends.	2 items, adapted from Previte et al. (2015b)	"My friends expect me to drink heavily on drinking occasions"
Alcohol-related fear of missing out	An apprehension that peers/friends might be having more rewarding experiences as a result of drinking from which one is absent	11 items, adapted from Al Abri (2017).	"It bothers me when I miss an opportunity to drink alcohol with friends"; "I get jealous when my friends are having fun drinking without me".

Environmental			
Drinking situations	Contextual factors or circumstances associated with drinking and/or heavy drinking.	24 items, adapted from O'Hare (1997) Specific drinking situations include: (1) <i>Convivial drinking</i> (situations reflect the general celebratory social and temporal aspect of drinking); (2) <i>Intimate drinking</i> (situations reflect the romance and sex-oriented aspect of drinking); and (3) <i>Emotional drinking</i> (situations relate to negative emotions that one drinks to cope with).	"How often did you drink alcohol in the following situations [at a party/ with my lover/ when lonely or homesick] during the last year?"
Cultural descriptive norms	Perceptions of how prevalent others drink at the national and local level.	3 items to estimate the AUDIT-C score at the university level, adapted from Bush et al. (1998) 3 items to estimate the AUDIT-C score at the generation level, adapted from Bush et al. (1998) 3 items to estimate the AUDIT-C score at the national level, adapted from Bush et al. (1998)	"In the last year, how often did [most of the students at your university/most of the people at your age/most of the people in Vietnam] have a drink containing alcohol?"
Cultural injunctive norms	Perceptions of how acceptable heavy drinking is to others at the national and local level.	3 items to measure cultural injunctive norms at the university, generation and national level, adapted from McAlaney et al. (2010), and McAlaney and McMahon (2007)	"How do [most of the students at your university/most of the people at your age/most of the people in Vietnam] feel about heavy drinking?"
Alternatives to drinking	Preference for engaging in activities other than drinking alcohol	5 items, <i>self-generated</i>	"Playing sport, exercising, health training"; "Participating in university clubs/extra-curricular activities"; "Going to the cinema on a night out".
Living environment	Students' living arrangement	Categories	"Living in dorms"; "Living off-campus with friends/flatmates"; "Living with parents"; and "Living off-campus alone".
Control			
Past consumption	Alcohol consumption (i.e., drinking frequency, typical drinking quantity and binge drinking frequency) in the past year.	3 items to measure personal AUDIT-C score, adapted from Bush et al. (1998)	"In the last year, how often did you have a drink containing alcohol?"
Social desirability bias	Individual's tendency to present themselves in a way that will make them look favourably/desirably to others	10 items, adapted from Vésteinsdóttir et al. (2017).	"I have never intensely disliked anyone"; "I sometimes feel resentful when I don't get my way".
Outcome			
Intention to drink in moderation	Individual's likelihood or readiness to perform moderate drinking behaviour	4 items, adapted from Previte et al. (2015a)	"I intend to keep track of my alcohol intake to ensure I do not exceed moderation"; "I am planning to drink a light to moderate amount rather than drinking to excess".

## 4.6. Results

This section reports on how the measures of the factors were purified and validated. Then, findings from regression analyses are reported to answer the research questions.

### 4.6.1. Measurement purification and validation

To purify the measures as well as to examine the dimensionality, multi-item measures were subject to separate exploratory factor analyses (EFA), using the Principle Components extraction method and the Direct Oblimin rotation method. The number of extracted factors was decided based on scree plots and theoretical justification. EFA solutions were checked for significant correlations between the variables (significance of the Bartlett's test of sphericity, the Kaiser-Meyer-Olkin measure of sampling adequacy  $KMO \geq 0.5$ ), total variance explained (TVE  $\geq 0.5$ ), proportion of variance in each variable explained by the factors (communality  $\geq 0.4$ ), magnitude of factor loadings ( $\geq 0.5$ ), and non-cross loading on multiple factors (loadings on other factors  $< 0.5$ ) (Hair et al., 2014) (see Appendix 5). Consequently, 16 items in four scales (*perceived control*, *peer pressure*, *FOMO*, and *drinking situations*) were removed due to the low loading ( $< 0.5$ ), low commonalities ( $< 0.4$ ), and cross-loading ( $> 0.5$ ) issues. EFA findings indicated that the *alcohol expectancies* and *drinking situations* constructs contained sub-dimensions as theoretically expected. Five activity items in the *alternatives* scale failed to load onto the same factor, and two sub-scales emerged, reflecting serious leisure activities (athletic and extra-curricular activities) and casual leisure (going to restaurants, cinema, and coffee/tea shops), similar to Stebbins' (2001) conceptualisation of leisure. However, as suggested by Finlay et al. (2012), athletic activities should be considered as a separate category of leisure in the context of alcohol drinking, thus alternatives to drinking in this study included three dimensions, namely *athletics* (1 item), *serious leisure* (1 item), and *casual leisure* (3 items). Other constructs were unidimensional.

Next, confirmatory factor analyses (CFA) were carried out to examine reliability, and discriminant and convergent validity of the measures as indicated from the previous EFA. CFA were run separately for each multi-item multi-dimensional construct, and simultaneously for the remaining multi-item uni-dimensional constructs. CFA findings indicated that overall, the measurement models showed adequate fit (Chi-square/df  $< 5$ , GFI  $\geq 0.9$ , CFI  $\geq 0.9$ , RMSEA  $< 0.08$ , SRMR  $< 0.08$ ) (see Appendix 6). Composite reliability (CR) and Cronbach's alpha (CA) values of all measures exceeded 0.6, except for

peer support (CR = 0.54, and CA = 0.51). Individual loadings of the constructs were above 0.5 and statistically significant ( $p < 0.001$ ), indicating acceptable item reliability. All measures had average variance extracted (AVE) of 0.4 or higher, except for the peer support construct (AVE = 0.38) (see Appendix 5). Furthermore, the measures passed the Fornell-Larcker criterion (i.e., the square root of AVE of a construct is higher than its correlation with any other constructs), establishing the discriminant validity of the measures (Fornell & Larcker, 1981) (see Appendix 7). In conclusion, the measures adopted in this study gained acceptable validity.

Items in the validated measures were then averaged to generate factor scores that represented values of the corresponding factors. For *peer pressure* and *peer support* factor, items were standardised before averaging due to different scales in use. Categorical variables (e.g., living environment and demographic characteristics) were transformed to dummy variables. An index of *social desirability bias* was computed by continuous scoring method (Stöber et al., 2002), i.e., reversing negatively keyed items and then summing scores across items.

#### **4.6.2. Regression for factors associated with drinking moderation on the total sample**

To examine the relationship between the selected factors and intention to drink in moderation according to the ecological framework, four multiple regression models were tested (see Figure 4.1). In Model 1, 2, and 3, a block of individual, social and environmental factors were entered as independent variables to consider the influences at the individual, social and environmental level, separately and respectively. In Model 4, independent variables included all factors used in the previous models to consider the influences at the three levels simultaneously. In all models, the dependent variable (intention to drink in moderation) and control variables remained the same. The level of significance was determined at 5% ( $p < 0.05$ ). Results of multiple regressions for the whole sample are presented in Table 4.2. Amongst the control variables, *gender*, *past consumption* and *social desirability bias* consistently and significantly influenced intention to drink in moderation across the four models ( $p < 0.05$ ). Other control variables showed no significant effect ( $p > 0.05$ ).

Figure 4.1. The Four Tested Models.

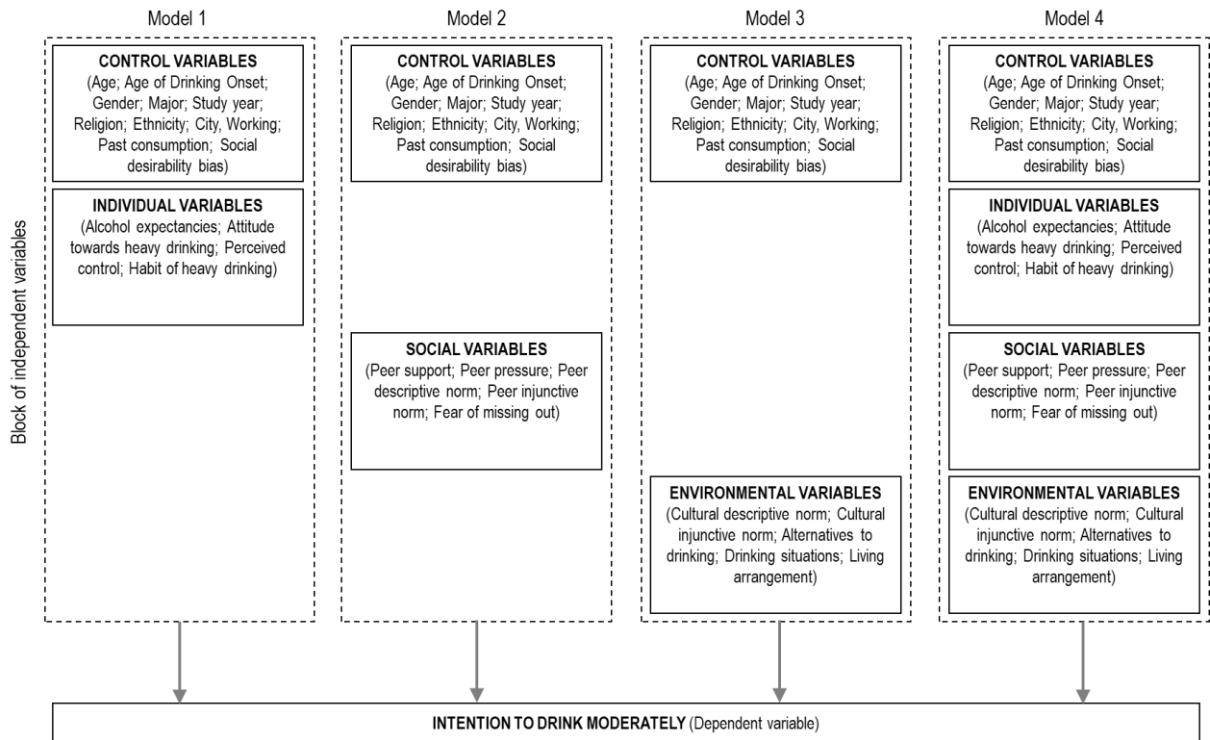


Table 4.2. Regression on Intention to Drink Moderately for Total Sample.

Variables	Model 1		Model 2		Model 3		Model 4		VIF
Age	-.069	ns	-.072	ns	-.038	ns	-.060	ns	1.582
Age of Drinking Onset	.008	ns	-.002	ns	.002	ns	.000	ns	1.217
Gender (Male)	.110	*	.112	*	.155	**	.100	*	1.857
Major (Science-and-Technology)	-.056	ns	-.042	ns	-.026	ns	-.058	ns	1.367
Study year (Seniors)	.014	ns	.039	ns	.013	ns	.019	ns	1.490
Religion (Yes)	-.006	ns	.022	ns	.009	ns	-.001	ns	1.101
Ethnicity (Kinh)	.015	ns	.004	ns	.011	ns	.000	ns	1.111
City (Danang)	.015	ns	.037	ns	.001	ns	.011	ns	1.276
Working (Employed)	.026	ns	.017	ns	-.010	ns	-.009	ns	1.135
Past consumption	-.159	***	-.287	***	-.243	***	-.230	***	2.229
Social desirability bias	.131	***	.120	**	.129	**	.108	**	1.218
Sociability expectancy	.025	ns					.015	ns	1.502
Tension reduction expectancy	.016	ns					.024	ns	1.479
Courage expectancy	.030	ns					.012	ns	1.370
Sexuality expectancy	.018	ns					.039	ns	1.492
Impairment expectancy	.016	ns					.002	ns	1.428
Aggression expectancy	.067	ns					.065	ns	1.943
Self-perception expectancy	.013	ns					-.018	ns	1.483
Attitude towards heavy drinking	-.121	**					-.083	*	1.350
Perceived control	.215	***					.207	***	1.267
Habit of heavy drinking	-.113	**					-.086	*	1.247
Peer support			.017	ns			.037	ns	1.177
Peer pressure			.089	*			.088	*	1.465
Peer descriptive norm			.129	**			.101	†	2.217
Peer injunctive norm			.003	ns			.003	ns	1.419
FOMO			-.140	**			-.078	†	1.715
Cultural descriptive norm					.067	ns	-.001	ns	1.562
Cultural injunctive norm					-.001	ns	.009	ns	1.374
Athletics					.092	*	.090	*	1.237
Serious leisure					.069	†	.057	ns	1.294
Casual leisure					.098	*	.057	ns	1.270
Convivial drinking					.024	ns	.041	ns	1.767
Intimate drinking					-.088	*	-.077	†	1.312
Emotional drinking					.021	ns	.056	ns	1.463
Living in dorms					.111	*	.107	*	1.702
Living off-campus with others					.207	***	.201	***	2.490
Living off-campus with parents					.188	***	.173	**	2.407
R <sup>2</sup>	16.5%		11.4%		14.1%		22.5%		
Adjusted R <sup>2</sup>	13.7%		9.2%		11.1%		17.8%		
F	5.989 ***		5.170 ***		4.743 ***		4.868 ***		
R <sup>2</sup> change (relative to Model 4)	6.0%		11.1%		8.4%		-		
F change (relative to Model 4)	3.003 ***		4.224 ***		4.482 ***		-		

Notes: \*\*\* p < 0.001; \*\* p < 0.01; \* p < 0.05; † p < 0.1; ns p ≥ 0.1



In Model 1, controlling for some demographic, SDB and drinking history characteristics, the individual factors alone could explain 16.5% of the variance in intention to drink moderately. At this level, three factors significantly influenced the intention. They included: *attitude towards heavy drinking* ( $\beta = -0.121, p < 0.01$ ), *habit of heavy drinking* ( $\beta = -0.113, p < 0.01$ ), and *perceived control* ( $\beta = 0.215, p < 0.001$ ). Model 2 showed that the social factors, along with the control variables, accounted for 11.4% of variance in intention to drink moderately. Particularly, three social factors having significant coefficients were *peer pressure* ( $\beta = 0.089, p < 0.05$ ), *peer descriptive norm* ( $\beta = 0.129, p < 0.01$ ), and FOMO ( $\beta = -0.140, p < 0.01$ ). Considering factors at the environmental level, Model 3 resulted in an  $R^2$  of 14.2%, meaning that 14.2% of the variance in the intention was explained by the environmental factors and control variables. Living environment variables such as *living in dorms* ( $\beta = 0.111, p < 0.05$ ), *living off-campus with others* ( $\beta = 0.207, p < 0.001$ ), and *living with parents* ( $\beta = 0.188, p < 0.001$ ), and alternatives to drinking such as *athletics* ( $\beta = 0.092, p < 0.05$ ) and *casual leisure* ( $\beta = 0.098, p < 0.05$ ) were significantly and positively associated with intention to drink in moderation. In contrast, drinking in *intimate situations* ( $\beta = -0.088, p < 0.05$ ) was negatively associated with the intention.

When factors at all three levels were simultaneously taken into consideration, there was significant improvement in  $R^2$  by 6-11% in Model 4. In total, 22.5% of the variance in moderate drinking intention were explained by these factors. There was no apparent collinearity problem in the model ( $VIF < 3$ ). It is noted, however, that the effects of factors such as *peer descriptive norm*, FOMO, *casual leisure*, and *intimate drinking* on the intention became insignificant ( $p > 0.05$ ). It suggests that these factors might interact with other factors at other levels in influencing the intention. Based on the magnitude of coefficients, the most important determinants of students' intention were *past consumption* ( $\beta = -0.230, p < 0.001$ ), *perceived control* ( $\beta = 0.207, p < 0.001$ ) and *living off-campus with flatmates* ( $\beta = 0.201, p < 0.001$ ).

#### 4.6.3. Regression for factors associated with drinking moderation by genders

Table 4.3 presents the results of multiple regressions on the female and male samples (only Model 4 shown). Due to the reduced sample size and complexity of the models, a significance level of 10% was applied to gender-specific regression analyses ( $p < 0.1$ ) (Schumm et al., 2013).

Table 4.3. Regression on Intention to Drink Moderately for Female and Male Samples (Model 4).

Variables	Female sample (n = 376)			Male sample (n = 274)		
	Beta		VIF	Beta		VIF
Age	0.025	ns	1.704	-0.150	*	1.586
Age of drinking onset	-0.005	ns	1.223	-0.039	ns	1.242
Major (Sci & Tech)	-0.115	*	1.143	-0.025	ns	1.302
Study year (Seniors)	-0.004	ns	1.728	0.036	ns	1.440
Religion (Yes)	0.008	ns	1.146	-0.003	ns	1.182
Ethnicity (Kinh)	-0.012	ns	1.135	0.033	ns	1.287
City (Danang)	0.031	ns	1.445	-0.060	ns	1.357
Working status (Employed)	0.021	ns	1.171	-0.006	ns	1.277
Past consumption	-0.209	**	1.839	-0.246	**	2.508
Social desirability bias	0.141	*	1.283	0.083	ns	1.297
Sociability expectancy	-0.019	ns	1.616	0.053	ns	1.521
Tension reduction expectancy	0.017	ns	1.411	0.018	ns	1.698
Courage expectancy	-0.076	ns	1.566	0.091	ns	1.360
Sexuality expectancy	0.093	ns	1.665	-0.013	ns	1.358
Impairment expectancy	-0.072	ns	1.423	0.093	ns	1.601
Aggression expectancy	0.097	ns	2.006	-0.016	ns	2.094
Self-perception expectancy	-0.029	ns	1.477	0.013	ns	1.745
Attitude towards heavy drinking	-0.101	†	1.365	-0.090	ns	1.484
Perceived control	0.171	**	1.246	0.220	***	1.509
Habit of heavy drinking	-0.041	ns	1.276	-0.133	*	1.410
Peer support	0.013	ns	1.289	0.040	ns	1.176
Peer pressure	0.162	**	1.409	0.015	ns	1.644
Peer descriptive norm	0.088	ns	1.784	0.118	ns	2.555
Peer injunctive norm	0.005	ns	1.372	0.020	ns	1.538
Fear of missing out	-0.044	ns	1.655	-0.131	†	2.055
Cultural descriptive norm	-0.004	ns	1.458	0.013	ns	1.870
Cultural injunctive norm	0.000	ns	1.326	0.020	ns	1.501
Athletics	0.091	†	1.304	0.060	ns	1.313
Serious leisure	0.002	ns	1.423	0.086	ns	1.363
Casual leisure	0.043	ns	1.273	0.074	ns	1.332
Convivial drinking	0.019	ns	1.816	0.073	ns	1.791
Intimate drinking	-0.074	ns	1.428	-0.046	ns	1.410
Emotional drinking	-0.028	ns	1.492	0.133	†	1.603
Living in dorms	0.118	†	2.001	0.109	ns	1.545
Living with flatmates	0.194	*	2.909	0.164	*	2.180
Living with parents	0.147	†	2.634	0.146	†	2.297
R <sup>2</sup> (Model 4)	21.5%			31.7%		
Adjusted R <sup>2</sup> (Model 4)	13.2%			21.3%		
F (Model 4)	2.581 ***			3.058 ***		
R <sup>2</sup> change (Model 1 relative to Model 4)	6.1% †			6.5% ns		
R <sup>2</sup> change (Model 2 relative to Model 4)	7.9% *			18% ***		
R <sup>2</sup> change (Model 3 relative to Model 4)	8.3% **			12.1% ***		

Notes: \*\*\* p < 0.001; \*\* p < 0.01; \* p < 0.05; † p < 0.1; ns p ≥ 0.1

In general, the examined factors explained intention to drink moderately amongst male students better than female students, with  $R^2$  of the model for the former higher than that for the latter (31.7% versus 21.5%). While the addition of factors at various levels led to significant improvement in  $R^2$  in the female sample (all  $R^2$  change between Model 4 and other models were statistically significant with  $p < 0.1$ ), it seems that the explanation of moderate drinking intention in the male sample mainly came from individual factors, rather than social and environmental factors ( $R^2$  change between Model 1 and Model 4 were insignificant).

The significant effects of *past consumption*, *perceived control*, *living off-campus with flatmates*, and *living with parents* were similar for both gender samples, and followed the patterns observed in the total sample. However, the gender differences in factors associated with drinking in moderation were recognised for *social desirability bias*, *age*, *major*, *attitude*, *habit*, *peer pressure*, *FOMO*, *athletic activities*, *emotional drinking* and *living in dorms*. Particularly, *social desirability bias* ( $\beta = 0.141$ ,  $p < 0.05$ ), *peer pressure* ( $\beta = 0.162$ ,  $p < 0.01$ ), *athletic activities* ( $\beta = 0.091$ ,  $p < 0.1$ ), and *living in dorms* ( $\beta = 0.118$ ,  $p < 0.1$ ) were positively associated with females' intention to drink moderately, whereas *majoring* in science and technology (compared to business and economics) ( $\beta = -0.115$ ,  $p < 0.05$ ), *attitude towards heavy drinking* ( $\beta = -0.101$ ,  $p < 0.1$ ) was negatively associated with females' intention. These factors were not significantly associated with males' intention. In contrast, intention to drink moderately amongst male students was negatively associated with *age* ( $\beta = -0.150$ ,  $p < 0.05$ ), *habit of heavy drinking* ( $\beta = -0.133$ ,  $p < 0.05$ ), and *FOMO* ( $\beta = -0.131$ ,  $p < 0.1$ ). Although not found in the total sample, the effect of *emotional drinking* on moderate drinking intention ( $\beta = 0.133$ ,  $p < 0.1$ ), was marginally significant in the male sample.

## 4.7. Discussion

This study responds to research calls for further insights into decision-making processes that support moderate drinking (in relation to heavy drinking) (Fry et al., 2014) and moderation practices from youths' perspective to "give legitimacy to the development of policy initiatives for creating a healthier and safer drinking culture" (Fry, 2010, p. 1292). In this section, we discuss our findings on (1) factors influencing moderate drinking intention, and (2) gender differences in the effects of the factors.

#### 4.7.1. Factors influencing moderate drinking intention

A major strength of this study, as well as an extension to previous research, is the utility of a comprehensive model to examine various factors at multiple levels as influences of moderate drinking. The large number of factors examined helps determine unique associations of the factors with alcohol moderation while controlling for other factors, thus reducing the possibility of model misspecification due to variable omission (Bravo et al., 2016). Findings from this comprehensive approach on moderate student drinking contribute to student drinking literature by advocating the ecological perspective to be a useful and valid framework for understanding students' drinking behaviours. In this study, the variance explained of intention to drink moderately showed significant improvements when adding blocks of individual, social and environmental factors to the model. It suggests that there exist multiple levels of influence on students' intention to moderate drinking beyond individual factors, which makes moderate drinking a complex phenomenon.

At the individual level, similar to prior studies concerning moderate drinking, this study identified that *attitude* (Previte et al., 2015b) and *perceived control* (Fry et al., 2014; Previte et al., 2015b; Sharma et al., 2018) were significant predictors of moderate drinking intention. Moreover, *perceived control* generated a stronger influence on moderate drinking compared to *attitude*. It is not surprising that *perceived control* was the most important factor determining moderate drinking, which reflected the self-imposed/self-controlled nature of the behaviour.

At the social and environmental level, there seems to be an overall pattern of peer influences on student drinking, such that they seem to play a less important role within a culture of moderate drinking, contrary to their pivotal role to increase alcohol consumption within cultures of heavy drinking (Borsari & Carey, 2001). For example, *peer injunctive norm* was not associated with moderate drinking intention in this study, contrary to the studies by Previte et al. (2015b) and Fry et al. (2014). In these studies, perceived norm was measured in terms of the subjective norm from important others. It may indicate that in the case of moderate drinking in Vietnam, friends/peers may be less influential than other important others in students' social circles (e.g., parents or siblings). *Peer support* was also found to be of limited efficacy to encourage drinking moderately, consistent with findings from Sharma et al. (2018). However, we found that *peer pressure* and *peer descriptive norm* were positively associated with moderation intention. As the

majority of students in our study sample were light drinkers who drank below the moderate drinking limit, this positive association may be interpreted as a rebellion or resistance to heavy drinkers, reflecting negative attitudes towards heavy drinking (Russell-Bennett & Golledge, 2009) or resistance identity (Fry, 2011) of moderate drinkers in the contexts that favour heavy drinking. Moreover, students who lived with others (regardless of being on or off campus) showed a higher tendency to moderate their drinking than those living alone. It suggests that the presence of others (social settings) should have a protective effect for moderate drinking in contexts similar to Vietnamese student drinking. This finding might be explained by the observation that student drinking culture in Vietnam favours moderate drinking in general. It suggests a need to leverage social agents other than peers to establish and maintain a student culture of moderate drinking.

At the broadest level, although *cultural drinking norms* failed to relate to moderate drinking intention, *alternative activities* to drinking, except for *serious leisure*, positively linked to students' intention to drink moderately. The finding offered evidence to support alternative-based strategy to curb drinking problems that has been suggested in previous research (Davies et al., 2018). Amongst drinking situations, *intimate drinking* (drinking with lover/on a date) was negatively associated with moderate drinking. Future research should investigate the influence of this particular subject on how people drink in more depth.

#### **4.7.2. Gender differences in the effects of the factors**

This study also adds to current knowledge by offering a comparison of influences of drinking in moderation between males and females in the context of Vietnamese student drinking. Specifically, moderate drinking amongst females was underlined by more negative *attitudes* towards heavy drinking, higher *peer pressure*, higher preference towards *athletics*, and *living in dorms*; whereas moderate drinking amongst males was associated with lower *habit* of heavy drinking, lower *FOMO* experience, and drinking in *emotion-related situations*. We also observed that the contribution of social and environmental factors to explain intention to drink moderately was more significant and substantial in the case of females. Thus, generally speaking, females seem to moderate their drinking through both internal and external control mechanism, while males tend to moderate their drinking mainly through internal control. This distinction might be explained by traditional gender roles with regards to alcohol use. In Vietnam, female drinking is culturally expected to be restricted since it can interfere with their social roles and responsibilities as caregivers to maintain merits and virtues (Diep et al., 2016a). In contrast, men generally do not suffer

from such social and cultural expectations and are indeed encouraged to drink to display their strength and power (Lincoln, 2016). Thus, women may perceive more social sanctions from drinking, while men may perceive less support for alcohol abstinence or moderation. Taken together, males might relate less to the social and cultural influences when they want to moderate their drinking, leaving the internal mechanism of drinking control as more salient.

#### **4.8. Implications for Alcohol Social Marketing Research and Interventions**

In practice, the design of interventions claimed to encourage protective behaviour is sometimes informed by insights from the corresponding risky behaviour (Middlestadt et al., 2014). This study suggests that this practice should be cautiously considered as it might not always be correct. In juxtaposition with heavy drinking research, we recognise variations between factors associated with heavy drinking and those related to moderate drinking. For example, a noteworthy finding from this study is the insignificance of peer norm in influencing moderate drinking, departing from heavy drinking research which commonly recognises the strong effect of this factor (Neighbors et al., 2007). It indicates a discouragement on the use of norm-based strategy to encourage moderate drinking behaviour amongst Vietnamese students. In fact, there have been some doubts about the effectiveness of this intervention approach in many other countries (Robinson et al., 2014). As such, we recommend a move from an avoidance approach (i.e., how to reduce heavy drinking behaviour) to a promotion approach (i.e., how to encourage moderate drinking behaviour) as a new opportunity and way to address alcohol problems. This study, by successfully determining factors associated with intention to drink moderately, adds more evidence to legitimise the moderate drinking approach as a complement to the conventional heavy drinking approach in alcohol social marketing.

For those who want to encourage drinking moderation, our findings suggest that alcohol interventions should be multi-faceted since moderate drinking is a complex behaviour which involves multiple levels of influence. The comprehensive examination of moderate drinking intention and its predictors at various levels can help identify the necessary targets to foster a healthier drinking lifestyle. For example, the interventions should focus on strengthening drinkers' self-control since our findings indicated the strongest effect of the *perceived control* factor on moderate drinking intention. This can be done by developing

social marketing programs that build/teach self-efficacy skills for young people. The programs should also leverage the protective effects of social environments/settings for moderate drinking. Furthermore, the finding regarding the significant influence of alternatives to drinking supports the development of alternative-based strategies to tackle alcohol problems. Amongst the alternative options, athletic activities should be paid special attention.

Given gender differences in alcohol consumption as well as factors associated with moderate drinking intention found in this study, it is suggested that social marketing programs aimed to encourage moderate drinking should be tailored to each gender segment. For example, apart from strengthening self-control to moderate one's drinking that is necessary for both genders, interventions for females may require more efforts to change attitudes towards drinking, and consider peer influences, athletic activities and living environment to leverage a pro-moderate drinking environment.

#### **4.9. Limitations and Directions for Future Research**

This study had some limitations that warrant future research. In this study, data were self-reported, thus potentially subject to the issue of social desirability responding. This tendency is deemed commonplace in social science, especially in studies on a potentially sensitive topic, and in a collectivistic cultural context like Vietnam (Krumpal, 2013). However, we attempted to address this issue by including a validated SDB index in the analyses to control for its effects. Moreover, ex-ante efforts in survey design and data collection were also made to lessen social desirability bias in participants' responses. For instance, the survey was introduced as a study of student drinking culture, without any prejudice towards drinking. It was self-administered by respondents with minimal presence and interaction with researchers. Items in the survey were modified or dropped if exhibiting cultural inappropriateness. Respondents were assured of the anonymity and voluntarism of their participation. They were also informed that there was no right or wrong answer. Future research can employ more objective measures and/or methods (e.g., observations) to better address this issue. Furthermore, findings from this study were based on cross-sectional data, thus inhibiting conclusion about the causal relationships of the examined factors. Longitudinal research can be used to establish the causal ordering of the factors.

What moderate drinking is has not reached consensus. In this study, we used a quantitative definition of moderate drinking recommended by authority/experts. There is evidence that lay people perceived moderate drinking differently and defined it in a qualitative manner (Green et al., 2007). Future research can adopt other approaches to define moderate drinking to confirm the findings. Moreover, moderate drinking was operationalised in terms of behavioural intention in this study. Repetition of this study with the actual behaviour being measured (e.g., frequency of drinking within the moderate limit, or frequency of participating in moderate drinking practices) should be carried out to confirm the findings.

Although the selection of determinants of drinking behaviours in this study was informed by previous research, we omitted some potential determinants (e.g., identity and parent influences) to keep the survey length manageable to the respondents. It is suggested to repeat the research with the inclusion of these potential influences. Doing so can also increase the predictive/explanatory power of the models. Finally, findings in this study are only limited to the Vietnamese undergraduate student context. Therefore, future research should extend research contexts to other countries and other populations to assess the generalisation of the findings.

#### **4.10. Conclusion**

This study extends knowledge on moderate drinking, which is often neglected in alcohol research. Our contribution is to offer a comprehensive model to examine factors associated with moderate drinking intention. The findings showed that these factors occurred at multiple levels, amongst which *perceived control*, *living environment* and *past consumption* were of most significance. Moreover, there exist differences in the influences of moderate drinking intention between male and female students. That is males' intention to drink moderately is mainly explained by the individual factors, while the intention amongst females is related to both internal and external influences. Therefore, this study recommends that social marketing interventions aimed at encouraging moderate drinking should be multifaceted, addressing multiple levels of influences of drinking behaviours, and taking the unique needs and characteristics of gender segments into consideration. Findings from this study also imply that knowledge about heavy drinking may not be applicable to moderate drinking. Complementing the avoidance



approach of heavy drinking, a promotion approach of moderate drinking is recommended as a new opportunity for addressing alcohol problems.

## CHAPTER 5

---

# GENERAL DISCUSSION AND CONCLUSION

---

This chapter summarises and integrates the key findings from the three preceding chapters (three papers), and shows their implications/contributions to alcohol social marketing research and practice. This chapter also discusses the limitations of the research project as a whole and offers directions for future research.

## 5.1. Summary of the Key Findings

This thesis has three research objectives: (RO1) to explore barriers to moderate drinking amongst university students in different drinking cultures; (RO2) to explore facilitators of moderate drinking amongst university students in different drinking cultures; and (RO3) to examine in-depth factors associated with moderate drinking amongst university students within a dry drinking culture context. To achieve these objectives, mixed methods research, consisting of two sequential exploratory studies, were carried out in New Zealand and Vietnam. Chapter 2 and 3 describe the research process and findings from Study 1, which addressed research objectives RO1 and RO2, respectively. Chapter 4 describes the research process and findings from Study 2 which addressed research objective RO3. In summary, Table 5.1 presents key findings from the studies. This table is followed by a more detailed discussion of the main findings.

Table 5.1. A Summary of Key Findings of The Thesis.

Research objectives (RO) and Research questions (RQ)	Key findings relating to the objectives/questions
RO1 (Chapter 2)	
RQ1.1: What are students' perceptions of the barriers to moderate drinking? RQ1.2: Can the barriers be understood at multiple levels of influence, in line with an ecological framework?	<ul style="list-style-type: none"> <li>- <b>There are a wide range of barriers to moderate drinking at multiple levels, in line with an ecological framework.</b></li> <li>- Barriers at the <i>Individual</i> level, in the descending order of the salience of the themes revealed, included: <i>Attitudes to drinking, Low self-control, Feelings/emotions, Addiction, Habit, Low negative expectancy, Amotivation, and Boredom.</i></li> <li>- Barriers at the <i>Social</i> level, in the descending order of the salience of the themes revealed, included: <i>Social/peer pressure, Social/peer norm, Fear of missing out, and Social identity/image.</i></li> <li>- Barriers at the <i>Environmental</i> level, in the descending order of the salience of the themes revealed, included: <i>Socialising activities, Events, Drinking culture, Working environment, and Negative circumstances.</i></li> </ul>
RQ1.3: What are the similarities and differences in students' perceptions of barriers to moderate drinking between a wet (New Zealand) and a dry (Vietnam) drinking culture?	<ul style="list-style-type: none"> <li>- Drinking characteristics of New Zealand students: frequent drinking, drinking in large quantity, and frequent binge drinking.</li> <li>- Drinking characteristics of Vietnamese students: infrequent drinking, drinking in moderate quantity, and infrequent binge drinking.</li> <li>- New Zealand students were more likely to mention the following barriers: <i>Attitudes to drinking, Low negative expectancy, Amotivation, Boredom; Social/peer norm, Fear of missing out; Drinking culture, and Living environment.</i></li> <li>- Vietnamese students were more likely to mention the following barriers: <i>Low self-control, Feelings/emotions, Addiction, Habit; Negative circumstances, Events, and Working environment.</i></li> <li>- New Zealand and Vietnamese students similarly mentioned the following barriers: <i>Social/peer pressure and Social identity/image.</i></li> <li>- <b>In general, the barriers were more external to students in New Zealand, and more internal to students in Vietnam.</b></li> </ul>

RO2 (Chapter 3)	
<p>RQ2.1: What are students' perceptions of the facilitators of moderate drinking?</p> <p>RQ2.2: Can the facilitators be understood in line with an ecological framework? If so, what is the relative salience of the facilitators at each level?</p>	<ul style="list-style-type: none"> <li>- <b>There are a wide range of facilitators of moderate drinking at multiple levels, in line with an ecological framework.</b></li> <li>- Facilitators at the <i>Individual</i> level, in the descending order of the salience of the themes revealed, included: <i>Coping behavioural skills</i>, <i>Negative expectancy</i>, <i>Controllability</i>, <i>Self-determination</i>, and <i>Cognitive skills</i>.</li> <li>- Facilitators at the <i>Social</i> level, in the descending order of the salience of the themes revealed, included: <i>Peer support</i>, <i>Peer norm</i>, <i>Family support</i>, and <i>Social support</i>.</li> <li>- Facilitators at the <i>Environmental</i> level, in the descending order of the salience of the themes revealed, included: <i>Alternatives</i>, <i>Circumstances</i>, <i>Socialising avoidance</i>, <i>Professional services</i>, <i>Macro environment</i> and <i>Living environment change</i>.</li> </ul>
<p>RQ2.3: How do these perceived facilitators vary between a wet (New Zealand) and a dry (Vietnam) drinking culture?</p>	<ul style="list-style-type: none"> <li>- New Zealand students were more likely to mention the following facilitators: <i>Coping behavioural skills</i>; <i>Peer support</i>, <i>Peer norm</i>; <i>Alternatives</i>, <i>Circumstances</i>, <i>Living environment change</i>, <i>Professional services</i>, and <i>Macro environment</i></li> <li>- Vietnamese students were more likely to mention the following facilitators: <i>Negative expectancy</i>, <i>Self-determination</i>; <i>Family support</i>, <i>Social support</i>; and <i>Socialising avoidance</i>.</li> <li>- New Zealand and Vietnamese students similarly mentioned the following facilitators: <i>Controllability</i> and <i>Cognitive skills</i>.</li> <li>- <b>In general, the facilitators were more external to students in New Zealand, and more internal to students in Vietnam.</b></li> </ul>
RO3 (Chapter 4)	
<p>RQ3.1: What factors at various (i.e., individual, social, and environmental) levels are associated with moderate drinking amongst Vietnamese students?</p>	<ul style="list-style-type: none"> <li>- Individual-level factors associated with intention to drink moderately included: <i>Perceived control</i> (+), <i>Attitude to heavy drinking</i> (-), and <i>Habit of heavy drinking</i> (-).</li> <li>- Social-level factors associated with intention to drink moderately included: <i>Peer descriptive norm</i> (+), <i>Peer pressure</i> (+), and <i>Fear of missing out</i> (-).</li> <li>- Environmental-level factors associated with intention to drink moderately included: <i>Living environment</i> (Not living alone, +), <i>Alternatives</i> (+), and <i>Intimate drinking situations</i> (-).</li> <li>- Factors that did not have a significant association with intention to drink moderately included: <i>Alcohol expectancies</i>, <i>Peer support</i>, <i>Peer injunctive norm</i>, <i>Convivial drinking situations</i>, and <i>Cultural descriptive and injunctive norm</i>.</li> <li>- Amongst the factors, <b><i>Perceived control</i> had the strongest influence on intention to drink moderately.</b></li> </ul>
<p>RQ3.2: How do the factors associated with moderate drinking differ between male and female students in Vietnam?</p>	<ul style="list-style-type: none"> <li>- Male students had significantly higher alcohol consumption than female counterparts.</li> <li>- There was no significant difference in intention to drink moderately between male and female students.</li> <li>- Factors that had a significant association with intention to drink moderately amongst male students, but not females, included: <i>Habit of heavy drinking</i>, <i>Fear of missing out</i>, and <i>Emotional drinking situations</i>.</li> <li>- Factors that had a significant association with intention to drink moderately amongst female student, but not males, included: <i>Attitude to heavy drinking</i>, <i>Peer pressure</i>, <i>Athletics activities as alternatives to drinking</i>, and <i>Living in dorms</i>.</li> </ul>

**Note:** (+) indicates a positive association, and (-) indicates a negative association.

### **5.1.1. Characteristics of student drinking in New Zealand and Vietnam**

Findings from both studies in this thesis highlighted different characteristics of student drinking between New Zealand and Vietnam. Particularly, New Zealand student drinking was characterised by a wet drinking culture, in which the students engaged in frequent drinking (twice a week or more), drinking in large quantities (more than 6 standard drinks on one occasion), and frequent binge drinking (weekly). In contrast, Vietnamese student drinking was characterised by a dry drinking culture (infrequent drinking [monthly or less], drinking in moderate quantities [less than 5 standard drinks], and infrequent binge drinking [less than monthly]). The intention to drink moderately was also reported at high levels amongst Vietnamese students, regardless of gender (Chapter 4). In fact, qualitative data from the Vietnamese sample suggested that drinking culture might be more relevant and salient to the working/professional population than the student population in Vietnam (Chapter 2).

The difference in alcohol consumption between New Zealand and Vietnamese students reported in this thesis aligns with previous literature and published statistics regarding the quantity of alcohol use. Furthermore, they confirm the difference in terms of the drinking patterns (e.g., frequency and intensity of binge drinking), which is relevant to public health and social marketing. The current findings also verify gender differences in student drinking in Vietnam. Vietnamese male students drank more and in a more harmful way than their female counterparts did (Chapter 4).

### **5.1.2. Barriers to and facilitators of moderate drinking at multiple levels**

The qualitative study (Study 1) identified a wide array of factors that inhibit and/or facilitate moderate drinking amongst university students (see Table 1 for a list of the barriers and facilitators). In this thesis, barriers were defined broadly as any factors impeding a behaviour, and facilitators were any factors supporting or stimulating a behaviour. As expected, the barriers and facilitators from students' narratives fitted into an ecological framework of health behaviour (Sallis et al., 2008), although participants were not primed to think of moderate drinking according to the framework. Specifically, there existed multiple levels of influence on moderate drinking, which ranged from the individual level, to social level and environmental level. At each level, the influencing factors (i.e., barriers and facilitators) varied in their salience/importance and across cultures. The findings in Chapter 2 and 3 also revealed that some factors could have both

protective and risky effects on moderate drinking (i.e., can be served as both barrier and facilitator). They included: *circumstances, socialising activities, living environment, peer influences* (pressure and norm), *self-control*, and *negative expectancy*. Amongst the factors, *peer pressure* was the most important barrier, while *alternatives* to drinking activities was one of the most important facilitators to moderate drinking in both countries.

Therefore, the findings indicate that moderate drinking amongst university students is a complex phenomenon, involving an interrelation of several factors at multiple levels of influence. It aligns with the tenets of an ecological framework of health behaviour (Sallis et al., 2008), which is increasingly proposed to understand behaviours in social marketing (Brennan et al., 2016).

### 5.1.3. Cultural differences in perceptions of moderate drinking

The qualitative study (Study 1) also made cross-cultural comparisons of students' perceptions regarding barriers to, and facilitators of, moderate drinking, findings from which showed many differences between a wet (New Zealand) and a dry (Vietnam) drinking culture. In general, New Zealand students perceived the barriers to moderate drinking as more general and broad external factors (e.g., *drinking culture, living environment, social norms*, and *FOMO*), while Vietnamese students considered them in a more specific and personal manner (e.g., *feelings, habit, self-control*, and *addiction*). Similarly, factors perceived to facilitate moderate drinking were more external to students in New Zealand, yet more internal to individuals in Vietnam. Students in New Zealand tended to employ social and external control (e.g., peer influences) and situational reasons (e.g., school work, and driving) to limit their drinking. In contrast, Vietnamese students tended to employ self-control and internal reasons (e.g., personal values, and alcohol beliefs) to reduce alcohol use. The findings indicate that external factors (at the social and environmental level) play a more significant role for moderate drinking in wet cultures like New Zealand, whereas internal factors (at the individual level) exert more influence in dry cultures like Vietnam. The findings support Norman et al.'s (1998) argument that problem drinkers attribute their behaviour to an external locus of control:

“Frequent binge drinkers were less likely to believe that the decision to engage in binge drinking was under their control and more likely to cite a range of factors which may make binge drinking more likely to occur, thus recognising a number of external influences on their drinking behaviour” (p. 168).

#### 5.1.4. Factors associated with moderate drinking in a dry drinking culture

Dry drinking cultures can offer a great opportunity for an in-depth examination of moderate drinking phenomenon, as well as useful experiences and lessons from which wet drinking cultures can gain alternative perspectives regarding alcohol use to address their alcohol issues. Therefore, the quantitative study (Study 2) examined relationships between 14 factors arising as important in Study 1 and students' intention to drink moderately in a dry drinking culture (Vietnam), controlling for the impact of past consumption, social desirability bias and some demographic characteristics. Similar to findings from the qualitative phase, the quantitative findings indicated significant relationships between many factors at multiple levels of influence and moderate drinking intention. They revealed the strongest influence of *perceived control*, over and above other factors, on moderate drinking, followed by *living environment*. Moreover, the influence of some factors on moderate drinking intention differed by gender. Generally, male students seemed to be influenced mainly by internal factors (e.g., lower *habit* of heavy drinking, lower *FOMO* experience, and drinking in *emotion-related situations*) in moderating their drinking; whereas both internal and external sources of influence (e.g., more negative *attitudes* towards heavy drinking, higher *peer pressure*, higher preference towards *athletics*, and *living in dorms*) were found amongst female students.

There were some discrepancies between the qualitative and quantitative findings regarding the importance of influences of moderate drinking in Vietnam. For example, the effects of *alcohol expectancies*, *peer support*, *peer pressure*, *peer injunctive norm*, and *drinking culture/ cultural norm* were insignificant or not in the expected direction in the quantitative study. It might be partly attributable to how moderate drinking was defined. It is important to note that there was a difference in the moderate drinking definition in the two studies. In Study 1, moderate drinking was defined in a qualitative manner, and the interpretation of moderate drinking was left to respondents. In line with previous quantitative moderate drinking research (Previte et al., 2015a), moderate drinking was defined in Study 2 as an alcohol consumption limit of 5 standard drinks for males and 4 standard drinks for females on a single drinking occasion, with 1 standard drink containing 10 grams of pure alcohol. Exceeding this recommended limit constitutes heavy drinking, in line with the WHO's definition of heavy drinking (Babor et al., 2001) or binge drinking (Wechsler & Nelson, 2001). Given that moderate drinking has not been consensually defined in the literature (Dufour, 1999; Green et al., 2007), Del Boca and Darkes (2003) argued that there is “no

single measure of alcohol use that is suitable for all research purposes and populations. Choice of a particular approach must depend on the degree of measurement precision required, on available resources, on respondent characteristics and on the data-collection setting” (p. 9). Therefore, the relationships between the examined factors and students’ intention towards drinking moderation might depend on how students interpreted the concept of moderate drinking.

Moreover, the research findings in Vietnam resulted from two studies with different methodologies. The adoption of such a mixed method research approach can result in finding conflicts (Carins et al., 2016; Creswell, 2015). In this thesis, these conflicts are not considered as a threat or compromise to the credibility and trustworthiness of the findings. Rather, they show a nuance of the influences under different interpretations of moderate drinking. They also provide two different perspectives (i.e., the participant-driven perspective of qualitative research versus the researcher/theory-driven perspective of quantitative research) on the same phenomenon (i.e., student moderate drinking). Indeed, some quantitative findings helped clarify some qualitative findings. For example, both the qualitative and quantitative findings showed alternatives to drinking are important for encouraging drinking moderation. However, the quantitative findings specified three specific types of alternatives to drinking, which emerged from the qualitative study, and revealed that athletic activities were the most important alternative for drinking moderation. Thus, the two methods provided a more comprehensive and nuanced description of the factors influencing students’ drinking moderation.

## **5.2. Contributions to Alcohol Social Marketing Research**

The central contribution of this thesis is that it extends our knowledge on moderate drinking behaviour, which guides subsequent development and implementation of alcohol social marketing programs. For each section below, I reiterate research gaps in alcohol social marketing and then indicate how findings from this thesis help address the gaps and contribute to the field. In particular, the major theoretical contributions of the thesis include: (1) shifting the focus of alcohol research from heavy to moderate drinking and advocating for a promotion approach in alcohol social marketing; (2) demonstrating the utility of an ecological framework for alcohol social marketing research; (3) providing



novel insights into cultural differences in students' perceptions regarding moderate drinking; and (4) highlighting the roles of moderate drinking barriers and facilitators.

### **5.2.1. A focus on moderate drinking and a shift towards a promotion approach**

The current alcohol literature has disproportionately centred on heavy drinking and the related harms. Very limited attention has been paid to examine moderate drinking. Thus, by investigating the influences of moderate drinking amongst university students, this thesis redresses the imbalance of the current scholarly conversations on alcohol consumption (Herring et al., 2014).

There might be a “complementarity assumption” (Sutton, 2004, p. 96) that heavy and moderate drinking behaviours are logical opposites. However, evidence from various disciplines suggests that opposing behaviours can be distinct consumption entities which may be influenced by different processes (Middlestadt et al., 2014; Richetin et al., 2011), or underlined by different beliefs or reasons (Chatzidakis et al., 2016). In this thesis, heavy drinking and moderate drinking are not considered as “two sides of the same coin”, but behavioural alternatives (Jaccard, 1981).

Previous research acknowledges that moderate drinking is difficult and challenging to clearly define (Dufour, 1999; Green et al., 2007), which impacts how research about moderate drinking is conducted. In general, researchers seem to agree that moderate drinking is the consumption of alcohol at a level and in a manner that reduces harms to drinkers themselves and society. This thesis elaborates the conceptualisation of moderate drinking beyond the metric measures of number of drinks. First, while moderate drinking should continue to focus on individuals' controllability of alcohol consumption (e.g., reducing alcohol intake), it is important to acknowledge that moderate drinking also involves interactions with social and environmental influences around alcohol use. This is evidenced in the multiple levels of influences of moderate drinking which were identified in the two studies in this thesis. Therefore, it suggests a conceptual shift in how moderate drinking is defined to not only the quantitative limit of alcohol, but also the outcome of interactions between individuals and drinking environments.

Second, findings from this research show that there is a cultural difference in the focus of moderate drinking. Particularly, internal influences of moderate drinking are more salient in Vietnam, whereas its external (social and environmental) influences are more

salient in New Zealand. Thus, moderate drinking in a wet culture like New Zealand can be regarded as a resistance to social and cultural norms. In relation to heavy or binge drinking, it can be defined as a choice or decision to moderate or resist heavy drinking, or an individual act of limiting consumption. On the other hand, moderate drinking in a dry culture like Vietnam is the norm because it is already socially and culturally accepted and expected. Thus, it can be defined just as an individual act of consumption which is aggregated into a collective norm. In line with previous research, these different understandings of moderate drinking suggest that moderate drinking is a subjective concept that can vary by individual and by sociocultural context (Dufour, 1999; Green et al., 2007).

A focus on moderate drinking in alcohol research can stimulate a promotion approach in alcohol social marketing (i.e., how to encourage drinking moderation). Here, the promotion approach should be interpreted in the same sense as the promotion focus in the regulatory focus theory (Higgins, 1997). Particularly, this theory posits that there are two separate and independent motivational orientations, namely the promotion focus (i.e., the desire to achieve desirable or positive end states) and the prevention focus (i.e., the desire to avoid undesirable or negative end states), and that individuals pursue a goal or behave in a way that maintains their adopted orientations (Higgins, 1997). In the alcohol drinking domain, it is argued that the promotion focus may be better suited to address drinking-related problems because drinkers, especially young drinkers, mainly drink for positive motives (e.g., enhancement and social motives), rather than for negative ones (e.g., conformity and coping motives) (Kuntsche et al., 2005).

The promotion approach in this thesis has the shared meaning with the health promotion (versus disease prevention) paradigm in public health. While health promotion is a process of engaging, enabling and empowering individuals and communities to increase control over and to improve their health, disease prevention differs from health promotion such that it aims to reduce/prevent the development and severity of diseases (WHO, 1998). For example, in the domain of eating behaviour, interventions taking the promotion approach target and enhance positive body image, rather than targeting body dissatisfaction and other risk factors to reduce disordered eating (Sundgot-Borgen et al., 2018).

In the context of social advertising, there are several examples of advertising appeals or message framings that show the value of the promotion approach. Research has

recognised the use of positive and negative emotional appeals in social marketing communication (Henley et al., 1998). While negative appeals (i.e., eliciting or promising negative emotions as a result of not adopting a recommended behaviour) have been used pervasively, research indicates that they can lead to avoidance and inaction rather than active responses to mobilise positive behaviour, which reduces the effectiveness of these appeals (Brennan & Binney, 2010; Hastings et al., 2004). On the other hand, positive appeals (i.e., eliciting or promising positive emotions as a result of adopting a behaviour) can have a stronger impact or be more effective than negative appeals for behavioural change (Previte et al., 2015b). Similarly, the promotion approach resonates with the use of gain-framed messages (i.e., the benefits of adopting healthy behaviours) in comparison to loss-framed messages (i.e., the costs of adopting the behaviours) in health communications. Research has demonstrated that gain frames are more persuasive when the message is promotion focused and positively framed, especially for those with a promotion focus (Lee & Aaker, 2004; Zhao & Pechmann, 2007).

In short, the promotion approach for alcohol social marketing as suggested in this thesis refers to social marketing solutions that encourage individuals to approach moderate drinking, in contrast to solutions that prevent or avoid heavy drinking. A potential downside of promoting moderate drinking is that it can create unintended consequences which increase alcohol consumption among light or non-drinkers. Moderate drinking might also result in a gradual transition to heavier drinking among these subjects. Therefore, this approach is more suitable for targeting heavy drinkers.

Moreover, this promotion perspective does not aim to reject the importance of the avoidance/prevention approach in alcohol social marketing (i.e., distancing from heavy drinking). Rather, it provides a complement to the dominant heavy drinking approach by offering new opportunities and fresh ideas to address alcohol problems. It has implications for social marketing not only in the domain of alcohol consumption but also in other behavioural domains. Particularly, it advocates that social issues involving complex behaviours should be addressed by *both* an avoidance and promotion approach.

### **5.2.2. The utility of an ecological framework to understand moderate drinking**

Social marketing has been criticised for lacking the use of theory (Truong, 2014). In alcohol social marketing, alcohol research is also criticised for relying on behavioural models at the individual level and discounting the social and environmental influences on

drinking. Moreover, factors influencing drinking behaviours have been examined relatively independently and fragmentally in previous research. Therefore, there is a need for a broader and more holistic perspective to understand alcohol consumption. To this end, this thesis adopted the ecological framework of health behaviours.

Historically, the ecological framework emerges in sociology in response to the narrow individual scope of psychology research (Gordon et al., 2018). The origin of the framework can be dated back to the work of Bronfenbrenner (1977) for understanding child development. Since then, the framework has gained popularity in public health (Sallis et al., 2008; Stokols, 1992) and social marketing arenas (Brennan et al., 2016). The term “ecological” here is derived from the term “ecology” in the biological science as a metaphor to describe the interrelations between organisms and their environments. Basically, the ecological framework draws on systems thinking (Domegan et al., 2016; Kennedy, 2017) which recognises the social world as structures of interacting, interrelated or interdependent entities. Therefore, it theorises that individuals are embedded within larger social systems, and that interactions between individuals and environments underlie behavioural outcomes (Bronfenbrenner, 1977).

In social marketing, literature on the ecological framework stems from the upstream movement which goes beyond individual behaviour change to achieve social change at broader levels (e.g., friends, family, community, workplace, policy, structures, and markets) (Gordon, 2013; Hoek & Jones, 2011; Wymer, 2011). As such, behaviours are viewed as the outcome of interactions between many factors at multiple levels, or systems of influence. In essence, it is a multi-theory framework that combines a range of psychology, social, cultural and critical theories to guide, explain and evaluate social marketing interventions (Gordon et al., 2018). Some examples of multi-level interventions informed by the framework include those on oral health (Lindridge et al., 2013), energy efficiency (Gordon et al., 2018), obesity (Gentile et al., 2009), nutrition (Gregson et al., 2001), physical activity (Elder et al., 2007) and food waste (Silchenko et al., 2019). There are few, if any, examples of ecological interventions on drinking moderation. In general, empirical research into the application of the ecological framework is rather limited, and level-specific influences on behaviours within the framework are not clearly identified (Golden & Earp, 2012; Lindridge et al., 2013). Moreover, interventions adopting the ecological approach have tended to focus on individual and interpersonal factors, rather than community, institutional, and societal level factors (Golden & Earp, 2012).

Research also identifies potential challenges and tensions in applying the ecological framework to social marketing programmes. For example, social marketers may have to deal with issues of power relations and politics, ethics/representation, agenda setting, and the need for reflexive practice (Gordon et al., 2018). Moreover, ecological framework-based programmes can be resource intensive, disrupted, and take a long time to take effect (Gordon et al., 2018). Therefore, although the ecological framework appears to be comprehensive and useful for social marketing to scope, develop and implement strategic interventions, it can be hard to manage. Some researchers even consider the framework to be impractical due to difficulties in operationalising the influence systems, or interpreting to what extent which factor is working in the systems (Sharma, 2015).

In relation to the ecological framework, findings across the studies in this thesis exemplify the usefulness of an ecological framework for furthering understanding of student drinking moderation. The specific barriers to and facilitators of moderate drinking identified in Chapter 2 and 3 can be naturally arranged into three categories (individual/intrapersonal factors, social/interpersonal factors, and environmental factors), which resemble the three general levels of influence on behaviour within the ecological framework. The quantitative study (Study 2) also offered empirical evidence for the significant influences of factors at these levels on moderate drinking intention. From the ecological framework perspective, these findings suggest that moderate drinking is embedded within interrelated systems of influence at different levels (e.g., interpersonal networks and the wider environment). Therefore, the thesis demonstrates the utility of the holistic ecological framework to examine moderate drinking. It is necessary to consider moderate student drinking in particular, and drinking problems in general, from the lens of the ecological framework.

The ecological framework, albeit being an accessible and useful framework, is generic and not behaviour-specific (Sallis et al., 2008). Hence, empirical findings from this thesis contribute to this framework by articulating the specificity and capturing more nuances of the influence systems with particular respect to moderate drinking behaviour. For instance, a detailed list of factors at each level of influence were presented in the previous chapters. Furthermore, the findings explored the distinction between direct and indirect influences as in the case of peer influence; the recognition of combative and complementary competition as in the case of alternative activities and circumstances; and the recognition of true facilitators and hygiene factors. The exploration of differences in

moderate drinking between a wet and dry drinking culture also reflects the interaction between cultural and other systems and individuals' drinking behaviour.

From this research, some recommendations regarding the application of the ecological framework can be drawn. First, on the conceptual ground, one has to broaden their view on individuals as problem/deviant consumers towards considering the broader social, cultural and environmental influences that can be addressed to bring about social change. Next, the ecological framework can be used as a tool to understand behaviour as determined by a set of interconnected individual, social and environmental factors, which then can inform the design and implementation of multi-level interventions. Particularly, one should identify various systems to be addressed and incorporated in the interventions by exploring specific individual, social and environmental influences on the behaviour of interest. Moreover, one should consider how the various systems or specific influences at various levels interact to affect the behaviour. The outcomes should reveal leverage points or nexuses to create solutions that address the influence systems in a complementary and synergistic manner. For example, factors at the individual level can be addressed by tools such as messaging, communications and products. The broader levels can be addressed by offering training and services, media advocacy, stakeholder engagement, lobbying and policy change.

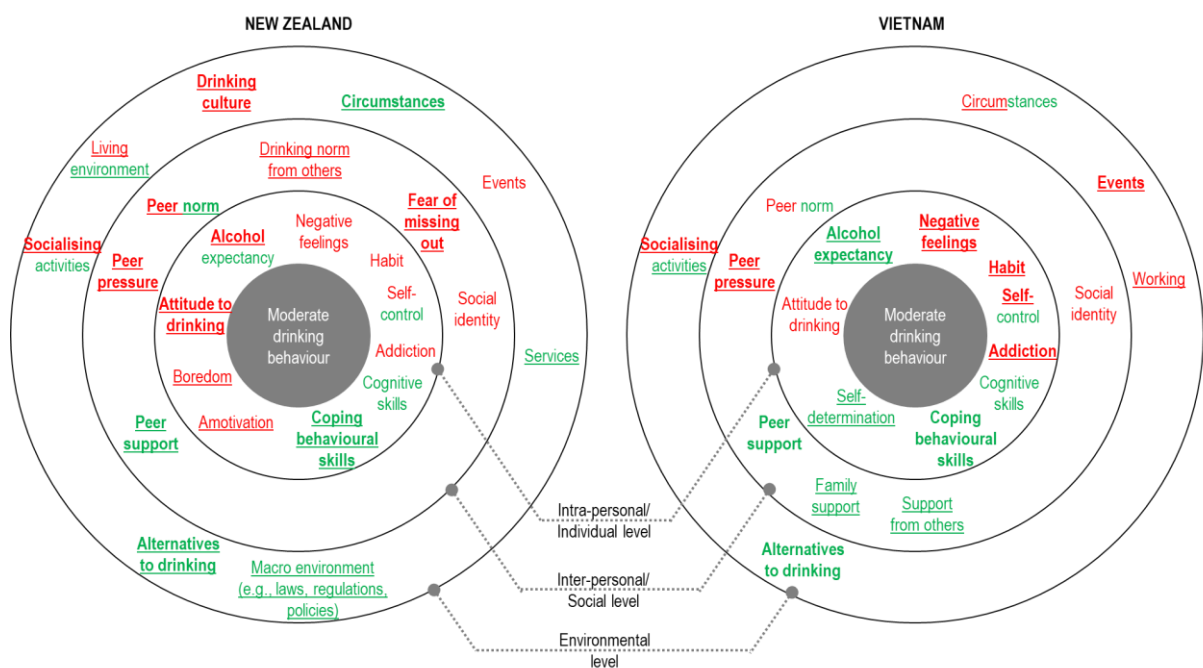
### **5.2.3. Insights into the cultural differences in moderate drinking**

Relevant to the above contribution, an investigation on cultural differences in student drinking can highlight the influence of culture (as one of the broadest factors at the environmental level within the ecological framework) on drinking behaviours. Previous alcohol research which examines cultural influences is usually bounded within one country/university setting. Specifically, alcohol social marketing research is predominant in wet drinking cultures such as the US, UK, and Australia (Kubacki et al., 2015). There is a lack of cross-cultural comparison of moderate drinking between a wet and dry drinking culture in their natural settings. This research practice limits our understandings of the cultural influence on moderate drinking. Also, it questions the extent to which alcohol social marketing can be transferred across cultures, or how lessons can be drawn from experiences of other cultures.

By comparing two countries with different drinking cultures, this study offers a broader and culturally appropriate view of drinking behaviours (Measham, 2006), contributing to

a global perspective in public policy and marketing (Kopp & Kim, 2018). Specifically, it produces novel insights into cultural differences in students' perceptions regarding moderate drinking barriers and facilitators. Thus, it also enables a clearer understanding of the interactions between culture and behaviour by disentangling the cultural aspects of moderate drinking behaviour such as its barriers and facilitators. Within the ecological framework, individuals' behaviour can be conceptualised as a series of influences in a social system represented by concentric circles, with the behaviour at the centre of the circle and the “pointy” end of a chain of influences (Bronfenbrenner, 1977; Hovell et al., 2002; Brennan et al., 2016). Based on findings from this thesis, Figure 5.1 presents a conceptual model of relevant factors of moderate drinking behaviour at each influence level in two different drinking cultures.

Figure 5.1. A Conceptual Model of Relevant Factors of Moderate Drinking Behaviour in Two Different Drinking Cultures.



Notes: The factors in red denote barriers; the factors in green denote facilitators; and the underlined factors indicate significant difference in salience between the countries.

In line with Szmigin *et al.* (2011) and Robertson and Tustin (2018), the cross-cultural findings suggest that students in wet cultures like New Zealand have less sense of personal responsibility and motivation to moderate their drinking since they are less likely to perceive individual barriers/facilitators to moderate drinking and attribute the drinking to more external factors. This knowledge has important implications for the development

and implementation of alcohol social marketing interventions. For instance, social marketing initiatives to address alcohol problems in wet cultures should adopt approaches targeted at the social and environmental level, rather than calling to individual responsibility in drinking.

By comparing students' perceptions of moderate drinking between two different cultures, the thesis also offers further cultural explanations for the variations in drinking and problems between countries beyond medical evidence (e.g., genetic differences) (Yi et al., 2017). It supports the previous findings on ethnic differences (e.g., the Caucasian versus the Asian) in alcohol consumption (Oei & Jardim, 2007; Paschall et al., 2005), and extends these findings to the national/cultural level, rather than to ethnic groups within a country.

#### **5.2.4. The role of barriers to and facilitators of moderate drinking**

Given that current alcohol literature is dominated by research focussing on excessive consumption of alcohol, little is known about what factors can inhibit and/or encourage moderate drinking, which has implications for a promotion approach in alcohol social marketing. Some may argue that knowledge on the influences of heavy drinking can be used as proxies for moderate drinking barriers and facilitators. However, as argued above, heavy and moderate drinking are not necessarily logical opposites, as such, investigation into their influences should be separate and stand alone. Therefore, this thesis contributes to alcohol social marketing research by offering a relatively comprehensive list of barriers to and facilitators of moderate drinking, and their relative importance in different cultural contexts. As a result, it offers a more comprehensive picture of the moderate drinking phenomenon. This understanding can be served as a starting point for future research to delve into the influence mechanism of specific factors.

Moreover, the juxtaposition of findings from Chapter 2 alongside Chapter 3 indicates that identification of barriers and removal of barriers are alone insufficient, albeit necessary, in changing or promoting behaviour, as argued in previous social marketing research (Polonsky et al., 2015). In other words, reversing or removing some barriers to moderate drinking is not sufficient for the behaviour to be undertaken. They can be conceived as “hygiene” factors of moderate drinking and not the true facilitators/motivators. It is therefore vital to understand both barriers and facilitators with regards to moderate drinking behaviour to encourage a more positive drinking lifestyle. In doing so, this thesis



helps clarify the role of some specific factors as barriers, or facilitators, or hygiene factors in impacting student drinking moderation.

The concept of hygiene factors is drawn from Herzberg's two-factor theory of motivation (Herzberg, 1964). The theory distinguishes between motivators and hygiene factors in job attitudes. Particularly, motivators are factors that produce positive satisfaction. On the contrary, there are distinct and separate factors whose presence does not lead to positive satisfaction, yet their absence results in dissatisfaction. According to Herzberg, these factors are called "hygiene" factors in the sense that they are maintenance factors to prevent job dissatisfaction – in analogy with the use of the same term in preventive medicine (Herzberg, 1964). It suggests not to assume dissatisfaction as the obverse of satisfaction, and that both motivators and hygiene factors must be recognised and attended to improve job attitudes and productivity.

In this thesis, evidence of hygiene factors is shown for drinking culture, working environment, fear of missing out, social identity, positive attitude towards drinking, feelings, boredom, habit and addiction. As can be seen in Table 5.2, the existence of these factors was regarded as barriers to moderate drinking in Chapter 2, but their absence did not necessarily facilitate moderate drinking in Chapter 3. Therefore, addressing/removing these factors would be essential for moderate drinking to occur, but the factors were not sufficient on their own to facilitate the behaviour.

Table 5.2. The Parallel between the Identified Barriers and Facilitators.

BARRIERS	%	FACILITATORS	%
<i>Environmental level</i>	48.5%	<i>Environmental level</i>	58.4%
Events	18.1%	Alternatives to drinking	26.5%
Socialising activities	19.7%	Socialising avoidance	12.9%
Negative circumstances	5.4%	Circumstances	18.4%
Living environment	5.6%	Living environment change	4.6%
		Macro environment	5.3%
		Professional services	7.7%
<b>Drinking culture</b>	<b>8.2%</b>		
<b>Working environment</b>	<b>6.8%</b>		
<i>Interpersonal level</i>	81.7%	<i>Interpersonal level</i>	48.9%
Peer pressure	55.5%	Peer support	23.6%
Peer norm	17.5%	Peer norm	21.2%
Others' pressure	6.4%	Family support	7.9%
		Social/others' support	7.7%
<b>Others' norm</b>	<b>7.2%</b>		
<b>Fear of missing out</b>	<b>16.3%</b>		
<b>Identity</b>	<b>14.9%</b>		
<i>Intrapersonal level</i>	79.7%	<i>Intrapersonal level</i>	65.0%
Low negative expectancy	7.6%	Negative expectancies	23.0%
Amotivation	7.6%	Self-determination	11.1%
Low self-control	23.1%	Controllability	16.8%
		Coping behavioural skills	26.3%
		Cognitive skills	6.7%
<b>Positive attitude to drinking</b>	<b>25.8%</b>		
<b>Feelings</b>	<b>22.5%</b>		
<b>Boredom</b>	<b>4.0%</b>		
<b>Habit</b>	<b>14.3%</b>		
<b>Addiction</b>	<b>15.5%</b>		

### 5.3. Contributions to Alcohol Social Marketing Practices and Global Health Issues

Heavy drinking amongst university students has been identified as a major public health burden in many countries, especially those in developed countries or in the European Union, North America, and Australia (Dantzer et al., 2006; Karam et al., 2007). Based on the present findings, some implications are drawn to inform future alcohol social marketing.

### **5.3.1. Interventions to encourage drinking moderation and moderate drinking cultures**

This thesis argues that heavy and moderate drinking are distinct consumption entities and behavioural alternatives. Therefore, it is important for social marketers to differentiate two behavioural objectives, namely: discouraging heavy drinking and encouraging drinking moderation. Accordingly, the targeted drinking behaviour and its associated factors need to be carefully selected and specifically investigated prior to developing and implementing any strategy for alcohol social marketing programs.

The thesis, by determining barriers to and facilitators of moderate drinking amongst university students in two different cultures, furthers the legitimacy of a promotion approach in alcohol social marketing. Specifically, it is suggested that encouraging drinking moderation can be a solution for tackling alcohol problems, complementing the conventional avoidance approach. Alcohol interventions aimed at encouraging drinking moderation or fostering a sensible drinking culture will be effective if barriers to moderate drinking behaviour are acknowledged and removed, while its facilitators are acknowledged and strengthened, within the cultural contexts of the interventions. The studies in this thesis offer a detailed description of young consumer's perceptions of these barriers and facilitators, which can serve as a useful guide for social marketers to adopt the promotion approach in their alcohol campaigns.

Importantly, findings from this thesis suggest that drinking behaviours are embedded within an interplay of influences at multiple (i.e., individual, social and environmental) levels. Therefore, in order to encourage drinking moderation, alcohol interventions should be multi-faceted, and multi-modal. Moreover, the comprehensive examination of moderate drinking and its influences at various levels can help identify the necessary targets or areas of change on which social marketers should concentrate their efforts and resources (Buyucek et al., 2018). At the individual level, the interventions should focus on strengthening drinkers' self-control and coping behavioural skills. At the social level, the interventions should focus on removing the direct pressure from peers within drinkers' networks. At the environmental level, the interventions should focus on providing alternatives to drinking activities, which may develop alternative cultures to disrupt drinking cultures.

The following are practical examples of how the research findings could be used by social marketing to promote moderate drinking cultures. First, interventions should focus on

strengthening drinkers' self-control, since the current findings revealed perceived control to be one of the strongest factors influencing moderate drinking. This can be done by developing social marketing programs that build/teach self-efficacy skills. For example, social marketers can use communication tools to inform youth about effective strategies and ways to reduce or refuse drinking in social situations. Services such as training classes/workshops and web/mobile apps can be developed to assist youth to moderate drinking through information dissemination, counselling, planning, and reminding functions (Song et al., 2019). Another innovative approach is using online games to equip young drinkers with moderate drinking skills and competencies. This approach can help deliver knowledge and transfer skills in a fun and engaging way, and has been shown to increase teenagers' intention to moderate drinking (Rundle-Thiele et al., 2013; Russell-Bennett et al., 2016).

The programs should also leverage the protective effects of social living environments for moderating drinking. To this end, midstream social marketing programs targeting parents, flatmates, and others (e.g., residential college managers, and landlords) can be developed to ask them to encourage students' moderate drinking. These social marketing intermediaries can be used as examples to portray positive images of moderate drinkers, or sources of information, support and control for facilitating responsible drinking environments (Wolfson et al., 2012).

Furthermore, the finding regarding the significant influence of alternatives to drinking supports the development of alternative-based strategies to tackle alcohol problems. For instance, social marketers can create social activities and events for young people to gather and have fun without alcohol or with alcohol not being the main part. Among the alternative options, athletic activities should be paid special attention. The promotion of these activities/events, as well as other aspects of youth/student life, should also be emphasised to show how students can diversify their leisure time and ways of building identity, which in turn can diffuse the adoption of a more moderate-drinking culture (Davies et al., 2018).

### **5.3.2. Culturally and gender-sensitive approach to alcohol interventions**

There is no “one-size fits all” solution to encouraging drinking moderation. This thesis confirms that there exist cultural differences in students' perceptions of moderate drinking in terms of the barriers and facilitators. There also appears to be gender

differences in alcohol consumption and determinants of intention to drink in moderation. As such, alcohol interventions need to be tailored to the cultural context of intervention implementation, and to the needs or characteristics of different gender segments. In general, alcohol social marketing interventions in wet cultures should spend more efforts at the social and environmental level, because drinkers in these cultures may lack personal responsibility or agency for their drinking. In contrast, interventions in dry cultures should focus more on strengthening the ability and motivation to drink moderately. Also, in these dry cultures, compared to males, females may require further interventions targeted at social and environmental influences since they seem to moderate their drinking through both internal and external control mechanisms.

### **5.3.3. Policy implications**

Even though the main contribution of this thesis is in the field of alcohol social marketing, it can offer implications for alcohol public policy. First, current alcohol policies in many countries tend to rely heavily on supply control (e.g., legislation and licensing laws to limit accessibility and availability of alcohol), which can be circumvented by consumers and businesses (Hogan et al., 2014). While this conventional approach to alcohol control should not be taken for granted, more sustained and substantive public policy efforts aimed at changing drinking behaviours can be developed and implemented. The suggested approach to address alcohol problems in this thesis (i.e., promotion of moderate drinking and drinking moderation) aligns with and supports the demand reduction and harm reduction approach to alcohol use (Stockwell, 2006). In short, an integrated and synchronised use of these three approaches should be employed to effectively address heavy drinking problems.

Findings from the research send a message to policy makers to be fully aware of the complexities of drinking behaviours which involve various levels of influence. It has implications for the allocation of responsibility and formulation of policy to regulate alcohol drinking. In balancing individual freedoms and general welfare, evidence from this thesis suggests that in places where heavy drinking is commonplace (i.e., wet cultures), more attention should be paid to change drinking contexts and environments over which individuals have no control, than assigning or leaving responsibility solely to individuals. It indicates the important role of governments, media and alcohol manufacturers in addressing alcohol problems.

The identification of influences of moderate drinking in the thesis can help to inform priority areas for alcohol policies to reduce barriers and enhance facilitators of the behaviour. At the macro level, drinking cultures should be disrupted by enforcing stricter policies and regulations on alcohol (e.g., control of production, export and import, wholesaling and retailing of alcohol products, minimum age for purchasing and drinking alcoholic beverages; drinking-driving rules; and alcohol marketing restrictions), and creating more health services and recreational infrastructures that are not pro-alcohol. To complement these efforts, continued use of education and persuasion strategies (e.g., media advocacy) can help to raise public awareness about the negative consequences of alcohol use, and the links between low levels of consumption and harms. Alcohol policies should also move beyond targeting individuals to groups, communities, and society, for example using community action and mobilisation programmes (WHO, 2010). Positive changes at the broader levels likely resulted from these alcohol policies might incrementally shift individuals' alcohol consumption towards lower average levels.

#### **5.3.4. Addressing global health inequality issue**

Despite not being a focus of the thesis, the cultural comparison approach adopted in this thesis can offer some useful insights for research addressing health inequality issues on a global scale. According to WHO (2018), “the skewed prevalence of effective alcohol policies in higher-income countries raises issues of global health equity and underscores the need for greater resources and priority to be placed on supporting the development and implementation of effective actions in low- and middle-income countries” (p. xviii). In this thesis, when asking about the facilitators of moderate drinking, the prevalence of the themes of professional support services and macro environment was significantly lower or nearly non-existent in Vietnam. Thus, a comparison of drinking cultures between a developed and a developing country signifies a global health inequality in the area of alcohol control. The Vietnamese government is recommended to develop public services and improve their current alcohol policy for addressing potential drinking problems, either by its own or with international assistance and co-operation.

## 5.4. Limitations and Future Research

Like any research, this thesis is not without limitations. First, participants in all studies in the thesis were recruited using convenience sampling. Thus, findings from New Zealand are limited to students at a large university in the South Island (the University of Otago), and findings from Vietnam are limited to students at three universities in Danang and Can Tho. Without a representative sample and the use of randomised sampling techniques, generalisation of the findings to the national level should be cautious. This research can be considered as offering a picture of alcohol drinking in similar groups of university students in two different drinking cultures over the same time period and using a standardised survey so that direct comparisons could be made (Dantzer et al., 2006). Therefore, future research should find ways to improve the representativeness of the sample in each country to derive more solid conclusions about cultural differences.

Second, although the studies in this thesis used mixed methodologies (qualitative and quantitative research), in essence, they relied on self-reported data from the survey method, which created potential response bias. Despite many measures employed to mitigate the bias, it is likely that this was not completely removed. Buyucek et al. (2018) suggest that social marketers should extend beyond self-report methods to consider structural and social factors during intervention planning. Therefore, future research is encouraged to use more objective methods (e.g., observations, or environmental audit) that involve less interaction with participants to avoid bias (Carins et al., 2016).

Third, this thesis examined multiple levels of influence on moderate drinking from a consumer (student drinkers) perspective only. It is advised that involving a broader array of stakeholders in formative research and evaluation can optimise behavioural outcomes (Buyucek et al., 2016). Hence, research taking other stakeholders' perspectives (e.g., university administrators, community residents, alcohol sellers, and alcohol policy makers) will also be useful for furthering understanding on the areas addressed in this thesis and may add new insights that were not uncovered through the focus on drinkers.

Fourth, there is currently no absolute agreement on what constitutes moderate drinking (Dufour, 1999; Green et al., 2007). In this thesis, moderate drinking was defined in different manners in the two studies, which may explain some contradictories in the findings between the two studies. As such, the current findings are restricted to the definitions of moderate drinking adopted in each individual study. In study 1,

interpretation of moderate drinking and its associated barriers and facilitators was left open to participants. Therefore, participants may imagine different barriers and facilitators that would apply depending on how they already self-define as either moderate or heavy drinkers. There is evidence that people tend to rely on their perceptions of personal limits to manage alcohol consumption, rather than the limit imposed by external authorities (drinking guidelines) (Green et al., 2007). Future work should attempt to achieve a consensus and elaboration on the nature of moderate drinking.

Fifth, given that prior research has shown that behavioural intention is a strong indicator of behaviour (Ajzen, 1991; Cooke et al., 2016), Study 2 in this thesis examined factors associated with intention to drinking moderately. Future research can extend the findings to examine effects on the actual behaviour and consequences of the behaviour in different drinking cultures.

Sixth, the studies in this thesis did not investigate the inter-relationships of factors within and across levels of influence. However, the ecological framework postulates interactions or reciprocal causations between individuals and environments (Sallis et al., 2008). For example, data analysis in Study 2 suggested that FOMO might interact with other factors at the individual or environmental level to influence intention to drink moderately. Future research could look at how factors at different levels interact with each other in driving drinking behaviours in different cultural contexts.

Seventh, gendered drinking is influenced by social and cultural factors, and knowledge on gender differences in moderate drinking in Chapter 4 is limited to the Vietnamese student context. Therefore, transferability of such knowledge to other countries (e.g., those with wet drinking cultures) should be cautious and requires a cultural adaptation approach. Although the analysis in this study attempted to control for drinking culture variables (at the individual level), future research can repeat the study in other contexts to conclude about the transferability.

## **5.5. Concluding Remarks**

In conclusion, this thesis addresses the dearth of literature into students' decision-making processes towards moderate drinking by: (1) demonstrating the value of an ecological theoretical perspective to examine factors influencing students' moderate drinking; (2)



clarifying the role of some specific factors as barriers, or facilitators, or hygiene factors in impacting student drinking moderation; and (3) highlighting the cultural and gender differences with respect to this complex phenomenon. As such, it redresses the imbalance of the current scholarly conversations on alcohol consumption which are disproportionately about heavy drinking, and stimulates a promotion approach in alcohol social marketing (i.e., how to encourage drinking moderation). By comparing two countries with different drinking cultures, this study also offers a broader and culturally appropriate view of drinking behaviours, contributing to a global perspective in public policy and social marketing. Based on the findings, this thesis helps to inform nonprofit and social marketing to develop future interventions aimed at encouraging safe and sensible drinking cultures.

---

## References

---

- Abar, C. (2012). Examining the relationship between parenting types and patterns of student alcohol-related behavior during the transition to college. *Psychology of Addictive Behaviors, 26*(1), 20-29.
- Abar, C., & Turrisi, R. (2008). How important are parents during the college years? A longitudinal perspective of indirect influences parents yield on their college teens' alcohol use. *Addictive Behaviors, 33*(10), 1360-1368.
- Adler, N. J., Doktor, R., & Redding, S. G. (1986). From the Atlantic to the Pacific century: Cross-cultural management reviewed. *Journal of Management, 12*(2), 295-318.
- Adler, N. J., & Gundersen, A. (2008). *International dimensions of organizational behavior*. Mason, OH: Thomson South-Western.
- Ajzen, I. (1991). The theory of planned behavior. *Organizational Behavior and Human Decision Processes, 50*(2), 179-211.
- Al Abri, A. (2017). *Where is the party tonight? The impact of fear of missing out on peer norms and alcohol expectancies and consumption among college students*. (Doctor of Philosophy), University of Connecticut, Retrieved from <https://opencommons.uconn.edu/dissertations/1352>
- Ally, A. K., Lovatt, M., Meier, P. S., Brennan, A., & Holmes, J. (2016). Developing a social practice-based typology of British drinking culture in 2009–2011: Implications for alcohol policy analysis. *Addiction, 111*(9), 1568-1579.
- American Marketing Association. (1985). AMA board approves new marketing definition. *Marketing News*.
- Andreasen, A. R. (1994). Social marketing: Its definition and domain. *Journal of Public Policy and Marketing, 13*(1), 108-114.
- Andreasen, A. R. (1995). *Marketing social change: Changing behavior to promote health, social development, and the environment*. San Francisco: Jossey-Bass.
- Andreasen, A. R. (2002). Marketing social marketing in the social change marketplace. *Journal of Public Policy and Marketing, 21*(1), 3-13.
- Arli, D., Pekerti, A., Kubacki, K., & Rundle-Thiele, S. (2016). Exploring the impact of self-construal and cultural intelligence on alcohol consumption: implications for social marketing. *International Journal of Nonprofit and Voluntary Sector Marketing, 21*(4), 269-285.
- Arnett, J. J. (2005). The developmental context of substance use in emerging adulthood. *Journal of Drug Issues, 35*(2), 235-254.

- Astudillo, M., Connor, J., Roiblat, R. E., Ibanga, A. K., & Gmel, G. (2013). Influence from friends to drink more or drink less: A cross-national comparison. *Addictive Behaviors, 38*(11), 2675-2682.
- Babor, T. F., Higgins-Biddle, J. C., Saunders, J. B., & Monteiro, M. G. (2001). *AUDIT: The alcohol use disorders identification test: Guidelines for use in primary care*. Retrieved 23 June 2017, from [http://apps.who.int/iris/bitstream/10665/67205/1/WHO\\_MSD\\_MSB\\_01.6a.pdf](http://apps.who.int/iris/bitstream/10665/67205/1/WHO_MSD_MSB_01.6a.pdf)
- Barry, A. E., Chaney, B. H., Stelfson, M. L., & Dodd, V. (2015). Evaluating the psychometric properties of the AUDIT-C among college students. *Journal of Substance Use, 20*(1), 1-5.
- Bartram, A., Elliott, J., & Crabb, S. (2017a). 'Why can't I just not drink?' A qualitative study of adults' social experiences of stopping or reducing alcohol consumption. *Drug and Alcohol Review, 36*(4), 449-455.
- Bartram, A., Elliott, J., Hanson-Easey, S., & Crabb, S. (2017b). How have people who have stopped or reduced their alcohol consumption incorporated this into their social rituals? *Psychology and Health, 32*(6), 728-744.
- Basil, M. (2017). Survey for formative research. In K. Kubacki & S. Rundle-Thiele (Eds.), *Formative research in social marketing: Innovative methods to gain consumer insights* (pp. 251-263). Singapore: Springer.
- Berger, J., & Rand, L. (2008). Shifting signals to help health: Using identity signaling to reduce risky health behaviors. *Journal of Consumer Research, 35*(3), 509-518.
- Beullens, K., & Vandebosch, L. (2016). A Conditional Process Analysis on the Relationship Between the Use of Social Networking Sites, Attitudes, Peer Norms, and Adolescents' Intentions to Consume Alcohol. *Media Psychology, 19*(2), 310-333. doi:10.1080/15213269.2015.1049275
- Bloomfield, K., Gmel, G., & Wilsnack, S. (2006). Introduction to special issue 'Gender, culture and alcohol problems: A multi-national study'. *Alcohol and Alcoholism, 41*(Supplement 1), i3-i7.
- Borsari, B., & Carey, K. B. (2001). Peer influences on college drinking: A review of the research. *Journal of Substance Abuse, 13*(4), 391-424.
- Borsari, B., & Carey, K. B. (2003). Descriptive and injunctive norms in college drinking: A meta-analytic integration. *Journal of Studies on Alcohol, 64*(3), 331-341.

- Brass, M., & Haggard, P. (2007). To do or not to do: the neural signature of self-control. *Journal of Neuroscience*, 27(34), 9141-9145.
- Bravo, A. J., Prince, M. A., & Pearson, M. R. (2016). A multiple replication examination of distal antecedents to alcohol protective behavioral strategies. *Journal of Studies on Alcohol and Drugs*, 77(6), 958-967.
- Brennan, L., & Binney, W. (2010). Fear, guilt, and shame appeals in social marketing. *Journal of Business Research*, 63(2), 140-146.
- Brennan, L., Previte, J., & Fry, M.-L. (2016). Social marketing's consumer myopia: Applying a behavioural ecological model to address wicked problems. *Journal of Social Marketing*, 6(3), 219-239.
- Brewer, N. T., & Rimer, B. K. (2008). Perspectives on health behavior theories that focus on individuals. In K. Glanz, B. K. Rimer, & K. Viswanath (Eds.), *Health behavior and health education: Theory, research, and practice* (pp. 149-165). San Francisco: Jossey-Bass.
- Bronfenbrenner, U. (1977). Toward an experimental ecology of human development. *American Psychologist*, 32(7), 513-531.
- Bronfenbrenner, U. (1986). Recent advances in research on the ecology of human development. In R. K. Silbereisen, K. Eyferth, & G. Rudinger (Eds.), *Development as action in context: Problem behavior and normal youth development* (pp. 287-309). New York, NY: Springer-Verlag Berlin Heidelberg.
- Burla, L., Knierim, B., Barth, J., Liewald, K., Duetz, M., & Abel, T. (2008). From text to codings: intercoder reliability assessment in qualitative content analysis. *Nursing Research*, 57(2), 113-117.
- Bush, K., Kivlahan, D. R., McDonell, M. B., Fihn, S. D., & Bradley, K. A. (1998). The AUDIT alcohol consumption questions (AUDIT-C): An effective brief screening test for problem drinking. *Archives of Internal Medicine*, 158(16), 1789-1795.
- Buyucek, N., Knox, K., & Rundle-Thiele, S. (2018). Observing alcohol drinking in licensed premises: A formative social marketing study. *Journal of Social Marketing*, 8(1), 40-57.
- Buyucek, N., Knox, K., & Rundle-Thiele, S. (2019). A positive behavioral approach: Identifying theoretical factors influencing moderate drinking practices. *Social Marketing Quarterly*. doi:10.1177/1524500419830442

- Buyucek, N., Kubacki, K., Rundle-Thiele, S., & Pang, B. (2016). A systematic review of stakeholder involvement in social marketing interventions. *Australasian Marketing Journal, 24*(1), 8-19.
- Caetano, R., & Laranjeira, R. (2006). A 'perfect storm' in developing countries: Economic growth and the alcohol industry. *Addiction, 101*(2), 149-152.
- Carey, K. B. (1993). Situational determinants of heavy drinking among college students. *Journal of Counseling Psychology, 40*(2), 217-220.
- Carins, J., & Rundle-Thiele, S. (2014). Fighting to eat healthfully: measurements of the military food environment. *Journal of Social Marketing, 4*(3), 223-239.
- Carins, J. E., Rundle-Thiele, S. R., & Fidock, J. J. (2016). Seeing through a glass onion: Broadening and deepening formative research in social marketing through a mixed methods approach. *Journal of Marketing Management, 32*(11-12), 1083-1102.
- Castro, F. G., Barrera, M. J., Mena, L. A., & Aguirre, K. M. (2014). Culture and alcohol use: Historical and sociocultural themes from 75 years of alcohol research. *Journal of Studies on Alcohol and Drugs, Supplement*(s17), 36-49.
- Chatzidakis, A., Hibbert, S., & Winklhofer, H. (2016). Are consumers' reasons for and against behaviour distinct? *European Journal of Marketing, 50*(1/2), 124-144.
- Chatzidakis, A., & Lee, M. S. (2013). Anti-consumption as the study of reasons against. *Journal of Macromarketing, 33*(3), 190-203.
- Chen, Y., & Feeley, T. H. (2015). Predicting Binge Drinking in College Students: Rational Beliefs, Stress, or Loneliness? *Journal of Drug Education, 45*(3-4), 133-155.
- Cherrier, H., & Gurrieri, L. (2014). Framing social marketing as a system of interaction: A neo-institutional approach to alcohol abstinence. *Journal of Marketing Management, 30*(7-8), 607-633.
- Clapp, J. D., Lange, J. E., Russell, C., Shillington, A., & Voas, R. B. (2003). A failed norms social marketing campaign. *Journal of Studies on Alcohol, 64*(3), 409-414.
- Clasen, D. R., & Brown, B. B. (1985). The multidimensionality of peer pressure in adolescence. *Journal of Youth and Adolescence, 14*(6), 451-468.
- Colby, S. M., Colby, J. J., & Raymond, G. A. (2009). College versus the real world: Student perceptions and implications for understanding heavy drinking among college students. *Addictive Behaviors, 34*(1), 17-27.
- Collins, K., Tapp, A., & Pressley, A. (2010). Social marketing and social influences: Using social ecology as a theoretical framework. *Journal of Marketing Management, 26*(13-14), 1181-1200.

- Connor, J., Cousins, K., Samaranayaka, A., & Kypri, K. (2014). Situational and contextual factors that increase the risk of harm when students drink: Case-control and case-crossover investigation. *Drug and Alcohol Review, 33*(4), 401-411.
- Conroy, D., & de Visser, R. (2013). 'Man up!': Discursive constructions of non-drinkers among UK undergraduates. *Journal of Health Psychology, 18*(11), 1432-1444.
- Conroy, D., & de Visser, R. (2014). Being a non-drinking student: An interpretative phenomenological analysis. *Psychology and Health, 29*(5), 536-551.
- Conroy, D., & de Visser, R. (2015). The importance of authenticity for student non-drinkers: An interpretative phenomenological analysis. *Journal of Health Psychology, 20*(11), 1483-1493.
- Conroy, D., Sparks, P., & de Visser, R. (2015). Efficacy of a non-drinking mental simulation intervention for reducing student alcohol consumption. *British Journal of Health Psychology, 20*(4), 688-707.
- Cooke, R., Dahdah, M., Norman, P., & French, D. P. (2016). How well does the theory of planned behaviour predict alcohol consumption? A systematic review and meta-analysis. *Health Psychology Review, 10*(2), 148-167.
- Cooke, R., Sniehotta, F., & Schütz, B. (2007). Predicting binge-drinking behaviour using an extended TPB: Examining the impact of anticipated regret and descriptive norms. *Alcohol and Alcoholism, 42*(2), 84-91.
- Cooper, M. L. (1994). Motivations for alcohol use among adolescents: Development and validation of a four-factor model. *Psychological Assessment, 6*(2), 117-128.
- Creswell, J. W. (2014). *Research design: Qualitative, quantitative, and mixed methods approaches*. Thousand Oaks, California: Sage.
- Creswell, J. W. (2015). *A concise introduction to mixed methods research*. Thousand Oaks, California: Sage.
- Creswell, J. W., & Clark, V. L. P. (2007). *Designing and conducting mixed methods research* (1st ed.). Thousand Oaks, California: Sage.
- Creswell, J. W., & Clark, V. L. P. (2018). *Designing and conducting mixed methods research*. Los Angeles: Sage.
- Dann, S. (2010). Redefining social marketing with contemporary commercial marketing definitions. *Journal of Business Research, 63*(2), 147-153.
- Dantzer, C., Wardle, J., Fuller, R., Pampalone, S. Z., & Steptoe, A. (2006). International study of heavy drinking: Attitudes and sociodemographic factors in university students. *Journal of American College Health, 55*(2), 83-90.

- Davies, E. L., Law, C., & Hennesly, S. E. (2018). You have to be prepared to drink: Students' views about reducing excessive alcohol consumption at university. *Health Education, 118*(1), 2-16.
- Dawson, D. A., Grant, B. F., Stinson, F. S., & Chou, P. S. (2004). Another look at heavy episodic drinking and alcohol use disorders among college and noncollege youth. *Journal of Studies on Alcohol, 65*(4), 477-488.
- de Macedo, J. Q., Khanlou, N., & Luis, M. A. V. (2015). Use of vignettes in qualitative research on drug use: Scoping review and case example from Brazil. *International Journal of Mental Health and Addiction, 13*(5), 549-562.
- de Visser, R. O., Graber, R., Hart, A., Abraham, C., Scanlon, T., Watten, P., & Memon, A. (2015). Using qualitative methods within a mixed-methods approach to developing and evaluating interventions to address harmful alcohol use among young people. *Health Psychology, 34*(4), 349-360.
- de Visser, R. O., Hart, A., Abraham, C., Graber, R., Scanlon, T., & Memon, A. (2014). How alike are young non-drinkers, former-drinkers, low-risk drinkers, and hazardous drinkers? *Addictive Behaviors, 39*(8), 1258-1264.
- de Visser, R. O., & Smith, J. A. (2007). Alcohol consumption and masculine identity among young men. *Psychology and Health, 22*(5), 595-614.
- de Visser, R. O., Wheeler, Z., Abraham, C., & Smith, J. A. (2013). 'Drinking is our modern way of bonding': Young people's beliefs about interventions to encourage moderate drinking. *Psychology and Health, 28*(12), 1460-1480.
- DeJong, W. (2002). The role of mass media campaigns in reducing high-risk drinking among college students. *Journal of Studies on Alcohol, Supplement*(14), 182-192.
- Del Boca, F. K., & Darkes, J. (2003). The validity of self-reports of alcohol consumption: state of the science and challenges for research. *Addiction, 98*, 1-12.
- Denscombe, M. (2010). *The good research guide for small social research projects* (4th ed.). England: McGraw-Hill.
- Deshpande, S. (2014). Guidance to authors submitting to the Social Marketing Quarterly. *Social Marketing Quarterly, 20*(3), 145-147.
- Dir, A. L., Bell, R. L., Adams, Z. W., & Hulvershorn, L. A. (2017). Gender differences in risk factors for adolescent binge drinking and implications for intervention and prevention. *Frontiers in Psychiatry, 8*, 289.



- Diep, P. B., Knibbe, R. A., Giang, K. B., & De Vries, N. (2013). Alcohol-related harm among university students in Hanoi, Vietnam. *Global Health Action*, 6(1). doi:10.3402/gha.v6i0.18857
- Diep, P. B., Kuntsche, E., Schelleman-Offermans, K., De Vries, N., & Knibbe, R. A. (2016a). Direct and indirect effects of alcohol expectancies through drinking motives on alcohol outcomes among students in Vietnam. *Addictive Behaviors*, 52(January), 115-122.
- Diep, P. B., Tan, F. E. S., Knibbe, R. A., & De Vries, N. (2016b). A multilevel study of students in Vietnam: Drinking motives and drinking context as predictors of alcohol consumption. *International Journal of Environmental Research and Public Health*, 13(7), E710.
- Domegan, C. T. (2008). Social marketing: Implications for contemporary marketing practices classification scheme. *Journal of Business and Industrial Marketing*, 23(2), 135-141.
- Domegan, C., McHugh, P., Devaney, M., Duane, S., Hogan, M., Broome, B. J., ... & Piwowarczyk, J. (2016). Systems-thinking social marketing: conceptual extensions and empirical investigations. *Journal of Marketing Management*, 32(11-12), 1123-1144.
- Donovan, R., & Henley, N. (2010). *Principles and practice of social marketing: An international perspective*. Cambridge: Cambridge University Press.
- Dufour, M. C. (1999). What is moderate drinking? Defining “drinks” and drinking levels. *Alcohol Research and Health*, 23(1), 5-14.
- Ehret, P. J., Ghaidarov, T. M., & LaBrie, J. W. (2013). Can you say no? Examining the relationship between drinking refusal self-efficacy and protective behavioral strategy use on alcohol outcomes. *Addictive Behaviors*, 38(4), 1898-1904.
- Elder, J. P., Lytle, L., Sallis, J. F., Young, D. R., Steckler, A., Simons-Morton, D., ... & Webber, L. (2006). A description of the social-ecological framework used in the trial of activity for adolescent girls (TAAG). *Health Education Research*, 22(2), 155-165.
- Elo, S., & Kyngäs, H. (2008). The qualitative content analysis process. *Journal of Advanced Nursing*, 62(1), 107-115.
- Ennett, S. T., Foshee, V. A., Bauman, K. E., Hussong, A., Cai, L., Reyes, H. L. M., . . . DuRant, R. (2008). The social ecology of adolescent alcohol misuse. *Child Development*, 79(6), 1777-1791.

- Epler, A. J., Sher, K. J., & Piasecki, T. M. (2009). Reasons for abstaining or limiting drinking: A developmental perspective. *Psychology of Addictive Behaviors, 23*(3), 428-442.
- Erol, A., & Karpyak, V. M. (2015). Sex and gender-related differences in alcohol use and its consequences: Contemporary knowledge and future research considerations. *Drug and Alcohol Dependence, 156*, 1-13.
- Finlay, A. K., Ram, N., Maggs, J. L., & Caldwell, L. L. (2012). Leisure activities, the social weekend, and alcohol use: Evidence from a daily study of first-year college students. *Journal of Studies on Alcohol and Drugs, 73*(2), 250-259.
- Fornell, C., & Larcker, D. F. (1981). Evaluating structural equation models with unobservable variables and measurement error. *Journal of Marketing Research, 18*(1), 39-50.
- Fox, K. F., & Kotler, P. (1980). The marketing of social causes: The first 10 years. *Journal of Marketing, 44*(4), 24-33.
- Foxcroft, D. R., Moreira, M. T., Almeida Santimano, N. M., & Smith, L. A. (2015). Social norms information for alcohol misuse in university and college students. *Cochrane Database of Systematic Reviews, 1*(CD006748), 1-143.  
doi:10.1002/14651858.CD006748.pub3
- Frederiksen, N. J. S., Bakke, S. L., & Dalum, P. (2012). "No alcohol, no party": An explorative study of young Danish moderate drinkers. *Scandinavian Journal of Public Health, 40*(7), 585-590.
- French, J., & Blair-Stevens, C. (2006). From snake oil salesmen to trusted policy advisors: The development of a strategic approach to the application of social marketing in England. *Social Marketing Quarterly, 12*(3), 29-40.
- French, J., & Gordon, R. (2015). *Strategic social marketing*. Thousand Oaks, California: Sage.
- French, D. J., Sargent-Cox, K. A., Kim, S., & Anstey, K. J. (2014). Gender differences in alcohol consumption among middle-aged and older adults in Australia, the United States and Korea. *Australian and New Zealand Journal of Public Health, 38*(4), 332-339.
- Fromme, K., Stroot, E. A., & Kaplan, D. (1993). Comprehensive effects of alcohol: Development and psychometric assessment of a new expectancy questionnaire. *Psychological assessment, 5*(1), 19.

- Fry, M.-L. (2010). Countering consumption in a culture of intoxication. *Journal of Marketing Management*, 26(13-14), 1279-1294.
- Fry, M.-L. (2011). Discourses of consumer's alcohol resistant identities. *Journal of Nonprofit and Public Sector Marketing*, 23(4), 348-366.
- Fry, M.-L. (2014). Rethinking social marketing: Towards a sociality of consumption. *Journal of Social Marketing*, 4(3), 210-222.
- Fry, M.-L., Drennan, J., Previte, J., White, A., & Tjondronegoro, D. (2014). The role of desire in understanding intentions to drink responsibly: An application of the model of goal-directed behaviour. *Journal of Marketing Management*, 30(5-6), 551-570.
- Fry, M.-L., Previte, J., & Brennan, L. (2017). Social change design: Disrupting the benchmark template. *Journal of Social Marketing*, 7(2), 119-134.
- Furtwängler, N., & de Visser, R. O. (2017a). Motivation to adhere to unit-based guidelines for alcohol consumption and ability to do so is limited among university students. *Drugs: Education, Prevention and Policy*, 24(5), 418-425.
- Furtwängler, N., & de Visser, R. O. (2017b). University students' beliefs about unit-based guidelines: A qualitative study. *Journal of Health Psychology*, 22(13), 1701-1711.
- Gabbiadini, A., Cristini, F., Scacchi, L., & Monaci, M. G. (2017). Testing the model of goal-directed behavior for predicting binge drinking among young people. *Substance Use and Misuse*, 52(4), 493-506.
- Gagnon, H., Tessier, S., Côté, J., April, N., & Julien, A.-S. (2012). Psychosocial factors and beliefs related to intention to not binge drink among young adults. *Alcohol and Alcoholism*, 47(5), 525-532.
- Gallage, H., Tynan, C., & Heath, T. (2018). Out-group peer involvement in youth alcohol consumption. *Journal of Consumer Behaviour*, 17(1), e42-e51.
- Gardner, B., Abraham, C., Lally, P., & de Bruijn, G.-J. (2012). Towards parsimony in habit measurement: Testing the convergent and predictive validity of an automaticity subscale of the Self-Report Habit Index. *International Journal of Behavioral Nutrition and Physical Activity*, 9(1), E102.
- Gentile, D. A., Welk, G., Eisenmann, J. C., Reimer, R. A., Walsh, D. A., Russell, D. W., ... & Fritz, K. (2009). Evaluation of a multiple ecological level child obesity prevention program: Switch® what you Do, View, and Chew. *BMC Medicine*, 7(1), 49.

- Gill, J. S. (2002). Reported levels of alcohol consumption and binge drinking within the UK undergraduate student population over the last 25 years. *Alcohol and Alcoholism*, 37(2), 109-120.
- Godwin, M., Drennan, J., & Previte, J. (2016). Social capital stories behind young women's drinking practices. *Journal of Social Marketing*, 6(3), 294-314.
- Golden, S. D., & Earp, J. A. L. (2012). Social ecological approaches to individuals and their contexts: Twenty years of health education and behavior health promotion interventions. *Health Education and Behavior*, 39(3), 364-372.
- Gordon, R. (2011). Critical social marketing: Definition, application and domain. *Journal of Social Marketing*, 1(2), 82-99.
- Gordon, R. (2013). Unlocking the potential of upstream social marketing. *European Journal of Marketing*, 47(9), 1525-1547.
- Gordon, R., Butler, K., Cooper, P., Waitt, G., & Magee, C. (2018). Look before you LIEEP: Practicalities of using ecological systems social marketing to improve thermal comfort. *Journal of Social Marketing*, 8(1), 99-119.
- Gordon, R., Heim, D., & MacAskill, S. (2012). Rethinking drinking cultures: A review of drinking cultures and a reconstructed dimensional approach. *Public Health*, 126(1), 3-11.
- Gordon, R., McDermott, L., Stead, M., & Angus, K. (2006). The effectiveness of social marketing interventions for health improvement: What's the evidence? *Public Health*, 120(12), 1133-1139.
- Graber, R., de Visser, R., Abraham, C., Memon, A., Hart, A., & Hunt, K. (2016). Staying in the 'sweet spot': A resilience-based analysis of the lived experience of low-risk drinking and abstinence among British youth. *Psychology and Health*, 31(1), 79-99.
- Gray, J. A. (1990). Brain systems that mediate both emotion and cognition. *Cognition and Emotion*, 4(3), 269-288.
- Green, C. A., Polen, M. R., Janoff, S. L., Castleton, D. K., & Perrin, N. A. (2007). "Not getting tanked": Definitions of moderate drinking and their health implications. *Drug and Alcohol Dependence*, 86(2-3), 265-273.
- Greene, J. C. (2007). *Mixed methods in social inquiry*. San Francisco: Jossey-Bass.
- Greenfield, T. K., Guydish, J., & Temple, M. T. (1989). Reasons students give for limiting drinking: a factor analysis with implications for research and practice. *Journal of Studies on Alcohol*, 50(2), 108-115.

- Gregson, J., Foerster, S. B., Orr, R., Jones, L., Benedict, J., Clarke, B., ... & Zotz, K. (2001). System, environmental, and policy changes: Using the social-ecological model as a framework for evaluating nutrition education and social marketing programs with low-income audiences. *Journal of Nutrition Education*, 33(Supplement 1), S4-S15.
- Grier, S., & Bryant, C. A. (2005). Social marketing in public health. *Annual Review of Public Health*, 26, 319-339.
- Griffiths, R., & Casswell, S. (2010). Intoxicogenic digital spaces? Youth, social networking sites and alcohol marketing. *Drug and Alcohol Review*, 29(5), 525-530.
- Gruenewald, P. J., Remer, L. G., & LaScala, E. A. (2014). Testing a social ecological model of alcohol use: The California 50-city study. *Addiction*, 109(5), 736-745.
- Gunzerath, L., Faden, V., Zakhari, S., & Warren, K. (2004). National Institute on Alcohol Abuse and Alcoholism report on moderate drinking. *Alcoholism: Clinical and Experimental Research*, 28(6), 829-847.
- Hair, J. F., Black, W. C., Babin, B. J., & Anderson, R. E. (2014). *Multivariate data analysis* (7th ed.). Essex, England: Pearson.
- Hallett, J., Howat, P., McManus, A., Meng, R., Maycock, B., & Kypri, K. (2014). Academic and personal problems among Australian university students who drink at hazardous levels: web-based survey. *Health Promotion Journal of Australia*, 24(3), 170-177.
- Ham, L. S., & Hope, D. A. (2003). College students and problematic drinking: A review of the literature. *Clinical Psychology Review*, 23(5), 719-759.
- Ham, L. S., Stewart, S. H., Norton, P. J., & Hope, D. A. (2005). Psychometric assessment of the Comprehensive Effects of Alcohol Questionnaire: Comparing a brief version to the original full scale. *Journal of Psychopathology and Behavioral Assessment*, 27(3), 141-158.
- Hastings, G. (2003). Relational paradigms in social marketing. *Journal of Macromarketing*, 23(1), 6-15.
- Hastings, G., & Domegan, C. (2014). *Social marketing: From tunes to symphonies* (2nd ed.). New York: Routledge.
- Hastings, G., Stead, M., & Webb, J. (2004). Fear appeals in social marketing: Strategic and ethical reasons for concern. *Psychology and Marketing*, 21(11), 961-986.
- Health Promotion Agency. (n.d.). Say Yeah, Nah. Retrieved 15 May 2019, from <https://www.alcohol.org.nz/resources-research/campaigns/say-yeah-nah>

- Henley, N., Donovan, R. J., & Moorhead, H. (1998): Appealing to positive motivations and emotions in social marketing: Example of a positive parenting campaign. *Social Marketing Quarterly*, 4(4), 48-53.
- Herring, R., Bayley, M., & Hurcombe, R. (2014). “But no one told me it’s okay to not drink”: A qualitative study of young people who drink little or no alcohol. *Journal of Substance Use*, 19(1-2), 95-102.
- Herzberg, F. (1964). The motivation-hygiene concept and problems of manpower. *Personnel Administration*, 27(1), 3-7.
- Higgins, E. T. (1997). Beyond pleasure and pain. *American Psychologist*, 52(12), 1280-1300.
- Hillier, D. (2006). *Communicating health risks to the public: A global perspective*. London: Routledge.
- Hingson, R., Zha, W., & Smyth, D. (2017). Magnitude and trends in heavy episodic drinking, alcohol-impaired driving, and alcohol-related mortality and overdose hospitalizations among emerging adults of college ages 18–24 in the United States, 1998–2014. *Journal of Studies on Alcohol and Drugs*, 78(4), 540-548.
- Hingson, R. W., Zha, W., & Weitzman, E. R. (2009). Magnitude of and trends in alcohol-related mortality and morbidity among US college students ages 18-24, 1998-2005. *Journal of Studies on Alcohol and Drugs, Supplement*(16), 12-20.
- Hoek, J., & Jones, S. C. (2011). Regulation, public health and social marketing: A behaviour change trinity. *Journal of Social Marketing*, 1(1), 32-44.
- Hofstede, G. (n.d). Country comparison. Retrieved 9 March 2018, from <https://www.hofstede-insights.com/country-comparison/new-zealand,vietnam/>
- Hogan, S. P., Perks, K. J., & Russell-Bennett, R. (2014). Identifying the key sociocultural influences on drinking behavior in high and moderate binge-drinking countries and the public policy implications. *Journal of Public Policy and Marketing*, 33(1), 93-107.
- Holmila, M., & Raitasalo, K. (2005). Gender differences in drinking: why do they still exist?. *Addiction*, 100(12), 1763-1769.
- Holmila, M., Raitasalo, K., Knibbe, R. A., & Hradilova-Selin, K. (2009). Country variations in family members' informal pressure to drink less. *Contemporary Drug Problems*, 36(1-2), 13-30.
- Hovell, M. F., Wahlgren, D. R., & Gehrman, C. A. (2002). The behavioral ecological model: Integrating public health and behavioral science. In R. J. DiClemente, R.

- A. Crosby, & M. C. Kegler (Eds.), *Emerging theories in health promotion practice and research: Strategies for improving public health* (pp. 347-385). San Francisco: Jossey Bass.
- Howard, D. E., Griffin, M., Boekeloo, B., Lake, K., & Bellows, D. (2007). Staying safe while consuming alcohol: A qualitative study of the protective strategies and informational needs of college freshmen. *Journal of American College Health, 56*(3), 247-254.
- Huang, J.-H., DeJong, W., Schneider, S. K., & Towvim, L. G. (2011). Endorsed reasons for not drinking alcohol: A comparison of college student drinkers and abstainers. *Journal of Behavioral Medicine, 34*(1), 64-73.
- Huhtanen, P., & Raitasalo, K. (2012). Ways of regulating one's drinking: A factor analysis of a Finnish general population sample. *Drug and Alcohol Review, 31*(7), 847-853.
- Hutton, F. (2016). New Zealand Students and 'Cultures of Intoxication'. *Sites: A Journal of Social Anthropology and Cultural Studies, 13*(2), 135-162.
- International Alliance for Responsible Drinking. (2017). *Social marketing and harmful drinking*. Retrieved 8 June 2019, from <http://www.iard.org/wp-content/uploads/2016/01/PR-Social-Marketing.pdf>
- International Social Marketing Association. (2013). *Consensus Definition of Social Marketing*. Retrieved 4 May 2018, from [http://www.issocialmarketing.org/assets/social\\_marketing\\_definition.pdf](http://www.issocialmarketing.org/assets/social_marketing_definition.pdf)
- Jaccard, J. (1981). Attitudes and behavior: Implications of attitudes toward behavioral alternatives. *Journal of Experimental Social Psychology, 17*(3), 286-307.
- Järvinen, M., & Room, R. (2007). *Youth drinking cultures: European experiences*. Aldershot: Ashgate.
- Jennison, K. M. (2004). The short-term effects and unintended long-term consequences of binge drinking in college: a 10-year follow-up study. *American Journal of Drug and Alcohol Abuse, 30*(3), 659-684.
- Johnson, R. B., Onwuegbuzie, A. J., & Turner, L. A. (2007). Toward a definition of mixed methods research. *Journal of Mixed Methods Research, 1*(2), 112-133.
- Jones, B. T., Corbin, W., & Fromme, K. (2001). A review of expectancy theory and alcohol consumption. *Addiction, 96*(1), 57-72.

- Jones, S. C., & Gregory, P. (2009). The impact of more visible standard drink labelling on youth alcohol consumption: Helping young people drink (ir)responsibly? *Drug and Alcohol Review, 28*(3), 230-234.
- Karam, E., Kypri, K., & Salamoun, M. (2007). Alcohol use among college students: An international perspective. *Current Opinion in Psychiatry, 20*(3), 213-221.  
doi:10.1097/YCO.0b013e3280fa836c
- Kennedy, A.-M. (2016). Macro-social marketing. *Journal of Macromarketing, 36*(3), 354-365.
- Kennedy, A.-M. (2017). Macro-social marketing research: Philosophy, methodology and methods. *Journal of Macromarketing, 37*(4), 347-355.
- Kennedy, A.-M., Kemper, J. A., & Parsons, A. G. (2018). Upstream social marketing strategy. *Journal of Social Marketing, 8*(3), 258-279.
- Kilmer, J. R., Cronce, J. M., & Larimer, M. E. (2014). College student drinking research from the 1940s to the future: Where we have been and where we are going. *Journal of Studies on Alcohol and Drugs, 17*(Supplement), 26-35.
- Kim, H.-Y. (2013). Statistical notes for clinical researchers: Assessing normal distribution (2) using skewness and kurtosis. *Restorative Dentistry and Endodontics, 38*(1), 52-54.
- Klatsky, A. L. (1999). Moderate drinking reduced risk of heart disease. *Alcohol Research and Health, 23*(1), 15-15.
- Kopp, S. W., & Kim, K.-H. (2018). Introduction to the Special Section on Global Perspectives in Public Policy and Marketing. *Journal of Public Policy and Marketing, 37*(1), 106-107.
- Kotler, P., & Lee, N. (2008). *Social marketing: Influencing behaviors for good* (3rd ed.). Thousand Oaks, California: Sage Publications.
- Kotler, P., & Roberto, E. L. (1989). *Social marketing: Strategies for changing public behavior*. New York: Free Press.
- Kotler, P., Roberto, N., & Lee, N. (2002). *Social marketing: Improving the quality of life*. Thousand Oaks, California: Sage.
- Kotler, P., & Zaltman, G. (1971). Social marketing: An approach to planned social change. *Journal of Marketing, 35*(3), 3-12.
- Krumpal, I. (2013). Determinants of social desirability bias in sensitive surveys: A literature review. *Quality and Quantity, 47*(4), 2025-2047.



- Kubacki, K., Rundle-Thiele, S., Pang, B., & Buyucek, N. (2015). Minimizing alcohol harm: A systematic social marketing review (2000–2014). *Journal of Business Research*, *68*(10), 2214-2222.
- Kuntsche, E., Knibbe, R., Gmel, G., & Engels, R. (2005). Why do young people drink? A review of drinking motives. *Clinical Psychology Review*, *25*(7), 841-861.
- Kuntsche, E., Kuntsche, S., Thrul, J., & Gmel, G. (2017). Binge drinking: Health impact, prevalence, correlates and interventions. *Psychology and Health*, *32*(8), 976-1017.
- Kuntsche, E., Wicki, M., Windlin, B., Roberts, C., Gabhainn, S. N., Van Der Sluijs, W., . . . Hublet, A. (2015). Drinking motives mediate cultural differences but not gender differences in adolescent alcohol use. *Journal of Adolescent Health*, *56*(3), 323-329.
- Kypri, K., Cronin, M., & Wright, C. S. (2005a). Do university students drink more hazardously than their non-student peers? *Addiction*, *100*(5), 713-714.
- Kypri, K., Langley, J., & Stephenson, S. (2005b). Episode-centred analysis of drinking to intoxication in university students. *Alcohol and Alcoholism*, *40*(5), 447-452.
- Kypri, K., Paschall, M. J., Langley, J., Baxter, J., Cashell-Smith, M., & Bourdeau, B. (2009). Drinking and alcohol-related harm among New Zealand university students: Findings from a national Web-based survey. *Alcoholism: Clinical and Experimental Research*, *33*(2), 307-314.
- Kypri, K., Paschall, M. J., Langley, J. D., Baxter, J., & Bourdeau, B. (2010). The role of drinking locations in university student drinking: Findings from a national web-based survey. *Drug and Alcohol Dependence*, *111*(1-2), 38-43.
- Labbe, A. K., & Maisto, S. A. (2011). Alcohol expectancy challenges for college students: A narrative review. *Clinical Psychology Review*, *31*(4), 673-683.
- Lau-Barraco, C., Linden-Carmichael, A. N., Braitman, A. L., & Stamatos, A. L. (2016). Identifying patterns of situational antecedents to heavy drinking among college students. *Addiction Research and Theory*, *24*(6), 431-440.
- Lazer, W., & Kelley, E. J. (1973). *Social marketing: Perspectives and viewpoints*. Homewood, Illinois: R. D. Irwin.
- Lee, A. Y., & Aaker, J. L. (2004). Bringing the frame into focus: The influence of regulatory fit on processing fluency and persuasion. *Journal of Personality and Social Psychology*, *86*(2), 205-218.
- Lee, N., & Kotler, P. (2019). *Social marketing: Influencing behaviors for good* (6th ed.). Thousand Oaks, California: Sage Publications.

- Lee, N., Rothschild, M. L., & Smith, W. (2011). A declaration of social marketing's unique principles and distinctions. Retrieved 4 May 2019, from <http://www.hwctf.org/Lee%20N%20R%20et%20al%202011%20A%20Declaration%20of%20Social%20Marketings%20Unique%20Principles%20and%20Distinctions.pdf>
- Lefebvre, R. C. (2012). Transformative social marketing: Co-creating the social marketing discipline and brand. *Journal of Social Marketing, 2*(2), 118-129.
- Lefebvre, R. C. (2013). *Social marketing and social change: Strategies and tools for improving health, well-being, and the environment*. San Francisco, California: John Wiley & Sons.
- Lettow, B., Vries, H., Burdorf, A., Conner, M., & Empelen, P. (2015). Explaining young adults' drinking behaviour within an augmented Theory of Planned Behaviour: Temporal stability of drinker prototypes. *British Journal of Health Psychology, 20*(2), 305-323.
- Lincoln, M. (2016). Alcohol and drinking cultures in Vietnam: A review. *Drug and Alcohol Dependence, 159*(February), 1-8.
- Lincoln, Y. S., & Guba, E. G. (1985). *Naturalistic inquiry*. Newbury Park, CA: Sage.
- Lincoln, Y. S., Lynham, S. A., & Guba, E. G. (2011). Paradigmatic controversies, contradictions, and emerging confluences, revisited. In N. K. Denzin & Y. S. Lincoln (Eds.), *The Sage handbook of qualitative research* (pp. 97-128). Thousand Oaks, CA: Sage.
- Lindridge, A., MacAskill, S., Gnich, W., Eadie, D., & Holme, I. (2013). Applying an ecological model to social marketing communications. *European Journal of Marketing, 47*(9), 1399-1420.
- Luu, B. N., & Nguyen, T. T. (2018). *Consumption of alcohol beverages in Vietnam: Results of a national survey (Vietnamese)*. Retrieved 9 June 2019, from [http://www.iard.org/wp-content/uploads/2018/11/IPSS\\_ConsumptionofAlcoholBeveragesinVietnam.pdf](http://www.iard.org/wp-content/uploads/2018/11/IPSS_ConsumptionofAlcoholBeveragesinVietnam.pdf)
- Mackinnon, S. P., Couture, M. E., Cooper, M. L., Kuntsche, E., O'Connor, R. M., Stewart, S. H., & Team, T. D. (2017). Cross-cultural comparisons of drinking motives in 10 countries: Data from the DRINC project. *Drug and Alcohol Review, 36*(November), 721-730.
- Marlatt, G. A., & Witkiewitz, K. (2002). Harm reduction approaches to alcohol use: Health promotion, prevention, and treatment. *Addictive Behaviors, 27*(6), 867-886.

- Martens, M. P., Martin, J. L., Littlefield, A. K., Murphy, J. G., & Cimini, M. D. (2011). Changes in protective behavioral strategies and alcohol use among college students. *Drug and Alcohol Dependence*, *118*(2), 504-507.
- Martineau, F., Tyner, E., Lorenc, T., Petticrew, M., & Lock, K. (2013). Population-level interventions to reduce alcohol-related harm: an overview of systematic reviews. *Preventive Medicine*, *57*(4), 278-296.
- May, C., & Previte, J. (2016). Understanding the midstream environment within a social change systems continuum. *Journal of Social Marketing*, *6*(3), 258-276.
- McAlaney, J., Bewick, B., & Bauerle, J. (2010). *Social norms guidebook: A guide to implementing the social norms approach in the UK*. West Yorkshire, UK: University of Bradford, University of Leeds, and Department of Health.
- McAlaney, J., & McMahon, J. (2007). Normative beliefs, misperceptions, and heavy episodic drinking in a British student sample. *Journal of Studies on Alcohol and Drugs*, *68*(3), 385-392.
- McEwan, B., Swain, D., & Campbell, M. (2011). Controlled intoxication: The self-monitoring of excessive alcohol use within a New Zealand tertiary student sample. *New Zealand Medical Journal*, *124*(1336), 68-74.
- McHugh, P., & Domegan, C. (2013). From reductionism to holism: How social marketing captures the bigger picture through collaborative system indicators. In K. Kubacki & S. Rundle-Thiele (Eds.), *Contemporary issues in social marketing* (pp. 78-94). Newcastle upon Tyne: Cambridge Scholars Publishing.
- McLeroy, K. R., Bibeau, D., Steckler, A., & Glanz, K. (1988). An ecological perspective on health promotion programs. *Health Education and Behavior*, *15*(4), 351-377.
- McNally, A. M., & Palfai, T. P. (2001). Negative emotional expectancies and readiness to change among college student binge drinkers. *Addictive Behaviors*, *26*(5), 721-734.
- Measham, F. (2006). The new policy mix: Alcohol, harm minimisation, and determined drunkenness in contemporary society. *International Journal of Drug Policy*, *17*(4), 258-268.
- Meier, P. S., Warde, A., & Holmes, J. (2018). All drinking is not equal: How a social practice theory lens could enhance public health research on alcohol and other health behaviours. *Addiction*, *113*(2), 206-213.
- Merrill, J. E., & Carey, K. B. (2016). Drinking over the lifespan: Focus on college ages. *Alcohol Research: Current Reviews*.

- Middlestadt, S. E., Macy, J. T., & Geshnizjani, A. (2014). To smoke or not to smoke: Is the risky behavior the opposite of the healthy behavior? *Health Behavior and Policy Review, 1*(2), 143-149.
- Mikhailovich, K., George, A., Rickwood, D., & Parker, R. (2011). A duty of care: non-drinkers and alcohol related harm among an Australian university sample. *Journal of Higher Education Policy and Management, 33*(6), 595-604.
- moderatedrinking.com. (n.d.). What is moderate drinking? Retrieved 01/02/2019, from [https://moderatedrinking.com/home/default\\_home.aspx?p=md\\_defined](https://moderatedrinking.com/home/default_home.aspx?p=md_defined)
- Monk, R. L., & Heim, D. (2013). A critical systematic review of alcohol-related outcome expectancies. *Substance Use and Misuse, 48*(7), 539-557.
- Monk, R. L., & Heim, D. (2014). A systematic review of the Alcohol Norms literature: A focus on context. *Drugs: Education, Prevention and Policy, 21*(4), 263-282.
- Moreira, M. T., Smith, L. A., & Foxcroft, D. (2009). Social norms interventions to reduce alcohol misuse in university or college students. *Cochrane Database of Systematic Reviews, 3*(CD006748), 1-97. doi:10.1002/14651858.CD006748.pub2
- Morgan, D. L. (2007). Paradigms lost and pragmatism regained: Methodological implications of combining qualitative and quantitative methods. *Journal of Mixed Methods Research, 1*(1), 48-76.
- Muli, N., & Lagan, B. M. (2017). Perceived determinants to alcohol consumption and misuse: A survey of university students. *Perspectives in Public Health, 137*(6), 326-336.
- Murgraff, V., McDermott, M. R., & Walsh, J. (2003). Self-Efficacy and behavioral enactment: The application of Schwarzer's health action process approach to the prediction of low-risk, single-occasion drinking. *Journal of Applied Social Psychology, 33*(2), 339-361.
- Mustonen, H., Mäkelä, P., & Lintonen, T. (2014). Toward a typology of drinking occasions: Latent classes of an autumn week's drinking occasions. *Addiction Research and Theory, 22*(6), 524-534.
- Nairn, K., Higgins, J., Thompson, B., Anderson, M., & Fu, N. (2006). 'It's just like the teenage stereotype, you go out and drink and stuff': Hearing from young people who don't drink. *Journal of Youth Studies, 9*(3), 287-304.
- Neighbors, C., Lee, C. M., Lewis, M. A., Fossos, N., & Larimer, M. E. (2007). Are social norms the best predictor of outcomes among heavy-drinking college students? *Journal of Studies on Alcohol and Drugs, 68*(4), 556-565.

- New Zealand Ministry of Health. (2010). *Alcohol and pregnancy: A practical guide for health professionals*. Retrieved 17 January 2020, from <https://www.health.govt.nz/system/files/documents/publications/alcohol-pregnancy-practical-guide-health-professionals.pdf>
- New Zealand Ministry of Health. (2015). *National Drug Policy 2015 to 2020*. Retrieved 27 February 2018, from <https://www.health.govt.nz/system/files/documents/publications/national-drug-policy-2015-2020-aug15.pdf>
- New Zealand Ministry of Health. (2019a). Annual Data Explorer 2017/18: New Zealand Health Survey. Retrieved 5 May 2019, from <https://minhealthnz.shinyapps.io/nz-health-survey-2017-18-annual-data-explorer>
- New Zealand Ministry of Health. (2019b). Improving the health of New Zealanders. Retrieved 15 May 2019, from <https://www.health.govt.nz/nz-health-statistics/national-collections-and-surveys/surveys/new-zealand-health-survey/improving-health-new-zealanders>
- Nguyen, M.-L., & Neighbors, C. (2013). Self-determination, perceived approval, and drinking: Differences between Asian Americans and Whites. *Addictive Behaviors, 38*(3), 1656-1662.
- Norman, P., Armitage, C. J., & Quigley, C. (2007). The theory of planned behavior and binge drinking: Assessing the impact of binge drinker prototypes. *Addictive Behaviors, 32*(9), 1753-1768.
- Norman, P., Bennett, P., & Lewis, H. (1998). Understanding binge drinking among young people: An application of the theory of planned behaviour. *Health Education Research, 13*(2), 163-169.
- O'Hare, T. (1997). Measuring excessive alcohol use in college drinking contexts: The Drinking Context Scale. *Addictive Behaviors, 22*(4), 469-477.
- Oei, T. P. S., & Jardim, C. L. (2007). Alcohol expectancies, drinking refusal self-efficacy and drinking behaviour in Asian and Australian students. *Drug and Alcohol Dependence, 87*(2), 281-287.
- Oei, T. P. S., & Morawska, A. (2004). A cognitive model of binge drinking: The influence of alcohol expectancies and drinking refusal self-efficacy. *Addictive Behaviors, 29*(1), 159-179.

- Open Development Vietnam (2019). *Ethnic minorities and indigenous people*. Retrieved 17 January 2020, from <https://vietnam.opendevelopmentmekong.net/topics/ethnic-minorities-and-indigenous-people/>
- Orme, J., & Coghill, N. (2014). Wasted potential: The role of higher education institutions in supporting safe, sensible and social drinking among students. *Health Education Journal*, 73(2), 192-200.
- Paschall, M. J., Bersamin, M., & Flewelling, R. L. (2005). Racial/Ethnic differences in the association between college attendance and heavy alcohol use: a national study. *Journal of Studies on Alcohol*, 66(2), 266-274.
- Peele, S., & Brodsky, A. (2000). Exploring psychological benefits associated with moderate alcohol use: a necessary corrective to assessments of drinking outcomes? *Drug and Alcohol Dependence*, 60(3), 221-247.
- Pennay, A., MacLean, S., Rankin, G., & O'Rourke, S. (2018). Hello Sunday Morning: Strategies used to support temporary alcohol abstinence through participation in an online health promotion programme. *Health Promotion Journal of Australia*, 29(3), 321-327.
- Perrino, L. (2017). *An exploration of cross-national differences in the drinking behaviour of Italians and English: A multi-method exploratory study*. (Doctor of Philosophy), University of West London, UK.
- Piacentini, M. G., & Banister, E. N. (2009). Managing anti-consumption in an excessive drinking culture. *Journal of Business Research*, 62(2), 279-288.
- Polak, M. A., & Conner, T. S. (2012). Impairments in daily functioning after heavy and extreme episodic drinking in university students. *Drug and Alcohol Review*, 31(6), 763-769.
- Polonsky, M., Francis, K., & Renzaho, A. (2015). Is removing blood donation barriers a donation facilitator? Australian African migrants' view. *Journal of Social Marketing*, 5(3), 190-205.
- Prestwich, A., Kellar, I., Conner, M., Lawton, R., Gardner, P., & Turgut, L. (2016). Does changing social influence engender changes in alcohol intake? A meta-analysis. *Journal of Consulting and Clinical Psychology*, 84(10), 845-860.
- Previte, J., Fry, M.-L., Drennan, J., & Hasan, S. F. E. (2015a). Friends or foes: Group influence effects on moderate drinking behaviors. *Journal of Business Research*, 68(10), 2146-2154.

- Previte, J., Russell-Bennett, R., & Parkinson, J. (2015b). Shaping safe drinking cultures: Evoking positive emotion to promote moderate-drinking behaviour. *International Journal of Consumer Studies*, *39*(1), 12-24.
- Raciti, M., O'Hara, R., Sharma, B., Reinhard, K., & Davies, F. (2013). Examining price promotions, venue and place of residence as predictors of alcohol consumption. *Journal of Social Marketing*, *3*(1), 8-27.
- Rahav, G., Wilsnack, R., Bloomfield, K., Gmel, G., & Kuntsche, S. (2006). The influence of societal level factors on men's and women's alcohol consumption and alcohol problems. *Alcohol and Alcoholism*, *41*(Supplement 1), i47-i55.
- Reckdenwald, A., Ford, J. A., & Murray, B. N. (2016). Alcohol use in emerging adulthood: Can Moffitt's developmental theory help us understand binge drinking among college students? *Journal of Child and Adolescent Substance Abuse*, *25*(6), 497-503.
- Rehm, J. (2011). The risks associated with alcohol use and alcoholism. *Alcohol Research and Health*, *34*(2), 135-143.
- Rehm, J., Mathers, C., Popova, S., Thavorncharoensap, M., Teerawattananon, Y., & Patra, J. (2009). Global burden of disease and injury and economic cost attributable to alcohol use and alcohol-use disorders. *Lancet*, *373*(9682), 2223-2233.
- Richetin, J., Conner, M., & Perugini, M. (2011). Not doing is not the opposite of doing: Implications for attitudinal models of behavioral prediction. *Personality and Social Psychology Bulletin*, *37*(1), 40-54.
- Richetin, J., Perugini, M., Conner, M., Adjali, I., Hurling, R., Sengupta, A., & Greetham, D. (2012). To reduce and not to reduce resource consumption? That is two questions. *Journal of Environmental Psychology*, *32*(2), 112-122.
- Rimer, B. K., & Glanz, K. (2005). *Theory at a glance: A guide for health promotion practice*. Retrieved 5 September 2017, from [https://cancercontrol.cancer.gov/brp/research/theories\\_project/theory.pdf](https://cancercontrol.cancer.gov/brp/research/theories_project/theory.pdf)
- Robertson, K., & Tustin, K. (2018). Students who limit their drinking, as recommended by national guidelines, are stigmatized, ostracized, or the subject of peer pressure: Limiting consumption is all but prohibited in a culture of intoxication. *Substance Abuse: Research and Treatment*, *12*. doi:10.1177/1178221818792414
- Robinson-Maynard, A., Meaton, J., & Lowry, R. (2013). Identifying key criteria as predictors of success in social marketing: Establishing an evaluative template

- and grid (ETG). In K. Kubacki & S. Rundle-Thiele (Eds.), *Contemporary issues in social marketing* (pp. 41-58). Newcastle upon Tyne: Cambridge Scholars.
- Robinson, E., Jones, A., Christiansen, P., & Field, M. (2014). Perceived peer drinking norms and responsible drinking in UK university settings. *Substance Use and Misuse, 49*(11), 1376-1384.
- Ronksley, P. E., Brien, S. E., Turner, B. J., Mukamal, K. J., & Ghali, W. A. (2011). Association of alcohol consumption with selected cardiovascular disease outcomes: a systematic review and meta-analysis. *BMJ, 342*, d671.
- Room, R. (2013). Sociocultural aspects of alcohol consumption. In P. Boyle, P. Boffetta, A. B. Lowenfels, H. Burns, O. Brawley, W. Zatonski, & J. Rehm (Eds.), *Alcohol: Science, policy, and public health* (pp. 38-45). Oxford: Oxford University Press.
- Room, R., Callinan, S., & Dietze, P. (2016). Influences on the drinking of heavier drinkers: interactional realities in seeking to 'change drinking cultures'. *Drug and Alcohol Review, 35*(1), 13-21.
- Room, R., & Mitchell, A. (1972). Notes on cross-national and cross-cultural studies. *Drinking and Drug Practices Surveyor, 5*(14), 16-20.
- Rothschild, M. L. (1999). Carrots, sticks, and promises: A conceptual framework for the management of public health and social issue behaviors. *Journal of Marketing, 63*(October), 24-37.
- Rundle-Thiele, S., Russell-Bennett, R., Leo, C., & Dietrich, T. (2013). Moderating teen drinking: Combining social marketing and education. *Health Education, 113*, 392-406.
- Russell-Bennett, R., & Golledge, A. H. (2009). *An investigation of cross-cultural differences in binge-drinking perceptions and behaviours*. Paper presented at the Australia and New Zealand Marketing Academy Conference (ANZMAC), Melbourne, Australia. <https://eprints.qut.edu.au/27680/1/c27680.pdf>
- Russell-Bennett, R., Leo, C., Rundle-Thiele, S., & Drennan, J. (2016). A hierarchy-of-effects approach to designing a social marketing game. *Journal of Nonprofit and Public Sector Marketing, 28*, 105-128.
- Russell-Bennett, R., Wood, M., & Previte, J. (2013). Fresh ideas: Services thinking for social marketing. *Journal of Social Marketing, 3*(3), 223-238.
- Sallis, J. F., Owen, N., & Fisher, E. B. (2008). Ecological models of health behavior. In K. Glanz, B. K. Rimer, & K. Viswanath (Eds.), *Health behavior and health education: Theory, research, and practice* (pp. 465-486). San Francisco: Jossey-Bass.



- Sancho, F. M., Miguel, M. J., & Aldás, J. (2011). Factors influencing youth alcohol consumption intention. *Journal of Social Marketing, 1*(3), 192-210.
- Santor, D. A., Messervey, D., & Kusumakar, V. (2000). Measuring peer pressure, popularity, and conformity in adolescent boys and girls: Predicting school performance, sexual attitudes, and substance abuse. *Journal of Youth and Adolescence, 29*(2), 163-182.
- Saunders, S. G., Barrington, D. J., & Sridharan, S. (2015). Redefining social marketing: Beyond behavioural change. *Journal of Social Marketing, 5*(2), 160-168.
- Savic, M., Room, R., Mugavin, J., Pennay, A., & Livingston, M. (2016). Defining “drinking culture”: A critical review of its meaning and connotation in social research on alcohol problems. *Drugs: Education, Prevention and Policy, 23*(4), 270-282.
- Schmidt, L. A., Mäkelä, P., Rehm, J., & Room, R. (2010). Alcohol: equity and social determinants. In E. Blas & A. S. Kurup (Eds.), *Equity, social determinants and public health programmes* (pp. 11-30). Switzerland: World Health Organization.
- Schulenberg, J. E., Johnston, L. D., O'Malley, P. M., Bachman, J. G., Miech, R. A., & Patrick, M. E. (2018). *Monitoring the Future national survey results on drug use, 1975–2017: Volume II, College students and adults ages 19-55*. Retrieved 23 June 2019, from [http://www.monitoringthefuture.org/pubs/monographs/mtf-vol2\\_2017.pdf](http://www.monitoringthefuture.org/pubs/monographs/mtf-vol2_2017.pdf)
- Schulenberg, J. E., & Maggs, J. L. (2002). A developmental perspective on alcohol use and heavy drinking during adolescence and the transition to young adulthood. *Journal of Studies on Alcohol and Drugs, Supplement*(14), 54-70.
- Schumm, W. R., Pratt, K. K., Hartenstein, J. L., Jenkins, B. A., & Johnson, G. A. (2013). Determining statistical significance (alpha) and reporting statistical trends: Controversies, issues, and facts. *Comprehensive Psychology, 2*, 10.
- Schuster, L. (2015). Competition and its influence on consumer decision making in social marketing. *Journal of Marketing Management, 31*(11-12), 1333-1352.
- Sharma, M. (2015). Multi-theory model (MTM) for health behavior change. *WebmedCentral Behaviour, 6*(9), WMC004982.
- Sharma, M., Anyimukwu, C., Kim, R. W., Nahar, V. K., & Ford, M. A. (2018). Predictors of responsible drinking or abstinence among college students who binge drink: A multitheory model approach. *Journal of the American Osteopathic Association, 118*(8), 519-530.

- Silchenko, K., Simonetti, F., & Gistri, G. (2019). The second life of food: When social marketing bridges solidarity and waste prevention. In D. Z. Basil, G. Diaz-Meneses, & M. D. Basil (Eds.), *Social marketing in action: Cases from around the world* (pp. 111-126). Cham, Switzerland: Springer.
- Slicker, E. K. (1997). University students' reasons for not drinking: Relationship to alcohol consumption level. *Journal of Alcohol and Drug Education, 42*(2), 83-102.
- Social Issues Research Centre. (1998). *Social and cultural aspects of drinking: A report to the Amsterdam Group*. Retrieved 5 September 2017, from [http://www.sirc.org/publik/social\\_drinking.pdf](http://www.sirc.org/publik/social_drinking.pdf)
- Song, T., Qian, S., & Yu, P. (2019). Mobile health interventions for self-control of unhealthy alcohol use: Systematic review. *JMIR mHealth and uHealth, 7*, e10899.
- Soydan, H. (1996). Using the vignette method in cross-cultural comparisons. In L. Hantrais & S. Mangen (Eds.), *Cross-national research methods in the social sciences* (pp. 120-128). New York: Pinter.
- Spotswood, F., Chatterton, T., Morey, Y., & Spear, S. (2017). Practice-theoretical possibilities for social marketing: Two fields learning from each other. *Journal of Social Marketing, 7*(2), 156-171.
- Stead, M., Gordon, R., Angus, K., & McDermott, L. (2007). A systematic review of social marketing effectiveness. *Health Education, 107*(2), 126-191.
- Stebbins, R. A. (2001). Serious leisure. *Society, 38*(4), 53-57.
- Steinman, K. J. (2003). College students' early cessation from episodic heavy drinking: Prevalence and correlates. *Journal of American College Health, 51*(5), 197-204.
- Stöber, J., Dette, D. E., & Musch, J. (2002). Comparing continuous and dichotomous scoring of the Balanced Inventory of Desirable Responding. *Journal of Personality Assessment, 78*(2), 370-389.
- Stockwell, T. (2006). Alcohol supply, demand, and harm reduction: What is the strongest cocktail?. *International Journal of Drug Policy, 17*(4), 269-277.
- Stokols, D. (1992). Establishing and maintaining healthy environments: Toward a social ecology of health promotion. *American Psychologist, 47*(1), 6-22.
- Stritzke, W. G., & Butt, J. C. (2001). Motives for not drinking alcohol among Australian adolescents: Development and initial validation of a five-factor scale. *Addictive Behaviors, 26*(5), 633-649.
- Strunin, L., Díaz-Martínez, A., Díaz-Martínez, L. R., Kuranz, S., Hernández-Ávila, C. A., García-Bernabé, C. C., & Fernández-Varela, H. (2015). Alcohol use among

- Mexican youths: Is familismo protective for moderate drinking? *Journal of Child and Family Studies*, 24(2), 309-316.
- Suaalii-Sauni, T., Samu, K. S., Dunbar, L., Pulford, J., & Wheeler, A. (2012). A qualitative investigation into key cultural factors that support abstinence or responsible drinking amongst some Pacific youth living in New Zealand. *Harm Reduction Journal*, 9(1), E36.
- Sudhinaraset, M., Wigglesworth, C., & Takeuchi, D. T. (2016). Social and cultural contexts of alcohol use: Influences in a social–ecological framework. *Alcohol Research: Current Reviews*, 38(1), 35-45.
- Sundgot-Borgen, C., Bratland-Sanda, S., Engen, K. M., Pettersen, G., Friberg, O., Torstveit, M. K., . . . Rosenvinge, J. H. (2018). The Norwegian healthy body image programme: study protocol for a randomized controlled school-based intervention to promote positive body image and prevent disordered eating among Norwegian high school students. *BMC Psychology*, 6(1), e8.
- Supski, S., Lindsay, J., & Tanner, C. (2017). University students' drinking as a social practice and the challenge for public health. *Critical Public Health*, 27(2), 228-237.
- Sutton, S. (2004). Determinants of health-related behaviours: Theoretical and methodological issues. In S. Sutton, A. Baum, & M. Johnston (Eds.), *The SAGE handbook of health psychology* (pp. 94-126). London: SAGE Publications.
- Szmigin, I., Bengry-Howell, A., Griffin, C., Hackley, C., & Mistral, W. (2011). Social marketing, individual responsibility and the “culture of intoxication”. *European Journal of Marketing*, 45(5), 759-779.
- Tam, N. M., Doran, C. M., Hill, P. S., & Dunne, M. P. (2012). Alcohol Reform in Viet Nam: Confronting rising consumption, injury and harm. *Applied Health Economics and Health Policy*, 10(5), 285-287.
- Tang, H., Cai, W., Wang, H., Zhang, Q., Qian, L., Shell, D. F., . . . Yin, P. (2013). The association between cultural orientation and drinking behaviors among university students in Wuhan, China. *PLoS One*, 8(1), e54796.
- Teddlie, C., & Tashakkori, A. (2009). *Foundations of mixed methods research: Integrating quantitative and qualitative approaches in the social and behavioral sciences*. Thousand Oaks, California: Sage.
- Tesch, R. (2013). *Qualitative research: Analysis types and software*. New York: Routledge.
- Teunissen, H. A., Spijkerman, R., Kuntsche, E., Engels, R. C., & Scholte, R. H. (2017). Cool or fool? The association between drinker prototypes and alcohol

- consumption using multiple time-point diary assessments in adolescent males. *Substance Use and Misuse*, 52(5), 656-665.
- Thompson, H. M., Previte, J., Kelly, S., & Kelly, A. B. (2017). Examining alcohol management practices in community sports clubs: A systems approach. *Journal of Social Marketing*, 7(3), 250-267.
- Thompson, P. L. (2013). J-curve revisited: Cardiovascular benefits of moderate alcohol use cannot be dismissed. *Medical Journal of Australia*, 198(8), 419-422.
- Thompson, W. E. (2017). Social support, religious involvement and alcohol use among students at a conservative religious university. *Behavioral Sciences*, 7(2), 34.
- Tran, K. T., Robertson, K., & Thyne, M. (2019). Students' perceptions of barriers to moderate drinking: A comparison between a wet and a dry drinking culture. *Journal of Social Marketing*. doi:10.1108/JSOCM-09-2018-0102
- Trockel, M., Wall, A., Williams, S. S., & Reis, J. (2008). When the party for some becomes a problem for others: The effect of perceived secondhand consequences of drinking behavior on drinking norms. *Journal of Psychology*, 142(1), 57-69.
- Truong, V. D. (2014). Social marketing: A systematic review of research 1998–2012. *Social Marketing Quarterly*, 20(1), 15-34.
- Truong, V. D., & Hall, C. M. (2013). Social marketing and tourism: What is the evidence? *Social Marketing Quarterly*, 19(2), 110-135.
- Tucker, M., & Harris, G. E. (2016). Alcohol use among university students: Considering a positive deviance approach. *Journal of Health Psychology*, 21(9), 1918-1927.
- UK National Social Marketing Centre. (2006a). *Social marketing benchmark criteria*. Retrieved 20 December 2018, from <http://www.thensmc.com/sites/default/files/benchmark-criteria-090910.pdf>
- UK National Social Marketing Centre. (2006b). *Social marketing works!* Retrieved 8 June 2019, from <https://www.thensmc.com/resource/social-marketing-works-short-guide-nhs>
- UK National Social Marketing Centre. (2011). *Big pocket guide to using social marketing for behaviour change*. Retrieved 8 June 2019, from [https://www.thensmc.com/sites/default/files/Big\\_pocket\\_guide\\_2011.pdf](https://www.thensmc.com/sites/default/files/Big_pocket_guide_2011.pdf)
- UNDP. (n.d.). Human Development Data (1990-2017). Retrieved 15 May 2019, from <http://www.hdr.undp.org/en/data>

- van Lettow, B., Vermunt, J. K., de Vries, H., Burdorf, A., & van Empelen, P. (2013a). Clustering of drinker prototype characteristics: What characterizes the typical drinker?. *British Journal of Psychology*, *104*(3), 382-399.
- van Lettow, B. V., de Vries, H., Burdorf, A., Norman, P., & Van Empelen, P. (2013b). Associations between abstainer, moderate and heavy drinker prototypes and drinking behaviour in young adults. *Psychology and Health*, *28*(12), 1407-1423.
- Van Wersch, A., & Walker, W. (2009). Binge-drinking in Britain as a social and cultural phenomenon: The development of a grounded theoretical model. *Journal of Health Psychology*, *14*(1), 124-134.
- Vantamay, S. (2009). Alcohol consumption among university students: Applying a social ecological approach for multi-level preventions. *Southeast Asian Journal of Tropical Medicine and Public Health*, *40*(2), 354-369.
- Vésteinsdóttir, V., Reips, U.-D., Joinson, A., & Thorsdottir, F. (2017). An item level evaluation of the Marlowe-Crowne Social Desirability Scale using item response theory on Icelandic Internet panel data and cognitive interviews. *Personality and Individual Differences*, *107*, 164-173.
- Vietnam Ministry of Health. (2004). *Survey Assessment of Vietnamese Youth (SAVY)*. Retrieved 6 March 2018, from [http://www.youthpolicy.org/library/wp-content/uploads/library/2003\\_Survey\\_Assessment\\_Vietnamese\\_Youth\\_Eng.pdf](http://www.youthpolicy.org/library/wp-content/uploads/library/2003_Survey_Assessment_Vietnamese_Youth_Eng.pdf)
- Vietnam Ministry of Health. (2010). *Survey Assessment of Vietnamese Youth 2 (SAVY 2)*. Retrieved 6 March 2018, from <https://catalogue.nla.gov.au/Record/5755857>
- Vietnamese Ministry of Health. (2018). *Report on legislations to prevent alcohol harms (Vietnamese)*. Retrieved 9 June 2019, from [http://duthaonline.quochoi.vn/DuThao/Lists/DT\\_TAILIEU\\_COBAN/Attachments/3214/10\\_Bao\\_cao\\_tong\\_quan\\_phap\\_luat.pdf](http://duthaonline.quochoi.vn/DuThao/Lists/DT_TAILIEU_COBAN/Attachments/3214/10_Bao_cao_tong_quan_phap_luat.pdf)
- Wason, K. D., Polonsky, M. J., & Hyman, M. R. (2002). Designing vignette studies in marketing. *Australasian Marketing Journal*, *10*(3), 41-58.
- Weber, R. P. (1990). Basic content analysis. In M. S. Lewis-Beck (Ed.), *Quantitative Applications in the Social Sciences* (2nd ed.). Newbury Park: Sage Publications.
- Wechsler, H., Austin, B., & DeJong, W. (1996). *Secondary Effects of Binge Drinking on College Campuses*. Retrieved 4 April 2017, from <http://files.eric.ed.gov/fulltext/ED400738.pdf>

- Wechsler, H., Davenport, A., Dowdall, G., Moeykens, B., & Castillo, S. (1994). Health and behavioral consequences of binge drinking in college: A national survey of students at 140 campuses. *Journal of the American Medical Association*, 272(21), 1672-1677.
- Wechsler, H., Lee, J. E., Hall, J., Wagenaar, A. C., & Lee, H. (2002). Secondhand effects of student alcohol use reported by neighbors of colleges: the role of alcohol outlets. *Social Science and Medicine*, 55(3), 425-435.
- Wechsler, H., Moeykens, B., Davenport, A., Castillo, S., & Hansen, J. (1995). The adverse impact of heavy episodic drinkers on other college students. *Journal of Studies on Alcohol*, 56(6), 628-634.
- Wechsler, H., Nelson, T. E., Lee, J. E., Seibring, M., Lewis, C., & Keeling, R. P. (2003). Perception and reality: A national evaluation of social norms marketing interventions to reduce college students' heavy alcohol use. *Journal of Studies on Alcohol*, 64(4), 484-494.
- Wechsler, H., & Nelson, T. F. (2001). Binge drinking and the American college students: What's five drinks? *Psychology of Addictive Behaviors*, 15(4), 287.
- Weinreich, N. K. (2011). *Hands-on social marketing: A step-by-step guide to designing change for good*. Thousand Oaks, California: Sage.
- Weitzman, E. R., & Nelson, T. F. (2004). College student binge drinking and the “prevention paradox”: Implications for prevention and harm reduction. *Journal of Drug Education*, 34(3), 247-265.
- West, S. G., Finch, J. F., & Curran, P. J. (1995). Structural equation models with nonnormal variables: Problems and remedies. In R. H. Hoyle (Ed.), *Structural equation modeling: Concepts, issues and applications* (pp. 56-75). Thousand Oaks, CA: Sage.
- White, A., & Hingson, R. (2014). The burden of alcohol use: Excessive alcohol consumption and related consequences among college students. *Alcohol Research: Current Reviews*, 35(2), 201-218.
- WHO. (1998). Health promotion glossary. Retrieved 17 January 2020, from <https://www.who.int/healthpromotion/about/HPR%20Glossary%201998.pdf>
- WHO. (2010). *Global strategy to reduce the harmful use of alcohol*. Retrieved 4 April 2017, from [http://www.who.int/substance\\_abuse/activities/gsrhua/en/](http://www.who.int/substance_abuse/activities/gsrhua/en/)
- WHO. (2014). *Global status report on alcohol and health 2014*. Retrieved 3 June 2017, from [http://www.who.int/substance\\_abuse/publications/global\\_alcohol\\_report/en/](http://www.who.int/substance_abuse/publications/global_alcohol_report/en/)

- WHO. (2018). *Global status report on alcohol and health 2018*. Retrieved 3 October 2018, from <http://apps.who.int/iris/bitstream/handle/10665/274603/9789241565639-eng.pdf?ua=1>
- WHO. (n.d.). Global Information System on Alcohol and Health (GISAH). Retrieved 15 May 2019, from <https://www.who.int/gho/alcohol/en/>
- Wicki, M., Kuntsche, E., & Gmel, G. (2010). Drinking at European universities? A review of students' alcohol use. *Addictive Behaviors, 35*(11), 913-924.
- Wiebe, G. D. (1951). Merchandising commodities and citizenship on television. *Public Opinion Quarterly, 15*(4), 679-691.
- Williams Jr, R. D., Perko, M. A., Usdan, S. L., Leeper, J. D., Belcher, D., & Leaver-Dunn, D. D. (2008). Influences on alcohol use among NCAA athletes: Application of the social ecology model. *American Journal of Health Studies, 23*(3), 151-159.
- Wilsnack, S. C. (2012). The GENACIS project: a review of findings and some implications for global needs in women-focused substance abuse prevention and intervention. *Substance Abuse and Rehabilitation, 3*(Suppl 1), 5-15.
- Wilsnack, R. W., Vogeltanz, N. D., Wilsnack, S. C., & Harris, T. R. (2000). Gender differences in alcohol consumption and adverse drinking consequences: Cross-cultural patterns. *Addiction, 95*(2), 251-265.
- Wilsnack, R. W., Wilsnack, S. C., Kristjanson, A. F., Vogeltanz-Holm, N. D., & Gmel, G. (2009). Gender and alcohol consumption: Patterns from the multinational GENACIS project. *Addiction, 104*(9), 1487-1500.
- Wilsnack, R. W., Wilsnack, S. C., & Obot, I. S. (2005). Why study gender, alcohol and culture. In I. S. Obot & R. Room (Eds.), *Alcohol, gender and drinking problems: Perspectives from low and middle income countries* (pp. 1-23). Geneva, Switzerland: WHO.
- Wolfson, M., Champion, H., McCoy, T. P., Rhodes, S. D., Ip, E. H., Blocker, J. N., ... Mitra, A. (2012). Impact of a randomized campus/community trial to prevent high-risk drinking among college students. *Alcoholism: Clinical and Experimental Research, 36*, 1767-1778.
- Wood, M. (2016a). Midstream social marketing and the co-creation of public services. *Journal of Social Marketing, 6*(3), 277-293.

- Wood, M. (2016b). Social marketing for social change. *Social Marketing Quarterly*, 22(2), 107-118.
- Wood, M. (2019). Resilience research and social marketing: the route to sustainable behaviour change. *Journal of Social Marketing*, 9(1), 77-93.
- World Bank. (n.d.). World Bank open data. Retrieved 15 May 2019, from <https://data.worldbank.org/>
- Wymer, W. (2011). Developing more effective social marketing strategies. *Journal of Social Marketing*, 1(1), 17-31.
- Yi, S., Ngin, C., Peltzer, K., & Pengpid, S. (2017). Health and behavioral factors associated with binge drinking among university students in nine ASEAN countries. *Substance Abuse Treatment, Prevention and Policy*, 12, e32.
- Young, C. M., DiBello, A. M., Steers, M.-L. N., Quist, M. C., Foster, D. W., Bryan, J. L., & Neighbors, C. (2016). I like people who drink like me: Perceived appeal as a function of drinking status. *Addictive Behaviors*, 53, 125-131.
- Zhang, Y., & Shrum, L. (2009). The influence of self-construal on impulsive consumption. *Journal of Consumer Research*, 35(5), 838-850.
- Zhao, G., & Pechmann, C. (2007). The impact of regulatory focus on adolescents' response to antismoking advertising campaigns. *Journal of Marketing Research*, 44(4), 671-687.
- Zimmermann, F., & Sieverding, M. (2010). Young adults' social drinking as explained by an augmented theory of planned behaviour: The roles of prototypes, willingness, and gender. *British Journal of Health Psychology*, 15(3), 561-581.



---

## Appendices

---

## Appendix 1. Inter-coder Reliability: The Cohen's Kappa Statistic.

The inter-coder reliability analysis for Chapter 2.

Themes of Barriers	Number of Cases	Number of Agreements	Number of Disagreements	Percent Agreement	Cohen's Kappa
Drinking culture	125	122	3	97.6	0.86
Living environment	125	121	4	96.8	0.76
Negative circumstances	125	122	3	97.6	0.83
Events	125	118	7	94.4	0.80
Socialising activities	125	117	8	93.6	0.81
Working environment	125	123	2	98.4	0.89
Peer norm	125	114	11	91.2	0.73
Others' norm	125	124	1	99.2	0.94
Peer pressure	125	117	8	93.6	0.87
Others' pressure	125	119	6	95.2	0.70
Fear of missing out	125	123	2	98.4	0.94
Identity	125	120	5	96.0	0.82
Positive attitude to drinking	125	118	7	94.4	0.85
Habit	125	124	1	99.2	0.96
Amotivation	125	122	3	97.6	0.84
Low negative expectancy	125	120	5	96.0	0.69
Low self-control	125	115	10	92.0	0.76
Addiction	125	125	0	100.0	1.00
Boredom	125	125	0	100.0	1.00
Feelings	125	116	9	92.8	0.76
Average				96.2	0.84

The inter-coder reliability analysis for Chapter 3.

Themes of Facilitators	Number of Cases	Number of Agreements	Number of Disagreements	Percent Agreement	Cohen's Kappa
Negative expectancies	124	120	4	96.8	0.91
Self-determination	124	117	7	94.4	0.74
Controllability	124	119	5	96.0	0.88
Coping behavioural skills	124	115	9	92.7	0.83
Cognitive skills	124	117	7	94.4	0.67
Peer norm	124	121	3	97.6	0.94
Peer support	124	120	4	96.8	0.92
Family support	124	121	3	97.6	0.81
Social support	124	118	6	95.2	0.72
Alternatives to drinking	124	121	3	97.6	0.94
Circumstances	124	115	9	92.7	0.72
Socialising avoidance	124	118	6	95.2	0.79
Living environment change	124	121	3	97.6	0.65
Macro environment	124	122	2	98.4	0.87
Professional services	124	122	2	98.4	0.89
Average				96.1	0.82

## Appendix 2. The Questionnaire for Study 2 (Vietnamese).

Số tham chiếu: 17/176  
Ngày 06/12/2017



### VĂN HÓA UỐNG ĐỒ UỐNG CÓ CÒN CỦA SINH VIÊN

#### PHIẾU THÔNG TIN DÀNH CHO NGƯỜI THAM GIA KHẢO SÁT

Cảm ơn bạn đã thể hiện sự quan tâm đến dự án nghiên cứu này. Vui lòng đọc kỹ phiếu thông tin này trước khi quyết định có tham gia hay không. Nếu bạn quyết định tham gia, chúng tôi xin cảm ơn. Nếu bạn quyết định không tham gia, sẽ không có thiệt hại nào đối với bạn và chúng tôi cảm ơn bạn đã cân nhắc lời đề nghị của chúng tôi.

**Mục tiêu của dự án nghiên cứu này là gì?**

Mục tiêu của dự án này là nhằm để khám phá các yếu tố ảnh hưởng đến việc uống bia rượu có chừng mực của sinh viên. Dự án này được thực hiện như là một phần của yêu cầu chương trình Tiến sĩ của ông Trần Triệu Khải.

**Những kiểu người tham gia nào được tìm kiếm?**

1000 sinh viên đại học, 18 tuổi trở lên, và đang ở tại Việt Nam hay New Zealand được mời tham gia vào khảo sát. Người tham gia sẽ được tuyển từ các trường đại học và các trang mạng xã hội công cộng. Người tham gia sẽ có cơ hội tham gia chương trình bốc thăm để trúng một trong năm phiếu mua hàng trị giá 500.000 đồng ở Việt Nam.

**Người tham gia sẽ được yêu cầu làm gì?**

Nếu bạn đồng ý tham gia vào dự án này, bạn sẽ được yêu cầu tham gia vào một khảo sát do bạn tự quản lý, theo hình thức bản câu hỏi giấy (nếu khảo sát được giới thiệu trong lớp học hay những nơi khác trong khuôn viên trường) hoặc bản câu hỏi trực tuyến (nếu khảo sát được giới thiệu thông qua các trang mạng xã hội). Sẽ không có nỗ lực nào nhằm liên kết các câu trả lời với người trả lời, và các thông tin cá nhân chỉ được lưu giữ cho mục đích bốc thăm.

Khảo sát này là về các yếu tố có thể thúc đẩy hoặc cản trở việc tiêu thụ đồ uống có cồn của sinh viên đại học. Bạn sẽ được hỏi về: (1) Ý kiến, niềm tin và đánh giá của bạn về việc uống nhiều và các phản ứng xảy ra khi uống; (2) Nhận thức của bạn về việc những người khác uống và cảm nhận của họ về uống nhiều như thế nào; (3) Nhận thức của bạn về áp lực uống từ bạn bè cùng lứa; (4) Cảm nhận của bạn về khả năng kiểm soát việc uống của mình; (5) Trải nghiệm và thói quen uống của bạn; (6) Sự lựa chọn của bạn về các hoạt động thay thế cho uống bia rượu; (7) Dự định hạn chế uống (để không vượt quá giới hạn chừng mực) của bạn; và (8) Việc tiêu thụ bia rượu của bạn nói chung và trong những tình huống cụ thể. Bạn cũng sẽ được hỏi để cung cấp một số thông tin về nhân khẩu và tâm lý. Không có câu trả lời nào là đúng hoặc sai cho các câu hỏi trong khảo sát. Chính ý kiến và đánh giá của bạn mới là quan trọng nhất. Việc tham gia vào nghiên cứu này ước tính mất không nhiều hơn 25 phút.

Vui lòng lưu ý rằng bạn có thể quyết định không tham gia vào dự án này và không gặp phải bất kỳ thiệt hại nào đối với bản thân bạn. Nếu bạn cảm thấy do dự hoặc không thoải mái khi trả lời bất kỳ câu hỏi nào, chúng tôi nhắc lại rằng bạn có quyền từ chối trả lời những câu hỏi đó.

**Dữ liệu hay thông tin nào sẽ được thu thập và chúng sẽ được sử dụng cho điều gì?**

Không có thông tin cá nhân nào sẽ được báo cáo, và không có thông tin nào sẽ được kết nối với bất kỳ người trả lời nào. Các thông tin nhân khẩu, tâm lý và thông tin liên quan đến việc tiêu dùng đồ uống có cồn của cá nhân bạn sẽ được sử dụng để mô tả đặc điểm của mẫu nghiên cứu. Các thông tin về ý kiến và nhận thức của người trả lời sẽ được tổng hợp và phân tích để viết báo cáo nghiên cứu.

Chỉ những người nghiên cứu có liên quan trong nghiên cứu này mới tiếp cận được dữ liệu. Dữ liệu thu thập sẽ được lưu trữ một cách an toàn mà chỉ những người được đề cập dưới đây mới có thể tiếp cận. Dữ liệu thu được như là kết quả của nghiên cứu sẽ được lưu trong vòng ít nhất 5 năm ở nơi lưu trữ an toàn.

Kết quả của dự án này có thể được xuất bản và sẽ có thể tìm thấy ở Thư viện Trường Đại học Otago (Dunedin, New Zealand), nhưng mọi nỗ lực sẽ được thực hiện để bảo đảm bảo cho việc ẩn danh của bạn.

**Người tham gia có thể thay đổi ý kiến và rút khỏi dự án nghiên cứu hay không?**

Bạn có thể rút khỏi việc tham gia vào dự án nghiên cứu vào bất kỳ lúc nào và không gặp phải bất kỳ thiệt hại nào đối với bản thân.

**Nếu người tham gia có bất kỳ câu hỏi nào thì sao?**

Nếu bạn có bất kỳ câu hỏi nào về dự án nghiên cứu này, vào bây giờ hoặc sau này, vui lòng liên lạc với:

*Trần Triệu Khải*

hoặc

*Kirsten Robertson*

Khoa Marketing, Trường Đại học Otago (NZ)  
Số điện thoại cơ quan: +64 3 479 4103  
Email: khai.tran@postgrad.otago.ac.nz

Khoa Marketing, Trường Đại học Otago (NZ)  
Số điện thoại cơ quan: +64 3 479 8451  
Email: kirsten.robertson@otago.ac.nz

**Nếu người tham gia cảm thấy khó chịu hoặc lo lắng?**

Trong trường hợp ít xảy ra rằng bạn thấy khảo sát này gây khó chịu hoặc lo lắng về việc uống bia rượu của mình, bạn nên dừng việc hoàn thành khảo sát, và nếu được, hãy tìm kiếm hỗ trợ và/hoặc tư vấn từ:

1. Dịch vụ y tế sinh viên tại khuôn viên trường, chẳng hạn:

- Phòng y tế, Trường Đại học Kinh tế - Đại học Đà Nẵng (71 Ngũ Hành Sơn, Hải Châu, Đà Nẵng)
- Phòng y tế, Trường Đại học Bách Khoa - Đại học Đà Nẵng (54 Nguyễn Lương Bằng, Liên Chiểu, Đà Nẵng)
- Phòng y tế, Trường Đại học Sư phạm - Đại học Đà Nẵng (459 Tôn Đức Thắng, Liên Chiểu, Đà Nẵng)
- Phòng y tế, Trường Đại học Ngoại ngữ - Đại học Đà Nẵng (131 Lương Nhữ Hộc, Khuê Trung, Đà Nẵng)

2. Tổng đài tư vấn

- Tổng đài 1080 (Yêu cầu tư vấn sức khỏe hoặc hỏi địa chỉ tư vấn, có tính phí)

Nghiên cứu này đã được phê duyệt bởi Ủy ban Đạo đức về Con người của Trường Đại học Otago. Nếu bạn có bất kỳ lo ngại nào về tính đạo đức của nghiên cứu này, bạn có thể liên lạc với Ủy ban thông qua Người quản lý Ủy ban Đạo đức về Con người (điện thoại +643 479 8256 hoặc email gary.witte@otago.ac.nz). Mọi vấn đề bạn đưa ra sẽ được giữ kín và điều tra và bạn sẽ được thông báo về kết quả.

Số tham chiếu: 17/176  
Ngày 06/12/2017



## VĂN HÓA ƯỚNG ĐÒ ƯỚNG CÓ CÒN CỦA SINH VIÊN

### PHIẾU ĐỒNG Ý DÀNH CHO NGƯỜI THAM GIA KHẢO SÁT

Tôi đã đọc Phiếu Thông Tin liên quan đến dự án nghiên cứu này và hiểu về nội dung của dự án. Tất cả thắc mắc của tôi đã được giải đáp thỏa đáng. Tôi hiểu rằng tôi được tự do yêu cầu các thông tin khác vào bất kỳ giai đoạn nào.

Tôi biết rằng:-

1. Sự tham gia của tôi trong dự án này là hoàn toàn tự nguyện;
2. Tôi được tự do rút khỏi dự án này vào bất kỳ lúc nào và không gặp phải bất kỳ thiệt hại nào;
3. Các thông tin có khả năng xác định danh tính cá nhân sẽ không được thu thập. Các dữ liệu thô nhằm cung cấp kết quả nghiên cứu cho dự án sẽ được lưu ở nơi lưu trữ an toàn trong vòng ít nhất năm năm;
4. Sau khi hoàn thành khảo sát, tôi có thể tham gia chương trình bốc thăm để trúng thưởng một trong năm phiếu mua hàng trị giá 500.000 đồng tại Việt Nam;
5. Kết quả nghiên cứu của dự án có thể sẽ được xuất bản và sẽ có thể tìm thấy ở Thư viện Trường Đại học Otago (Dunedin, New Zealand) nhưng mọi nỗ lực sẽ được thực hiện để đảm bảo cho việc ẩn danh của tôi.

Tôi đồng ý tham gia vào dự án nghiên cứu này.

.....  
(Chữ ký của người tham gia)

.....  
(Ngày)

.....  
(Tên của người tham gia, viết in hoa)

.....  
(Tên của người đồng ý)

Nghiên cứu này đã được phê duyệt bởi Ủy ban Đạo đức về Con người của Trường Đại học Otago. Nếu bạn có bất kỳ lo ngại nào về tính đạo đức của nghiên cứu này, bạn có thể liên lạc với Ủy ban thông qua Người quản lý Ủy ban Đạo đức về Con người (điện thoại +643 479 8256 hoặc email [gary.witte@otago.ac.nz](mailto:gary.witte@otago.ac.nz)). Mọi vấn đề bạn đưa ra sẽ được giữ kín và điều tra và bạn sẽ được thông báo về kết quả.



## BẢN KHẢO SÁT VĂN HÓA SỬ DỤNG ĐỒ UỐNG CÓ CỒN (BIA, RƯỢU) CỦA SINH VIÊN

### GIỚI THIỆU

Khảo sát này là một phần của dự án nghiên cứu cho chương trình Tiến sĩ tại Trường Đại học Otago, New Zealand (số tham chiếu 17/176). Mục tiêu của nghiên cứu này là nhằm tìm hiểu các yếu tố ảnh hưởng đến việc uống bia rượu của sinh viên. Khảo sát này mất khoảng 25 phút. Khi hoàn thành khảo sát, chúng tôi muốn dành cho bạn cơ hội tham gia bốc thăm để trúng một trong năm phiếu mua hàng trị giá 500.000 đồng.

Không có câu trả lời nào là đúng hay sai đối với các câu hỏi trong khảo sát này. Chính các ý kiến và đánh giá của bạn mới là quan trọng nhất. Các phản hồi của bạn hoàn toàn được ẩn danh và bảo mật. Sự tham gia của bạn hoàn toàn mang tính tự nguyện. Bạn có thể chọn không tham gia từ bây giờ hoặc rút khỏi khảo sát vào bất kỳ lúc nào.

Nếu bạn có thắc mắc về dự án nghiên cứu của chúng tôi, vui lòng liên hệ với thành viên của nhóm nghiên cứu. Trong trường hợp hy hữu bạn thấy cuộc khảo sát này khiến mình khó chịu hay lo lắng, bạn nên dừng tham gia khảo sát và tìm kiếm hỗ trợ/tư vấn từ dịch vụ y tế sinh viên ở khuôn viên trường mình hoặc đường dây điện thoại chuyên giúp đỡ các vấn đề về rượu bia. Có thể tìm thấy thông tin của các liên lạc này ở trang cuối.

### HƯỚNG DẪN

Trước khi tham gia vào khảo sát, vui lòng đọc các định nghĩa sau đây về: đơn vị đo lường đồ uống có cồn (bia, rượu vang, rượu mạnh và các loại đồ uống có chứa cồn khác), khái niệm “uống chừng mực” và “uống nhiều”.

#### ĐƠN VỊ UỐNG TIÊU CHUẨN (STANDARD DRINK)

- “Đơn vị uống tiêu chuẩn” đo lường hàm lượng cồn nguyên chất có trong một thức uống. 1 “đơn vị uống tiêu chuẩn” hay 1 “đơn vị đồ uống có cồn” tương đương với 10g cồn nguyên chất chứa trong một đồ uống.
- Quy đổi 1 đơn vị uống tiêu chuẩn với một số hình thức đồ uống có cồn thông dụng như sau:



- 1 đơn vị uống tiêu chuẩn ~ 1 lon/chai bia 330ml (với nồng độ cồn 4%)
  - 1 đơn vị uống tiêu chuẩn ~ 1 ly rượu vang 100ml (với nồng độ cồn 12.5%)
  - 1 đơn vị uống tiêu chuẩn ~ 1 cốc nhỏ rượu mạnh 30ml (với nồng độ cồn 42%)
- Để biết rõ hơn, vui lòng xem Trang 2.

#### UỐNG CHỪNG MỰC

- “Uống chừng mực” là việc uống đồ uống có cồn không nhiều hơn 4 đơn vị uống tiêu chuẩn (đối với nữ) hoặc không nhiều hơn 5 đơn vị uống tiêu chuẩn (đối với nam) trong một dịp uống.

#### UỐNG NHIỀU

- “Uống nhiều” là việc uống nhiều hơn 4 đơn vị uống tiêu chuẩn (đối với nữ) hoặc nhiều hơn 5 đơn vị uống tiêu chuẩn (đối với nam) trong một dịp uống.

Với mỗi câu hỏi dưới đây, vui lòng đánh dấu tích vào một ô phương án lựa chọn (ví dụ, ) hoặc khoanh tròn một con số (ví dụ, ①) tương ứng với câu trả lời của bạn. Với các câu hỏi mở, vui lòng ghi vào chỗ trống (\_\_\_\_).

## Hướng dẫn nhanh về hàm lượng cồn bạn đang uống

Sau đây là hướng dẫn về số lượng đơn vị uống tiêu chuẩn có trong một loại các đồ uống – nhờ đó bạn có thể dễ dàng biết được hàm lượng cồn chứa trong đồ uống bạn lựa chọn.

Đây chỉ là hướng dẫn. Hãy luôn kiểm tra nhãn đồ uống để biết chính xác số đơn vị uống tiêu chuẩn bạn đang tiêu thụ.



Nguồn:  
New Zealand  
Health Promotion Agency  
([alcohol.org.nz](http://alcohol.org.nz))

**CAU 1** Bảng bên trái liệt kê một danh sách các phản ứng có thể xảy ra do uống đồ uống có cồn (bia, rượu,...). Ở bảng A, vui lòng chỉ ra mức độ bạn đánh giá mỗi phản ứng – tức, mức độ các phản ứng là đáng ao ước/tốt hay không đáng ao ước/xấu, theo thang điểm từ 1-5 (1 = Rất xấu; 2 = Xấu; 3 = Trung lập; 4 = Tốt; 5 = Rất tốt). Ở bảng B, vui lòng chỉ ra mức độ bạn đồng ý hay không đồng ý rằng một phản ứng cụ thể nào đó có thể xảy ra với bạn sau khi uống bia rượu theo thang điểm từ 1-5 (1 = Hoàn toàn không đồng ý; 2 = Không đồng ý; 3 = Trung lập; 4 = Đồng ý; 5 = Hoàn toàn đồng ý).

DANH SÁCH PHẢN ỨNG	A: ĐÁNH GIÁ PHẢN ỨNG					B: KHẢ NĂNG XẢY RA					
	Rất xấu				Rất tốt	Hoàn toàn không đồng ý				Hoàn toàn đồng ý	
Nếu tôi đang bị ảnh hưởng từ bia rượu, ...											
... tôi sẽ hành động một cách thân thiện, hòa đồng	1	2	3	4	5	1	2	3	4	5	
... tôi sẽ dễ nói chuyện hơn với mọi người	1	2	3	4	5	1	2	3	4	5	
... tôi sẽ cảm thấy bình tĩnh	1	2	3	4	5	1	2	3	4	5	
... tôi sẽ cảm thấy yên bình, bình an	1	2	3	4	5	1	2	3	4	5	
... tôi sẽ cảm thấy can đảm	1	2	3	4	5	1	2	3	4	5	
... tôi sẽ cảm thấy dũng cảm và táo bạo	1	2	3	4	5	1	2	3	4	5	
... tôi sẽ trở thành một người bạn tình tốt hơn	1	2	3	4	5	1	2	3	4	5	
... tôi sẽ trở nên thu hút hơn với bạn khác giới	1	2	3	4	5	1	2	3	4	5	
... tôi sẽ trở nên vụng về, lóng ngóng	1	2	3	4	5	1	2	3	4	5	
... tôi sẽ cảm thấy choáng váng, chóng mặt	1	2	3	4	5	1	2	3	4	5	
... tôi sẽ làm những điều liều lĩnh, rui ro	1	2	3	4	5	1	2	3	4	5	
... tôi sẽ hành động một cách hung hăng, công kích	1	2	3	4	5	1	2	3	4	5	
... tôi sẽ trở nên to tiếng, om sòm hay ồn ào	1	2	3	4	5	1	2	3	4	5	
... tôi sẽ cảm thấy ủ rũ, buồn rầu	1	2	3	4	5	1	2	3	4	5	
... tôi sẽ cảm thấy tội lỗi	1	2	3	4	5	1	2	3	4	5	

**CAU 2** Vui lòng chỉ ra mức độ đánh giá của bạn đối với việc uống nhiều theo thang đo năm điểm từ -2 đến 2.

Đối với tôi, uống nhiều hơn 5 đơn vị (với nam giới) hoặc 4 đơn vị (với nữ giới) trong một dịp uống là ...

Không thích thú	-2	-1	0	1	2	Thích thú
Xấu	-2	-1	0	1	2	Tốt
Có lợi	-2	-1	0	1	2	Có hại
Không dễ chịu	-2	-1	0	1	2	Dễ chịu
Lạnh mạnh	-2	-1	0	1	2	Không lạnh mạnh

**CAU 3** Áp lực từ bạn bè cùng trang lứa được định nghĩa là “khi những người trạc tuổi bạn đề nghị, khuyến khích, chế giễu, thách thức hoặc bắt ép bạn để làm điều gì đó hoặc để ngăn cản bạn làm điều gì khác, bất kể bản thân bạn có thích hay không”.

Vui lòng chỉ ra mức độ áp lực bạn cảm thấy từ phía bạn bè khi sử dụng bia rượu hay khi tiệc tùng.

3.1. Áp lực từ bạn bè của bạn để **UỐNG** đồ uống có cồn (bia, rượu, ...) mạnh như thế nào?

Không áp lực       Ít áp lực       Tương đối áp lực       Khá nhiều áp lực       Nhiều áp lực

3.2. Trong năm qua, mức độ thường xuyên bạn cảm thấy bị ảnh hưởng phải uống hoặc uống nhiều hơn bởi một người bạn là như thế nào?

Không bao giờ       Hiếm khi       Thỉnh thoảng       Thường xuyên       (Hầu như) luôn luôn

3.3. Áp lực từ bạn bè của bạn để **KHÔNG UỐNG** đồ uống có cồn (bia, rượu, ...) mạnh như thế nào?

Không áp lực       Ít áp lực       Tương đối áp lực       Khá nhiều áp lực       Nhiều áp lực

3.4. Trong năm qua, mức độ thường xuyên bạn bè của bạn cố gắng ảnh hưởng đến việc uống của bạn khiến bạn uống ít hơn hoặc giảm uống là như thế nào?

Không bao giờ       Hiếm khi       Thỉnh thoảng       Thường xuyên       (Hầu như) luôn luôn

Trang 3 |



**CAU 4** Vui lòng chỉ ra mức độ bạn đồng ý với các câu nhận định sau đây về áp lực uống bia rượu từ phía bạn bè trong nhóm bạn bè của bạn theo thang điểm từ 1-5.

(1 = Hoàn toàn không đồng ý; 2 = Không đồng ý; 3 = Trung lập; 4 = Đồng ý; 5 = Hoàn toàn đồng ý)

	Hoàn toàn không đồng ý			Hoàn toàn đồng ý	
Tôi cảm thấy bị áp lực phải uống tới say tại những buổi tiệc/dịp tụ tập.	1	2	3	4	5
Tôi cảm thấy bị áp lực phải uống từ bạn bè.	1	2	3	4	5
Bạn bè của tôi nghĩ rằng tôi nên uống nhiều trong các dịp uống.	1	2	3	4	5
Bạn bè của tôi mong đợi tôi uống nhiều trong các dịp uống.	1	2	3	4	5

**CAU 5** Vui lòng chỉ ra mức độ chấp nhận/tán thành mà bạn nghĩ những người liệt kê dưới đây sẽ cảm nhận về việc uống nhiều trong các dịp uống theo thang điểm từ 1-5.

(1 = Hoàn toàn không tán thành; 2 = Không tán thành; 3 = Trung lập; 4 = Tán thành; 5 = Hoàn toàn tán thành)

	Hoàn toàn không tán thành			Hoàn toàn tán thành	
Bạn bè của bạn cảm nhận về việc uống nhiều như thế nào?	1	2	3	4	5
Hầu hết các sinh viên ở trường bạn cảm nhận về việc uống nhiều như thế nào?	1	2	3	4	5
Hầu hết những người ở tuổi bạn cảm nhận về việc uống nhiều như thế nào?	1	2	3	4	5
Hầu hết những người ở Việt Nam cảm nhận về việc uống nhiều như thế nào?	1	2	3	4	5

**CAU 6** Vui lòng chỉ ra mức độ bạn đồng ý với các câu nhận định sau đây về khả năng kiểm soát uống bia rượu của bạn theo thang điểm từ 1-5.

(1 = Hoàn toàn không đồng ý; 2 = Không đồng ý; 3 = Trung lập; 4 = Đồng ý; 5 = Hoàn toàn đồng ý)

	Hoàn toàn không đồng ý			Hoàn toàn đồng ý	
Tôi tự tin tôi có thể từ chối uống đồ uống có cồn (bia rượu) nếu tôi muốn.	1	2	3	4	5
Tôi tự tin tôi có thể uống chừng mực trong một dịp uống.	1	2	3	4	5
Nếu tôi muốn, tôi có thể dễ dàng uống một cách chừng mực trong một dịp uống.	1	2	3	4	5
Uống bao nhiêu đồ uống có cồn (bia rượu) là hoàn toàn do tôi.	1	2	3	4	5
Việc tôi uống chừng mực trong một dịp uống hay không là phụ thuộc vào tôi.	1	2	3	4	5
Tôi cảm thấy kiểm soát được việc mình uống chừng mực trong một dịp uống hay không.	1	2	3	4	5

**CAU 7** Dưới đây là một số lựa chọn thay thế cho việc uống đồ uống có cồn (bia rượu). Hãy tưởng tượng rằng bạn có sự lựa chọn giữa việc uống bia rượu và tham gia vào mỗi hoạt động dưới đây. Vui lòng chỉ ra khả năng bạn sẽ chọn những hoạt động này thay vì uống bia rượu theo thang điểm từ 1-5.

(1 = Rất không có khả năng; 2 = Không có khả năng; 3 = Trung lập; 4 = Có khả năng; 5 = Rất có khả năng)

	Rất không có khả năng			Rất có khả năng	
Chơi thể thao, tập thể dục, rèn luyện sức khỏe	1	2	3	4	5
Tham gia vào các hoạt động ngoại khóa/câu lạc bộ của trường	1	2	3	4	5
Đến rạp chiếu phim khi đi chơi tối	1	2	3	4	5
Đến quán ăn/nhà hàng để ăn (hơn là để uống) khi đi chơi tối	1	2	3	4	5
Đến quán cà phê/trà với bạn bè	1	2	3	4	5
Uống đồ uống có nồng độ cồn thấp trong các buổi tiệc/sự kiện/dịp tụ tập	1	2	3	4	5
Uống đồ uống không chứa cồn trong các buổi tiệc/sự kiện/dịp tụ tập	1	2	3	4	5
Ở nhà một mình	1	2	3	4	5

**CAU 8** Vui lòng chỉ ra mức độ bạn đồng ý với các câu nhận định sau đây theo thang điểm từ 1-5.

(1 = Hoàn toàn không đồng ý; 2 = Không đồng ý; 3 = Trung lập; 4 = Đồng ý; 5 = Hoàn toàn đồng ý)

**Uống nhiều hơn 5 đơn vị uống (nếu là nam) hoặc nhiều hơn 4 đơn vị uống (nếu là nữ) trong mỗi dịp uống là điều ...**

	Hoàn toàn không đồng ý			Hoàn toàn đồng ý	
... tôi thực hiện một cách tự động.	1	2	3	4	5
... tôi thực hiện mà không phải suy nghĩ.	1	2	3	4	5
... tôi bắt đầu thực hiện trước khi nhận ra mình đang thực hiện nó.	1	2	3	4	5

Trang 4 |

**CAU 9** Vui lòng chỉ ra mức độ thường xuyên bạn uống bia rượu trong những tình huống sau đây trong năm qua theo thang điểm từ 1-5.

(1 = Không bao giờ; 2 = Hiếm khi; 3 = thỉnh thoảng; 4 = Thường xuyên; 5 = Luôn luôn/Hầu như luôn luôn)

Tôi uống đồ uống có cồn (bia, rượu) ...	Không bao giờ					Luôn luôn				
	1	2	3	4	5	1	2	3	4	5
... ở quán bar hoặc club	1	2	3	4	5	1	2	3	4	5
... ở một buổi tiệc	1	2	3	4	5	1	2	3	4	5
... ở một buổi biểu diễn ca nhạc (hoặc những sự kiện công cộng)	1	2	3	4	5	1	2	3	4	5
... với một đứa bạn thân/một ít người bạn	1	2	3	4	5	1	2	3	4	5
... khi đang nghỉ lễ hoặc kết thúc học kỳ	1	2	3	4	5	1	2	3	4	5
... với một nhóm nhiều bạn bè	1	2	3	4	5	1	2	3	4	5
... khi đang trong học kỳ	1	2	3	4	5	1	2	3	4	5
... khi gần cuối tuần hoặc vào cuối tuần	1	2	3	4	5	1	2	3	4	5

... nhân dịp mừng/kỷ niệm điều gì đó quan trọng với mình	1	2	3	4	5	1	2	3	4	5
... khi những người khác xung quanh tôi đang nhậu/tiệc tùng	1	2	3	4	5	1	2	3	4	5
... với người yêu	1	2	3	4	5	1	2	3	4	5
... khi hoàn thành xong công việc làm công ăn lương của mình	1	2	3	4	5	1	2	3	4	5
... khi đang hẹn hò	1	2	3	4	5	1	2	3	4	5
... vào đầu tuần hoặc giữa tuần	1	2	3	4	5	1	2	3	4	5
... khi hoàn thành xong bài tập/công việc ở trường	1	2	3	4	5	1	2	3	4	5
... một mình (ở nhà/ký túc xá/quán bar/v.v...)	1	2	3	4	5	1	2	3	4	5

... khi xem TV/tận hưởng âm nhạc/chơi game/phương tiện mạng xã hội	1	2	3	4	5	1	2	3	4	5
... ở quán ăn, nhà hàng	1	2	3	4	5	1	2	3	4	5
... khi thấy cô đơn hoặc nhớ nhà	1	2	3	4	5	1	2	3	4	5
... khi vừa mới gây gổ/cãi vã với người thân của mình	1	2	3	4	5	1	2	3	4	5
... khi đang thư giãn, giải tỏa căng thẳng	1	2	3	4	5	1	2	3	4	5
... khi thấy buồn bã	1	2	3	4	5	1	2	3	4	5
... khi thấy giận bản thân mình hoặc người khác	1	2	3	4	5	1	2	3	4	5
... khi thấy không tự tin về bản thân	1	2	3	4	5	1	2	3	4	5

**CAU 10** Hãy nghĩ đến lần tiếp theo khi bạn uống bia rượu, vui lòng chỉ ra khả năng bạn sẽ tự thực hiện các hành vi như mô tả dưới đây theo thang điểm từ 1-5 (1 = Rất không có khả năng; 2 = Không có khả năng; 3 = Trung lập; 4 = Có khả năng; 5 = Rất có khả năng). Nếu bạn không uống bia rượu, vui lòng chọn ô "ND".

Lần tới khi tôi uống đồ uống có cồn (bia rượu), ...	Rất không có khả năng					Rất có khả năng					ND
	1	2	3	4	5	1	2	3	4	5	
... tôi dự định theo dõi lượng uống của mình để đảm bảo rằng tôi không vượt quá giới hạn uống chừng mực.	1	2	3	4	5	1	2	3	4	5	<input type="checkbox"/>
... tôi sẽ cố gắng theo dõi lượng uống của mình để đảm bảo rằng tôi không vượt quá giới hạn uống chừng mực.	1	2	3	4	5	1	2	3	4	5	<input type="checkbox"/>
... tôi sẽ hỗ trợ bạn bè mình hạn chế uống để đảm bảo rằng họ không vượt quá giới hạn uống chừng mực.	1	2	3	4	5	1	2	3	4	5	<input type="checkbox"/>

**CAU 11** Vui lòng chỉ ra mức độ bạn đồng ý với các câu nhận định sau đây về dự định uống chừng mực của bạn theo thang điểm từ 1-5 (1 = Hoàn toàn không đồng ý; 2 = Không đồng ý; 3 = Trung lập; 4 = Đồng ý; 5 = Hoàn toàn đồng ý). Nếu bạn không uống bia rượu, vui lòng chọn ô "ND".

Lần tới khi tôi uống đồ uống có cồn (bia rượu), ...	Hoàn toàn không đồng ý					Hoàn toàn đồng ý					ND
	1	2	3	4	5	1	2	3	4	5	
... tôi dự định hạn chế uống để đảm bảo rằng tôi không vượt quá giới hạn uống chừng mực.	1	2	3	4	5	1	2	3	4	5	<input type="checkbox"/>
... tôi đang lên kế hoạch sẽ uống ít hoặc uống chừng mực hơn là uống quá nhiều.	1	2	3	4	5	1	2	3	4	5	<input type="checkbox"/>
... bạn bè tôi và tôi dự định uống ít hoặc uống chừng mực hơn là uống quá nhiều.	1	2	3	4	5	1	2	3	4	5	<input type="checkbox"/>

Trang 5 |

**CAU 12** Dưới đây là một số câu nhận định về trải nghiệm uống bia rượu của bạn. Vui lòng chỉ ra mức độ chính xác mà mỗi câu nhận định nói về trải nghiệm chung của bạn theo thang điểm từ 1-5 (1 = Hoàn toàn không đúng về tôi; 2 = Hơi đúng về tôi; 3 = Tương đối đúng về tôi; 4 = Khả đúng về tôi; 5 = Chắc chắn đúng về tôi).

	Hoàn toàn không đúng			Chắc hẳn đúng	
	1	2	3	4	5
Tôi thấy buồn phiền khi tôi bỏ lỡ một cơ hội uống bia rượu với bạn bè.	1	2	3	4	5
Tôi thấy khó chịu/bực bội khi tôi bỏ lỡ một buổi nhậu với bạn bè.	1	2	3	4	5
Tôi thấy hối tiếc khi tôi bỏ lỡ một buổi nhậu hay tụ tập với bạn bè.	1	2	3	4	5
Tôi thấy ghen tị khi bạn bè đang uống bia rượu vui vẻ mà không có tôi.	1	2	3	4	5
Tôi lo lắng những người khác có cảm giác thỏa mãn hơn tôi do họ uống bia rượu.	1	2	3	4	5
Tôi uống bia rượu vì tôi sợ cảm giác bị bỏ rơi, cho ra rìa.	1	2	3	4	5
Tôi uống bia rượu tại các buổi tiệc vì tôi lo lắng về việc sẽ bỏ lỡ những cuộc vui.	1	2	3	4	5
Tôi cảm thấy như mình đã bỏ lỡ điều gì đó khi không tham gia vào các trò chơi uống bia rượu với bạn bè.	1	2	3	4	5
Tôi sẽ hối hận nếu tôi không đi chơi và tận hưởng những buổi tối uống bia rượu với bạn bè.	1	2	3	4	5
Tôi sẽ hối hận nếu tôi không hết mình khi uống bia rượu.	1	2	3	4	5
Thỉnh thoảng tôi cảm thấy như mình đã bỏ lỡ niềm vui của "cảm giác phấn khích khi uống bia rượu" nếu tôi không uống.	1	2	3	4	5

**CAU 13** Vui lòng ước tính hoặc nêu cảm nhận chung của bạn về tần suất uống, lượng uống và tần suất uống nhiều của từng người liệt kê dưới đây.

13.1. Trong năm qua, mức độ thường xuyên những người sau đây uống đồ uống có cồn là như thế nào?

	Chưa bao giờ	Hàng tháng hoặc ít hơn	2-4 lần một tháng	2-3 lần một tuần	≥4 lần một tuần
Chính bản thân bạn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bạn bè của bạn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hầu hết các sinh viên ở trường bạn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hầu hết những người ở tuổi bạn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hầu hết những người ở Việt Nam	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13.2. Trong năm qua, những người sau đây tiêu thụ khoảng bao nhiêu đơn vị đồ uống có cồn trong một ngày uống bình thường của họ?

	0, 1 hoặc 2	3 hoặc 4	5 hoặc 6	7, 8, hoặc 9	≥10
Chính bản thân bạn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bạn bè của bạn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hầu hết các sinh viên ở trường bạn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hầu hết những người ở tuổi bạn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hầu hết những người ở Việt Nam	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

13.3. Trong năm qua, mức độ thường xuyên những người sau đây tiêu thụ nhiều hơn 5 đơn vị uống (đối với nam) hay nhiều hơn 4 đơn vị uống (đối với nữ) trong một dịp uống là như thế nào?

	Chưa bao giờ	Ít hơn hàng tháng	Hàng tháng	Hàng tuần	Hàng ngày/bầu như hàng ngày
Chính bản thân bạn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Bạn bè của bạn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hầu hết các sinh viên ở trường bạn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hầu hết những người ở tuổi bạn	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Hầu hết những người ở Việt Nam	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>

**CAU 14** Vui lòng đọc mô tả sau đây về Khanh.

"Khanh, 20 tuổi, là sinh viên năm thứ hai tại một trường đại học. Khanh học tập chăm chỉ nhưng cũng sắp xếp thời gian để tận hưởng cuộc sống xã hội. Khanh thường đi chơi hoặc đi nhậu với bạn bè khoảng 3 buổi/tuần. Mỗi lần uống, Khanh thường uống khoảng 5-6 đơn vị đồ uống có cồn hoặc hơn, đôi khi "quá chén" có thể hơn thế khá nhiều. Mặc dù Khanh không coi việc uống bia rượu của mình là có vấn đề, Khanh đôi khi gặp rắc rối trong việc nhớ lại những gì mình đã nói hoặc làm trong khi uống vào đêm trước. Khanh thỉnh thoảng cũng gây gổ với bạn bè sau khi uống. Đôi khi Khanh quá nhức đầu và không thể đến lớp vào ngày hôm sau."

Trang 6 |

Các câu dưới đây hỏi ý kiến của bạn về **nguyên nhân** của những vấn đề/rắc rối mà Khanh gặp phải này.

14.1. Theo bạn, nguyên nhân của những vấn đề này **có thể kiểm soát được** hay **không kiểm soát được** ở mức độ nào trên thang điểm từ 1-5?

Không kiểm soát được (ngoài sự kiểm soát của cá nhân)  1  2  3  4  5  Có thể kiểm soát được (trong sự kiểm soát của cá nhân)

14.2. Theo bạn, nguyên nhân của những vấn đề này thuộc về **yếu tố bên ngoài** hay **yếu tố bên trong** ở mức độ nào trên thang điểm từ 1-5?

Nguyên nhân bên ngoài (ví dụ: môi trường, gia đình, bạn bè)  1  2  3  4  5  Nguyên nhân bên trong (ví dụ: tính cách, sở thích)

14.3. Theo bạn, nguyên nhân của những vấn đề này mang tính hay thay đổi hay **ổn định** ở mức độ nào trên thang điểm từ 1-5?

Hay thay đổi (có thể thay đổi được)  1  2  3  4  5  Ổn định (mang tính cố định)

14.4. Theo bạn, Khanh phải **chịu trách nhiệm** cho những vấn đề này ở mức độ như thế nào?

Hoàn toàn không phải chịu trách nhiệm  Ít phải chịu trách nhiệm  Tương đối phải chịu trách nhiệm  Khá phải chịu trách nhiệm  Phải chịu trách nhiệm rất nhiều

14.5. Theo bạn, **nhóm bạn** mà Khanh thường **uống bia/rượu** cùng phải **chịu trách nhiệm** cho những vấn đề này ở mức độ như thế nào?

Hoàn toàn không phải chịu trách nhiệm  Ít phải chịu trách nhiệm  Tương đối phải chịu trách nhiệm  Khá phải chịu trách nhiệm  Phải chịu trách nhiệm rất nhiều

**CAU 15** Dưới đây là một số câu nhận định về **thái độ** và **tính cách cá nhân**. Vui lòng đọc từng câu và chỉ ra mức độ mỗi câu nhận định là **đúng** hay **sai** đối với bản thân bạn theo thang điểm từ 1-5.

(1 = Hoàn toàn sai; 2 = Hơi sai; 3 = Không đúng cũng không sai; 4 = Hơi đúng; 5 = Hoàn toàn đúng)

	Hoàn toàn sai	1	2	3	4	5	Hoàn toàn đúng
Tôi chưa bao giờ ghét cay ghét đắng người nào.		1	2	3	4	5	
Thỉnh thoảng tôi cảm thấy bức bối khi chuyện không theo ý mình.		1	2	3	4	5	
Bất kể tôi nói chuyện với ai, tôi luôn luôn là một người giỏi lắng nghe.		1	2	3	4	5	
Có những lúc tôi lợi dụng một ai đó.		1	2	3	4	5	
Khi tôi phạm phải sai lầm, tôi luôn sẵn sàng thừa nhận nó.		1	2	3	4	5	
Thỉnh thoảng tôi sẽ cố để trả đũa, hơn là sẽ tha thứ hay quên đi.		1	2	3	4	5	
Có những lúc tôi cảm thấy như muốn phá hủy/đập vỡ mọi thứ.		1	2	3	4	5	
Có những khi tôi thấy khá ghen tị với vận may của người khác.		1	2	3	4	5	
Tôi chưa bao giờ cảm thấy rằng tôi bị phạt vô cớ.		1	2	3	4	5	
Tôi chưa bao giờ chủ đích nói điều gì làm tổn thương cảm giác của ai đó.		1	2	3	4	5	

**CAU 16** Vui lòng trả lời các câu dưới đây để giúp chúng tôi mô tả mẫu nghiên cứu.

Tuổi: \_\_\_\_\_ Giới tính:  Nữ  Nam  
 Dân tộc: \_\_\_\_\_ Tôn giáo: \_\_\_\_\_  
 Sinh viên năm thứ mấy? \_\_\_\_\_ Ngành học: \_\_\_\_\_  
 Tuổi bắt đầu uống bia rượu (kể từ lần đầu tiên uống  $\geq 1$  đơn vị uống tiêu chuẩn): \_\_\_\_\_  
 Tình trạng làm việc:  Không làm việc  Làm bán thời gian  Làm toàn thời gian  
 Nơi đang ở:  
 Tôi đang ở ký túc xá của trường  Tôi đang ở ngoài trường cùng bạn bè/người khác  
 Tôi đang ở ngoài trường một mình  Tôi đang ở ngoài trường cùng người yêu/vợ/chồng  
 Tôi đang ở nhà cùng bố/mẹ/người bảo hộ  Khác (ghi rõ: \_\_\_\_\_)

Trang 7 |

Kết thúc bản khảo sát. Cảm ơn bạn đã dành thời gian hoàn thành.

#### RÚT THĂM TRÚNG THƯỜNG

Nếu bạn muốn tham gia rút thăm để trúng một trong năm phiếu mua sắm, vui lòng để lại địa chỉ email hoặc số điện thoại di động tại đây (*bạn vẫn có thể lựa chọn ẩn danh*): \_\_\_\_\_

Những người được chọn sẽ được thông báo riêng vào tháng 5/2018 qua email hoặc SMS. Chúc may mắn!

#### NẾU BẠN CÓ BẤT KỲ CÂU HỎI NÀO?

Bạn có thể liên lạc với:

##### Thành viên của nhóm nghiên cứu

*TS. Kirsten Robertson*

Khoa Marketing, Trường Đại học Otago (NZ)

Điện thoại: +64 3 479 8451

Email: [kirsten.robertson@otago.ac.nz](mailto:kirsten.robertson@otago.ac.nz)

*Ông Trần T. Khai*

Khoa Marketing, Trường Đại học Otago (NZ)

Điện thoại: +64 3 479 4103

Email: [khai.tran@postgrad.otago.ac.nz](mailto:khai.tran@postgrad.otago.ac.nz)

#### NẾU BẠN CẢM THẤY KHÓ CHỊU HOẶC LO LẮNG?

Bạn có thể liên lạc với:

##### Dịch vụ y tế tại trường

*Phòng y tế tại Trường Đại học Kinh tế - Đại học Đà Nẵng*

71 Ngũ Hành Sơn, Hải Châu, Đà Nẵng

Điện thoại: 0236 383 6169

*Phòng y tế tại Trường Đại học Sư phạm - Đại học Đà Nẵng*

459 Tôn Đức Thắng, Liên Chiểu, Đà Nẵng

Điện thoại: 0236 384 1323

*Phòng y tế tại Trường Đại học Bách Khoa - Đại học Đà Nẵng*

54 Nguyễn Lương Bằng, Liên Chiểu, Đà Nẵng

Điện thoại: 0236 384 2308

*Phòng y tế tại Trường Đại học Ngoại ngữ - Đại học Đà Nẵng*

131 Lương Nhữ Hộc, Khuê Trung, Đà Nẵng

Điện thoại: 0236 369 9335

##### Dịch vụ tư vấn

*Tổng đài 1080*

Yêu cầu tư vấn sức khỏe hoặc hỏi địa chỉ tư vấn

Điện thoại: 1080 (Có tính phí)

Mã cá nhân:

\_\_\_\_\_

Trang 8 |

### Appendix 3. Data Examination for Study 2.

Missing values of the quantitative variables in the dataset seemed not to follow a “missing completely at random” pattern as indicated by the Little’s MCAR test (Chi square = 10618.093, df = 9805,  $p = 0.000$ ). Thus, we treated missing values by means of the Expectation-Maximisation (EM) imputation method using SPSS software. Given the very low level of missing values in all items (ranging from 0% to 1.2%) and the ability of EM in accommodating non-random missing data processes with least bias (Hair et al., 2014), this treatment provided a reasonable approach to remedy the missing value issue.

Outliers are not of great concern in the case of variables using Likert-scale since the choice of value 1 or 5 is not considered as extreme response. Hence, we only examined outliers for demographic variables using box plots. As a result, we recoded the age, year of study, and age of drinking onset variable by grouping the extreme values (outliers) of the variables to the upper/lower fence (Whisker) of their box plots (e.g., age  $\geq 22$ , study year  $\geq 4$ , age of drinking onset  $\leq 13$ ).

Normality of items were checked by the Kolmogorov-Smirnov test and Shapiro-Wilks test, which indicated a non-normal distribution across the items ( $p < 0.001$ ). However, these formal normality tests have been argued to be unreliable for large samples ( $n > 300$ ) (Kim, 2013). Further examination of skewness and kurtosis revealed that no items had skewness values falling outside of the (-2; 2) range, and no items had kurtosis values falling outside of the (-7; 7) range, indicating unsubstantial departure from symmetry and normality (West et al., 1995) (see the tables below). Moreover, examination of the normal Q-Q plots showed that all variables were relatively normally distributed. Therefore, it is concluded that data in Study 2 had acceptable normality.

Normality of items

Item	S	K	K-S	S-W	Item	S	K	K-S	S-W
EXP_P1	-0.468	-0.349	0.224	0.892	SIT1	1.218	0.408	0.313	0.746
EXP_P2	-0.682	0.167	0.258	0.861	SIT2	-0.347	-0.029	0.256	0.870
EXP_P3	0.106	-0.598	0.179	0.916	SIT3	0.856	0.061	0.285	0.794
EXP_P4	0.239	-0.488	0.186	0.911	SIT4	-0.405	-0.315	0.221	0.885
EXP_P5	-0.406	-0.339	0.214	0.901	SIT5	-0.161	-0.713	0.174	0.915
EXP_P6	-0.230	-0.724	0.185	0.912	SIT6	-0.169	-0.525	0.180	0.910
EXP_P7	0.046	-0.833	0.184	0.909	SIT7	0.695	0.020	0.216	0.851
EXP_P8	0.283	-0.672	0.175	0.900	SIT8	0.330	-0.605	0.205	0.900
EXP_N1	-0.444	-0.592	0.233	0.896	SIT9	-0.459	-0.373	0.218	0.891
EXP_N2	-1.119	0.675	0.238	0.803	SIT10	0.210	-0.576	0.198	0.906
EXP_N3	0.043	-1.209	0.170	0.898	SIT11	0.988	0.420	0.277	0.798
EXP_N4	0.498	-0.981	0.201	0.860	SIT12	0.323	-0.777	0.193	0.892
EXP_N5	0.208	-1.233	0.175	0.883	SIT13	1.178	0.895	0.328	0.748
EXP_N6	0.068	-0.702	0.181	0.914	SIT14	1.190	1.523	0.282	0.773
EXP_N7	0.296	-0.755	0.177	0.892	SIT15	0.984	0.213	0.277	0.796
ATT1	-0.068	-0.989	0.176	0.910	SIT16	1.922	3.412	0.412	0.618
ATT2	0.282	-0.361	0.196	0.897	SIT17	1.952	4.149	0.392	0.639
ATT3	0.389	-0.803	0.199	0.885	SIT18	0.127	-0.607	0.196	0.902
CON1	-0.951	-0.002	0.255	0.804	SIT19	1.192	0.479	0.321	0.750
CON2	-1.093	0.991	0.252	0.792	SIT20	1.198	0.457	0.335	0.740
CON3	-1.000	0.741	0.245	0.802	SIT21	0.675	-0.566	0.234	0.841
CON4	-0.695	-0.320	0.221	0.849	SIT22	0.436	-0.886	0.188	0.875
CON5	-0.776	-0.177	0.244	0.858	SIT23	0.885	-0.267	0.274	0.805
CON6	-0.778	0.415	0.268	0.834	SIT24	1.210	0.615	0.325	0.749
HAB1	-0.020	-1.141	0.171	0.904	AUDIT_UNI	0.380	0.177	0.122	0.967
HAB2	0.566	-0.371	0.220	0.881	AUDIT_YOUTH	0.305	0.094	0.137	0.969
HAB3	0.341	-0.881	0.212	0.895	AUDIT_COUNTRY	-0.074	-0.431	0.082	0.980
PPRE_S	0.412	-0.551	0.225	0.892	CNOR_I1	-0.060	-0.097	0.245	0.877
PPRE_F	0.157	0.000	0.231	0.869	CNOR_I2	-0.323	-0.282	0.249	0.882
PPRE_G2	0.192	-1.375	0.200	0.869	CNOR_I3	-0.398	-0.199	0.246	0.886
PPRE_G3	0.295	-0.844	0.209	0.900	ALT1	-0.869	-0.015	0.255	0.842
PSUP_S	0.932	0.548	0.248	0.824	ALT2	-0.581	-0.228	0.233	0.887
PSUP_F	0.402	-0.221	0.212	0.886	ALT3	-0.567	-0.491	0.211	0.877
AUDIT_PEER	0.513	0.123	0.150	0.957	ALT4	-0.969	0.365	0.243	0.825
PNOR_I1	-0.045	-1.058	0.183	0.907	ALT5	-1.393	1.930	0.276	0.759
PNOR_I2	-0.227	-0.946	0.192	0.907	AUDIT_PERSONAL	1.503	2.553	0.242	0.826
FOMO1	0.956	0.089	0.264	0.804	SDB	-0.102	0.383	0.057	0.993
FOMO2	1.483	1.726	0.337	0.717	INT_I1	-0.793	0.012	0.231	0.854
FOMO3	0.651	-0.413	0.226	0.856	INT_I2	-0.754	0.058	0.240	0.856
FOMO4	1.023	0.005	0.294	0.779	INT_3	-0.506	-0.425	0.221	0.857
FOMO5	1.762	2.515	0.399	0.642	INT_4	-0.552	-0.385	0.217	0.873
FOMO6	1.836	2.587	0.401	0.625	<b>Note:</b> S = Skewness; K = Kurtosis; K-S = Kolmogorov-Smirnov statistic with Lilliefors significance correction (df = 660, p < 0.05); S-W = Shapiro-Wilk statistic (df = 660, p < 0.05).				
FOMO7	0.978	0.101	0.277	0.797					
FOMO8	0.767	-0.433	0.232	0.834					
FOMO9	1.107	0.343	0.284	0.781					
FOMO10	1.850	3.275	0.384	0.650					
FOMO11	0.861	-0.150	0.246	0.822					

### Normality of variables

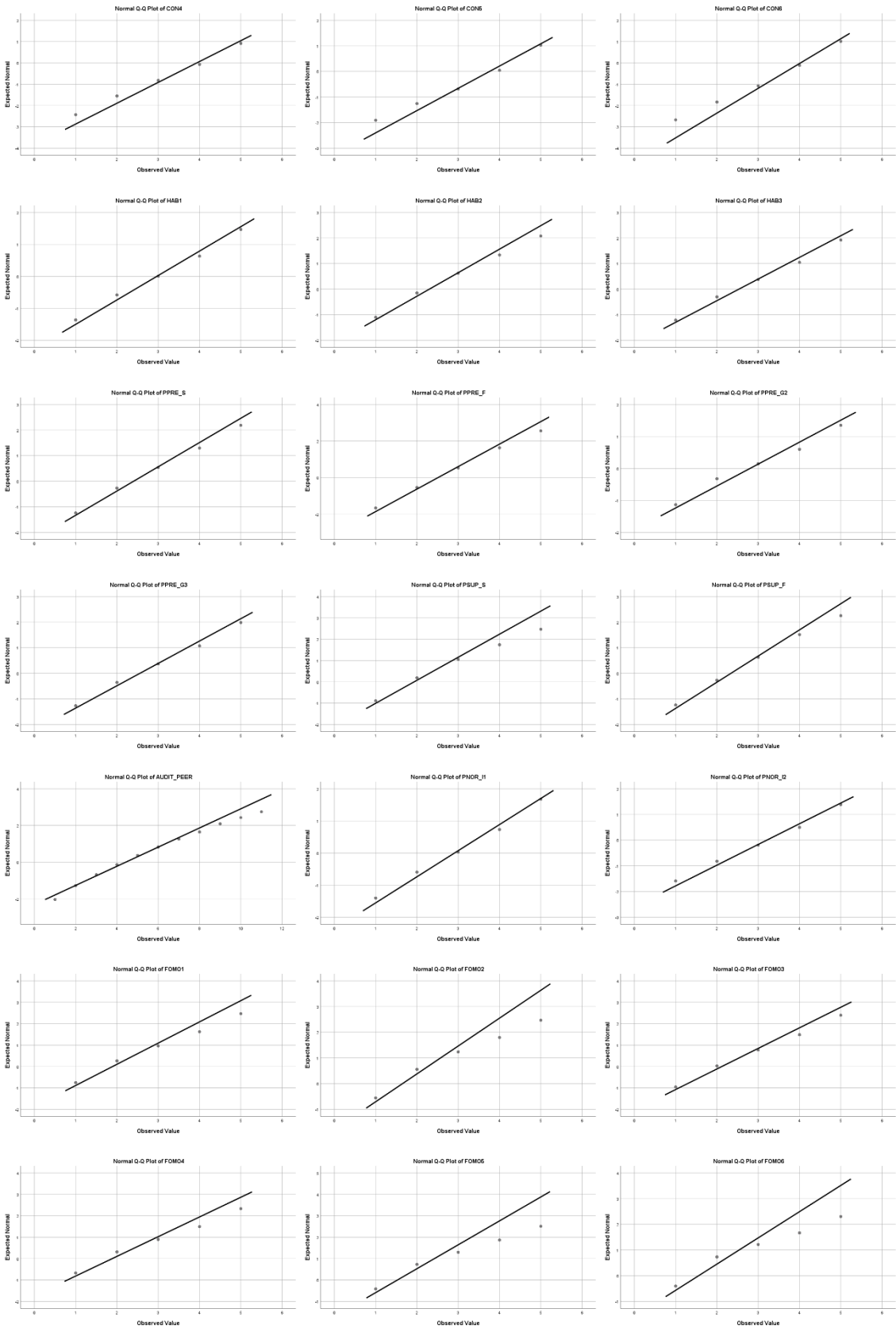
Variable	S	K	K-S	S-W	Variable	S	K	K-S	S-W
Sociability expectancy	-0.564	0.230	0.168	0.938	Peer injunctive norm	-0.140	-0.906	0.119	0.953
Tension reduction expectancy	0.179	-0.222	0.111	0.964	Fear of missing out	0.980	0.627	0.129	0.910
Courage expectancy	-0.320	-0.353	0.125	0.957	Convivial drinking	-0.165	-0.288	0.059	0.991
Sexuality expectancy	0.059	-0.562	0.141	0.955	Intimate drinking	0.991	0.569	0.230	0.839
Impairment expectancy	-0.753	0.117	0.170	0.922	Emotional drinking	0.831	-0.087	0.145	0.898
Aggression expectancy	0.243	-1.040	0.108	0.943	Cultural descriptive norm	0.176	-0.019	0.068	0.994
Self-perception expectancy	0.189	-0.415	0.111	0.957	Cultural injunctive norm	-0.323	0.365	0.131	0.970
Attitude towards heavy drinking	0.114	-0.524	0.085	0.976	Athletics	-0.869	-0.015	0.255	0.842
Perceived control	-0.748	0.570	0.110	0.941	Serious leisure	-0.581	-0.228	0.233	0.887
Habit of heavy drinking	0.094	-0.481	0.087	0.971	Casual leisure	-0.837	0.764	0.118	0.925
Peer pressure (standardised)	0.228	-0.649	0.064	0.976	Past consumption	1.503	2.553	0.242	0.826
Peer support (standardised)	0.524	0.098	0.134	0.940	Social desirability bias	-0.102	0.383	0.057	0.993
Peer descriptive norm	0.513	0.123	0.150	0.957	Intention to moderate drinking	-0.420	-0.255	0.096	0.954

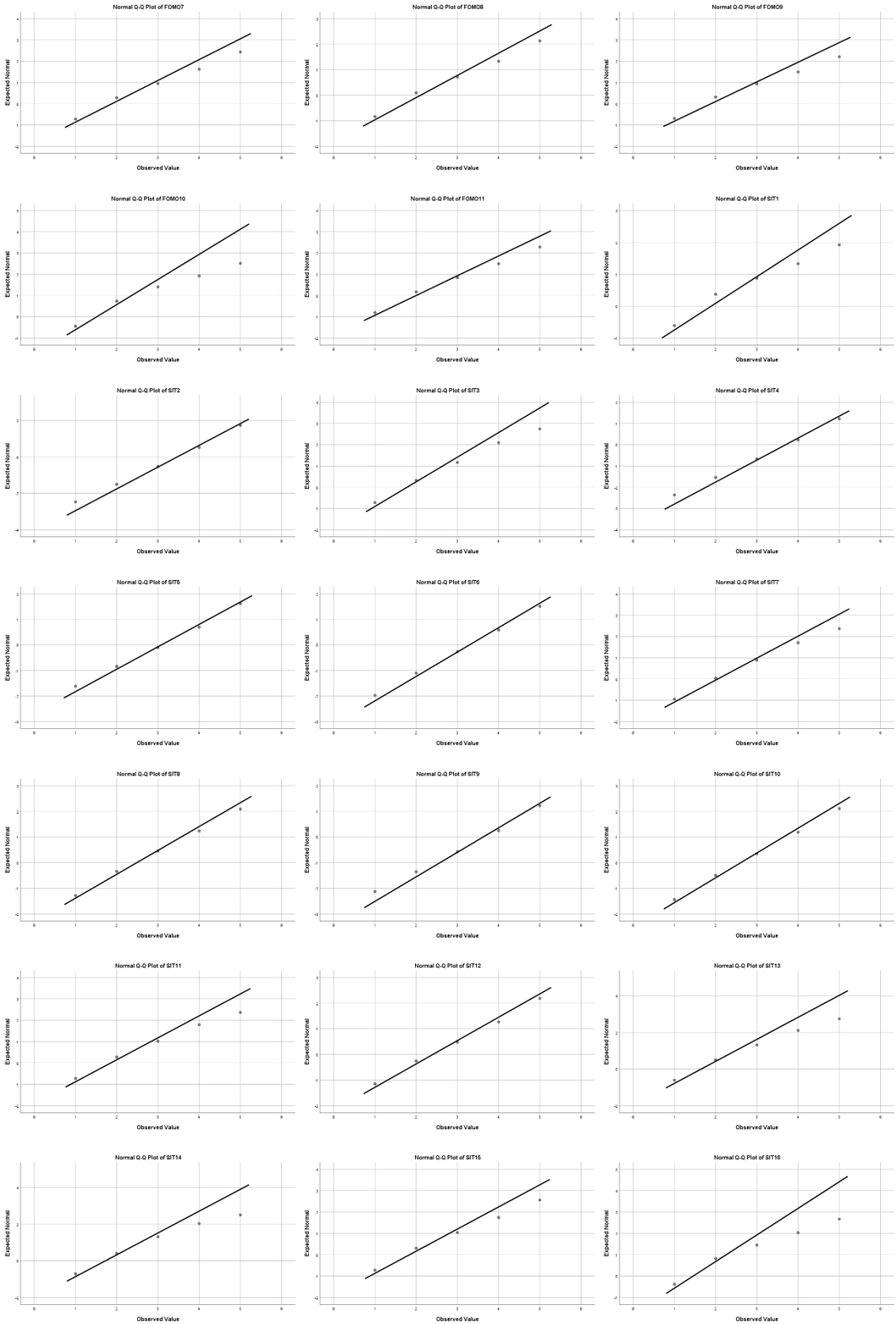
**Note:** S = Skewness; K = Kurtosis; K-S = Kolmogorov-Smirnov statistic with Lilliefors significance correction (df = 660, p < 0.05); S-W = Shapiro-Wilk statistic (df = 660, p < 0.05).

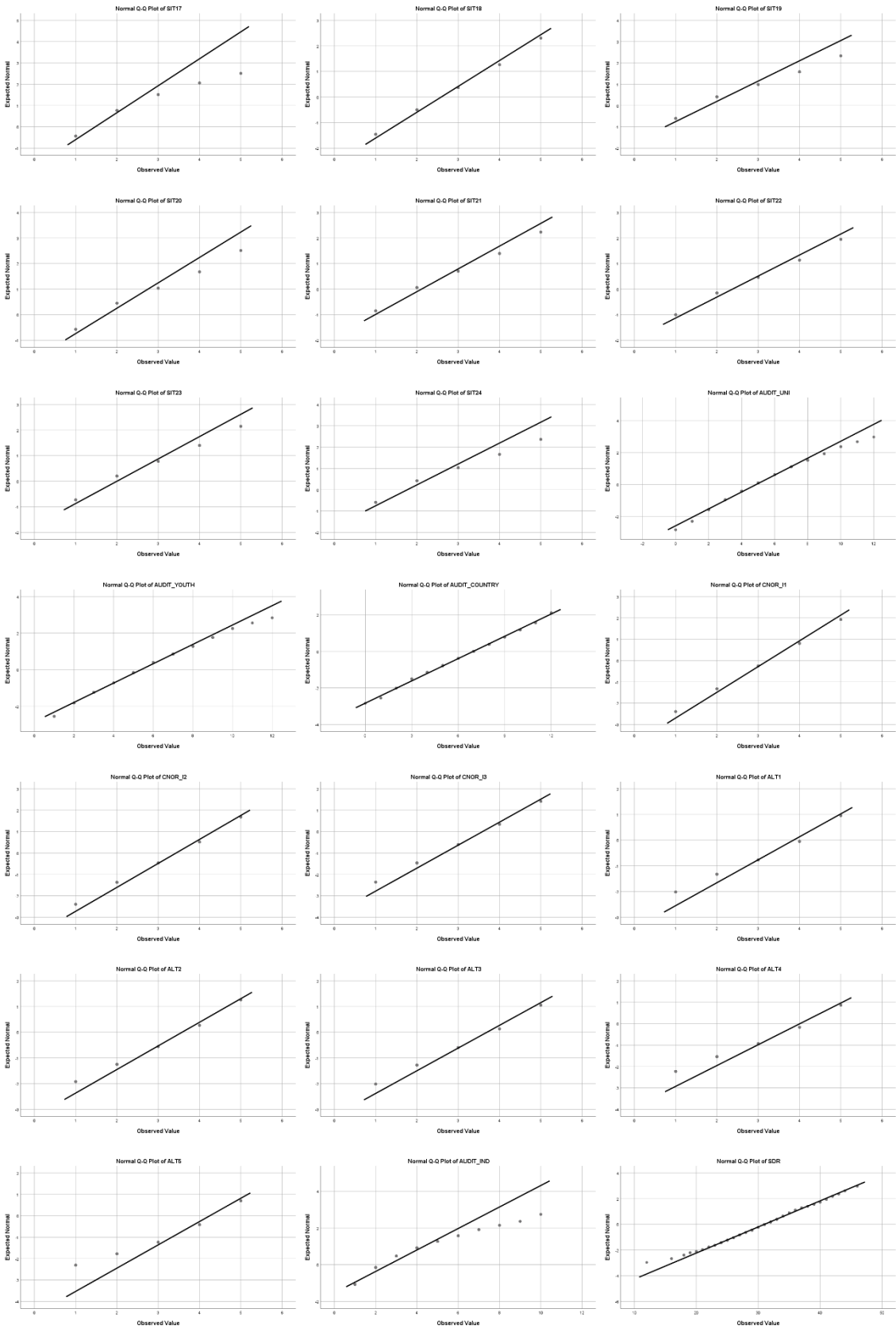


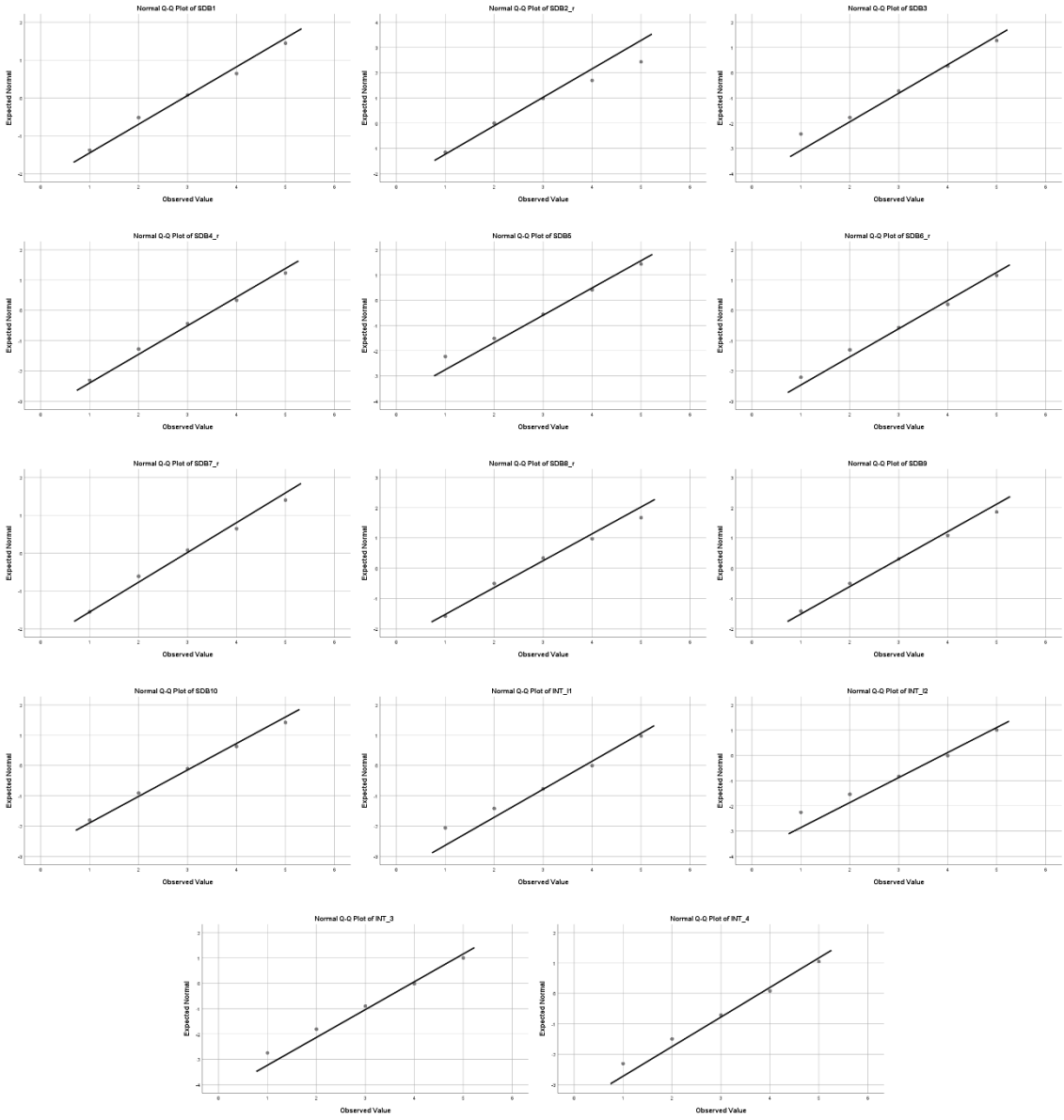
# Normal Q-Q plots of individual items



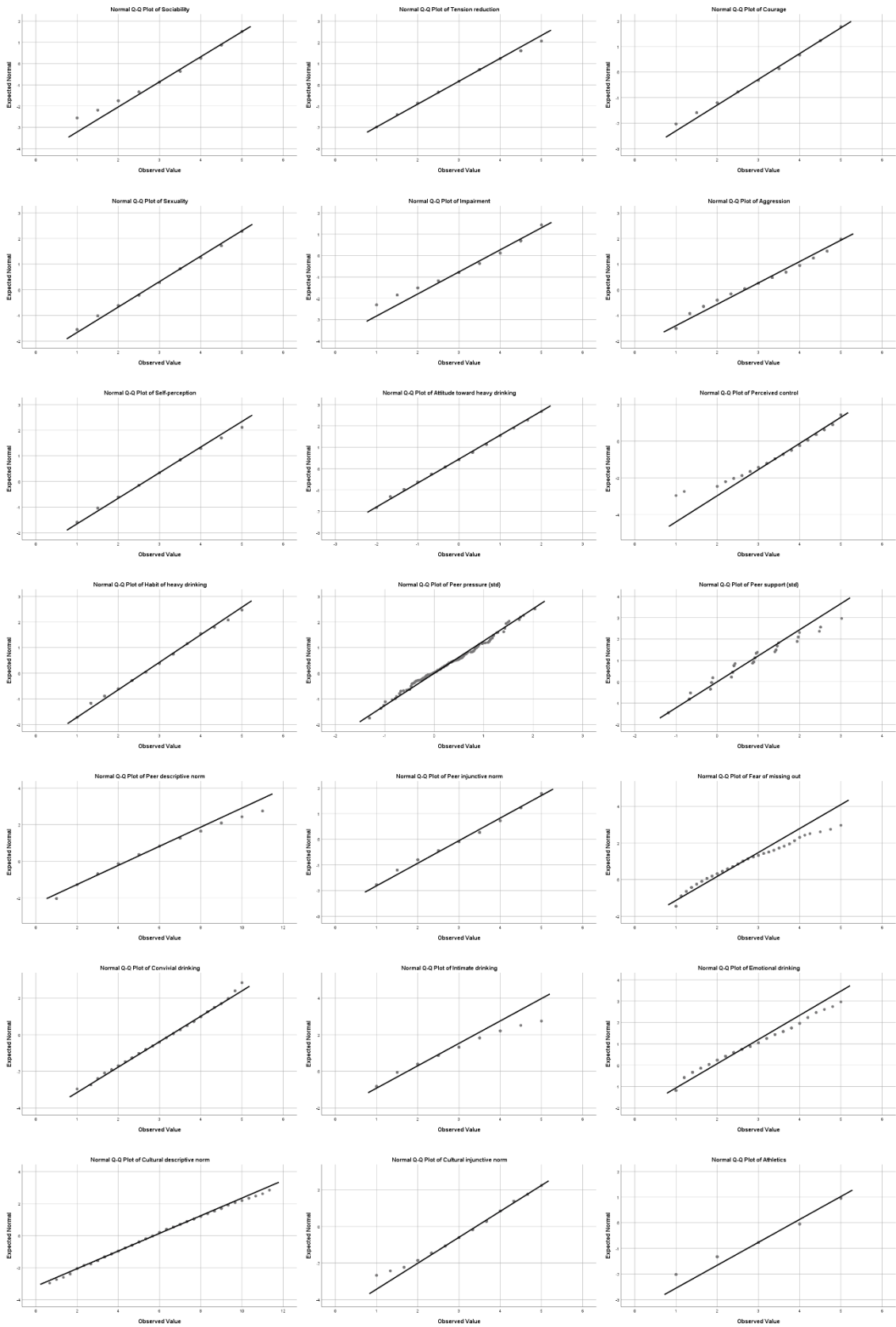


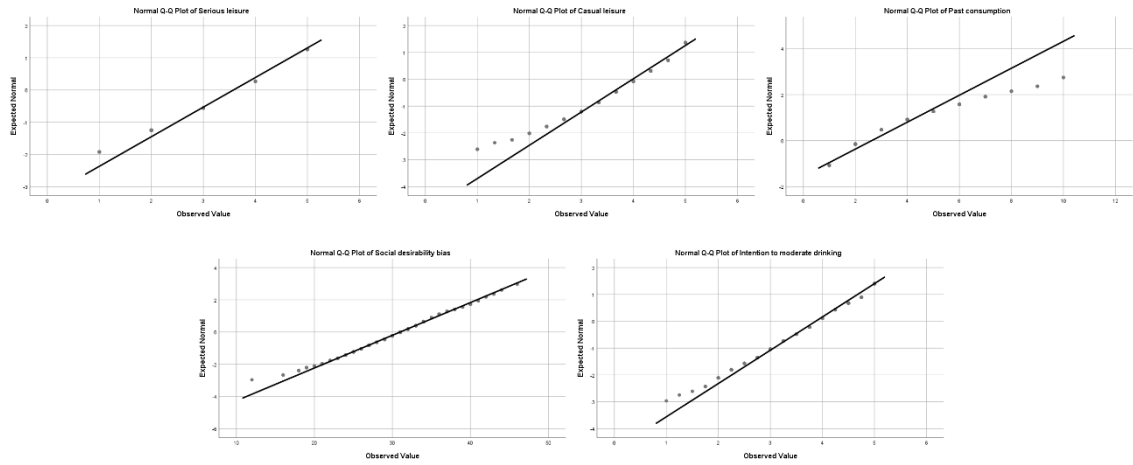






## Normal Q-Q plots of latent variables





## Appendix 4. Descriptive statistics for Study 2.

Constructs	Score range	Mean (SD) [Total Sample]	Evaluation <sup>a</sup> [Total Sample]	Mean (SD) [Female sample]	Mean (SD) [Male sample]
<b>Environmental factors</b>					
Cultural descriptive norm	[0, 12]	5.75 (1.82)	Medium	5.60 (1.71)	5.95 (1.90)*
Cultural injunctive norm	[1, 5]	3.42 (0.71)	Medium	3.30 (0.69)	3.59 (0.69)*
Alternatives: Athletics	[1, 5]	3.85 (1.12)	High	3.71 (1.13)	4.03 (1.09)*
Alternatives: Serious leisure	[1, 5]	3.58 (1.09)	Medium	3.68 (1.05)*	3.42 (1.14)
Alternatives: Casual leisure	[1, 5]	3.98 (0.81)	High	4.17 (0.72)*	3.74 (0.85)
Convivial drinking	[1, 5]	3.27 (0.72)	Medium	3.14 (0.72)	3.46 (0.69)*
Intimate drinking	[1, 5]	1.75 (0.82)	Low	1.69 (0.77)	1.84 (0.87)*
Emotional drinking	[1, 5]	1.94 (0.88)	Low	1.85 (0.82)	2.04 (0.95)*
<b>Social factors</b>					
Peer support <sup>b</sup>	[1, 5]	2.14 (0.78)	Low	2.08 (0.80)	2.21 (0.75)*
Peer pressure <sup>b</sup>	[1, 5]	2.59 (0.97)	Medium	2.46 (0.94)	2.75 (0.98)*
Peer descriptive norm	[0, 12]	4.43 (1.92)	Medium	3.89 (1.72)	5.16 (1.93)*
Peer injunctive norm	[1, 5]	3.06 (1.14)	Medium	2.84 (1.10)	3.36 (1.11)*
FOMO	[1, 5]	1.87 (0.77)	Low	1.79 (0.72)	1.97 (0.82)*
<b>Individual factors</b>					
Sociability expectancy	[1, 5]	3.73 (0.85)	High	3.60 (0.86)	3.89 (0.80)*
Tension reduction expectancy	[1, 5]	2.84 (0.93)	Medium	2.72 (0.91)	3.00 (0.92)*
Courage expectancy	[1, 5]	3.28 (0.99)	Medium	3.26 (0.98)	3.30 (1.00)
Sexuality expectancy	[1, 5]	2.68 (1.01)	Medium	2.50 (1.01)	2.93 (0.94)*
Impairment expectancy	[1, 5]	3.74 (0.97)	High	3.68 (0.93)	3.82 (1.01)
Aggression expectancy	[1, 5]	2.68 (1.20)	Medium	2.55 (1.14)	2.83 (1.26)*
Self-perception expectancy	[1, 5]	2.65 (1.00)	Medium	2.60 (0.95)	2.73 (1.06)
Attitudes to heavy drinking	[-2, 2]	-0.40 (0.89)	Medium	-0.39 (0.85)	-0.42 (0.95)
Perceived control	[1, 5]	4.08 (0.70)	High	4.09 (0.68)	4.08 (0.71)
Habit of heavy drinking	[1, 5]	2.60 (0.93)	Medium	2.53 (0.93)	2.71 (0.92)*
<b>Outcome</b>					
Intention to drinking in moderation	[1, 5]	3.87 (0.81)	High	3.85 (0.78)	3.90 (0.84)
<b>Control variables</b>					
Past consumption	[0, 12]	2.63 (1.71)	Low	2.11 (1.26)	3.31 (1.95)*
Social desirability bias	[10, 50]	31.00 (4.92)	Medium	30.79 (4.98)	31.29 (4.88)

**Note:** <sup>a</sup> Qualitative evaluation of the constructs included Low, Medium and High level, based on the 33% and 67% percentile of the score range. <sup>b</sup> Mean of unstandardized scores. \* Significant gender difference using t-test ( $p < 0.05$ ).

Data showed that at the environmental level, cultural norms (descriptive and injunctive norms) were rated at the medium level. For alternatives to drinking, students in the sample showed a high preference for athletic and casual leisure activities, but a modest preference for serious leisure activities. The students drank in convivial drinking situations with a



moderate frequency. Drinking in intimate and emotion-related situations was uncommon, with low frequencies.

At the social level, data revealed that students received a low level of peer support for reducing drinking and experienced low alcohol-related fear of missing out. Other social constructs (peer pressure, peer descriptive norms, and peer injunctive norms) were evaluated at the medium level.

At the individual level, sociability enhancement and impairment were the most salient alcohol expectancies with a high rating, all other expectancies were rated as having medium salience. Students also reported a medium level of habit of heavy drinking and slightly negative attitudes towards heavy drinking. Moreover, they strongly believed that they could control their drinking. Regarding the outcome construct, students expressed high intention to drink in moderation. On average, students had a medium level of social responding bias. Past-year alcohol consumption was reported as low.

Considering gender differences, data showed that male students in this study provided significant higher evaluations on the majority of constructs examined. The only factors that were evaluated significantly higher by females were the preference for serious and casual leisure. Factors such as courage, impairment, and self-perception expectancy, attitudes towards heavy drinking, and perceived control were evaluated similarly by the two genders. There were also no significant differences in intention to drink in moderation and social desirability bias between male and female respondents.

## Appendix 5. Measurement Assessment for Study 2.

Constructs and items	Loading EFA	Loading CFA
<b>Alcohol expectancies:</b> <i>KMO = 0.79; TVE = 78.0%</i> (1 = strongly disagree to 5 = strongly agree)		
<i>Sociability: CA = 0.63; CR = 0.63; AVE = 0.46</i>		
I would act more sociable	-.79	.68
I would find it easier to talk to people	-.82	.68
<i>Tension reduction: CA = 0.63; CR = 0.64; AVE = 0.47</i>		
I would feel calm	.74	.75
I would feel peaceful	.86	.62
<i>Courage: CA = 0.76; CR = .78; AVE = 0.64</i>		
I would feel courageous	-.90	.68
I would feel brave and daring	-.82	.90
<i>Sexuality: CA = 0.64; CR = 0.65; AVE = 0.48</i>		
I would be a better lover	-.83	.72
I would feel more sexy/attractive <sup>a</sup>	-.86	.66
<i>Impairment: CA = 0.70; CR = 0.71; AVE = 0.56</i>		
I would be clumsy	.79	.82
I would feel dizzy	.90	.66
<i>Risk and aggression: CA = 0.86; CR = 0.87; AVE = 0.69</i>		
I would take risks	.82	.78
I would act aggressively	.90	.91
I would be loud, boisterous, or noisy	.87	.80
<i>Self-perception: CA = 0.69; CR = 0.69; AVE = 0.52</i>		
I would feel moody	.85	.72
I would feel guilty	.83	.73
<b>Drinking situations:</b> <i>KMO = 0.86; TVE = 61.6%</i> (1 = Never to 5 = Always/Almost always)		
<i>Convivial drinking: CA = 0.80; CR = 0.80; AVE = 0.40</i>		
at a party	.74	.62
with a close friend/few friends	.75	.67
during semester breaks or holidays	.70	.66
with a large group of friends	.78	.63
when celebrating something important to me	.56	.59
towards the end of the week or weekend	.65	.63
<i>Intimate drinking: CA = 0.77; CR = 0.78; AVE = 0.64</i>		
with my lover	.89	.80
on a date	.88	.80
<i>Emotional drinking: CA = 0.87; CR = 0.87; AVE = 0.57</i>		
when lonely or homesick	-.80	.65
when having a fight with someone close to me	-.81	.69
when feeling sad	-.79	.79

when feeling angry with myself or someone else	-.85	.87
when feeling unconfident and unsure of myself	-.77	.78
<b>Alternatives to drinking:</b> <i>KMO = 0.63; TVE = 77.5%</i> (1 = Extremely unlikely to 5 = Extremely likely).		
<i>Athletics</i>		
Playing sport, exercising, health training	s	s
<i>Serious leisure</i>		
Participating in university clubs/extra-curricular activities	s	s
<i>Casual leisure:</i> <i>CA = 0.69; CR = 0.69; AVE = 0.43</i>		
Going to the cinema on a night out	.78	.64
Going to eating venues/restaurants for eating (rather than drinking) on a night out	.82	.70
Going to coffee/tea shops with friends	.76	.62
<b>Attitude to heavy drinking:</b> <i>KMO = 0.68; TVE = 64.0%; CA = 0.71; CR = 0.72; AVE = 0.46</i> For me, having more than 5 drinks (for male) or 4 drinks (for female) on the same occasion would be ...		
enjoyable/unenjoyable	.80	.69
good/bad	.81	.70
pleasant/unpleasant	.79	.65
<b>Perceived control:</b> <i>KMO = 0.82; TVE = 56.9%; CA = 0.81; CR = 0.81; AVE = 0.46</i> (1 = Strongly disagree to 5 = Strongly agree)		
I am confident that I could refuse a drink if I wanted to.	.71	.61
I am confident that I could drink in moderation on a drinking occasion.	.79	.75
If I wanted to, I could easily drink in moderation on a drinking occasion.	.79	.74
How much alcohol I drink is completely up to me.	.75	.67
I feel under control as to whether or not I drink moderately on a drinking occasion.	.72	.63
<b>Habit:</b> <i>KMO = 0.59; TVE = 61.7%; CA = 0.68; CR = 0.72; AVE = 0.47</i> Drinking more than 5 drinks (if being male) or more than 4 drinks (if being female) on each drinking occasion is something ... (1 = Strongly disagree to 5 = Strongly agree)		
I do automatically	.77	.60
I do without thinking	.87	.90
I start doing before I realise I'm doing it	.70	.51
<b>Peer injunctive norm:</b> <i>KMO = 0.50; TVE = 84.5%; CA = 0.82; CR = 0.82; AVE = 0.69</i> (1 = Strongly disagree to 5 = Strongly agree)		
My friends think that I should drink heavily on drinking occasions.	.92	.83
My friends expect me to drink heavily on drinking occasions.	.92	.83
<b>Fear of missing out:</b> <i>KMO = 0.89; TVE = 56.2%; CA = 0.89; CR = 0.89; AVE = 0.50</i> (1 = Not at all true of me to 5 = Extremely true of me)		
It bothers me when I miss an opportunity to drink alcohol with friends.	.79	.77
It disturbs me when I miss a drinking party with friends.	.77	.75
I regret it when I miss a drinking party or gathering with friends.	.77	.74
I get jealous when my friends are having fun drinking without me.	.72	.68
I drink at parties because I worry about missing out on the fun.	.70	.64
I feel like I'm missing out when not joining my friends in the drinking games.	.78	.73
I will regret it if I don't go out and have drinking nights with my friends.	.77	.72
I will regret it if I don't let loose with alcohol.	.69	.63

<b>Cultural descriptive norms:</b> <i>KMO = 0.71; TVE = 76.6%; CA = 0.83; CR = 0.85; AVE = 0.66</i> Estimate the AUDIT-C score (drinking frequency, typical drinking quantity and binge drinking frequency) of:		
most of the students at your university	.88	.79
most of the people of your age	.91	.91
most of the people in Vietnam	.84	.72
<b>Cultural injunctive norms:</b> <i>KMO = 0.65; TVE = 63.8%; CA = 0.71; CR = 0.73; AVE = 0.47</i> How do the following persons feel about heavy drinking? (1 = Strongly disapprove to 5 = Strongly approve)		
most of the students at your university	.78	.63
most of the people of your age	.85	.82
most of the people in Vietnam	.76	.59
<b>Intention to moderate drinking:</b> <i>KMO = 0.70; TVE = 64.3%; CA = 0.81; CR = 0.82; AVE = 0.53</i> (1 = Extremely unlikely to 5 = Extremely likely)		
I intend to keep track of my alcohol intake to ensure I do not exceed moderation.	.85	.85
I will expend effort on keeping track of my alcohol intake to ensure I do not exceed moderation.	.82	.82
(1 = Strongly disagree to 5 = Strongly agree)		
I intend to limit my drinking to ensure I do not exceed moderation.	.83	.69
I am planning to drink a light to moderate amount rather than drinking to excess.	.70	.52
<b>Peer pressure<sup>b</sup>:</b> <i>KMO = 0.65; TVE = 63.3%; CA = 0.71; CR = 0.72; AVE = 0.46</i> <i>Pressure strength:</i> How strong is the pressure from your friends to drink alcohol? (1 = No pressure to 5 = A lot of pressure)	.73	.61
<i>Perceived pressure:</i> I feel pressured to get drunk at parties/social gatherings. (1 = Strongly disagree to 5 = Strongly agree)	.81	.66
<i>Perceived pressure:</i> I feel pressured by friends to drink. (1 = Strongly disagree to 5 = Strongly agree)	.84	.76
<b>Peer support<sup>b</sup>:</b> <i>KMO = 0.50; TVE = 67.3%; CA = 0.51; CR = 0.54; AVE = 0.39</i> <i>Support strength:</i> How strong is the pressure from your friends to NOT drink alcohol? (1 = No pressure to 5 = A lot of pressure)	.82	.74
<i>Support frequency:</i> During the last year, how often have any of your friends attempted to influence your drinking so that you would drink less or cut down on drinking? (1 = Never to 5 = Almost always)	.82	.47
<b>Past consumption:</b> Estimate personal AUDIT-C score, including:	s	s
<i>Drinking frequency:</i> In the last year, how often did you have a drink containing alcohol? (Never; Monthly or less; 2-4 times a month; 2-3 times a week; and $\geq 4$ times a week)		
<i>Typical drinking quantity:</i> In the last year, how many drinks containing alcohol did you have on a typical day when you were drinking? (1-2; 3-4; 5-6; 7-9; and $\geq 10$ )		
<i>Frequency of binge drinking:</i> In the last year, how often did you have more than 5 (for male) or 4 (for female) drinks on one occasion? (0 = Never to 4 = Daily or almost daily)		
<b>Peer descriptive norm</b>	s	s
Estimate the AUDIT-C score (drinking frequency, typical drinking quantity and binge drinking frequency) of your friends		
<b>Social desirability bias</b> (1 = Completely false to 5 = Completely true)	s	s
I have never intensely disliked anyone		
I sometimes feel resentful when I don't get my way (-)		

No matter who I'm talking to, I'm always a good listener		
There have been occasions when I took advantage of someone (-)		
I'm always willing to admit it when I make a mistake		
I sometimes try to get even, rather than forgive and forget (-)		
There have been occasions when I felt like smashing things (-)		
There have been times when I was quite jealous of the good fortune of others (-)		
I have never felt that I was punished without cause		
I have never deliberately said something that hurt someone's feelings		
<b>Living environment</b>	s	s
Living in dorms: 0 = No; 1 = Yes		
Living off-campus with friends/flatmates/partners: 0 = No; 1 = Yes		
Living off-campus with parents: 0 = No; 1 = Yes		
Living off-campus alone: Reference category		
<b>Gender:</b> 0 = Female; 1 = Male	s	s
<b>City/University:</b> 0 = Can Tho; 1 = Da Nang	s	s
<b>Religion:</b> 0 = No religion; 1 = Have religious affiliation	s	s
<b>Ethnicity:</b> 0 = Other; 1 = Kinh	s	s
<b>Working status:</b> 0 = Not employed; 1 = Part-time/full-time employed	s	s
<b>Study year:</b> 0 = Junior (1st and 2nd year); 1 = Senior (3rd and 4th year)	s	s
<b>Major:</b> 0 = Business-and-economics; 1 = Science-and-technology	s	s
<b>Age</b>	s	s
<b>Age of drinking onset</b>	s	s

**Note:**

Removed items during the process of measurement purification and validation were not shown.

KMO = Kaiser-Meyer-Olkin measure of sampling adequacy (all Bartlett's tests of sphericity were significant at  $p < 0.001$ );

TVE = Total variance explained; CA = Cronbach's alpha; CR = Composite reliability; AVE = Average variance explained.

All CFA loadings were significant at  $p < 0.001$ .

<sup>a</sup> For cultural appropriateness, the item "I would enjoy sex more" in the Brief Comprehensive Effects of Alcohol (B-CEOA) scale (Ham et al., 2005) was replaced by this item derived from the full CEOA scale (Fromme et al., 1993).

<sup>b</sup> Peer pressure and support were explicitly defined in the survey as "when people your own age offer, encourage, ridicule, challenge or urge you to do something or to keep you from doing something else, no matter if you personally want to or not".

(-) negatively keyed items

s single-item construct

## Appendix 6. CFA Model Fit Assessment for Study 2.

<b>Model (Suggested threshold)</b>	$\chi^2$	df	p	$\chi^2/df$ (<5)	RMSEA (<0.08)	SRMR (<0.08)	CFI (>0.9)	GFI (>0.9)
Alcohol expectancies (7 dimensions)	279.48	69	0.000	4.050	0.068	0.053	0.935	0.947
Alternatives to drinking (3 dimensions)	7.98	4	0.092	1.995	0.039	0.022	0.990	0.995
Drinking situations (3 dimensions)	190.37	62	0.000	3.070	0.056	0.037	0.959	0.957
Uni-dimensional constructs (10 constructs)	1349.67	549	0.000	2.458	0.047	0.048	0.905	0.893

## Appendix 7. Fornell-Larcker Criterion Tests for Study 2.

Discriminant validity of measurement models was assessed using the Fornell-Larcker criterion (i.e., the square root of the average variance extracted of a construct is higher than its correlation with any other constructs) (Fornell & Larcker, 1981). In the tables below, the diagonal shows the square root of the AVE of each latent variable. The remaining cells show the correlations between the latent variables.

### Alcohol expectancies

	Aggression	Courage	Sexuality	Tension reduction	Impairment	Self-perception	Sociability
Aggression	<b>0.832</b>						
Courage	0.357***	<b>0.799</b>					
Sexuality	0.383***	0.508***	<b>0.690</b>				
Tension reduction	-0.142**	0.188***	0.427***	<b>0.685</b>			
Impairment	0.567***	0.180***	0.138*	-0.159**	<b>0.746</b>		
Self-perception	0.649***	0.216***	0.236***	-0.024	0.514***	<b>0.723</b>	
Sociability	-0.065	0.352***	0.444***	0.665***	0.032	-0.072	<b>0.680</b>

Note: \*\*\* p < 0.001; \*\* p < 0.01; \* p < 0.05; † p < 0.1

### Drinking situations

	Convivial drinking	Emotional drinking	Intimate drinking
Convivial drinking	<b>0.634</b>		
Emotional drinking	0.493***	<b>0.757</b>	
Intimate drinking	0.415***	0.366***	<b>0.800</b>

Note: \*\*\* p < 0.001; \*\* p < 0.01; \* p < 0.05; † p < 0.1

### Uni-dimensional constructs

	FOMO	Cultural descriptive norm	Perceived control	Intention	Habit	Cultural injunctive norm	Peer pressure	Attitude	Peer support	Peer injunctive norm
FOMO	<b>0.707</b>									
Cultural descriptive norm	0.095*	<b>0.810</b>								
Perceived control	-0.307***	0.045	<b>0.681</b>							
Intention	-0.184***	0.027	0.296***	<b>0.729</b>						
Habit	0.220***	0.023	-0.04	-0.199***	<b>0.690</b>					
Cultural injunctive norm	0.243***	0.400***	-0.006	0.009	0.113*	<b>0.688</b>				
Peer pressure	0.251***	0.101*	-0.264***	0.096†	-0.019	0.250***	<b>0.678</b>			
Attitude	0.363***	-0.028	-0.051	-0.244***	0.360***	0.139**	-0.110*	<b>0.678</b>		
Peer support	0.095†	0.037	-0.180**	-0.023	0.000	-0.042	0.389***	0.085	<b>0.617</b>	
Peer injunctive norm	0.344***	0.105*	-0.143**	-0.008	0.077	0.434***	0.445***	0.128*	0.060	<b>0.830</b>

Note: \*\*\* p < 0.001; \*\* p < 0.01; \* p < 0.05; † p < 0.1

## Appendix 8. Coding Sheet for the Content Analysis (Barriers Themes).

### CODING SCHEME

No.	Theme code	Theme label	Theme description
1	ADD	Addiction	The addictive nature of alcohol makes students addicted to alcohol and unable to change their behaviour.
2	AGE	Age	Students' heavy drinking pattern is attributable to their young age or their current stage of life.
3	ATT	Positive attitude towards alcohol and drinking	Students like alcohol and enjoy drinking as well as the effects it brings. Drinking is considered a main source of fun in students' lives.
4	BOR	Boredom	Students get bored and have nothing else to do.
5	CON	Low self-control	Students lack of self-control, determination or willpower to change their behaviour. Students find it difficult to restrict drinking or refuse others' drinking invitations.
6	DRI	Drinking behaviour	Students' heavy drinking pattern is attributable to their drinking history, drinking frequency, and drinking quantity.
7	FEE	Feelings	Students engage in drinking when experiencing negative mood/emotion, stress/pressure, or to avoid social anxiety.
8	HAB	Habit	Heavy drinking becomes a routine. It is what students normally do for entertaining or relaxing.
9	MOT	Amotivation	Students do not have the motivation or the desire to change their behaviour. Any promises to drink less/stop drinking are considered banter or a joke or a result of the temporary effects of the hangover since students do not actually mean it.
10	PER	Personality	Students' heavy drinking pattern is attributable to their personality traits and other psychological characteristics.
11	NEX	Low negative expectancy	Students tend to ignore or forget the bad consequences of a hangover. Negative experiences of heavy drinking are thought to wear-off quickly or be outweighed.
12	CFO	Social conformity	Students cannot change their drinking behaviour because they want to keep up with or follow what others and friends are doing. Participants mentioned this as social conformity.
13	FOM	Fear of missing out	Students want to fit in their social groups, not to be left out and avoid the feeling of being socially excluded by others. In this way, they seek their peer's acceptance and approval. Respondents called this as fear of missing out.
14	IDE	Identity	Heavy drinking is a means of self-expression and self-image management, contributing positively to students' personal identity, and their student identity. If reducing drinking, students can risk losing face or suffer from stereotype threats. This linked to students' self-esteem and ego.
15.1	PNO	Peer norm	Through observing friends drinking and drunkenness, drinking is normalised since it is accepted and expected by friends. The terms "peer norm" or "peer influence" are used to reflect the impact of the norms. Friend groups are considered the main factor inhibiting moderate drinking.
15.2	ONO	Others' norm	Similar to peer norm, but friends/peers not being mentioned.
16.1	PPR	Peer pressure	The term "peer pressure" or related expressions are used to indicate the direct influence of friends on students' drinking behaviour.



			Specifically, friends exert a direct influence by: encouraging, inviting or enticing students; ridiculing them; provoking, challenging, or forcing them to drink.
16.2	OPR	Others' pressure	Similar to peer pressure, but friends/peers not being mentioned.
17	RES	Respecting	Drinking is viewed as a way to show respects to not only students' friends but any others who invited them a drink. Therefore, refusing or limiting drinking is a sign of disrespect which students wanted to avoid.
18	CIR	Negative circumstances	Students cannot restrict heavy drinking due to negative life occurrences such as family conflict, relationship breakdown, study failure, or unemployment.
19	DCU	Drinking culture	The term "drinking culture" or related expressions (e.g., ritual) are used to indicate the influence of culture on students' drinking behaviour. Such cultural influence can be at a (e.g., New Zealand culture, Vietnamese culture), city level (e.g., Dunedin culture), university level (e.g., Otago culture, "scarfie", university life), or student level (e.g., flat, hall, sport, youth).
20	EVE	Events	Various personal and public events involve drinking and stimulate students to drink. They range from personal parties, celebrations, and occasions (such as wedding, engagement, birthday, and anniversary), to public events and occasions (such as holiday, festival and new year).
21	LIV	Living environment	The unhealthy or pro-drinking surroundings, as well as the presence of alcohol outlets and other social settings, encourage students drinking.
22	MAC	Macro environment	Respondents recognise the broad influence of macro factors such as government policies in restricting supply, distribution and demand of alcohol, or alcohol-related communication media. It relates to alcohol accessibility and alcohol marketing.
23	SOC	Socialising activities	Drinking is regarded as a main source of socialising with friends (e.g., meeting, gathering or hanging out with friends). Students drink to be social and enhance their relationships in these social occasions.
24	WOR	Working environment	Work expectations/demands and the pressure to socialise at work make people drink regardless of their wants.
25	MIS	Miscellaneous	Other factors cannot be classified into the above-mentioned themes.

### CODING SHEET

For each respondent (row), put a tick in the columns (theme codes) where you decide the answers in the transcript correspond to the codes in the coding scheme.

ID	A	A	A	B	C	D	F	H	M	P	N	C	F	I	P	O	P	O	R	C	D	E	L	M	S	W	M
	D	G	T	O	O	R	E	A	O	E	E	F	O	D	N	N	P	P	R	I	C	V	I	A	O	O	I
1																											
2																											
3																											
...																											

## Appendix 9. Coding Sheet for the Content Analysis (Facilitators Themes).

### CODING SCHEME

No.	Theme code	Theme label	Theme description
1	AFF	Affective control skills	One needs to control their mood or emotions.
2	ATT	Attitude change	One needs to change their attitudes towards favouring moderate drinking.
3	COG	Cognitive skills	One needs to be equipped with cognitive skills related to thinking, reasoning, reflecting, and awareness that help reduce drinking.
4	CON	Controllability	One needs to control or discipline their drinking habit to be sober, moderate drinkers or responsible drinkers.
5	COP	Coping behavioural skills	One needs to possess behavioural skills to cope with drinking pressures or invitations by using a variety of methods/tips to refuse drinking and/or reduce alcohol consumption in terms of quantity, frequency, and alcohol strength.
6	DET	Self-determination	One needs to have determination and will-power to reduce their alcohol consumption.
7	DES	Desire	In order to change drinking, one needs to have desire to do it.
8	GOA	Goal setting and planning	One needs to set goals, rules and plans to adhere to moderate drinking.
9	NEG	Negative expectancies	From experiences, observations and/or learning, one needs to perceive that alcohol consumption carries risks and results in negative consequences to themselves and others.
10	FMO	Low fear of missing out	One could drink less if they do not suffer from fear of missing out.
11	FSU	Family support	One could drink less with support from family in terms of behavioural support (e.g., prohibition, education, advice), and/or emotional support (e.g., caring).
12	PNO	Peer norm	Friends' drinking characteristics are suggested to influence one's drinking, whereby closer relationships with 'good' friends (who have positive/healthier drinking behaviour), and/or reduced interactions with 'bad' friends (who have heavy drinking habits) can help restrict drinking. In some responses, respondents use the general term "friends"/"peer groups" which may capture the impact of such norms.
13	PSU	Peer support	One could drink less with support from their friends or girl/boyfriend in the form of behavioural support (e.g., offering approval/encouragement, advice, preventing/prohibiting, looking after and not putting pressure), and/or emotional support (e.g., warmth, caring and empathy).
14	SIM	Social image	One could drink less if they dissociate drinking with their selves and ego.
15	SNO	Social norm	One could drink less if it is socially accepted or when other people do not drink. <i>[Norms from friends or family are not mentioned]</i>
16	SSU	Social support	Respondents suggest general actions to support one's drinking less, without friends and family being mentioned. One could also drink less with support from others outside their family and friend circles (e.g., school, teachers, and surrounding people) in the form of restriction (e.g., advice and punishment) or lowering pressures to drink.

17	ALT	Alternatives to drinking	One could drink less by involving themselves in alternative activities to drinking and a healthier lifestyle (e.g., non-drinking hobbies, and extracurricular activities), usually for their leisure/enjoyment.
18	CIR	Circumstances	One could drink less when they face circumstances related to their current responsibilities/obligations that cost their time, ability and commitment. One could drink less under tight financial situations. One could drink less under difficult health conditions.
19	CUL	Drinking culture change	A positive change in drinking culture could help one to drink less.
20	LIV	Living environment change	A positive change in living environment (e.g., city, flat, university, and bar) could help one to drink less.
21	MAC	Macro environment	Public policies in alcohol control, anti-drinking communications, education and interventions could help one to drink less.
22	PRO	Professional services	One could drink less with help from counselling or professional services for preventing or altering their drinking problems. Specific measures such as therapy, rehab or medicine are suggested to be workable for modifying ones' drinking behaviour.
23	SOA	Socialising avoidance	One needs to avoid pro-alcohol events/parties and situations filled with drinking pressure/temptation.
24	MIS	Miscellaneous	There is no way/solution to reduce drinking. Shifting towards other drugs/substances is also suggested as a way to reduce drinking. Other factors cannot be classified into the above-mentioned themes.

#### CODING SHEET

For each respondent (row), put a tick in the columns (theme codes) where you decide the answers in the transcript correspond to the codes in the coding scheme.

ID	A	A	C	C	C	D	D	G	N	F	F	P	P	S	S	S	A	C	C	L	M	P	S	M
	F	T	O	O	O	E	E	O	E	M	S	N	S	I	N	S	L	I	U	I	A	R	O	I
	F	T	G	N	P	T	S	A	G	O	U	O	U	M	O	U	T	R	L	V	C	O	A	S
1																								
2																								
3																								
...																								